

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.

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)
(Amended September 11, 2009)(Amended March 1, 2013)(Amended May 2, 2014)
(Amended January 10, 2020)

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 South Coast AQMD; and
- (E) Has been certified by the South Coast AQMD to meet the criteria stated in (A) through (D) according to test methods and procedures approved by the South Coast AQMD.

CLEAN AIR SOLVENT CERTIFICATE is a certificate issued by the South Coast AQMD 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)

(A) Group I (cont.)

acetone

ethane

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 (C₄F₉OCH₃)2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane
[(CF₃)₂CF₂OCH₃]1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C₄F₉OC₂H₅)2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane
[(CF₃)₂CF₂OC₂H₅]

parachlorobenzotrifluoride (PCBTF)

methyl acetate

methyl formate

propylene carbonate

1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)

trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)

trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zd)

(B) Group II

methylene chloride (dichloromethane)
1,1,1-trichloroethane (methyl chloroform)
trichlorofluoromethane (CFC-11)
dichlorodifluoromethane (CFC-12)
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)
1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)
cyclic, branched, or linear, completely methylated siloxanes
(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 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 South Coast AQMD 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 solvers, 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 South Coast AQMD.
- (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 South Coast AQMD'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.

SOUTH COAST AQMD means South Coast Air Quality Management District.

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 11 E and R 12 E; then south to the southern boundary of Riverside County.

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~~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 11 E and R 12 E; then south to the southern boundary
of Riverside County.~~

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.

~~RULE 105. AUTHORITY TO ARREST~~

~~The Air Pollution Control Officer and every officer and employee of the Southern California Air Pollution Control 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.~~

~~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 24304(a) 41703 of the Health and Safety Code of the State of California. ²⁴³⁰¹ *by APZ Board*~~

~~(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.~~

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.

(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.

(2) 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.

- (3) The provisions of this rule shall apply to all stationary sources of VOC emissions currently complying with a District rule by means of an AECP or Equivalency Plan. A stationary source may continue to achieve compliance through an existing Plan for a period not to exceed 180 days from date of Plan submission in accordance with the schedule set forth in paragraph (e).
- (4) 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.
- (2) 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.
- (3) The owner or operator of a stationary source of VOC emissions shall be subject to the applicable rule's specific requirements pending District

approval of a submitted Plan unless the source is operating under the provision of subparagraph (b)(3).

- (4) The AECPP 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.
- (5) The owner or operator operating under an approved Plan shall maintain daily operating records, information on operations, source tests, laboratory analyses, monitoring data, and other information in a manner and form consistent with determining compliance with the Plan on a 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.
- (6) 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 AECPP emissions limit.
- (7) Baseline emissions are the product of:
 - Emission rate (ER) (lbs VOC/gal of solids)
 - Capacity utilization (CU) (gals of solids/hour)
 - Hours of operations (H) (hrs/day)

$$\text{Baseline emissions} = \text{ER} \times \text{CU} \times \text{H} = (\text{lbs VOC/day})$$

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.

- (8) Emission reductions shall consist of VOC emissions only and shall be enforceable, permanent, quantifiable, and surplus.
- (9) For Plans encompassing VOC emissions from coating operations, the emission reductions shall be demonstrated on a solids basis, i.e. averaging shall be performed using pounds of VOC emitted per gallon of solids. The VOC content of the coating is as applied including any thinner added before or during application. Water and exempt solvents shall be excluded in this calculation.
- (10) Emission reductions shall consist of emissions resulting from activities governed by only one source-specific District rule for which the Plan is submitted.
- (11) Equipment subject to the Plan shall be located within the same stationary source.
- (12) If the emission reduction required by the AECF is accomplished through equipment shutdown or production curtailment, the permanency of the reduction shall be ensured by permit conditions limiting the total VOC emissions from the entire facility. Thus, all future increases in VOC emissions from the facility shall require complete emission reduction offsets, regardless of the provisions of Regulation XIII.

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

(e) Compliance Schedule

- (1) For sources operating under District approved AECPs at the time of this rule's adoption, the following schedule shall apply:
 - (A) sources seeking compliance with Rules 1124 - Aerospace Assembly and Component Coating Operations; 1125 - Metal Container, Closure, and Coil Coating Operations; 1128 - Paper, Fabric, and Film Coating Operations; 1130 - Graphic Arts; 1136 - Wood Products Coatings; 1145 - Plastic, Rubber, and Glass Coatings; 1151 - Motor Vehicle and Mobile Equipment Non-assembly Line Coating Operations; 1164 - Semiconductor Manufacturing; and 1168 - Control of Volatile Organic Compound Emissions from Adhesive Application shall submit Plans consistent with this rule's requirements within 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.
- (2) New Plans and Plans updated subsequent to any initial plans submittals required by the adoption of this rule shall be submitted:
 - (A) prior to modification of equipment subject to alternative emission control; or
 - (B) within 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.

5-13-91

(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 cancelled.

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5-13-91

(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 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(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.

2/28/94

(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.

5/13/91

(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.

1/28/94

(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.

4/21/76

RULE 207. Altering or Falsifying of Permit. A person shall not willfully deface, alter, forge or falsify any permit issued under these rules.

~~RULE 208. (Reserved)~~

~~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, changes ownership or no longer will be operated by the permittee, the permit shall become void. For the purposes of this rule, statutory mergers or name changes shall not constitute a transfer or change of ownership.~~

~~RULE 210. Applications. Every application for a permit required under Rules 201, 203 and 208 shall be filed in a manner and form prescribed by the Air Pollution Control Officer, and shall give all the information necessary to enable the Air Pollution Control Officer to make the determination required by Rule 212 and any other standard applicable to the granting of permits.~~

~~RULE 211. Action on Permits. The Air Pollution Control Officer shall act, within a reasonable time, on an application for permit and shall notify the applicant in writing of the approval or denial of the permit.~~

5

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.

5/13/91

(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 (1×10^{-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:

| <u>Air Contaminant</u> | <u>Daily Maximum</u> <u>in lbs per Day</u> |
|----------------------------|---|
| Volatile Organic Compounds | 30 |
| Nitrogen Oxides | 40 |
| PM ₁₀ | 30 |
| Sulfur Dioxide | 60 |
| Carbon Monoxide | 220 |
| Lead | 3 |

The process for public notification and comment shall include all of the applicable provisions of 40 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.

5/13/91

(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. 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

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.

- (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 calculate 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

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

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;

- (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 exceedance 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 exceedance;
 - (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

- (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

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.

(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

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.

- (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.

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

$|CC|$ = 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

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.

- (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:

$$LE = \frac{|R - \bar{C}|}{R} \times 100$$

Where:

\bar{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.

- (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 O₂ or CO₂ concentration, the RA requirement shall apply to the corrected concentration value. The RA of a RAA data set is calculated and expressed as a percentage as follows:

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

Where:

\overline{RM} = Mean of the values determined by the 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 O₂ or CO₂ 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:

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

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, \bar{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

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

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

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

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 O₂ (maximum) and 1.0 percent CO₂ (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

- (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

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

(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, O₂ concentration, CO₂ 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 |
|--------------------------|--------------------------|
| NO _x | 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 O₂, 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

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

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

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 (X_r), not located next to the stack or duct wall, that is less than or equal to 10.0% each adjacent traverse point concentration of X_r , 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) X_r 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

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 ± 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

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

| <u>Parameter</u> | <u>Specifications</u> |
|--------------------------|--|
| (A) Operational Period | Greater than or equal to 168 hours |
| (B) Calibration Error | Less than or equal to 5 percent of the calibration gas value |
| (C) Response Time | Less than or equal to 10 minutes |
| (D) Zero Drift (2-hour) | Less than or equal to 2 percent of FSR |
| (E) Zero Drift (24-hour) | Less than or equal to 2 percent of FSR |

- (F) Calibration Drift (2-hour) Less than or equal to 2 percent of FSR
- (G) Calibration Drift (24-hour) Less than or equal to 2.5 percent of FSR.
- (H) Relative Accuracy Less than or equal to 20 percent of the mean value of the RM test data, or, less than or equal to 10 percent of the allowed concentration, whichever is greater

(2) Performance Specifications ~~Monitors~~ for Existing Diluent Gas CEMS

| <u>Parameter</u> | <u>Specifications</u> |
|---------------------------------|---|
| (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 Rule 218.1 (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.

- (B) For gas calibration standards not explicitly covered by the EPA Protocol, the CEMS owner or operator shall submit the gas manufacturer's alternative certification protocol for the specific compound or compounds.
- (i) The procedures of the EPA Protocol shall be used for gas calibration standards not explicitly covered therein, except that the gas manufacturer must identify a recertification period and submit data documenting the applicability of this period. The gas manufacturer may submit alternative performance standards for certification and recertification, based on supporting technical data also provided by the manufacturer. This alternative shall be subject to the approval of 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

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) NO₂ to NO Conversion Efficiency

The conversion efficiency tests shall be conducted according to the requirements of District Method 100.1. The value for the NO₂ gas shall be greater than or equal to the maximum expected or recorded NO₂ 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.

- (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.

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

ATTACHMENT A

SUPPLEMENTAL AND ALTERNATIVE
CEMS PERFORMANCE REQUIREMENTS

A. Applicability of Supplemental and Alternative Performance Requirements

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

TABLE A-1
Alternative Performance Requirement(s)

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

1. + (plus) denotes an additional performance requirement that shall be conducted if the mandatory performance requirement(s) cannot be met.
2. If the concentration of the CEMS is such that the specifications for the low level spike recovery/bias factor determination cannot be met, the Facility Permit holder shall conduct a low level RATA/bias factor determination.
3. Abbreviations used in this Attachment are:

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

B. Test Definitions, Performance Specifications and Test Procedures

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

1. Low Level Calibration Error
 The low level 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

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

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.

- 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 ≤ 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.

- 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. Low Level RATA/Bias Factor Determination using Enhanced Reference Method 6.1

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

- a. Performance Specifications
There are no pass/fail criteria with respect to the magnitude of the percent relative accuracy. There are performance criteria for the special RATA with respect to the reference method and range of concentration on the CEMS.

b. Testing Procedures

The reference method for the low level RATA/bias factor determination is 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 within 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 ($d = \text{CEMS} - \text{reference method}$, ppm) and confidence coefficient ($cc = \text{statistical calculated}$, 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.

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 cutting 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.

- (l) 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 commercial or purer grades of:
 - (A) Sulfuric acid or phosphoric acid with an acid strength of 99 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.

Rules in the South Coast Air Quality Management District SIP

The following text is an EPA transcription of the SIP material that was submitted by the state. If you would like to inspect a scan of the source material for this transcription, please contact the EPA Region 9 contact listed at <https://www.epa.gov/air-quality-implementation-plans/find-regional-contact-air-quality-sipsfipstips>.

Materials from Rule 219, continued. (Submitted to the EPA on 10/23/1982)

****continued from paragraph (n)****

- (5) Equipment used exclusively for the storage and transfer of liquid soaps, liquid detergents, vegetable oils, fatty acids, fatty esters, waxes and wax emulsions.
- (6) Equipment used exclusively for the storage and transfer of refined lubricating oils.
- (7) Equipment used exclusively for the storage and transfer of crankcase drainage oil of less than 3,000 liters (793 gallons).
- (8) Equipment used exclusively for organic liquid storage or transfer to and from such storage, of less than 950 liters (251 gallons) capacity. (Does not include asphalt.)
- (9) Equipment used exclusively for the storage and transfer of edible animal fats intended for human consumption and of sufficient quality to be certifiable for United States markets.
- (10) Equipment used exclusively for the storage, holding, melting and transfer of asphalt or coal tar pitch with a capacity of less than 600 liters (159 gallons).
- (11) Pumps used exclusively for pipeline transfer of liquids.
- (12) Equipment used exclusively for the unheated underground storage of 23,000 liters (6,077 gallons) or less of, and equipment used exclusively for the transfer to or from such storage of, organic liquids with a vapor pressure of 100 mm Hg (1.93 psi) absolute or less at actual storage conditions.

(o) Natural Gas and Crude Oil Production Equipment:

- (1) Well heads and well pumps.
- (2) Crude oil and natural gas pipeline transfer pumps.
- (3) Gas, hydraulic or pneumatic repressurizing equipment, unless powered by internal combustion engines which are not exempt under Section (b)(1) of this rule.
- (4) Equipment used exclusively as water boilers, water or hydrocarbon heaters, and closed heat transfer systems (does not include steam generators used for oilfield steam injection) that have:
 - (A) a maximum heat input rate of 5,040,000 kilogram calories (20,000,000 Btu) per hour (gross) and
 - (B) are fired exclusively with commercial sales gas, liquefied petroleum gas or with produced gas which contains less than 10 ppm hydrogen sulfide.

(5) The following equipment used exclusively for “primary recovery,” and not associated with “community lease” units:

(A) Gas separators and boots.

(B) Initial receiving, dehydrating, washing and “shipping tanks” with an individual capacity of 150,000 liters (39,630 gallons) or less and any gas recovery equipment exclusively serving such tanks.

(C) Crude oil well head loading facilities.

(D) Gravity-type effluent water separators

(E) Produced gas dehydrating equipment.

The following definitions will apply to this section:

“Primary Recovery” – Crude oil or natural gas production from “free-flow” wells or from well units where only produced water or produced gas is reinjected to repressure the production zone.

“Community Lease” Units – Facilities used for multiple-well units (three or more wells), whether for group of wells at one location or for separate wells on adjoining leases.

“Shipping Tanks” – Tanks which operate essentially as “run down” tanks for separated crude oil where the holding time is 72 hours or less.

(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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(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.

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: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 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: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 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. | |
| <i>Class One Mitigation Measures</i> | |
| 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. | |
| <i>Class One Mitigation Measures</i> | |
| 1. | <ul style="list-style-type: none"> 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 |
| <i>Class Two Mitigation Measures</i> | |
| 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. |

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| (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: |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Continued on next page</i> | |

| Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued) | |
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| <i>Class Two Mitigation Measures</i> | |
| 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. |

| | |
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| (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: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 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. |
| <i>Continued on next page</i> | |

| Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued) | |
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| (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: | |
| <i>Class One Mitigation Measures</i> | |
| 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

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| (A). Poultry House: Each poultry house shall incorporate at least four (4) of the following mitigation measures: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 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. |
| <i>Continued on next page</i> | |

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

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| (B). Feed Operations: Owners/operators shall incorporate at least five (5) of the following feed mitigation measures: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |

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| (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: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 5. | Store all removed animal waste in an enclosure vented to a control device with at least 80% control efficiency. |
| <i>Continued on next page</i> | |

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

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| 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. |

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| (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: | |
| <i>Class One Mitigation Measures</i> | |
| 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. |
| <i>Class Two Mitigation Measures</i> | |
| 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. |
| <i>Continued on next page</i> | |

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

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| 8. | Cover the lagoon or storage pond and vent to a biofilter or a control device with at least 80% control efficiency. |
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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 June 5, 1981)(Amended July 9, 1982)(Amended Dec. 3, 1982)
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(Amended June 2, 2017)(Amended January 5, 2018)(Amended May 4, 2018)
(Amended March 1, 2019)(Amended May 3, 2019)(Amended June 7, 2019)
(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~~

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, NO_x 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 fugitives 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 NO_x CAA Non-Attainment Fee for, a major stationary source of NO_x (a source may be a major stationary source for either VOC, NO_x 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:

$$\text{Annual CAA Non-Attainment Fee} = \$5,000 \times \text{CPIF} \times [A - (0.8 \times B)]$$

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, NO_x 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 (NO_x) 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 NO_x reductions in the SCAQMD; or facilitate future VOC or NO_x 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 NO_x, 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 remainder 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 | | | | |
| <i>School Bus Retrofit</i> | 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 | | | | |
| <i>LNG Truck Replacement</i> | 5/2/2008 | 2009/2010 | One-time | \$5,000,000 |
| <i>LNG Truck Replacement</i> | 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 | | | | |
| <i>ARRA-LNG Truck Replacement</i> | 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 |
|---|---------------|-----------------------------|-------------------|----------------------|
| <i>Local Governments**</i> | | FY 2008/2009 | Continuous | \$14,000,000 |
| <i>MSRC**</i> | | 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.)

SOUTH COAST

7/10/84

7/10/84

~~January 26, 1984~~

adopted 3-2-84

Proposed Amended 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. 1 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.

~~Proposed~~ Amended Rule 401

- (c) This rule shall not apply to asphalt pavement heaters.
- (d) This rule shall not apply to abrasive blasting operations.
- (e) ~~This rule shall not apply to coke ovens except for the stacks.~~

(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) 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.
- (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 PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀.
 - (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 PM₁₀ 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 | |
|-----------------------|---|---|
| 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes <p align="center">Guidance</p> |
| 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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 | |
|--------------------------------|--|--|
| 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes |
| Disturbed soil | <p align="center">Guidance</p> 07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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 | |
|---------------------------------------|---|--|
| Importing/exporting of bulk materials | 09-1 Stabilize material while loading to reduce fugitive dust emissions; and 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. | <ul style="list-style-type: none"> ✓ 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 |
| Landscaping | 10-1 Stabilize soils, materials, slopes Guidance | <ul style="list-style-type: none"> ✓ 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 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance. | <ul style="list-style-type: none"> ✓ 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 |

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. | <ul style="list-style-type: none"> ✓ 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. <p align="center">Guidance</p> | <ul style="list-style-type: none"> ✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exits |
| 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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 <p align="center">Guidance</p> |
| Truck loading | 17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114) | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ Haul waste material immediately off-site |

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | | |
|----------------------------|-----------------|---|---|
| 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. <p style="text-align: center;">Guidance</p> | |

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) | <p>(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</p> <p>(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.</p> |
| Earth-moving: Construction fill areas: | <p>(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.</p> |

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 | <p>(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</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p> |
| Open storage piles | <p>(5a) Apply chemical stabilizers; OR</p> <p>(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</p> <p>(5c) Install temporary coverings; OR</p> <p>(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.</p> |
| All Categories | <p>(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.</p> |

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

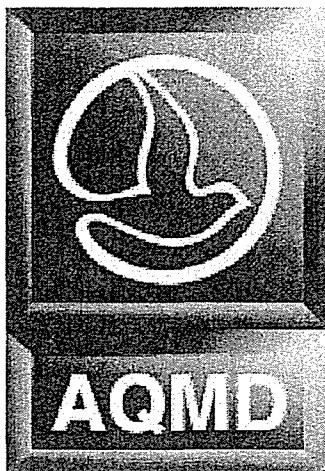
| FUGITIVE DUST SOURCE CATEGORY | CONTROL MEASURES |
|--------------------------------------|---|
| Earth-moving | (1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil. |
| Disturbed surface areas | (0B) On the last day of active operations 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). |

11/16/04

RULE 403 IMPLEMENTATION HANDBOOK



South Coast Air Quality Management District

Office of Planning, Rule Development and Area Sources

21865 Copley Drive

Diamond Bar, California 91765

April 2004

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

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**GUIDANCE FOR
LARGE OPERATIONS**

**Large Operation Notification Procedures
Contact Signage
Statement of No Change
Notice of Completion**

GUIDANCE FOR LARGE OPERATIONS

Notification Procedures

Rule 403 requires large operations that meet or exceed the threshold for large operations to:

- ✓ notify the District in writing by submitting a Large Operation Notification (Form 403N) with the appropriate site mapping within seven days of qualifying as a large operation to the address provided below:

Phill Hubbard
South Coast Air Quality
Management District
Rule 403 Compliance
21865 E. Copley Drive
Diamond Bar, CA 91765

- ✓ identify a dust control supervisor
- ✓ install contact signage that meets the minimum standards outlined by this Chapter within 50 feet of each public site entrance or other frequently-used work entrances. No more than four signs are required per site/facility. One sign is sufficient for multiple site entrances located within 300 yards of each other.
- ✓ implement the Rule 403 Table 2 and Table 3 control actions for each on-site source, and
- ✓ prepare daily records of control action implementation and maintain such recordkeeping information for three years.

Rule 403 also requires large operations to notify the AQMD 30 days after no longer qualifying as a large operation [subparagraph (e)(1)(F)] by submitting a Project Completion Form (Form 403 C) or submit a Statement of No Change (Form 403 NC) for projects that will last more than one year [paragraph (e)(2)]. The requirement to submit a Statement of No Change is not required for stationary sources (i.e., aggregate facilities, etc.) that operate for multiple years at one site.

A blank Large Operation Notification Form (Form 403N), minimum contact signage standards, a Notice of Completion Form (Form 403C), a Statement of No-Change (Form 403NC) is presented in this chapter. A sample recordkeeping form is included in Chapter 6.

FORM 403N

RULE 403 - LARGE OPERATION NOTIFICATION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

Large operations are required to implement the Rule 403 Table 2 and Table 3 control measures and must notify the AQMD no later than 7 days after qualifying as a large operation. Completing this Form and returning it, along with a site location map, to the AQMD will represent compliance with the notification procedures. Note: activities that implement the Table 2 and the Table 3 control measures are required to maintain records of control measure application (see Chapter 6 of the Rule 403 Implementation Handbook).

Is this notification being submitted to comply with the requirements of a Notice to Comply or Notice of Violation?
YES/NO

Notice Number _____ Please attach copy

Qualifying Criteria:

1. Does this operation contain more than 50 acres of disturbed surface area as of the date of submittal? **YES/NO**
Please indicate the size of the project _____.
2. Will the earth moving operation exceed a daily earth moving or throughput volume of 5,000 cubic yards three times during the most recent 365-day period from the date grading begins? **YES/NO**

If you answered yes to either 1 or 2 above please continue with the application. If you answered no to both 1 & 2 you may stop here. If you still have questions regarding your qualifying status please call Phill Hubbard III at (909) 396-2966.

**RULE 403 - LARGE OPERATION NOTIFICATION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**
21865 Copley Drive, Diamond Bar, CA 91765

Please Print or Type

| | | | |
|---|--------------|-------------------------------------|-------------|
| Contractor/ Consultant/ Owner: (Circle one of the above) | | Phone Number: | |
| Address: | City: | State: | Zip: |
| Project Name: | | | |
| Name of Responsible Person of Organization: | | | |
| Title: | | Phone Number: | |
| Dust Control Supervisor: | | Phone Number: | |
| Date Attended Dust Class: | | ID Number: | |
| Project Address: (Attach location map) | City: | State: | Zip: |
| Name of Property Owner: (If different than above) | | | |
| Type of Activity: | | | |
| Anticipated Start Date: | | Anticipated Completion Date: | |
| Check here if permanent facility: (Statement of No Change is not required for stationary sources (aggregate facilities, etc.) that operate at one site for multiple years) | | | |
| Telephone Number: | | | |
| Emergency Phone Number: | | | |
| In accordance with paragraph (e)(1) of Rule 403, I will ensure that the actions specified in Tables 2 and 3 will be implemented on-site for each applicable fugitive dust source type within the property lines. Further, I hereby certify that all information contained herein is true and correct. | | | |
| | | | |
| SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION | | TITLE | DATE |

GUIDANCE FOR LARGE OPERATIONS

Minimum Contact Signage Standards

Rule 403 subparagraph (e)(1)(D) requires large operations to install and maintain signage that identifies phone numbers for dust complaints. Signs must be installed within 50 feet of each public site entrance and other frequently-used work entrances. No more than four signs are required per site/facility. One sign is sufficient for multiple site entrances located within 300 yards of each other. The following guidance has been prepared to assist project operators in complying in this requirement.

RULE 403 IMPLEMENTATION HANDBOOK

CONSTRUCTION SITE SIGNAGE GUIDELINES (Minimum Requirements)

- ✓ The purpose of this signage is to allow the public to contact the responsible party if visible dust emissions or track-out of material is observed from a construction site.

| Project size | Over 50 Acres |
|---|---------------|
| Sign size | 48" x 96" |
| Permit # (if applicable) | 4" |
| Site Name | 4" |
| Project Name / Tract ##### | 4" |
| IF YOU SEE DUST COMING FROM | 4" |
| THIS PROJECT CALL: | 4" |
| Name, Phone Number XXX-XXXX | 6" |
| If you do not receive a response, Please call | 3" |
| the AQMD at 1-800-CUT-SMOG | 3" |
| | 3" |

Notes:

- ✓ Signage must be located within 50 feet of each project site entrance.
- ✓ No more than four signs are required per site/facility.
- ✓ One sign is sufficient for multiple site entrances located within 300 yards of each other.
- ✓ Text height shall be at a minimum as shown on right side of sign template above.
- ✓ Sign background must contrast with lettering, typically black text with white background.
- ✓ Sign should be 1 inch A/C laminated plywood board.
- ✓ The lower edge of the sign board must be a minimum of 6 feet and a maximum of 7 feet above grade.
- ✓ The telephone number listed for the contact must be a local or a toll-free number and shall be accessible 24 hours per day.

STATEMENT OF NO CHANGE FOR PROJECTS THAT EXTEND MORE THAN ONE YEAR

Approved large operation notifications are valid for one year from the date of AQMD acceptance. If a project will extend beyond one-year and if all sources of fugitive dust and control measures are the same as the originally accepted submittal, the operator can extend the applicability of the large operation notification for an additional year by submitting a Statement of No-Change (Form 403NC). A Statement of No-Change is not required for stationary sources (e.g., aggregate facilities, etc.) that operate for multiple years at one facility. A sample Form 403NC is provided on the following page.

**STATEMENT OF NO CHANGE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

21865 Copley Drive, Diamond Bar, CA 91765

Large operation notifications are valid for one year from SCAQMD acceptance. Rule 403 requires resubmittal of a large operation notification at least 30 days prior to the expiration date or the submittal will no longer be valid. Submittal of form 403NC will represent resubmittal of a large operation notification if conditions will not change in the upcoming year. SCAQMD acceptance of Form 403NC will make the previously approved submittal valid for one additional year from its original approval date. A Statement of No Change is not required for stationary sources (aggregate facilities, etc.) that operate at one site for multiple years.

Please Print or Type

| | | | |
|--|--------------|----------------------|-------------|
| Contractor/ Consultant/ Owner: (Circle one of the above) | | Phone Number | |
| Address: | City: | State: | Zip: |
| Project Name: | | | |
| Name of Responsible Person of Organization: | | | |
| Title: | | | |
| Dust Control Supervisor: | | Phone Number: | |
| Date Attended Dust Class: | | ID Number: | |
| Project Address: | | | |
| (Attach location map) | City: | State: | Zip: |
| Name of Property Owner: (If different than above) | | | |
| Type of Activity: | | | |
| Anticipated Completion Date: | | | |
| Telephone Number: | | | |
| Emergency Phone Number: | | | |

Agreement

All conditions at the site are the same as identified in the large operation notification approved by the SCAQMD on _____. (Please provide date) Moreover, all control measures will be implemented at the site in the manner set forth in the previously approved large operation notification.

Signature of Owner (Date)

Signature of Operator or Contractor (Date)
(If not the same as owner)

SCAQMD Use Only

| | |
|---------------------|---------------------|
| Date Received _____ | Staff Initial _____ |
|---------------------|---------------------|

PROJECT COMPLETION FORM

Subparagraph (e)(1)(F) requires large operations to notify the AQMD within 30 days of no longer qualifying as a large operation. A sample Form 403C is provided on the following page.

**NOTICE OF COMPLETION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

21865 Copley Drive, Diamond Bar, CA 91765

Rule 403 requires large operations to notify the AQMD within 30 days of no longer qualifying as a large operation. This form has been prepared to assist activities in complying with this requirement.

| PROJECT INFORMATION | PLEASE ENTER INFORMATION BELOW |
|---|--------------------------------|
| CONSTRUCTION PROJECT NAME / REFERENCE NUMBER | |
| PROJECT ADDRESS/LOCATION | |
| OWNER/DESIGNEE NAME | |
| PHONE NUMBER | |
| SUPPLEMENTAL PHONE NUMBER | |
| <p>OWNER (DESIGNEE) STATEMENT</p> <p>I certify that the referenced site no longer qualifies as a large operation.</p> <p>Owner Signature _____ Date _____</p> <p>Inspection Results</p> <p>An inspection by a SCAQMD representative has been performed with the following results noted:</p> <p>_____ Construction has ceased and the entire site has been adequately treated for long-term stabilization</p> <p>_____ Construction has ceased, but portions of the site have not been adequately treated for long-term stabilization (<i>Attach additional stabilization requirements</i>)</p> <p>Enforcement Officer _____ Date _____</p> | |

TEST METHODS

- **Opacity Test Methods**
- **Stabilized Surface**
- **Threshold Friction Velocity**
- **Silt Loading/Content**

OPACITY TEST METHODS

Time Averaged Method:

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

These procedures are for evaluating continuous fugitive dust emissions and are for the determination of the opacity of continuous fugitive dust emissions by a qualified observer. Continuous fugitive dust emissions sources include activities that produce emissions continuously during operations such as earthmoving, grading, and trenching. Emissions from these types of continuous activities are considered continuous even though speed of the activity may vary and emissions may be controlled to 100%, producing no visible emissions, during parts of the operation. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the fugitive dust plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., earthmoving, grading, trenching), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For fugitive dust from earthmoving equipment, make opacity observations at a point just beyond where material is not being deposited out of the plume (normally three (3) feet above the mechanical equipment generating the plume).

Recording Observations: Record the opacity observations to the nearest 5% every fifteen (15) seconds on an observational record sheet. Each momentary observation recorded represents the

average opacity of emissions for a fifteen (15) second period. If a multiple plume exists at the time of an observation, do not record an opacity reading. Mark an "x" for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an "x" for the fifteen (15) second interval reading. Readings identified as "x" shall be considered interrupted readings.

Data Reduction For Time-Averaged Method: For each set of twelve (12) or twenty four (24) consecutive readings, calculate the appropriate average opacity. Sets shall consist of consecutive observations, however, readings immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

Intermittent Emissions Method

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

This procedure is for evaluating intermittent fugitive dust emissions: This procedure is for the determination of the opacity of intermittent fugitive dust emissions by a qualified observer. Intermittent fugitive dust emissions sources include activities that produce emissions intermittently such as unpaved road travel, screening, dumping, and stockpiling where predominant emissions are produced intermittently. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). Make two observations per plume at the same point, beginning with the first reading at zero (0) seconds and the second reading at five (5) seconds. The zero (0) second observation should begin immediately after a plume has been created above the surface involved.

Recording Observations: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five (5) second period.

Repeat the Observations listed above and the Recording Operations listed above in this procedure until you have recorded a total of 12 consecutive opacity readings. This will occur once six intermittent plumes on which you are able to take proper readings have been observed. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

Average the 12 opacity readings together. If the average opacity reading equals 20% or lower, the source is in compliance with the averaged method opacity standard described in the Rule.

STABILIZED SURFACE TEST METHOD

Introduction:

The purpose of this test is to check whether a property is sufficiently crusted to prevent windblown dust. (Note: This test's primary function is to provide a simplified initial assessment of surface stability. If there is any doubt as to a property's stability after performing this test, the Threshold Friction Velocity test should be conducted to more thoroughly determine a surface's erodibility potential.)

Equipment:

- One steel ball. Diameter - 5/8 (0.625) inches. Mass - 16-17 grams
- A ruler or measuring tape
- A cardboard frame with a 1 ft. by 1 ft. opening (optional)

Step 1:

Select a 1 by 1 foot Survey Area that is representative, or a typical example, of the crusted surface.

Step 2:

Hold the small steel ball one (1) foot off the ground directly above your survey area. Use a ruler or measuring tape to make sure that your hand is at the correct distance above the ground. Drop the ball within the survey area.

Step 3:

Pass/Fail Determination. Observe the ground around the ball closely before picking it up. Did the ball sink into the surface so that it is partially or fully surrounded by loose grains of dirt? Has it dropped out of view entirely? Then pick up the ball. Look closely where the ball fell. Are loose grains of dirt visible?

If you have answered "yes" to any of the previous questions, the surface has failed the first drop test. Note that if the ball causes a slight indentation on the surface but you do not see loose grains, the surface has passed the test.

Step 4:

Select two additional areas within the 1 by 1 foot survey area to drop the ball. Repeat Steps 2 and 3. If the surface passes two or all three of the drop tests, the survey area is considered as passing the test.

Step 5:

Select at least two other survey areas that are representative of the crusted surface. Pick the areas randomly and make sure they are spaced some distance apart. Drop the ball 3 times within each of these additional survey areas. Once again, if the surface passes the test twice or three times, count the survey area as passing the test.

Step 6:

Examine Results. If all of the survey areas have passed the test, the surface is stable, or sufficiently crusted. If one or more survey areas have failed the test, the surface is insufficiently crusted. If the surface fails the visible crust test, but there are minimal loose grains on the surface, the U.S. EPA recommends that the Threshold Friction Velocity test be done. Where there is little loose material that can be collected, the surface is likely to pass the Threshold Friction Velocity test.

Question and Answer – Stabilized Surface Test Method

Question:

What if blowsand is on the crusted surface? (Blowsand is thin deposits of loose grains which have not originated from the surface you are testing, but have been blown there from some surrounding area. Blowsand tends to collect in certain areas rather than uniformly over the surface. If present, it will generally cover less than 50% of the entire surface.)

Answer:

Clear the blowsand from the survey area surfaces on which you plan to drop the ball. Blowsand should not be a factor in your results.

Question:

What if material has been dumped or piled on the surface that is not blowsand, such as dirt or swimming pool waste?

Answer:

Do not do the Stabilized Surface test on those surfaces unless they have crusted over. Instead, do the Threshold Friction Velocity test on any loose surface material.

Question:

What if two of the survey areas pass with flying colors and the third survey area fails miserably?

Answer:

Chances are that the third survey area is either part of an uncrusted portion of the lot or has a much lighter kind of crust or different soil type than that of the other two survey areas. This means that the third survey area represents a different kind of surface than the other survey areas. If this is the case, examine the disturbed surface areas on the lot carefully. Using measuring tape,

segment off (literally or mentally) the portion(s) of the lot that the third survey area represents. Size it up in feet and select two additional 1 by 1 foot survey areas on which to do the visible crust test. Keep in mind that if all other areas on the lot have a stable crust except for the newly identified area, it would need to be at least 5,000 square feet in size or subject to motor vehicle disturbance (i.e. trespassing) for disturbed vacant land requirements to apply.

THRESHOLD FRICTION VELOCITY

Introduction:

The purpose of the Threshold Friction Velocity, or TFV, test method is to determine a site's susceptibility to wind-driven soil erosion. TFV can differ among disturbed vacant lots depending on the type of soil and to what extent it is disturbed. The lower the TFV, the greater the propensity for fine particles to be lifted at relatively low wind speeds. Since rocks and other non-erodible elements add protection against soil erosion, they raise TFV if present on the disturbed surface. A TFV of 100 cm/sec or greater is considered sufficiently protective.

Equipment:

- A set of sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan. *(The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.)*
- A spatula without holes
- A cardboard frame with a 1 ft. by 1 ft. opening
- Basic calculator
- Graduated cylinder or measuring cup *(may possibly need)*

Step 1:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 2:

Select a 1 foot by 1 foot survey area that is representative, or typical, of the disturbed surface. Mark this area using a cardboard frame. Check whether the surface is wet or damp. If so, return later to do this test method when the surface has dried.

Step 3:

Collect a sample of loose surface material to a depth of approximately 3/8 inch (1 cm) into a dustpan. This can best be done using a lightweight whisk broom/brush to carefully sweep the surface material within the marked survey area onto a spatula and lifting it into the dustpan. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface.

Step 4:

Check the dustpan for rocks or hard-packed clumps of soil collected in your sample. Measure their diameter and remove those larger than 3/8 inch (1 cm) in diameter from the sample.

Step 5:

Carefully pour the sample into the stack of sieves, minimizing release of dust particles by slowly brushing material into the stack with a whisk broom or paintbrush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and gently move it using broad, horizontal circular arm motions. Complete 10 clockwise and 10 counter-clockwise motions at a speed of approximately 1 second per motion. Be careful not to move the sieve too roughly in order to avoid breaking up any naturally clumped material.

Step 6:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g. material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and gently rotate it using the same circular arm motions as before an additional 10 times. (You only need to reassemble the sieve(s) that contain material which requires further sifting.)

Step 7:

Line up the sieves in a row as they are disassembled, with the 4 mm sieve at one end and the collector pan at the other. Slightly tilt and gently tap each sieve and the collector pan so that all material is collected on one side. The material in the sieves and collector pan should be on the same side relative to your position. Observe the relative amount of material in each sieve and the collector pan to determine which contains the greatest volume. If this is difficult to determine, use a graduated cylinder or a measuring cup to measure the relative volume.

Step 8:

Use the table below to estimate TFV for the sieve catch with the greatest volume estimated in Step 7. For example, if the sieve containing the greatest volume is the one with the 0.5 mm opening, TFV = 58 cm/second.

| Sieve Size Opening (mm) | Sieve No. | TFV (cm/sec) |
|-------------------------|-----------|--------------|
| 4 | 5 | > 100 |
| 2 | 10 | 100 |
| 1 | 18 | 76 |
| 0.5 | 35 | 58 |
| 0.25 | 60 | 43 |
| Collector Pan | N/A | 30 |

* TFV values in this table take into account the aggregate size distribution of particles between the different sieve size openings.

Step 9:

Repeat this procedure on at least two other representative areas on the disturbed surface. Average your TFV results from the three samples collected.

Step 10:

Examine Results. If the TFV you've calculated is greater than or equal to 100 cm/sec, the surface is stable.

Question and Answer – Threshold Friction Velocity Test Method

Question:

If there are hard-packed clumps of dirt on the surface, do I sieve these clumps along with the rest of the soil sample?

Answer:

If the hard-packed clumps are 1 cm or greater in size, extract them from the sample.

Question:

Can I combine all three collected soil samples into the sieve stack at once to save time?

Answer:

You may try combining the three samples after removing rocks or other non-erodible elements greater than 1 cm in diameter from each sample only if the mass of the three samples is

approximately the same. However, combined samples may be more difficult to sieve and require reassembling and re-shaking of the sieves more than once. Also, it may be difficult to visibly compare the volume of material caught in the sieves after they have been disassembled. Therefore, combining samples is not recommended.

Question:

If I see dust particles escaping when I collect a sample and transfer it to the sieves, should I start over?

Answer:

Not necessarily. A small amount of dust particles can escape without influencing the TFV results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus potentially causing error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test at all on very windy days.

Question:

If you're not sure which sieve contains the greatest amount of material, can you weigh the sieves for comparison?

Answer:

While, typically, more volume corresponds to greater weight, this is not always the case. Use a measuring cup or graduated cylinder if necessary to determine the sieve that contains the greatest amount of material.

Question:

When determining TFV in step 8, can I combine material in the largest 2 sieves to estimate volume?

Answer:

No. This may fundamentally alter the premises on which the method is based and lead to an incorrect determination of stability.

SILT LOADING/CONTENT TEST METHOD

Introduction:

Silt Content Test Method. The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots. The higher the silt content, the more fine dust particles that are released when cars and trucks drive on unpaved roads and unpaved parking lots.

Equipment:

- A set of full height, eight inch diameter sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan 1 ft. in width. (*The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.*)
- A spatula without holes A small scale with half ounce increments (*e.g. postal/package scale*)
- A shallow, lightweight container (*e.g. plastic storage container*)
- A sturdy cardboard box or other rigid object with a level surface
- Basic calculator
- Cloth gloves (optional for handling metal sieves on hot, sunny days)
- Sealable plastic bags (if sending samples to a laboratory)
- Pencil/pen and paper

Step 1:

Look for a routinely traveled surface, as evidenced by tire tracks. [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure. It is only intended to ensure that surface testing is done in a representative manner.] Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier

elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

Step 2:

Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.

Step 3:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 4:

Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

Step 5:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass (e.g., material in each sieve - besides the top sieve that captures a range of larger elements - should look the same size). If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute. (You only need to reassemble the sieve(s) that contain material, which requires further sifting.)

Step 6:

After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the

sieves -- only the collector pan. Weigh the container with the material from the collector pan and record its weight.

Step 7:

If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an unpaved parking lot, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 and multiply by 100 to estimate the percent silt content.

Step 8:

Select another two routinely traveled portions of the unpaved road or unpaved parking lot and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

Step 9:

Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an unpaved road and the average percent silt content is 6% or less, the surface is stable. If the source is an unpaved parking lot and the average percent silt content is 8% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road), it is recommended that you collect 3 additional samples from the source according to Step 1 and take them to an independent laboratory for silt content analysis.

Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1, and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is: "Procedures For Laboratory Analysis Of Surface/Bulk Dust Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina.

Question and Answer - Silt Loading/Content Test Method

Question:

If I see dust escaping when I collect a sample and transfer it to the sieves, should I start over?

Answer:

Not necessarily. A small amount of dust can escape without influencing the silt content results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus

potentially causing an error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test on very windy days.

Question:

Once I calculate the percent silt content for 3 samples collected on one segment of an unpaved road, can I assume the same result for the whole length of the road?

Answer:

You may extrapolate results only to the extent that the rest of the unpaved road has the same average daily trips as the segment you tested and the surface condition on other segments of the road is the same.

Question:

If water is being used as a control measure on the source and this causes the surface to be damp, should I do the silt content test method on a damp surface?

Answer:

Do the silt content test method when the surface is dry in between water applications. The condition of the surface immediately following watering is different than after the water has evaporated. Since sources are required to be in compliance with the rule at all times, test the surface when it is dry.

Question:

If speed limit signs have been posted along an unpaved road as a control measure, do I need to test the surface for silt content?

Answer:

Yes. If speed limit signs have effectively lowered vehicle speeds on the road, the percent silt content may decrease. If signs have been ineffective in controlling speeds and no other controls are being applied, the source may be out of compliance. Either way, you should test to see whether the source meets the appropriate silt content standard.

**ON-SITE WIND
MONITORING EQUIPMENT**

**Guidance for Conducting Wind Measurements
Attachment A – Wind Monitoring Specifications**

ON-SITE WIND MONITORING EQUIPMENT

Guidance for Conducting Wind Measurements

The following are AQMD requirements and recommendations for wind measurements used for data reporting or analysis. The meteorological data submitted to AQMD must be accurate and representative. To insure that the meteorological data is acceptable, facilities that wish to deviate from these recommendations must consult with AQMD staff prior to collecting data. In some cases, less stringent procedures may suffice. For example, a lower sensor height may be acceptable for windblown dust analysis from smaller construction sources. It is recommended that all facilities request that AQMD staff review and approve their monitoring plans and sensor specifications prior to the purchase and installation of equipment.

Aspects of a successful monitoring program include the selection of proper equipment, instrument siting, instrument and site maintenance, periodic audits and frequent data review. The instruments should be sited so as to characterize air flow between the source and receptor areas. In flat terrain, or where receptors are close to the source, one meteorological site may be adequate. Additional wind monitoring sites may be needed in complex terrain.

Wind Sensor Siting

The standard sensor height for measuring surface winds is 10 meters (33 feet) above ground level (AGL) over open, level terrain. This usually requires the installation of a tower or mast. For the instrument to be sited over open terrain, there shall be minimal obstructions to the wind flow, such as from buildings, hills or trees. In general, wind sensors should be located where the distance from the sensors to any obstruction is at least 10 times the height of that obstruction. When mounted on a building, wind sensors should be mounted at least 1.5 times the height of the building above the rooftop. Since these siting guidelines are sometimes not possible, especially in urban areas, it is

recommended that siting that deviates from these guidelines be reviewed by AQMD staff or an experienced consultant prior installation.

Data Recording Devices

Data loggers are the preferred method of recording and archiving the data. They are more precise and require less maintenance than strip chart recorders. Data loggers also allow data to be transmitted by telephone or radio to a central computer. All data records must be kept for a period of at least three years after the need for data collection has ended. Data recovery from a well-maintained meteorological system should be at least 90% complete on an annual basis, with no large data gaps (i.e., gaps greater than two weeks).

The U.S. Environmental Protection Agency (EPA) recommends a sampling frequency of once per second (EPA, 2000), which is typical for quality data loggers. Wind averaging periods may depend on the purpose of the data collected and the need to meet specific regulatory requirements. Either 1-hour or 15-minute averaging periods are common.

For each averaging time, wind speed and direction are usually scalar-averaged. Wind direction is defined as the direction from which the wind is blowing, measured in degrees from true north. Since wind direction has a numerical discontinuity between 360 and 001 degrees, scalar averaging of the wind direction is usually calculated using the unit vector method (EPA 2000). Resultant or vector averages are also often calculated, where the 1-second wind speeds and directions are added vectorially by breaking them into their horizontal components, adding the vector components, then recalculating a magnitude (speed) and direction. Both types of horizontal wind averaging, as well as the collection of peak instantaneous wind gusts during the averaging period and sigma theta, the standard deviation of the wind direction, are typical calculations for meteorological data loggers.

Time for the data recording system must be within five minutes of the correct local time, with data archived in Pacific Standard Time (PST) on a 24-hour clock. Thus there should be no change to Daylight Savings Time. It must also be noted whether the time stamp is at the start or the end of the averaging period. When reporting data, the convention is that time-ending data shall range from 0100 to 2400 PST for hourly averages and 0015 to 2400 PST for 15-minute averages. Time-beginning averages are reported with clock times starting at 0000 PST and ending with 2300 PST for hourly averages or 2345 PST for 15-minute averages. Reported data should have the site identification, year, day and time included at the beginning of the record.

Wind Sensor Accuracy

For wind sensors, the starting threshold must be rated as no higher than 0.5 meters per second. If there is some suspicion that the site would have a significant number of hours of wind speeds under 0.5 m/s, sensors with a lower threshold, such as 0.22 m/s, should be used. Wind speed systems shall be accurate to within $0.2 \text{ m/s} \pm 5$ percent of the observed speed. Total wind direction system errors shall not exceed 5 degrees. This includes an instrument accuracy of ± 3 degrees for linearity and ± 2 degrees for alignment to a known direction. Table 1 summarizes these accuracy guidelines.

Table 1. Summary of Performance Criteria for Wind Sensors.

| Sensor Type | Sensor Height | Range | Accuracy | Resolution | Starting Threshold | Procedural References |
|-----------------------------|---------------|-------------------------------|--|------------|--------------------|------------------------|
| Wind Speed (Horizontal) | 10 meters* | 0.5 – 50 m/s | $0.2 \text{ m/s} \pm 5\%$ of observed wind speed | 0.1 m/s | 0.5 m/s | EPA, 2000 EPA, 1995 |
| Wind Direction (Horizontal) | 10 meters* | 0 – 360 degrees (or 0 – 540°) | ± 5 degrees | 1 degree | 0.5 m/s | EPA, 2000 EPA, 1995 |

* Other sensor heights may be used when appropriate and approved by AQMD.

Maintenance

Frequent data review, preferably on a daily basis, is critical for collecting good meteorological data. In addition, visual inspections of each site should be made at least once every month. This will help to identify sensor alignment problems that may not be obvious in the data. During the inspections, it is recommended that the sensors be compared to the current conditions, possibly by using hand-held instruments such as a compass or GPS and portable anemometer.

In order to ensure that the sensors operate within the manufacturer's specifications, a calibration of the sensors should be performed once every six months by a trained technician or the sensor manufacturer. In corrosive, marine or dusty conditions, more frequent calibrations may be needed. Spare sensors are helpful to avoid data loss while sensors are brought down for calibration and repairs. A logbook of calibrations and repairs is required.

Furthermore, data that is critical for regulatory purposes should be independently audited by a qualified individual who is not affiliated with the organization that maintains and calibrates the instrument. The audits should be on a schedule that is appropriate for the measurements. Typically, once per year is adequate if a routine maintenance and calibration schedule is kept. An audit report shall be written and problems shall be corrected as soon as possible. The audit shall compare the individual sensors to the sensor performance criteria (Table 1) and also look at the data collection system as a whole, including the data logger and siting, to ensure that the data are representative and accurate.

References

EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 1998: Technical Assistance Document for Sampling and Analysis of Ozone Precursors. Document EPA-600/R-98-161. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 2000: Meteorological Monitoring Guidance for Regulatory Modeling Applications. Document EPA-454/R-99-005. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

Attachment A

WIND MONITORING SPECIFICATIONS

The following information is designed to provide installation and operating parameters for a wind monitoring station or device. It is to be used for Orders for Abatement and is not designed to represent approved AQMD specifications for a wind monitoring instrument or station.

- This station, or device shall be capable of indicating the wind speed with an accuracy of 0.2 meters/sec. \pm 5% of observed speed
- The instrument or station should be located on-site so as to accurately characterize the air flow field on this construction project.
- The starting threshold shall be rated as no higher than 0.5 meters per second.¹
- Data will be recorded on a data logger, which has been chosen over a strip chart recorder because they are: more precise, require very little maintenance, and allow data to be transmitted by telephone or radio.¹
- Three months worth of wind monitoring data will be available on-site in the form of hard copies, and made available at the Inspector's request.
- All records will be maintained by the operator for a period of two years and made available upon request.
- The logger time shall be within 5 minutes of the correct time.¹
- A sampling rate of once per second will be employed by the monitoring station or instrument. This sampling frequency is commonly used and recognized as an industry standard.
- The operator shall submit the specifications and operating parameters, for the wind monitoring instrument or station, to AQMD for approval as an appropriate measuring instrument.
- This instrument or station shall be calibrated and maintained in accordance with the manufacturer's specifications.
- The standard height for measuring surface winds is 10 meters above ground over level, open terrain. Open terrain is defined as being away from obstructions to flow, such as buildings, hills or trees. Generally, the wind sensors should be located where the horizontal distance between the sensors and any obstruction is at least ten times the height of that obstruction.¹
- If wind sensors are to be mounted on a building, they should be mounted at a height at least 1.5 times the building height above the roof. It is usually not a good idea to mount

wind sensors on stacks, unless the sensors can be mounted on booms at least two stack widths away from the stack, and with a wind measurement system mounted on both sides of the stack.¹

¹ EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

7/29/04

(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 (PM₁₀) 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) 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.
- (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.

~~(f) 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.~~

11/16/04

RULE 403.1 IMPLEMENTATION HANDBOOK



South Coast Air Quality Management District

21865 Copley Drive

Diamond Bar, California 91765

April 2004

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

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Preface

Rule 403.1 is a companion rule to Rule 403 and is applicable to man-made sources of fugitive dust in the Coachella Valley. Figure 1 illustrates the boundaries of the Coachella Valley. This Handbook has been developed by South Coast Air Quality Management District (AQMD) staff to assist affected persons and activities in complying with Rule 403.1. Rule 403.1 dust control plan submittal requirements are applicable to sources not subject to local government dust control ordinance requirements (i.e., school districts, transportation projects, and utilities).

Any reference to a specific product name is for informational purposes only and does not represent an AQMD endorsement for the product.

Figure 1 - Coachella Valley

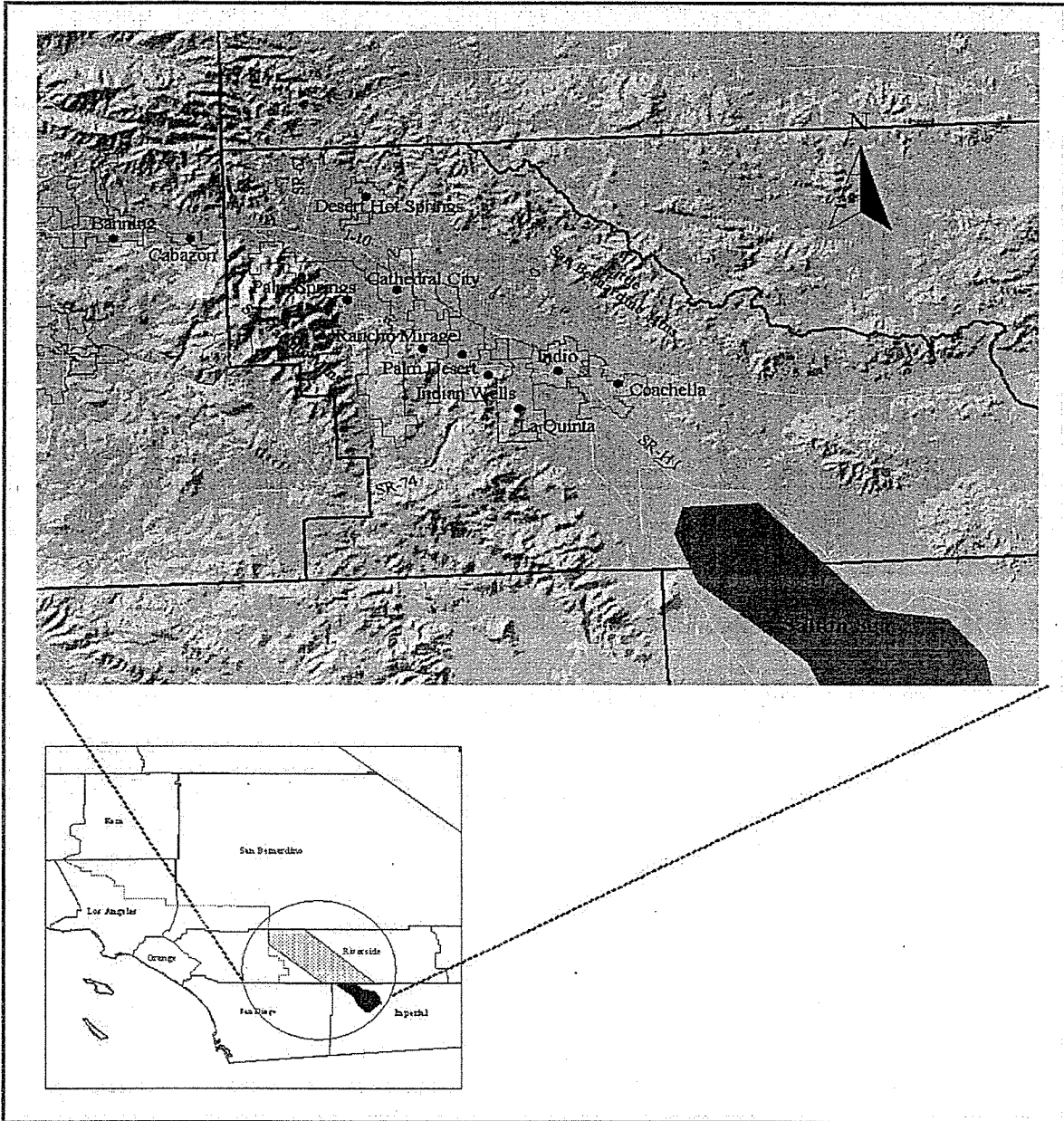


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CHAPTER 8 - CHEMICAL DUST SUPPRESSANT VENDORS

Resource List of Chemical Dust Suppressant Vendors 8-1

COACHELLA VALLEY WIND MONITORING

Summary of Rule 403.1 Requirements

District Wind Forecasts

**On-Site Wind Monitoring Equipment
Notification Procedures**

COACHELLA VALLEY WIND MONITORING

Summary of Rule 403.1 Requirements

Site specific wind monitoring is encouraged due to improved accuracy when compared to regional wind monitors. Additionally, site-specific wind monitoring may document high winds that are not captured by regional wind monitors.

The following guidance has been prepared to assist activities that conduct wind monitoring. As indicated in the guidance, activities should develop a draft site-specific wind monitoring program and forward this information to AQMD for review. The wind monitoring guidance, based on an AQMD-issued Order for Abatement, is also summarized in Attachment A to this Chapter.

Draft wind speed monitoring programs can be directed to:

Kevin Durkee
Meteorology Section
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765
(909) 396-3252 (Facsimile)
kdurkee@aqmd.gov (e-mail)

Questions on submittal of a draft wind monitoring program can be directed to Kevin Durkee at (909) 396-3168.

COACHELLA VALLEY WIND MONITORING

District Wind Forecasts

Persons conducting agricultural tilling operations in the Coachella Valley and those activities which seek an exemption to Rule 403 under paragraph (i)(3) need to be aware when wind speeds exceed 25 miles per hour (mph). The wind speed determination can be either through District wind forecasts or through on-site wind monitoring equipment (anemometers). Persons that rely on District forecasts can call 1.800.CUT.SMOG, press one for air quality information, and then press five for Coachella Valley wind forecasts to receive a forecast for the following day. When there is a high wind event forecast for the Coachella Valley, the forecast is applicable for the full calendar day. Paragraphs (g)(2) and (h)(2) of Rule 403.1 describes the Rule requirements for those activities that elect to install anemometers.

COACHELLA VALLEY WIND MONITORING

On-Site Wind Monitoring Equipment Notification Procedures

Under Rule 403.1, anemometers may be installed to document on-site wind conditions. Paragraph (g)(2) specifies that the District be notified of anemometer installation and that such notification be *received* within 10 days of installing such equipment. The notification must include the following: person's name, address, telephone number, a brief description of the operation and the first date of operation. For convenience, a sample notification form is included here. All notices must be addressed as follows.

Phill Hubbard
Engineering and Compliance
Attention: Rule 403.1 Monitoring
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Date: _____

NOTICE TO INSTALL WIND MONITORING EQUIPMENT

Company Name:

Contact Person:

Phone Number (including area code):

Location of the Site:

Address (if available):

First Date of Operating Wind Measuring Equipment: _____

Briefly Describe the Type of Operation:

After completing the information above, please return this form to:

Engineering and Compliance
Attention: Phill Hubbard
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

**ON-SITE WIND
MONITORING EQUIPMENT**

**Guidance for Conducting Wind Measurements
Attachment A – Wind Monitoring Specifications**

ON-SITE WIND MONITORING EQUIPMENT

Guidance for Conducting Wind Measurements

The following are AQMD requirements and recommendations for wind measurements used for data reporting or analysis. The meteorological data submitted to AQMD must be accurate and representative. To insure that the meteorological data is acceptable, facilities that wish to deviate from these recommendations must consult with AQMD staff prior to collecting data. In some cases, less stringent procedures may suffice. For example, a lower sensor height may be acceptable for windblown dust analysis from smaller construction sources. It is recommended that all facilities request that AQMD staff review and approve their monitoring plans and sensor specifications prior to the purchase and installation of equipment.

Aspects of a successful monitoring program include the selection of proper equipment, instrument siting, instrument and site maintenance, periodic audits and frequent data review. The instruments should be sited so as to characterize air flow between the source and receptor areas. In flat terrain, or where receptors are close to the source, one meteorological site may be adequate. Additional wind monitoring sites may be needed in complex terrain.

Wind Sensor Siting

The standard sensor height for measuring surface winds is 10 meters (33 feet) above ground level (AGL) over open, level terrain. This usually requires the installation of a tower or mast. For the instrument to be sited over open terrain, there shall be minimal obstructions to the wind flow, such as from buildings, hills or trees. In general, wind sensors should be located where the distance from the sensors to any obstruction is at least 10 times the height of that obstruction. When mounted on a building, wind sensors should be mounted at least 1.5 times the height of the building above the rooftop. Since these siting guidelines are sometimes not possible, especially in urban areas, it is recommended that siting that deviates from these guidelines be reviewed by AQMD staff or an experienced consultant prior installation.

Data Recording Devices

Data loggers are the preferred method of recording and archiving the data. They are more precise and require less maintenance than strip chart recorders. Data loggers also allow data to be transmitted by telephone or radio to a central computer. All data records must be kept for a period of at least three years after the need for data collection has ended. Data recovery from a well-maintained meteorological system should be at least 90% complete on an annual basis, with no large data gaps (i.e., gaps greater than two weeks).

The U.S. Environmental Protection Agency (EPA) recommends a sampling frequency of once per second (EPA, 2000), which is typical for quality data loggers. Wind averaging periods may depend on the purpose of the data collected and the need to meet specific regulatory requirements. Either 1-hour or 15-minute averaging periods are common.

For each averaging time, wind speed and direction are usually scalar-averaged. Wind direction is defined as the direction from which the wind is blowing, measured in degrees from true north. Since wind direction has a numerical discontinuity between 360 and 001 degrees, scalar averaging of the wind direction is usually calculated using the unit vector method (EPA 2000). Resultant or vector averages are also often calculated, where the 1-second wind speeds and directions are added vectorially by breaking them into their horizontal components, adding the vector components, then recalculating a magnitude (speed) and direction. Both types of horizontal wind averaging, as well as the collection of peak instantaneous wind gusts during the averaging period and sigma theta, the standard deviation of the wind direction, are typical calculations for meteorological data loggers.

Time for the data recording system must be within five minutes of the correct local time, with data archived in Pacific Standard Time (PST) on a 24-hour clock. Thus there should be no change to Daylight Savings Time. It must also be noted whether the time stamp is at the start or the end of the averaging period. When reporting data, the convention is that time-ending data shall range from 0100 to 2400 PST for hourly averages and 0015 to 2400 PST for 15-minute averages. Time-beginning averages are reported with clock times starting at 0000 PST and ending with 2300 PST for hourly averages or 2345 PST for 15-minute averages. Reported data should have the site identification, year, day and time included at the beginning of the record.

Wind Sensor Accuracy

For wind sensors, the starting threshold must be rated as no higher than 0.5 meters per second. If there is some suspicion that the site would have a significant number of hours of wind speeds under 0.5 m/s, sensors with a lower threshold, such as 0.22 m/s, should be used. Wind speed systems shall be accurate to within 0.2 m/s \pm 5 percent of the observed speed. Total wind direction system errors shall not exceed 5 degrees. This includes an instrument accuracy of \pm 3 degrees for linearity and \pm 2 degrees for alignment to a known direction. Table 1 summarizes these accuracy guidelines.

Table 1. Summary of Performance Criteria for Wind Sensors.

| Sensor Type | Sensor Height | Range | Accuracy | Resolution | Starting Threshold | Procedural References |
|-----------------------------|---------------|-------------------------------|---|------------|--------------------|------------------------|
| Wind Speed (Horizontal) | 10 meters* | 0.5 – 50 m/s | 0.2 m/s \pm 5% of observed wind speed | 0.1 m/s | 0.5 m/s | EPA, 2000 EPA, 1995 |
| Wind Direction (Horizontal) | 10 meters* | 0 – 360 degrees (or 0 - 540°) | +/- 5 degrees | 1 degree | 0.5 m/s | EPA, 2000 EPA, 1995 |

* Other sensor heights may be used when appropriate and approved by AQMD.

Maintenance

Frequent data review, preferably on a daily basis, is critical for collecting good meteorological data. In addition, visual inspections of each site should be made at least once every month. This will help to identify sensor alignment problems that may not be obvious in the data. During the inspections, it is recommended that the sensors be compared to the current conditions, possibly by using hand-held instruments such as a compass or GPS and portable anemometer.

In order to ensure that the sensors operate within the manufacturer's specifications, a calibration of the sensors should be performed once every six months by a trained technician or the sensor manufacturer. In corrosive, marine or dusty conditions, more frequent calibrations may be needed. Spare sensors are helpful to avoid data loss while sensors are brought down for calibration and repairs. A logbook of calibrations and repairs is required.

Furthermore, data that is critical for regulatory purposes should be independently audited by a qualified individual who is not affiliated with the organization that maintains and calibrates the instrument. The audits should be on a schedule that

is appropriate for the measurements. Typically, once per year is adequate if a routine maintenance and calibration schedule is kept. An audit report shall be written and problems shall be corrected as soon as possible. The audit shall compare the individual sensors to the sensor performance criteria (Table 1) and also look at the data collection system as a whole, including the data logger and siting, to ensure that the data are representative and accurate.

References

EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 1998: Technical Assistance Document for Sampling and Analysis of Ozone Precursors. Document EPA-600/R-98-161. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 2000: Meteorological Monitoring Guidance for Regulatory Modeling Applications. Document EPA-454/R-99-005. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

Attachment A

WIND MONITORING SPECIFICATIONS

The following information is designed to provide installation and operating parameters for a wind monitoring station or device. It is to be used for Orders for Abatement and is not designed to represent approved AQMD specifications for a wind monitoring instrument or station.

- This station, or device shall be capable of indicating the wind speed with an accuracy of 0.2 meters/sec. \pm 5% of observed speed
- The instrument or station should be located on-site so as to accurately characterize the air flow field on this construction project.
- The starting threshold shall be rated as no higher than 0.5 meters per second.¹
- Data will be recorded on a data logger, which has been chosen over a strip chart recorder because they are: more precise, require very little maintenance, and allow data to be transmitted by telephone or radio.¹
- Three months worth of wind monitoring data will be available on-site in the form of hard copies, and made available at the Inspector's request.
- All records will be maintained by the operator for a period of two years and made available upon request.
- The logger time shall be within 5 minutes of the correct time.¹
- A sampling rate of once per second will be employed by the monitoring station or instrument. This sampling frequency is commonly used and recognized as an industry standard.
- The operator shall submit the specifications and operating parameters, for the wind monitoring instrument or station, to AQMD for approval as an appropriate measuring instrument.
- This instrument or station shall be calibrated and maintained in accordance with the manufacturer's specifications.
- The standard height for measuring surface winds is 10 meters above ground over level, open terrain. Open terrain is defined as being away from obstructions to flow, such as buildings, hills or trees. Generally, the wind sensors should be located where the horizontal distance between the sensors and any obstruction is at least ten times the height of that obstruction.¹

RULE 403.1 IMPLEMENTATION HANDBOOK

- If wind sensors are to be mounted on a building, they should be mounted at a height at least 1.5 times the building height above the roof. It is usually not a good idea to mount wind sensors on stacks, unless the sensors can be mounted on booms at least two stack widths away from the stack, and with a wind measurement system mounted on both sides of the stack.¹

¹ EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

FUGITIVE DUST CONTROL PLAN GUIDANCE

- **Summary of Rule 403.1 Requirements**
- **Fugitive Dust Control Plan Application (Form 400A)**
- **Fugitive Dust Control Plan Guidance for Smaller Projects (less than 10 acres)**
- **Fugitive Dust Control Plan Guidance for Larger Projects (10 acres or greater)**
- **Statement of No-Change**

FUGITIVE DUST CONTROL PLAN GUIDANCE

Summary of Dust Control Ordinance Requirements

Rule 403.1 requires submittal of a Fugitive Dust Control Plan to the AQMD prior to initiating any construction/earth-moving activities. * These requirements are only applicable to construction projects with 5,000 or more square feet of soil disturbance that are not subject to a local government dust control ordinance's fugitive dust control plan submittal requirements. *

The Fugitive Dust Control Plan submittal requirements consist of two elements:

- (1) Fugitive Dust Control Plan Application (Form 400P);
- and
- (2) Fugitive Dust Control Plan (Form DCP or equivalent for projects with less than 10 acres of disturbed surfaces or a Site-Specific Fugitive Dust Control Plan for projects with 10 or more acres of disturbed surfaces).

Approved Fugitive Dust Control Plans are valid for one year from the date of AQMD approval. If a project will extend beyond one-year and if all sources of fugitive dust and control measures are the same as the originally approved plan, the operator can extend the applicability of the dust control plan for an additional year by submitting a Statement of No-Change (Form 403NC). A sample Form 403NC is provided later in this chapter.

The following guidance has been prepared for construction project operators that are not subject to local jurisdiction fugitive dust control plan submittal requirements to facilitate preparation of consistent fugitive dust control plans throughout the Valley.

FUGITIVE DUST CONTROL PLAN APPLICATION FORM

A Fugitive Dust Control Plan Application (Form 400P) is required for construction activities that do not submit a dust control plan to comply with a local jurisdiction dust control ordinance. Submitting a complete application is essential in expediting the process, so please read and follow the instructions carefully.

In addition to the Fugitive Dust Control Plan application (Form 400P), construction activities are required to pay the appropriate fees per AQMD Rule 306 and prepare a Fugitive Dust Control Plan. These fees are updated annually based on the consumer price index so please use the following contacts to determine the fees for your submittal.

Rule 403.1 Compliance
Attention: Phill Hubbard
South Coast Air Quality Management District
(909) 396-2000

Guidance for preparing Fugitive Dust Control Plans for smaller projects (less than 10 acres of disturbed surfaces) and larger projects (10 acres or more of disturbed surfaces) is also included in this Chapter.

APPLICATION FOR PLANS (Form 400-P)

Section I - Company Information

LEGAL NAME OF APPLICANT _____ IRS OR S.S. NUMBER _____

PERMIT TO BE ISSUED TO (SEE INSTRUCTIONS) _____

BUSINESS MAILING ADDRESS _____

Section II - Facility Information

EQUIPMENT ADDRESS/LOCATION _____ FACILITY NAME _____
 _____ NUMBER/STREET _____ FACILITY ID NUMBER _____
 _____ CITY OR COMMUNITY **CA** _____ ZIP CODE _____

NAME OF CONTACT PERSON _____ TITLE _____ CONTACT TELEPHONE NUMBER () - _____

TYPE OF BUSINESS AT THIS FACILITY _____ AQMD Coachella Valley Dust Control Certificate # _____

Section III - Equipment Information

APPLICATION HEREBY SUBMITTED FOR: _____

RULE NUMBER WHICH THIS APPLICATION APPLIES TO: _____

TYPE OF PLAN APPLICATION: Compliance Plan Alternative Emission Control Plan (AECP)
 Excavation Plan Extreme Performance Coating Classification
 Other

IF THIS APPLICATION IS ASSOCIATED WITH CERTAIN DISTRICT APPLICATION(S)/PERMIT(S), ENTER APPLICATION/PERMIT NUMBER(S): _____

FOR THIS PROJECT HAS A CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) DOCUMENT BEEN REQUIRED BY ANOTHER GOVERNMENTAL AGENCY?
 No Yes, IF YES, ENTER NAME OF AGENCY AND SUBMIT A COPY IF APPROVED.

DO YOU CLAIM CONFIDENTIALITY OF DATA? (SEE INSTRUCTIONS) Yes No

| OPERATING SCHEDULE | | | | FOR AECP PLEASE FILL IN THE TABLE BELOW: | |
|--------------------|-----------|-----------|------------|--|------------------------|
| | HOURS/DAY | DAYS/WEEK | WEEKS/YEAR | ACTUAL USAGE TWO YEARS AGO | ACTUAL USAGE LAST YEAR |
| MAXIMUM | | | | | |
| AVERAGE | | | | | |

Section IV - Signature

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.
 SIGNATURE OF RESPONSIBLE OFFICIAL OF FIRM: _____ TITLE OF RESPONSIBLE OFFICIAL OF FIRM: _____

TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL OF FIRM: _____ RESPONSIBLE OFFICIAL'S TELEPHONE NUMBER () - _____ DATE SIGNED: / /

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.
 SIGNATURE OF PREPARER: _____ TITLE OF PREPARER: _____

TYPE OR PRINT NAME OF PREPARER: _____ PREPARER'S TELEPHONE NUMBER () - _____ DATE SIGNED: / /

| | | | | | | |
|----------------------|------------------------------|-----------------|--------------------------|--|------------------------|------------|
| AQMD USE ONLY | APPLICATION/TRACKING # _____ | PROJECT # _____ | TYPE B C D | EQUIPMENT CATEGORY CODE: _____ / _____ | FEE SCHEDULE: \$ _____ | VALIDATION |
| ENG. A R DATE | ENG. A R DATE | CLASS I III IV | ASSIGNMENT UNIT ENGINEER | ENF. SECT. | CHECK/MONEY ORDER # | AMOUNT \$ |

1. Payment of Fugitive Dust Control Plan Review Fees

AQMD Rule 306 requires submittal of a Fugitive Dust Control Plan review fee. This fee is updated annually based on the consumer price index. You can check the current plan evaluation fee at <http://www.aqmd.gov/rules/html/r306.html> or you can contact the following:

Rule 403.1 Compliance
Attention: Phill Hubbard
South Coast Air Quality Management District
(909) 396-2000

2. Site Mapping

Provide a map showing the vicinity of the project clearly identifying the closest major cross streets or other landmarks and the project location. Label this map "**Vicinity Map**". Required map size is 8 ½ by 11".

Provide an 8 ½ by 11" or larger **Assessor Parcel Map** for the property(s) on which the project will be occurring. Outline or highlight the affected parcels. Identify location of site entrances, internal unpaved haul routes, wind fencing, areas to be chemically stabilized and other proposed and required dust control mitigations. Projects that are only installing or constructing linear features such as roads, pipelines or other utilities that boarder or cross more than one Assessor's parcel do not require Assessor's Parcel Maps, but must provide a detailed vicinity map adequately depicting the entire project area. If the project is divided into construction phases (separate physical project areas), provide a map clearly identifying the phases.

3. Attach a Fugitive Dust Control Plan

- ✓ Projects with less than 10 acres of disturbed surfaces must complete and attach a Fugitive Dust Control Plan (Form DCP) or equivalent.
- ✓ Projects with 10 acres or more of disturbed surfaces must complete and attach a Site-Specific Fugitive Dust Control Plan. Guidance for preparation of a Site-Specific Fugitive Dust Control Plan is included later in this Chapter.

4. Project Signage

Construction signage must be installed on-site prior to construction. Guidelines for construction signage are found in Chapter 5 of this Handbook.

RULE 403.1 IMPLEMENTATION HANDBOOK

Ownership Designee Form
(Form OD)

An owner's designee form is required if a Fugitive Dust Control Plan is not prepared/implemented by the property owner, developer or prime contractor.

| PROJECT INFORMATION | PLEASE ENTER INFORMATION BELOW |
|---|---------------------------------------|
| DESIGNEE'S NAME | |
| COMPANY NAME | |
| ADDRESS/LOCATION | |
| PHONE NUMBER | |
| AFTER-HOURS PHONE NUMBER | |
| AQMD DUST CLASS CERTIFICATE # | |
| PROPERTY OWNER INFORMATION | PLEASE ENTER INFORMATION BELOW |
| PROPERTY OWNER'S NAME | |
| ADDRESS/LOCATION | |
| PHONE NUMBER | |
| 24-HOUR, MANNED AFTER- HOURS PHONE NUMBER | |
| OWNER STATEMENT | |
| <p>I hereby authorize the person listed as my designee to act on my behalf in all matters regarding the issuance and requirements of the Fugitive Dust Control Plan for construction activities. The designee is responsible for project duration. The designee has successfully completed the AQMD Coachella Valley Fugitive Dust Control Class. Furthermore, the designee is responsible for ensuring the contractor(s), subcontractor(s), and all other persons associated with the project are in compliance with the approved Fugitive Dust Control Plan, dust control ordinance requirements, and AQMD regulations.</p> | |
| <p>Owner's Signature _____ Date _____</p> | |
| <p>Printed Name _____</p> | |

**FUGITIVE DUST CONTROL PLAN PREPARATION GUIDANCE
FOR SMALLER CONSTRUCTION PROJECTS
(LESS THAN 10 ACRES)**

The following instructions have been prepared to assist project operators in preparing a Fugitive Dust Control Plan for construction activities with less than 10 acres of disturbed surfaces. Submitting a complete Fugitive Dust Control Plan is essential in expediting the process, so please read and follow the instructions carefully.

Fugitive Dust Control Plan Guidance

Use the attached pages (Form DCP) to describe the dust control actions to be implemented on-site. Separate the actions to be implemented during the various project phases (e.g., clearing/grubbing and mass grading, finish grading, and site construction, etc.). If applicable, describe the additional control actions to be implemented on-site.

Please remember the following when preparing a Fugitive Dust Control Plan:

- ✓ A complete copy of the Fugitive Dust Control Plan and all maps must be on-site prior to beginning construction activity and must be retained on-site at all times during project construction.
- ✓ Construction signage must be installed on-site prior to construction. Guidelines for construction signage are found in Chapter 5 of this Handbook.
- ✓ Dust control is required 24 hours a day, 7 days a week for the duration of the project regardless of wind conditions or construction project status.
- ✓ Daily recordkeeping of dust control actions is required to be compiled and retained during project duration and for three years after project completion.
- ✓ Grading plans must include a statement that incorporates the approved Fugitive Dust Control Plan into the approved grading plan.

RULE 403.1 IMPLEMENTATION HANDBOOK

| |
|---|
| Fugitive Dust Control Plan For Projects < 10 Acres (Form DCP, Page 1 of 5) |
|---|

Project Name: _____

Permit Number (if applicable): _____

Owner Name: _____

Anticipated Start Date: _____ Anticipated Completion Date: _____

Total Earth-Movement (Cubic Yards): _____

*Note: Fill out completely and describe Control Actions (e.g., # of watering trucks during phases, available water GPM. etc.).
 Indicate N/A if not applicable*

Project Phases

| Source Category | Clearing, Grubbing, and Mass Grading <i>(Describe Control Actions)</i> | Finish Grading <i>(Describe Control Actions)</i> | Site Construction <i>(Describe Control Actions)</i> |
|-----------------------|---|---|--|
| Backfilling | | | |
| Clearing and Grubbing | | | |
| Clearing Forms | | | |
| Crushing | | | |

RULE 403.1 IMPLEMENTATION HANDBOOK

Fugitive Dust Control Plan
 For Projects < 10 Acres
 (Form CP, Page 2 of 5)

Project Phases

| Source Category | Clearing, Grubbing, and Mass Grading <i>(Describe Control Actions)</i> | Finish Grading <i>(Describe Control Actions)</i> | Site Construction <i>(Describe Control Actions)</i> |
|--|---|---|--|
| Cut and Fill: | | | |
| Demolition – mechanical/manual | | | |
| Disturbed soil | | | |
| Earth-moving activities | | | |
| Importing/exporting of bulk materials | | | |

RULE 403.1 IMPLEMENTATION HANDBOOK

Fugitive Dust Control Plan
For Projects < 10 Acres
(Form CP, Page 3 of 5)

Project Phases

| Source Category | Clearing, Grubbing, and Mass Grading <i>(Describe Control Actions)</i> | Finish Grading <i>(Describe Control Actions)</i> | Site Construction <i>(Describe Control Actions)</i> |
|-----------------------------------|---|---|--|
| Landscaping | | | |
| Road shoulder maintenance | | | |
| Screening | | | |
| Staging Areas | | | |
| Stockpiles/bulk material handling | | | |

RULE 403.1 IMPLEMENTATION HANDBOOK

| |
|--|
| Fugitive Dust Control Plan For Projects < 10 Acres (Form CP, Page 4 of 5) |
|--|

Project Phases

| Source Category | Clearing, Grubbing, and Mass Grading <i>(Describe Control Actions)</i> | Finish Grading <i>(Describe Control Actions)</i> | Site Construction <i>(Describe Control Actions)</i> |
|---|---|---|--|
| Traffic areas for construction activities | | | |
| Trenching | | | |
| Truck unloading | | | |
| Turf overseeding | | | |
| Unpaved roads/parking lots | | | |

RULE 403.1 IMPLEMENTATION HANDBOOK

Fugitive Dust Control Plan
 For Projects < 10 Acres
 (Form CP, Page 5 of 5)

Project Phases

| Source Category | Clearing, Grubbing, and Mass Grading <i>(Describe Control Actions)</i> | Finish Grading <i>(Describe Control Actions)</i> | Site Construction <i>(Describe Control Actions)</i> |
|---|---|---|--|
| Vehicular track-out, handling, clean-up | | | |
| Weather monitoring/work practices | | | |
| <i>Other (describe)</i> | | | |
| | | | |
| | | | |

**FUGITIVE DUST CONTROL PLAN PREPARATION GUIDANCE
FOR LARGER CONSTRUCTION PROJECTS
(10 ACRES OR LARGER)**

In addition to the Fugitive Dust Control Plan application (Form 400P), Rule 403.1 requires an AQMD-approved Site-Specific Fugitive Dust Control Plan for projects with 10 acres or more of disturbed surfaces. The following guidance has been prepared to describe the required elements of a Site-Specific Fugitive Dust Control Plan. A Fugitive Dust Control Plan template is provided following this initial guidance. Please submit the Site-Specific Fugitive Dust Control Plans with the applicable filing fees for approval to:

Phill Hubbard
Supervising Investigator
South Coast AQMD
21865 East Copley Drive
Diamond Bar, CA 91765
(909) 396-2966
(909) 396-2608 [Facsimile]
phubbard@aqmd.gov

Required Elements of Site-Specific Fugitive Dust Control Plan

Project Description

This section of the Fugitive Dust Control Plan must provide a complete description of the project, a development plan, a schedule of activities, and a time frame for project completion. Additionally, this section must contain a description of soil types on site and an estimated proposed expenditure for the total project dust control budget.

Water Source Identification

This section must contain a description and location of the water supply that is dedicated to dust control. Also, identify sources of a back-up water supply if proposed in conjunction with a contingency measure. This section covers earth-moving activities for the life of the project.

Coachella Valley Best Available Control Measures:

This section must include a description of the primary dust control measures selected for each source at the project site (e.g., No. 1 - Earth-Movement, No. 2 – Unpaved Roads, etc.) based on the list of CV BACM included in this Handbook. This section must also have a description of the fugitive dust control measures to be implemented during non-working hours.

Control Measures Guidance:

Suggested minimum standards for a Site-Specific Fugitive Dust Control Plan are presented below. As a reminder, specific applicable dust control ordinance requirements are provided in italics. Additionally, grading plans must include a statement that incorporates the Site-Specific Fugitive Dust Control Plan into the approved grading plan.

No. 1 EARTH-MOVEMENT

Project Phasing

If feasible, use grading permit conditions to **break the project into phases** so that only a portion of the site is disturbed at any given time to ensure control of fugitive dust. This technique is critical for project sites with greater than 100 acres.

Pre-Watering

Prior to initiating activity, **pre-water site** through use of portable irrigation lines. At least 72 hours of pre-watering is recommended for each area prior to initiating earth-movement. The operator must specify water source and available flow rate (g/m).

Watering During Earth-Movement Activities

Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour during non high-wind conditions. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000 gallon water trucks may be used in place of one 10,000 gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent fugitive dust. The operator must specify the number and type of watering vehicles available for dust control during each project phase as well as during off-hours and the availability of back-up water trucks if the

site experiences dust control problems (see also contingency measure requirements below).

Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower that can take up to 40 minutes to refill.

Perimeter Controls

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the site construction phase.

A perimeter **watering system** or fence line misting system consisting of portable irrigation equipment may be an effective fugitive dust mitigation system to protect surrounding residences and businesses. The local jurisdiction may also be provided access to this equipment.

Site Stabilization

Chemical dust suppressants are to be applied in accordance with the manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods. Recordkeeping is necessary to demonstrate compliance. Wind fencing or other obstructions can keep areas previously treated with dust control suppressants free from future disturbances.

Vegetation can be a cost-effective alternative to chemical stabilization for areas that will remain inactive for long periods. Wind fencing or other obstructions can keep the vegetated area free from future disturbances.

Contingency Measures

This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions according to the applicable performance standards (e.g., plume length of greater than 100 feet, or crossing any property line, or 20 percent opacity). Also, describe the steps that will be taken to initiate a contingency measure.

No. 2 – UNPAVED ROAD TRAVEL

Surface Improvements

Paving of the internal roadway network early in a project's development phase can reduce chemical dust suppressant reapplication costs. Periodic

street cleaning throughout project construction will likely be required to ensure compliance with the dust control ordinance track-out requirements and to reduce entrained road dust.

Application of **gravel** or other material with a lower silt content than the underlying soils can be an effective surface improvement for dust control. For reference, the specific requirements for a gravel pad to prevent track-out are minimum one inch or larger washed gravel maintained to a depth of six inches. Periodic maintenance (grading and spot reapplication) may be required.

Surface Treatments

Chemical dust suppressants designed by the manufacturer for traffic areas, and applied in accordance with manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods once final roadway elevations have been reached. Limiting/restricting access to non-road areas can also reduce the need to retreat areas previously stabilized.

Constant watering of unpaved roads, haul routes, and equipment paths represents a short-term, cost-effective dust control action. High evaporation rate may justify use of chemical dust suppressants for a longer-term control. For reference, U.S. EPA studies have documented a 50 percent reduction in PM10 emissions under a water application rate of 0.2 gallons per square yard per hour.

Source Extent Reduction

Unpaved road emissions are a function of the number of vehicles traversing the area and the vehicle speeds. Accordingly, programs to **reduce vehicular trips or vehicle speeds** can reduce fugitive dust emissions. Frequent watering or application of chemical stabilizers would likely be required in addition to the source extent measures to ensure that the applicable performance standards are met.

Contingency Measures

Contingency measures must be identified for each unpaved haul road/internal access route. This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions according to the applicable performance standards (e.g., plume length of greater than 100 feet, or crossing any property line, or 20 percent opacity). Also, describe the steps that will be taken to initiate a contingency measure.

No. 3 – STORAGE PILES/BULK MATERIAL HANDLING

Wind Sheltering

Install and maintain **wind barriers** with no less than 50 percent porosity on three sides of the pile, such that the barrier is equal to or greater than the pile height.

Coverings can be used on smaller storage piles to prevent windblown dust. Any covering must be secured to ensure that it remains in place and effective.

Storage Pile Stabilization

Water applied continuously to all disturbed portions of the storage piles by means of water truck or sprinkler system as necessary to maintain sufficient visible moisture on the pile surface.

Chemical dust suppressants can be an effective control measure for storage piles with infrequent disturbances. Any product used must be applied in accordance with the manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods. Recordkeeping is necessary to demonstrate compliance.

Vegetation can be a cost-effective alternative to chemical stabilization for storage piles that will remain inactive for long periods. Wind fencing or other obstructions can keep the vegetated area free from future disturbances.

Material Handling

Confining **load-in/load-out** of material to the leeward (downwind) side of the pile can reduce wind erosion of storage piles. This control measure would likely need to be implemented in conjunction with other control measures to achieve the applicable performance standards.

Stockpiles within 100 yards of occupied buildings must not be greater than eight feet in height.

Stockpiles greater than eight feet in height and not covered 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.

Contingency Measures

Contingency measures must be identified for each storage pile/material handling source. This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust

emissions according to the applicable performance standards (e.g., plume length of greater than 100 feet, or crossing any property line, or 20 percent opacity). Also, describe the steps that will be taken to initiate a contingency measure.

NO. 4 – VEHICULAR TRACK-OUT, HAULING, CLEANUP

Track-Out Prevention

Construction site accesses are to be improved with paving or gravel. If the project site is not balanced (e.g., off-site material transport), a wheel washing system and/or ribbed steel plates must be placed in the roadway before the vehicle enters the paved/graveled area to clean the tires and prevent track-out.

Covering haul vehicles or utilizing **bedliners** can prevent material from being lofted out of the vehicle or from falling out of the bottom of the vehicle.

Track-Out Mitigation

Street sweeping can be an effective mitigation measure if material is tracked out on to paved roads surrounding the site. Efforts to prevent material track-out will reduce sweeping costs.

Contingency Measures

Contingency measures must be identified for each track-out source. This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions according to the applicable performance standards (e.g., track-out extending more than 25 feet from any site access point). Also, describe the steps that will be taken to initiate a contingency measure.

NO. 5 - DISTURBED SURFACES/INACTIVE SITES

During Dust Generating Activities

Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour during non high-wind conditions. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000 gallon water trucks may be used in place of one 10,000 gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent fugitive dust. The operator must specify the number and type of

watering vehicles available for dust control during each project phase as well as during off-hours and the availability of back-up water trucks if the site experiences dust control problems (see also contingency measure requirements below).

Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower that can take up to 40 minutes to refill.

Perimeter Controls

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the site construction phase.

A perimeter **watering system** or fence line misting system consisting of portable irrigation equipment may be an effective fugitive dust mitigation system to protect surrounding residences and businesses. The local jurisdiction may also be provided access to this equipment.

Temporary Stabilization During Weekends, After Work Hours, Holidays

Depending on site soil types, water can be used to either maintain soils in a damp condition or to develop a surface crust.

Chemical dust suppressants, diluted in accordance with the manufacturer's specifications for short-term stabilization can be an effective technique for areas that will be subject to future disturbances.

Access Restriction

Fencing or other obstructions can keep the stabilized area free from future disturbances and thereby reduce the potential for windblown dust.

Long Term Stabilization

Chemical dust suppressants, applied in accordance with the manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods can be an effective long-term stabilization technique. Recordkeeping is necessary to demonstrate compliance. Portable irrigation is necessary to ensure adequate site coverage. Wind fencing or other obstructions can keep areas previously treated with dust control suppressants free from future disturbances.

Vegetation can be a cost-effective alternative to chemical stabilization for areas that will remain inactive for long periods. Wind fencing or other obstructions can keep the vegetated area free from future disturbances.

Perimeter Controls

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the site construction phase.

A perimeter **watering system** or fence line misting system consisting of portable irrigation equipment may be an effective fugitive dust mitigation system to protect surrounding residences and businesses. The portable watering system may be used in place of or in conjunction with watering trucks. The local jurisdiction may also be provided access to this equipment.

Contingency Measures

Contingency measures must be identified for disturbed surface areas or inactive portions of a construction site. This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions according to the applicable performance standards (e.g., plume length of greater than 100 feet, or crossing any property line, or 20 percent opacity). Also, describe the steps that will be taken to initiate a contingency measure.

NO. 6 – UNPAVED PARKING LOTS

Areas Subject to Frequent Disturbances

Equipment staging areas are to be treated with at least one inch washed gravel maintained to a depth of four inches or treated with chemical dust suppressants designed by the manufacturer for traffic areas, and applied in accordance with the manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods.

Employee parking areas are to be covered with at least one inch washed gravel maintained to a depth of four inches or treated with chemical dust suppressants designed by the manufacturer for traffic areas, and applied in accordance with the manufacturer's specifications and in sufficient concentrations and frequency to ensure compliance with the applicable test methods. If an internal roadway network is paved, employees are to be instructed to park only on paved areas.

Contingency Measures

Contingency measures must be identified for each unpaved parking lot. This section must describe the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions according to the applicable performance standards (e.g., plume length of greater than 100 feet, or crossing any property line, or 20 percent opacity). Also, describe the steps that will be taken to initiate a contingency measure.

NO. 7 – EMPLOYEE TRAINING

Employee Dust Control Training and Compliance:

This section must describe how on-site personnel will ensure that the project remains in compliance with the Site-Specific Fugitive Dust Control Plan. This section must include a statement of the authority and training of personnel that will allow the attainment of this goal.

Dust Control Supervisor

Rule 403.1 paragraph (e)(4) requires a dust control supervisor for projects with greater than or equal to 50 acres of disturbed surfaces. The dust control supervisor must have completed the AQMD Coachella Valley Fugitive Dust Control Class, have a valid certificate of attendance, and have dust control as a primary responsibility with the authority to immediately employ additional dust control efforts.

DUST CONTROL PLAN TEMPLATE

A template to assist in the preparation of a Site-Specific Fugitive Dust Control Plan is provided in the following pages. Operators may use this template as a guide, however, all the elements listed in the preceding pages must be included in the Site-Specific Fugitive Dust Control Plan. Additionally use of an 8 ½ by 11 inch, stand alone Site-Specific Fugitive Dust Control Plan is required regardless if the information is included on an approved grading plan.

SITE-SPECIFIC FUGITIVE DUST CONTROL PLAN*
(SITES 10 ACRES OR GREATER)

Site Description

Please ensure that Fugitive Dust Control Plan Application (Form 400P) is completed and attached to the Site-Specific Fugitive Dust Control Plan.

Project Description

Please provide the following information as completely as possible.

- No.** **Description of Source(s)** [*Please provide best estimates*]
- 1** **Earth-moving** (If not applicable, check here ____)
Maximum cubic yards of earth-movement: _____/month or _____/year
Anticipated start date: _____ End date _____; or Ongoing _____ (Check)
Amount of export: _____ (Disposal site) _____
- 2** **Unpaved roads** (If not applicable, check here ____)
Mileage: _____ Estimate of average daily traffic levels: _____
Type of motor vehicles using roads: _____
- 3** **Storage piles/Bulk Material handling** (If not applicable, check here ____)
Maximum number of piles: _____
Average height: _____, length/width: _____
Configuration: ____ cone, ____ windrow, ____ other (specify) _____
- 4** **Vehicular track-out/Cleanup** (If not applicable, check here ____)
Number of access points which connect to public roads: _____
Estimate of the maximum number of vehicles that will exit the site: _____/ day
- 5** **Disturbed surface areas** (If not applicable, check here ____)
Maximum acreage: _____
Will any disturbed surface areas remain inactive for at least 10 days? Yes __ No __
- 6.** **Unpaved Parking Lots** (If not applicable, check here _____)
Number of unpaved lots at this site: _____
Size of each lot: _____

Soil Types

Primary soil type on site: _____

Dust Control Budget

Estimate of project dust control budget: _____

Water Source Identification

Water source (g/m): _____

Back-up water source: _____

* Use of an 8 ½ by 11 inch, stand alone site-specific fugitive dust control plan is required regardless if the information is included on an approved grading plan.

No. 1 - EARTH-MOVEMENT

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures.

| <u>Control Measure</u> | <u>Control Action</u> |
|--|---|
| Pre-grading | Number of acres to be graded at one time: _____ |
| Planning | Number of parcels to be phase-graded: _____ |
| Watering (pre-grading) | Number of water trucks: _____ Frequency of application: _____ Sprinkler/hose system: _____ Describe: _____ |
| Watering (during grading) | Number of water trucks: _____ Frequency of application: _____ Sprinkler/hose system: _____ Describe: _____ |
| Watering (post grading) | Number of water trucks: _____ Frequency of application: _____ Sprinkler/hose system: _____ Describe: _____ |
| Wind fencing | Maximum height: _____ Location: _____ Describe: _____ _____ |
| Chemical stabilization | Type of product: _____ Frequency of application: _____ Concentration: _____ Describe: _____ _____ |
| Cover haul vehicles/Bedliners in haul vehicles | Operator of haul vehicles, if other than site owner: _____ _____ _____ |
| Other (specify) | _____ _____ |
| Contingency Measure(s) | _____ _____ |

If necessary, attach additional information.

RULE 403.1 IMPLEMENTATION HANDBOOK

No. 2 - UNPAVED ROAD TRAVEL*

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

| <u>Control Measure</u> | <u>Control Action</u> |
|-------------------------------|--|
| Paving | Frequency of street sweeping: _____ Describe: _____ _____ _____ |
| Gravel | Depth of gravel: _____ Describe: _____ _____ _____ |
| Chemical stabilization | Type of product: _____ Frequency of application: _____ Concentration: _____ Describe: _____ _____ _____ |
| Watering | Frequency of application: _____ Describe: _____ _____ _____ |
| Reduce speed | Maximum speed limit: _____ miles per hour How are speeds controlled: Post signs _____; Briefings to workers _____ |
| Trip reduction | Describe how achieved: _____ _____ _____ _____ |
| Other (specify) | _____ _____ _____ |
| Contingency Measure(s) | _____ _____ _____ _____ |

If necessary, attach additional information.

* All unpaved haul roads and parking areas must be identified on the Dust Control Plan site map and all vehicles shall only use established haul routes and parking areas.

No. 3 - STORAGE PILES/BULK MATERIAL HANDLING

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

| <u>Control Measure</u> | <u>Control Action</u> |
|-------------------------------|--|
| Wind sheltering | Type of barriers: _____ Average height of barriers: _____ Describe: _____ _____ _____ |
| Coverings | Types of coverings: _____ Describe: _____ _____ _____ |
| Watering | Method of application: _____ Frequency of application: _____ Describe: _____ _____ _____ |
| Chemical stabilization | Type of product: _____ Frequency of application: _____ Concentration: _____ Describe: _____ _____ _____ |
| Vegetation | _____ _____ _____ |
| Loadin/loadout | Orientation of loadin/loadout procedures: N S E W Describe: _____ _____ _____ |
| Contingency Measure(s) | _____ _____ _____ _____ |

If necessary, attach additional information.

RULE 403.1 IMPLEMENTATION HANDBOOK

No. 4 - VEHICULAR TRACK-OUT, HAULING, CLEANUP

Note: If trackout, spillage, or carry-out extend more than 25 feet along a paved public roadway, finalize clean-up activities within one hour. Also remove any track-out, spillage or carry-out at the conclusion of the workday.

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

| <u>Control Measure</u> | <u>Control Action</u> |
|---|--|
| Gravel pads | Location: _____ Size: _____ |
| Paving | Location: _____ |
| Track-out device | Locations: _____ |
| Type of device | Describe: _____ |
| Wheel washers | Location: _____ Describe: _____ _____ _____ |
| Cover haul vehicles/ Bedliners in haul vehicles | Operator of haul vehicles, if other than site operator: _____ _____ _____ |
| Sweep/clean roadways | Frequency: _____ Type of equipment: _____ Describe: _____ _____ _____ |
| Other (specify) | _____ _____ _____ _____ |
| Contingency Measure(s) | _____ _____ _____ _____ |

If necessary, attach additional information.

No. 5 - DISTURBED SURFACES/INACTIVE SITES

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

Control Measure

Control Action

During Dust Generating Activities

Watering Method of application: _____
Frequency: _____
Describe: _____

Wind fencing Location: _____
Height: _____
Describe: _____

Site access Method of vehicle restriction: _____

Chemical stabilization Type of product: _____
Frequency of application: _____
Concentration: _____
Describe: _____

Vegetation Location: _____
Plant type: _____
Describe: _____

Temporary Stabilization During Weekends, After Work Hours, and on Holidays

Watering Method of application: _____
Frequency: _____
Describe: _____

Chemical stabilization Type of product: _____
Frequency of application: _____
Concentration: _____

Site access Method of vehicle restriction: _____

RULE 403.1 IMPLEMENTATION HANDBOOK

No. 5 - DISTURBED SURFACES/INACTIVE SITES (Continued)

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

Long-Term Stabilization

| <u>Control Measure</u> | <u>Control Action</u> |
|------------------------|---|
| Chemical stabilization | Type of product: _____ Frequency of application: _____ Concentration: _____ |
| Vegetation | Location: _____ Plant type: _____ |
| Wind fencing | Location: _____ Height: _____ Describe: _____ _____ |
| Other (specify) | _____ _____ _____ |
| Contingency Measure(s) | _____ _____ _____ |

If necessary, attach additional information.

NO. 6 – UNPAVED PARKING LOTS

Coachella Valley Best Available Control Measures:

In the space provided below, please check and describe your dust control measures

| <u>Control Measures</u> | <u>Control Action</u> |
|---------------------------|---|
| Gravel | Location: _____ |
| Chemical stabilization | Type of product: _____ Frequency of application: _____ Concentration: _____ |
| Pave | Material to be used as dust suppressant: _____ |
| Other (specify) | _____ _____ _____ |
| Contingency Measure(s) | _____ _____ _____ |

If necessary, attach additional information.

NO. 7 – EMPLOYEE EDUCATION

Employee Dust Control Training and Compliance:

This section must provide a summary of the method by which on-site personnel will ensure that the project remains in compliance with the requirements contained in the Site-Specific Fugitive Dust Control Plan. This section must include a statement of the authority and training of personnel that will allow the attainment of this goal.

Describe _____

Justification

If you believe that none of the control measures for a given source category are technically feasible or if they would conflict with other regulations please describe the justification in the space provided. Please be specific. If necessary, attach additional information.

**STATEMENT OF NO CHANGE FOR PROJECTS THAT LAST
MORE THAN ONE YEAR**

Approved Fugitive Dust Control Plans are valid for one year from the date of AQMD approval. If a project will extend beyond one-year and if all sources of fugitive dust and control measures are the same as the originally approved plan, the operator can extend the applicability of the dust control plan for an additional year by submitting a Statement of No-Change (Form 403NC). A sample Form 403NC is provided on the following page.

FORM 403NC

**STATEMENT OF NO CHANGE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

21865 Copley Drive, Diamond Bar, CA 91765

Rule 403 requires resubmittal of Fugitive Dust Control Plans at least 60 days prior to the Plan expiration date. Submittal of form 403NC will represent resubmittal of an approved Plan if conditions will not change in the upcoming year. SCAQMD acceptance of Form 403NC will make the previously approved plan valid for one additional year from its original approval date.

Please Print or Type

| | | | |
|--|--------------|----------------------|-------------|
| Contractor/ Consultant/ Owner: (Circle one of the above) | | Phone Number | |
| Address: | City: | State: | Zip: |
| Project Name: | | | |
| Name of Responsible Person of Organization: | | | |
| Title: | | | |
| Dust Control Supervisor: | | Phone Number: | |
| Date Attended Dust Class: | | ID Number: | |
| Project Address: | | | |
| (Attach location map) | City: | State: | Zip: |
| Name of Property Owner: (If different than above) | | | |
| Anticipated Completion Date: | | | |
| Type of Activity: | | | |
| Telephone Number: | | | |
| Emergency Phone Number: | | | |

Agreement

All conditions at the site are the same as identified in the Fugitive Dust Emissions Control Plan approved by the SCAQMD on _____. (Please provide date) Moreover, all control measures will be implemented at the site in the manner set forth in the previously approved Plan.

Signature of Owner (Date)

Signature of Operator or Contractor (Date)
(If not the same as owner)

SCAQMD Use Only

| | |
|---------------------|---------------------|
| Date Received _____ | Staff Initial _____ |
|---------------------|---------------------|

TEST METHODS

- **Opacity Test Methods**
- **Stabilized Surface**
- **Threshold Friction Velocity**
- **Silt Loading/Content**

OPACITY TEST METHODS

Time Averaged Method:

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

These procedures are for evaluating continuous fugitive dust emissions and are for the determination of the opacity of continuous fugitive dust emissions by a qualified observer. Continuous fugitive dust emissions sources include activities that produce emissions continuously during operations such as earthmoving, grading, and trenching. Emissions from these types of continuous activities are considered continuous even though speed of the activity may vary and emissions may be controlled to 100%, producing no visible emissions, during parts of the operation. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the fugitive dust plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., earthmoving, grading, trenching), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For fugitive dust from earthmoving equipment, make opacity observations at a point just beyond where material is not being deposited out of the plume (normally three (3) feet above the mechanical equipment generating the plume).

Recording Observations: Record the opacity observations to the nearest 5% every fifteen (15) seconds on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a fifteen (15) second period. If a multiple plume exists at the time of an observation, do not record an opacity reading. Mark an "x" for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an "x" for the fifteen (15) second interval reading. Readings identified as "x" shall be considered interrupted readings.

Data Reduction For Time-Averaged Method: For each set of twelve (12) or twenty four (24) consecutive readings, calculate the appropriate average opacity. Sets shall consist of consecutive observations, however, readings immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

Intermittent Emissions Method

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

This procedure is for evaluating intermittent fugitive dust emissions: This procedure is for the determination of the opacity of intermittent fugitive dust emissions by a qualified observer. Intermittent fugitive dust emissions sources include activities that produce emissions intermittently such as unpaved road travel, screening, dumping, and stockpiling where predominant emissions are produced intermittently. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

RULE 403.1 IMPLEMENTATION HANDBOOK

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). Make two observations per plume at the same point, beginning with the first reading at zero (0) seconds and the second reading at five (5) seconds. The zero (0) second observation should begin immediately after a plume has been created above the surface involved.

Recording Observations: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five (5) second period.

Repeat the Observations listed above and the Recording Operations listed above in this procedure until you have recorded a total of 12 consecutive opacity readings. This will occur once six intermittent plumes on which you are able to take proper readings have been observed. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

Average the 12 opacity readings together. If the average opacity reading equals 20% or lower, the source is in compliance with the averaged method opacity standard described in the Rule.

STABILIZED SURFACE TEST METHOD

Introduction:

The purpose of this test is to check whether a property is sufficiently crusted to prevent windblown dust. (Note: This test's primary function is to provide a simplified initial assessment of surface stability. If there is any doubt as to a property's stability after performing this test, the Threshold Friction Velocity test should be conducted to more thoroughly determine a surface's erodibility potential.)

Equipment:

- One steel ball. Diameter - 5/8 (0.625) inches. Mass - 16-17 grams
- A ruler or measuring tape
- A cardboard frame with a 1 ft. by 1 ft. opening (optional)

Step 1:

Select a 1 by 1 foot Survey Area that is representative, or a typical example, of the crusted surface.

Step 2:

Hold the small steel ball one (1) foot off the ground directly above your survey area. Use a ruler or measuring tape to make sure that your hand is at the correct distance above the ground. Drop the ball within the survey area.

Step 3:

Pass/Fail Determination. Observe the ground around the ball closely before picking it up. Did the ball sink into the surface so that it is partially or fully surrounded by loose grains of dirt? Has it dropped out of view entirely? Then pick up the ball. Look closely where the ball fell. Are loose grains of dirt visible?

If you have answered "yes" to any of the previous questions, the surface has failed the first drop test. Note that if the ball causes a slight indentation on the surface but you do not see loose grains, the surface has passed the test.

Step 4:

Select two additional areas within the 1 by 1 foot survey area to drop the ball. Repeat Steps 2 and 3. If the surface passes two or all three of the drop tests, the survey area is considered as passing the test.

Step 5:

Select at least two other survey areas that are representative of the crusted surface. Pick the areas randomly and make sure they are spaced some distance apart. Drop the ball 3

times within each of these additional survey areas. Once again, if the surface passes the test twice or three times, count the survey area as passing the test.

Step 6:

Examine Results. If all of the survey areas have passed the test, the surface is stable, or sufficiently crusted. If one or more survey areas have failed the test, the surface is insufficiently crusted. If the surface fails the visible crust test, but there are minimal loose grains on the surface, the U.S. EPA recommends that the Threshold Friction Velocity test be done. Where there is little loose material that can be collected, the surface is likely to pass the Threshold Friction Velocity test.

Question and Answer – Stabilized Surface Test Method

Question:

What if blowsand is on the crusted surface? (Blowsand is thin deposits of loose grains which have not originated from the surface you are testing, but have been blown there from some surrounding area. Blowsand tends to collect in certain areas rather than uniformly over the surface. If present, it will generally cover less than 50% of the entire surface.)

Answer:

Clear the blowsand from the survey area surfaces on which you plan to drop the ball. Blowsand should not be a factor in your results.

Question:

What if material has been dumped or piled on the surface that is not blowsand, such as dirt or swimming pool waste?

Answer:

Do not do the Stabilized Surface test on those surfaces unless they have crusted over. Instead, do the Threshold Friction Velocity test on any loose surface material.

Question:

What if two of the survey areas pass with flying colors and the third survey area fails miserably?

Answer:

Chances are that the third survey area is either part of an uncrusted portion of the lot or has a much lighter kind of crust or different soil type than that of the other two survey areas. This means that the third survey area represents a different kind of surface than the other survey areas. If this is the case, examine the disturbed surface areas on the lot carefully. Using measuring tape, segment off (literally or mentally) the portion(s) of the lot that the third survey area represents. Size it up in feet and select two additional 1 by 1 foot survey areas on which to do the visible crust test. Keep in mind that if all other areas on the lot have a stable crust except for the newly identified area, it would need to be at

RULE 403.1 IMPLEMENTATION HANDBOOK

least 5,000 square feet in size or subject to motor vehicle disturbance (i.e. trespassing) for disturbed vacant land requirements to apply.

THRESHOLD FRICTION VELOCITY

Introduction:

The purpose of the Threshold Friction Velocity, or TFV, test method is to determine a site's susceptibility to wind-driven soil erosion. TFV can differ among disturbed vacant lots depending on the type of soil and to what extent it is disturbed. The lower the TFV, the greater the propensity for fine particles to be lifted at relatively low wind speeds. Since rocks and other non-erodible elements add protection against soil erosion, they raise TFV if present on the disturbed surface. A TFV of 100 cm/sec or greater is considered sufficiently protective.

Equipment:

- A set of sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan. (*The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.*)
- A spatula without holes
- A cardboard frame with a 1 ft. by 1 ft. opening
- Basic calculator
- Graduated cylinder or measuring cup (*may possibly need*)

Step 1:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 2:

Select a 1 foot by 1 foot survey area that is representative, or typical, of the disturbed surface. Mark this area using a cardboard frame. Check whether the surface is wet or damp. If so, return later to do this test method when the surface has dried.

Step 3:

Collect a sample of loose surface material to a depth of approximately 3/8 inch (1 cm) into a dustpan. This can best be done using a lightweight whisk broom/brush to carefully sweep the surface material within the marked survey area onto a spatula and lifting it into the dustpan. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface.

Step 4:

Check the dustpan for rocks or hard-packed clumps of soil collected in your sample. Measure their diameter and remove those larger than 3/8 inch (1 cm) in diameter from the sample.

Step 5:

Carefully pour the sample into the stack of sieves, minimizing release of dust particles by slowly brushing material into the stack with a whisk broom or paintbrush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and gently move it using broad, horizontal circular arm motions. Complete 10 clockwise and 10 counter-clockwise motions at a speed of approximately 1 second per motion. Be careful not to move the sieve too roughly in order to avoid breaking up any naturally clumped material.

Step 6:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g. material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and gently rotate it using the same circular arm motions as before an additional 10 times. (You only need to reassemble the sieve(s) that contain material which requires further sifting.)

Step 7:

Line up the sieves in a row as they are disassembled, with the 4 mm sieve at one end and the collector pan at the other. Slightly tilt and gently tap each sieve and the collector pan so that all material is collected on one side. The material in the sieves and collector pan should be on the same side relative to your position. Observe the relative amount of material in each sieve and the collector pan to determine which contains the greatest volume. If this is difficult to determine, use a graduated cylinder or a measuring cup to measure the relative volume.

Step 8:

Use the table below to estimate TFV for the sieve catch with the greatest volume estimated in Step 7. For example, if the sieve containing the greatest volume is the one with the 0.5 mm opening, TFV = 58 cm/second.

| Sieve Size Opening (mm) | Sieve No. | TFV (cm/sec) |
|-------------------------|-----------|--------------|
| 4 | 5 | > 100 |
| 2 | 10 | 100 |
| 1 | 18 | 76 |
| 0.5 | 35 | 58 |
| 0.25 | 60 | 43 |
| Collector Pan | N/A | 30 |

* TFV values in this table take into account the aggregate size distribution of particles between the different sieve size openings.

Step 9:

Repeat this procedure on at least two other representative areas on the disturbed surface. Average your TFV results from the three samples collected.

Step 10:

Examine Results. If the TFV you've calculated is greater than or equal to 100 cm/sec, the surface is stable.

Question and Answer – Threshold Friction Velocity Test Method

Question:

If there are hard-packed clumps of dirt on the surface, do I sieve these clumps along with the rest of the soil sample?

Answer:

If the hard-packed clumps are 1 cm or greater in size, extract them from the sample.

Question:

Can I combine all three collected soil samples into the sieve stack at once to save time?

Answer:

You may try combining the three samples after removing rocks or other non-erodible elements greater than 1 cm in diameter from each sample only if the mass of the three samples is approximately the same. However, combined samples may be more difficult to sieve and require reassembling and re-shaking of the sieves more than once. Also, it

may be difficult to visibly compare the volume of material caught in the sieves after they have been disassembled. Therefore, combining samples is not recommended.

Question:

If I see dust particles escaping when I collect a sample and transfer it to the sieves, should I start over?

Answer:

Not necessarily. A small amount of dust particles can escape without influencing the TFV results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus potentially causing error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test at all on very windy days.

Question:

If you're not sure which sieve contains the greatest amount of material, can you weigh the sieves for comparison?

Answer:

While, typically, more volume corresponds to greater weight, this is not always the case. Use a measuring cup or graduated cylinder if necessary to determine the sieve that contains the greatest amount of material.

Question:

When determining TFV in step 8, can I combine material in the largest 2 sieves to estimate volume?

Answer:

No. This may fundamentally alter the premises on which the method is based and lead to an incorrect determination of stability.

SILT LOADING/CONTENT TEST METHOD

Introduction:

Silt Content Test Method. The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots. The higher the silt content, the more fine dust particles that are released when cars and trucks drive on unpaved roads and unpaved parking lots.

Equipment:

- A set of full height, eight inch diameter sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan 1 ft. in width. *(The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.)*
- A spatula without holes A small scale with half ounce increments *(e.g. postal/package scale)*
- A shallow, lightweight container *(e.g. plastic storage container)*
- A sturdy cardboard box or other rigid object with a level surface
- Basic calculator
- Cloth gloves (optional for handling metal sieves on hot, sunny days)
- Sealable plastic bags (if sending samples to a laboratory)
- Pencil/pen and paper

Step 1:

Look for a routinely traveled surface, as evidenced by tire tracks. [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure. It is only intended to ensure that surface testing is done in a representative manner.] Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the

sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

Step 2:

Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.

Step 3:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 4:

Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

Step 5:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass (e.g., material in each sieve - besides the top sieve that captures a range of larger elements - should look the same size). If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute. (You only need to reassemble the sieve(s) that contain material, which requires further sifting.)

Step 6:

After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves -- only the collector pan. Weigh the container with the material from the collector pan and record its weight.

Step 7:

If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an unpaved parking lot, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 and multiply by 100 to estimate the percent silt content.

Step 8:

Select another two routinely traveled portions of the unpaved road or unpaved parking lot and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

Step 9:

Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an unpaved road and the average percent silt content is 6% or less, the surface is stable. If the source is an unpaved parking lot and the average percent silt content is 8% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road), it is recommended that you collect 3 additional samples from the source according to Step 1 and take them to an independent laboratory for silt content analysis.

Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1, and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is: "Procedures For Laboratory Analysis Of Surface/Bulk Dust Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina.

Question and Answer - Silt Loading/Content Test Method

Question:

If I see dust escaping when I collect a sample and transfer it to the sieves, should I start over?

Answer:

Not necessarily. A small amount of dust can escape without influencing the silt content results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus potentially causing an error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test on very windy days.

Question:

Once I calculate the percent silt content for 3 samples collected on one segment of an unpaved road, can I assume the same result for the whole length of the road?

Answer:

You may extrapolate results only to the extent that the rest of the unpaved road has the same average daily trips as the segment you tested and the surface condition on other segments of the road is the same.

Question:

If water is being used as a control measure on the source and this causes the surface to be damp, should I do the silt content test method on a damp surface?

Answer:

Do the silt content test method when the surface is dry in between water applications. The condition of the surface immediately following watering is different than after the water has evaporated. Since sources are required to be in compliance with the rule at all times, test the surface when it is dry.

Question:

If speed limit signs have been posted along an unpaved road as a control measure, do I need to test the surface for silt content?

Answer:

Yes. If speed limit signs have effectively lowered vehicle speeds on the road, the percent silt content may decrease. If signs have been ineffective in controlling speeds and no other controls are being applied, the source may be out of compliance. Either way, you should test to see whether the source meets the appropriate silt content standard.

| | | | | | | | |
|-----|-------|-----|-------|------------------|--------------------|-----|-------|
| 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 |

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 (SO₂) and averaged over 15 consecutive minutes, exceeding:

(A) In the South Coast Air Basin, 500 ppm by volume, effective July 1, 1982.

(B) In the Southeast Desert Air Basin portion of Riverside County:

(i) 500 ppm by volume for equipment which is issued a permit to construct or permit to operate after July 1, 1982.

(ii) 1,500 ppm by volume until January 1, 1984, and 500 ppm by volume thereafter for equipment that has been issued a permit to construct or permit to operate prior to July 1, 1982.

(b) The provisions of this rule shall not apply to emissions from:

(1) Stationary internal combustion engines.

(2) Propulsion of mobile equipment.

(3) Emergency venting due to equipment failure or process upset.

(c) The provisions of subsection (a)(2) of this rule shall not apply to:

(1) Equipment which is subject to the emission limits and requirements of source specific rules in Regulation XI.

(2) Equipment which complies with the gaseous fuel sulfur content 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(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 (CO₂) at standard conditions averaged over a minimum of 15 consecutive minutes.

The provisions of this rule shall not apply to jet engine test stands and emissions from internal combustion engines.

9/29/98

(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°F 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 H₂S 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 H₂S, 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 | | | |
| Small Refiners | 40 | 4 hrs | May 4, 1996 |
| Other Refiners | 40 | 4 hrs | May 4, 1994 |
| 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 SO₂.
- (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 SO₂. 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 H₂S, 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 SO₂ 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 H₂S 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 H₂S 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 H₂S 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 H₂S 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.

(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.

7/25/79

7/25/79

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 (SO₂) 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.

(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):
- $$\text{Overall Efficiency} = (\text{Capture Efficiency}) \times (\text{Control Device Efficiency}) / 100$$
- (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.

RULE 443 LABELING OF SOLVENTS

8/2/76

(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 into a storage 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.

4/7/76

South Coast
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 = $W_s - W_w - W_{es}$

$$\frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

- 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.

6/11/13

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:

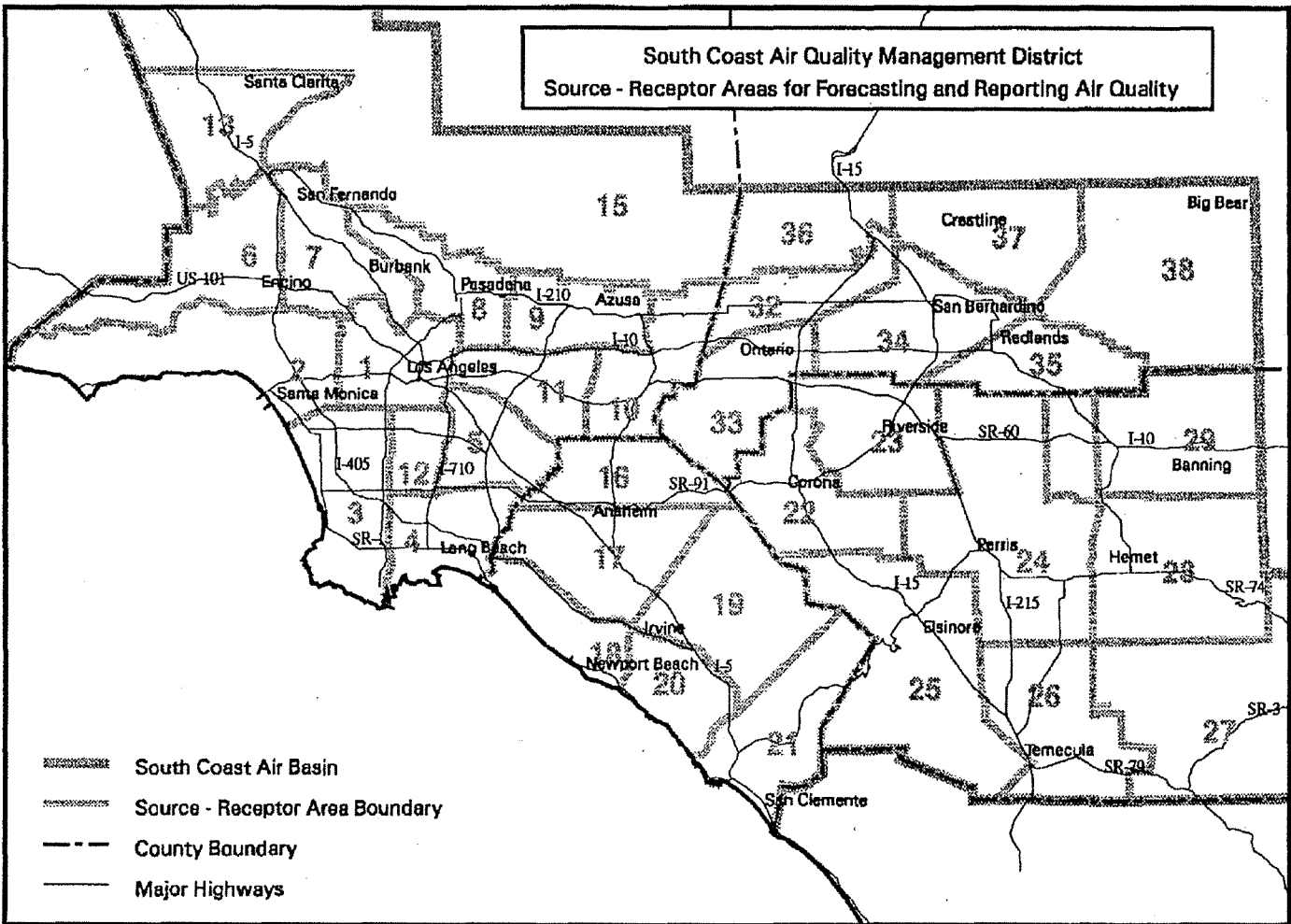
- ~~(A) Recreational fires or ceremonial fires, including fires conducted pursuant to United States Code, Title 4, Chapter 1, Section 8.~~
- ~~(B) Open burning of natural gas, propane, untreated wood, or charcoal for the purpose of:~~
- ~~(i) Preparation or warming of food for human consumption; or~~
- ~~(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)(Amended June 5, 2020)
(Amended October 27, 2020)

RULE 445. WOOD-BURNING DEVICES

(a) Purpose

The purpose of this rule is to reduce the emission of particulate matter from wood-burning devices and establish contingency measures for applicable ozone standards for the reduction of volatile organic compounds.

(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, March 16, 2015, 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) DAILY MAXIMUM 8-HOUR OZONE AIR QUALITY FORECAST means the maximum predicted ambient average ozone concentration, during any rolling eight (8) hour time period for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.
- (4) DAILY PM2.5 AIR QUALITY FORECAST means the predicted ambient average PM2.5 concentration, for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.
- (5) 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.
- (6) 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.
- (7) 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.
- (8) MANUFACTURED FIRELOG means a commercial product expressly manufactured for use to simulate a wood burning fire in a wood-burning device.
- (9) MASONRY HEATER means any permanently installed device that meets the definition of a masonry heater in ASTM E 1602-03.
- (10) 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.
- (11) 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, March 16, 2015, or any subsequent revision.

- (12) 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.
- (13) PM2.5 means particulate matter with an aerodynamic diameter less than 2.5 microns.
- (14) 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.
- (15) 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.
- (16) SOLE SOURCE OF HEAT means the only permanent source of heat that is capable of meeting the space heating needs of a household.
- (17) SOURCE RECEPTOR AREA (SRA) means any of the numbered areas in the Basin as shown on the map in Attachment 1.
- (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.
- (19) 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.
- (20) 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, March 16, 2015, or any subsequent revision.
- (21) 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.

- (22) 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).
- (23) 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, March 16, 2015, or any subsequent revision including, but not limited to, wood stoves and wood-burning fireplace inserts.
- (24) WOOD-BURNING SEASON means for:
 - (A) PM2.5, the consecutive entire four (4) months of November, December, January, and February.
 - (B) Ozone, upon triggering any one of the ozone contingency provisions in subparagraph (g), the consecutive entire eight (8) months of September, October, November, December, January, February, March and April.
- (25) 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

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 that 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.

(A) Alternative language, toll-free telephone number or web address for the information specified in subdivision (j) may be used, subject to Executive Officer approval.

(B) The Executive Officer shall specify guidelines for the aforementioned labeling requirements.

(e) Wood-Burning Season PM2.5 Mandatory Burning Curtailment (No-Burn day)

No person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season for PM2.5 so declared to the public by the Executive Officer to be a mandatory wood-burning curtailment (No-Burn) day based on the specified geographic area below 3,000 feet above mean sea level and applicable daily PM2.5 air quality forecast as follows:

- (1) Basin-wide if the daily PM2.5 air quality forecast for any source receptor area exceeds $30 \mu\text{g}/\text{m}^3$, or
- (2) subsequent to a determination by U.S. EPA, pursuant to 40 CFR § 51.1014(a) of a failure to comply with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast as set forth in subdivision (f) PM2.5 Contingency Measures.

(f) PM2.5 Contingency Measures

- (1) Upon the issuance of a final determination by U.S. EPA, pursuant to 40 CFR § 51.1014(a), that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:

- (A) meet any Reasonable Further Progress (RFP) requirement in an attainment plan approved in accordance with § 51.1012;
 - (B) meet any quantitative milestone in an attainment plan approved in accordance with § 51.1013;
 - (C) submit a quantitative milestone report required under § 51.1013(b); or,
 - (D) attain the applicable PM_{2.5} NAAQS by the applicable attainment date, the contingency measure(s) specified in paragraph (f)(2) shall be implemented, sequentially and in the order of stringency.
- (2) A Basin-wide, mandatory wood-burning curtailment during the wood-burning season if the daily PM_{2.5} air quality forecast for any SRA exceeds:
- (A) 29 µg/m³, upon a final determination of a failure to comply with any of the provisions of paragraph (f)(1);
 - (B) 28 µg/m³, upon a final determination of a failure to comply with any two of the provisions in paragraph (f)(1);
 - (C) 27 µg/m³, upon a final determination of a failure to comply with any three of the provisions in paragraph (f)(1); and
 - (D) 26 µg/m³, upon a final determination of a failure to comply with any four of the provisions in paragraph (f)(1).

~~(g) Ozone Contingency Measures~~

- ~~(1) Upon the issuance of a final determination by U.S. EPA, that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:~~
- ~~(A) meet a Reasonable Further Progress (RFP) requirement in an approved attainment plan for an applicable ozone NAAQS; or~~
 - ~~(B) attain an applicable ozone NAAQS by the applicable attainment date, the applicable contingency measure(s) specified in paragraph (g)(2) shall be implemented, sequentially and in the order of stringency.~~
- ~~(2) Basin-wide, below 3,000 feet above mean sea level, no person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season for ozone, so declared by Executive Officer to be a curtailment (No-Burn) day due to forecasted ambient ozone concentration levels, if the daily maximum 8-hour ozone air quality forecast for any SRA exceeds:~~

- ~~(A) 80 ppb, upon a final determination of a first failure to comply with any of the provisions of paragraph (g)(1);~~
 - ~~(B) 75 ppb, upon a final determination of a second failure to comply with any of the provisions of paragraph (g)(1); and~~
 - ~~(C) 70 ppb, upon a final determination of a third failure to comply with any of the provisions of paragraph (g)(1).~~
- (h) Prohibitions on Permissive Burn Days as described in Rule 444(c)(25)(C) or restrictions on Marginal Burn Days as described in Rule 444 (c)(21)(D) shall be in effect only if a No-Burn day is declared during any of the consecutive months of November, December, January or February.
- (i) 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 subdivisions (e), (f), and (g), 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.

(j) Administrative Requirements

The Executive Officer will provide public notice of a mandatory wood-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.

~~(k) Penalties~~

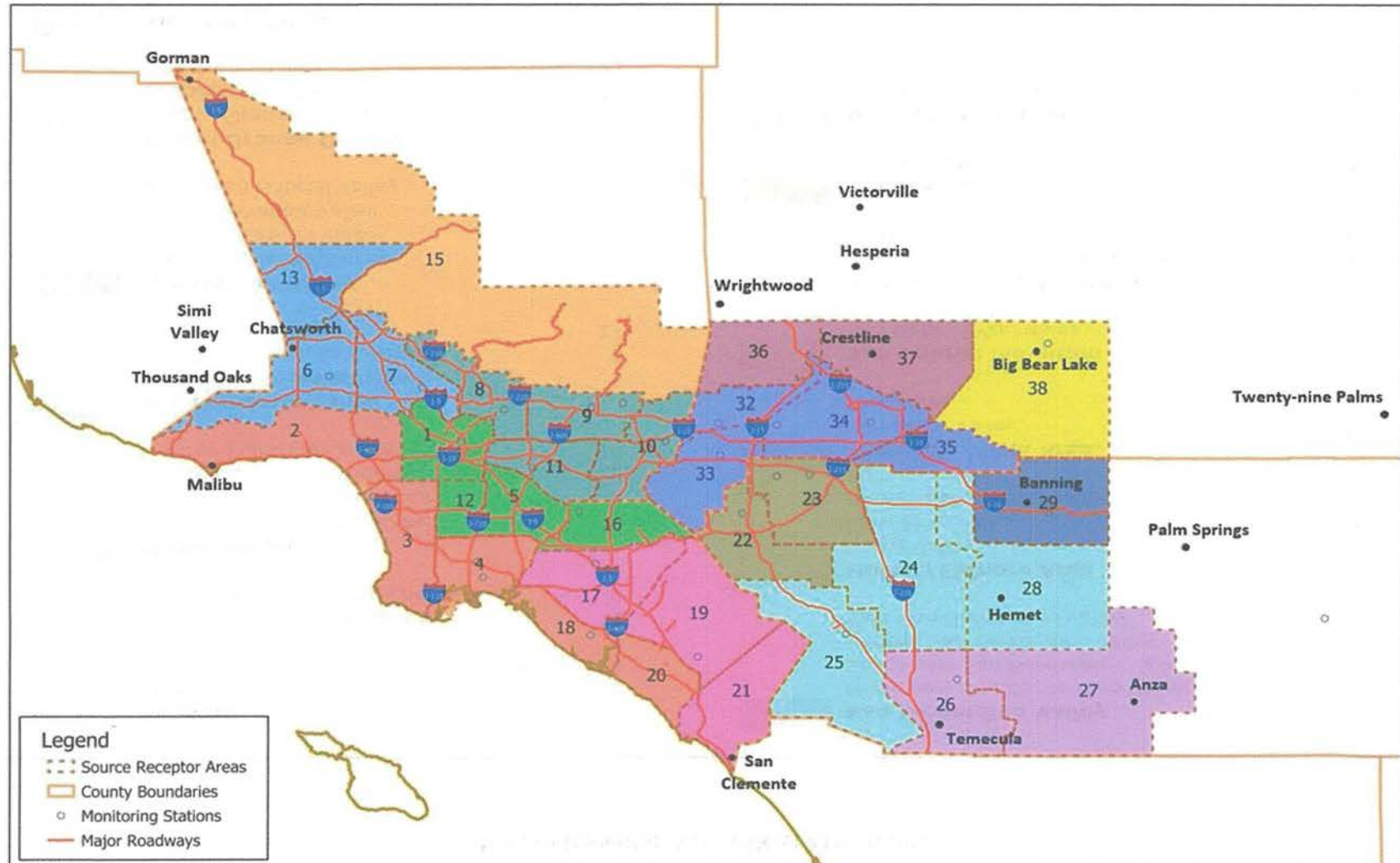
~~Any person that violates the provisions of subdivision (e) is subject to the following:~~

- ~~(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.~~



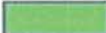



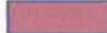




(l) Severability

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 – Source Receptor Areas (SRAs) in the South Coast Air Basin (unshaded areas are outside the Basin)



Source Receptor Area (SRA) Map Index

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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 popped 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 fueller 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.

(Adopted January 9, 1976)(Amended May 5, 1978)(Amended October 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:

$$T_{Adj} = 300 \text{ °F} + T_1 - T_a$$

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 | | Temperature, °F | |
|------------------------|--------------------|-------------|------------------------------|-----------------|
| | A - °API | B - IBP, °F | Not to Exceed Vapor Pressure | |
| <u>Organic Liquids</u> | <u>A</u> | <u>B</u> | <u>0.5 psia</u> | <u>1.5 psia</u> |
| 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 | | Temperature, °F Not to Exceed Vapor Pressure | |
|-----------------------|--------------------|-------------|---|----------|
| | A - °API | B - IBP, °F | 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 | -- | 10 |
| | | (lb/gal) | | |
| Carbon Tetrachloride | 13.4 | 170 | 30 | 60 |
| Chloroform | 12.5 | 142 | -- | 40 |
| | | (lb/gal) | | |
| Cyclohexane | 49.7 | 177 | 35 | 70 |
| 1,2 Dichloroethane | 10.5 | 180 | 35 | 77 |
| | | (lb/gal) | | |
| 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 | -- | 70 |
| | | (lb/gal) | | |
| Methylethyl Ketone | 44.3 | 175 | 30 | 70 |
| 1,1,1-Trichloroethane | 11.2 | 165 | 60 | 100 |
| | | (lb/gal) | | |
| Trichloroethylene | 12.3 | 188 | 50 | 91 |
| | | (lb/gal) | | |
| Toluene | 30.0 | 231 | 73 | 115 |
| Vinyl Acetate | 19.6 | 163 | -- | 60 |

ATTACHMENT A

FLOATING ROOF TANK SEAL CATEGORIES

PRIMARY SEALS

| <u>Category A</u> | <u>Category B</u> | <u>Category C</u> |
|--|---|---|
| 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

| <u>Category A</u> | <u>Category B</u> | <u>Category C</u> |
|--------------------|-------------------|-------------------------|
| 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:
 - 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 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.
 - 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.

Rule 463 (Cont.)

(Amended November 4, 2011)

- 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.

Rule 463 (Cont.)

**ATTACHMENT B (Cont.)
(Amended November 4, 2011)**

**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 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).

Rule 463 (Cont.)

**ATTACHMENT B (Cont.)
(Amended November 4, 2011)**

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
- T Leg stand
- ⊗ Roof drain
- * Emergency roof drain
- ∞ Vacuum breaker
- Vent
- Platform & ladder

Defects:

- ⊖ Leg top
- ‡ Leg pin
- σ 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 single continuous 1/8" - 1-1/2" gap exceed 10% circ. length? No Yes
 - Tube
 - Did 1/2" probe drop between shell and seal? No Yes
 - Did cumulative 1/8" - 1/2" gap exceed 95% circumference length? No Yes
- 6) Internal floating roof (installed before 6/1/84) did LEL exceed 50%
(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:

DATA REPORTING REQUIREMENT FOR ROOF TANKS

The data items shall include, but not be limited to, the following:

- | A. External Floating Roof Tank | B. Internal Floating Roof Tank | C. Fixed Roof Tank |
|--|---|--|
| 1. Tank I.D. | 1. Tank I.D. | 1. Tank I.D. |
| 2. Product Code | 2. Product Code | 2. Product Code |
| 3. Type of Floating Roof Seal | 3. Type of Floating Roof Seal | 3. Vent Type to Vapor Recovery System |
| 4. Shell Construction | 4. Shell Construction | *4. Average Stock Storage Temperature |
| 5. Reid Vapor Pressure | 5. Reid Vapor Pressure | 5. True Vapor Pressure |
| *6. Average Stock Storage Temperature | *6. Average Stock Storage Temperature | 6. Tank Diameter |
| 7. True Vapor pressure | 7. True Vapor Pressure | *7. Vapor Molecular Weight |
| 8. Tank Diameter | 8. Tank Diameter | 8. Average Outage |
| *9. Wind Speed Exponent | *9. Wind Speed Exponent | *9. Average Daily Temperature Change |
| *10. Average Wind Velocity | *10. Average Wind Velocity | 10. Throughput |
| *11. Seal Factor | *11. Seal Factor | 11. Turnover Factor |
| *12. Product Factor | *12. Product Factor | *12. Turnovers Per Year |
| *13. Vapor Molecular Weight | *13. Vapor Molecular Weight | *13. Adjustment Factor for Small Tank |
| *14. Clingage Factor | *14. Clingage Factor | *14. Paint Factor |
| 15. Throughput | 15. Throughput | *15. Crude-Oil Factor (Breathing) |
| *16. Density of Liquid Stock | *16. Density of Liquid Stock | *16. Crude-Oil Factor (Working) |
| 17. Total Number of Different Type of Fitting | *17. Number of Columns | 17. Breathing Loss |
| 18. Total Roof Fitting Loss Factor | *18. Effective Column Diameter | 18. Working Loss |
| 19. Vapor Pressure Function | 19. Total Number of Different Types of Fittings | 19. Total Loss (Without Vapor Recovery) |
| 20. Roof Fitting Loss | *20. Total Deck Fitting Loss Factor | *20. Vapor Recovery System Efficiency |
| 21. Standing Loss | 21. Vapor Pressure Function | 21. Total Loss (With Vapor Recovery) |
| 22. Withdrawal Loss | *22. Deck Seam Length Factor | 22. Number of Excess Upset Emissions Incidents |
| 23. Total Loss | *23. Deck Seam Loss per Unit | 23. Total Excess Upset Emissions |
| 24. Number of Excess Upset Emissions Incidents | 24. Deck Seam Loss | |
| 25. Total excess Upset Emissions | 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 | |

* Default values are available from the District

The Data format and order shall be specified and approved by the Executive Officer.

5/13/91

(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 influent 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:

$$f = -0.0663 + 0.000319 \times (\text{annual mean ambient temperature, } ^\circ\text{F}) \\ - 0.000286 \times (10\% \text{ true boiling point, } ^\circ\text{F}) \\ + 0.00215 \times (\text{annual average influent temperature, } ^\circ\text{F})$$

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.

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.

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 20°C.
- (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.

SCADMD
sholew

5/20/82

January 12, 1982

3-5-82

Adopted
~~Proposed~~ Amended Rule 467 - Safety Pressure Relief Valves Devices

(a) Definitions

For the purpose of this rule:

- (1) A Pressure Relief Valve (PRV) is an automatic pressure relieving device actuated by static pressure upstream of the device.
- (2) A Rupture Disc is a diaphragm held between flanges for the purpose of isolating a volatile organic compound from the atmosphere or from a PRV located downstream.
- (3) A Pressure Relief Device is either a PRV or a rupture disc.
- (4) A Volatile Organic Compound is any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, methane, 1,1,1 trichloroethane, methylene chloride, and trichlorotrifluoroethane, that has a Reid vapor pressure (RVP) greater than 80mm Hg (1.55 pounds per square inch), or an absolute vapor pressure (AVP) greater than 36mm Hg (0.7 psi) at 20°C.
- (5) A Working Day is any day except Saturday or Sunday or employee holiday.
- (6) A Leak is:
 - (A) The dripping of liquid volatile organic compounds at a rate of more than three drops per minute, or
 - (B) An indication of gaseous volatile organic compounds in excess of 10,000 ppm above background when measured at the source with a portable hydrocarbon detection instrument.

- (7) Background is the ambient concentration of volatile organic compounds determined at least three (3) meters upwind from the pressure relief device to be inspected.
- (8) A Refinery is an establishment that processes petroleum as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.
- (9) A Chemical Plant is any plant producing organic chemicals and/or manufacturing products by organic chemical processes.
- (10) Thermal protection means protection from overpressure due to variation in atmospheric temperature or other external heat.

(b) General Requirements

The operator of a refinery or chemical plant shall not use any safety pressure relief valve device on any equipment handling volatile organic compounds materials-above-776mm-Hg (15-pounds-per-square-inch)-absolute-pressure unless the safety pressure relief valve device is vented to a vapor recovery or disposal system; protected-by-a-ruptured-disc,-or-is-maintained-by-an-inspection-system approved-by-the-Air-Pollution-Control-Officer. or inspected and maintained in accordance with the requirements of this rule.

The-provisions-of-this-rule-shall-not-apply-to-any-safety-pressure-relief valve-of-2.5-centimeters-(1-inch)-pipe-size-or-less.

(c) Inspection Requirements

- (1) Visually inspect each PRV on each working day.
- (2) Inspect each pressure relief device handling volatile organic compounds quarterly with a portable hydrocarbon detection instrument, except that after four quarterly inspections in which no leakage is

detected the inspection frequency shall be annually. Detection of a leak shall cause the inspection frequency to revert to quarterly after repairs are completed.

- (3) Where both a rupture disc and a PRV are used in series, the downstream device shall be inspected.
- (4) When a pressure relief device is known to have relieved, such device shall be subjected to an additional inspection with a portable hydrocarbon detection instrument within 15 working days of the date of the known pressure relief.
- (5) Inspect each pressure relief device removed from service for repair within 15 working days of the device's return to service.
- (6) Pressure relief devices which are found to be leaking and which are tagged or logged for repair at the turnaround need not be reinspected before the turnaround.

(d) Maintenance Requirements

Any pressure relief device determined to be leaking shall be:

- (1) Repaired within 15 days of the discovery of the leak to a no-leak condition, or
- (2) Repaired or replaced at the next scheduled turnaround of the process unit if the pressure relief device cannot be isolated for maintenance without shutdown of the process unit.
- (3) A leak shall not be subject to this section if the operator shows to the satisfaction of the Executive Officer that without the contribution of ethane and/or any compound which is not a VOC, the criterion for a leak would not be met.

(e) Recordkeeping

- (1) Each operator of a pressure relief device shall maintain records of inspections required by sections (c)(2), (c)(4), and (c)(5) in a manner approved by the Executive Officer.
- (2) Pressure relief devices which have been observed to leak shall be tagged for repair or shall be logged for repair in a central repair action log for the process unit.

(f) Measurement Requirements

- (1) The instruments used for the measurement of gaseous volatile organic compounds shall be equated to calibrating with hexane while sampling at one liter per minute.
- (2) Inspection sampling shall be performed at the center of the exhaust stack for a valve and at the center of the leakage path for other devices.

(g) Exemptions

- (1) Pressure relief devices which are located such that their inspection would present a safety hazard to personnel.
- (2) Pressure-vacuum vent valves on storage tanks.
- (3) The functional operation of a pressure relief device to relieve an overpressure condition.
- (4) Pressure relief devices of one inch size or less which are installed for thermal protection.

(h) Effective Date

The provisions of this rule shall become effective on July 1, 1982. The provisions of Rule 467 as adopted on May 7, 1976, shall remain in effect until July 1, 1982.

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 than 5 kilograms (11.0 pounds) per hour of sulfur compounds expressed as sulfur dioxide may dilute to meet the provision of subsection (a) above until October 1, 1976.

~~A person shall not discharge into the atmosphere from any sulfur recovery unit producing elemental sulfur, effluent process gas containing more than:~~

~~(a) 500 ppm of sulfur compounds expressed as sulfur dioxide, calculated on a dry basis averaged over a minimum of 15 consecutive minutes.~~

~~(b) 10 ppm of hydrogen sulfide averaged over a minimum of 15 consecutive minutes and calculated on a dry basis.~~

~~(c) 90 kilograms (198.5 pounds) per hour of sulfur compounds expressed as sulfur dioxide.~~

~~Any sulfur recovery unit having an effluent process gas discharge containing less than 5 kilograms (11.0 pounds) per hour of sulfur compounds expressed as sulfur dioxide may dilute to meet the provision of subsection (a) above until October 1, 1976.~~

RULE 469. Sulfuric Acid Units (Revised 10/8/76)

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 expressed as sulfur dioxide, calculated on a dry basis averaged over a minimum of 15 consecutive minutes.

(b) 90 kilograms (198.5 pounds) per hour of sulfur compounds expressed as sulfur dioxide.

RULE 470. Asphalt Air Blowing

8/2/76

A person shall not operate or use any equipment for the air blowing of asphalt unless all gases, vapors and gas-entrained effluents from such equipment are:

(a) Incinerated at temperatures of not less than 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).

2/2/76

RULE 472. Reduction of Animal Matter

8/2/76

(a) A person shall not operate or use any equipment for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from such equipment are:

(1) Incinerated at temperatures of not less than 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 be 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.

(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 (NO₂), calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes, in excess of the concentrations shown in the following table:

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 (NO₂), calculated at three percent oxygen on dry basis averaged over a minimum of 15 minutes, in excess of the concentrations shown in the following table:

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.

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 a permit to build, erect, install or expand is required after May 7, 1976, air contaminants that exceed the following:

(1) Oxides of nitrogen, expressed as nitrogen dioxide (NO₂), calculated at 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 (NO₂), calculated at three percent oxygen on a dry basis averaged over a minimum of 15 minutes, as shown in the following table:

| Fuel | Gas | Liquid or Solid |
|---------------|-------------------------|-------------------------|
| Concentration | 125 ppm NO _x | 225 ppm NO _x |

When more than one type of fuel is used, the allowable concentration shall be determined by proportioning the gross heat input and allowable concentration of each fuel.

2. Combustion contaminants that exceed both of the following two limits:

(A) 5 kilograms (11 pounds) per hour.

(B) 23 milligrams per cubic meter (0.01 gr/SCF) calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes.

(b) Nothing in this rule shall be construed as preventing the maintenance or preventing the alteration or modification of existing steam generating equipment which will not increase the mass rate of air contaminant emissions.

(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:

$$V_{\text{air}} = \frac{\text{VFR (CFM)} \times 144 (\text{in}^2/\text{ft}^2)}{N_{\text{filter}} \times A_{\text{filter}} (\text{in}^2)}$$

Where:

$$V_{\text{air}} = \text{Air velocity (ft/min)}$$

| | | |
|---------------------|---|---|
| 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.

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:

$$IER_{\text{month } i} = [\text{Baseline Emission Rate}_{\text{month } i}] - \text{Post-reduction Emission Rate}_{\text{month } i} \times \text{Activity Level}_{\text{month } i}$$

Where:

- $IER_{\text{month } i}$ = Intra-facility Emission Reductions for month i
- Baseline Emission Rate $_{\text{month } i}$ = Baseline emission rate in month i
- Post Reduction Emission Rate $_{\text{month } i}$ = Post Reduction emission rate in month i

Activity Level_{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.

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:

| <u>Contaminant</u> | <u>Averaging Time</u> | <u>Health Advisory</u> | <u>Stage 1</u> | <u>Stage 2</u> | <u>Stage 3</u> |
|---|--------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| 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.

