

Rule 102

Definition of Terms

The definitions contained in this Rule shall apply to all rules within this Rulebook except when a term is otherwise provided in a specific rule or regulation.

- (1) Actual Emissions – The actual rate of emissions of a Regulated Air Pollutant which accurately represent the emissions from an Emissions Unit. Such emissions shall be calculated using the verified actual operating hours; production rates; and types of materials processed, stored or combusted as applicable.
- (2) Adhesive – Any substance that is used to bond one surface to another by attachment.
- (3) Aerosol Coating Product – A pressurized Coating product that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application.
- (4) Aggregate Emissions – A facility-wide sum of Actual Emissions, on an emissions category specific basis, from emission units operated at a single facility.
- (5) Agricultural Burning – Open outdoor fires used in agricultural operations in the growing of crops or raising of fowls or animals, or open outdoor fires used in forest management, range improvement, or the improvement of land for wildlife and game habitat or disease and pest prevention. Agricultural burning also includes open outdoor fires used in the operation or maintenance of a system for the delivery of water for the purposes specified above.
- (6) Agricultural Facility – Any equipment or group of equipment potentially subject to District Rules 201 and 203 used in an Agricultural Operation and which are located on Contiguous Property under common ownership or control.
- (7) Agricultural Operations – 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 profit or for a livelihood, including the growing and harvesting of crops or the raising of fowl or animals, or conducting agricultural research or instruction by an educational institution. Agricultural Operations do not include activities involving the processing or distribution of crops or fowl.
- (8) Agricultural Wastes – Unwanted or unsalable materials produced wholly from Agricultural Operations, other than forest or range management operations, directly related to the growing of crops or animals for the primary purpose of making a profit or for a livelihood. The term does not include wastes created by land use conversion to non-agricultural purposes unless the destruction of such waste by open outdoor fire is ordered by the County or State Agricultural Commissioner upon his determination that the waste

is infested with infectious transmittable or contagious plant disease which is an immediate hazard to agricultural operation conducted on adjoining or nearby property.

- (9) Air-Assisted Airless Spray – A coating application system in which the coating fluid is supplied to the gun under fluid pressure and air is combined at the spray cap.
- (10) Air Contaminant or Air Pollutant – Any discharge, release, or other propagation into the atmosphere directly or indirectly caused by man and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matters, acids or any combination thereof.
- (11) Air-dried Coating – A coating that is cured at a temperature below 90 °C (194 °F).
- (12) Air Pollution Control Officer (APCO) – That person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of the California Health and Safety Code §40750 and his or her designee.
- (13) Annual Heat Input – The total Heat Input of fuels, in Btu, burned by a Permit Unit in a calendar year, as determined from the Higher Heating Value (HHV) and cumulative annual usage of each fuel.
- (14) Architectural Coatings – Any coatings applied to stationary structures and their appurtenances; to mobile homes, to pavements, or to curbs.
- (15) Atmosphere – That portion of the air which envelopes or surrounds the earth.
- (16) Baked Coating – Any Coating that is cured at a temperature at or above 90 °C (194 °F).
- (17) Best Available Retrofit Control Technology (BARCT) – 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.
- (18) Boiler or Steam Generator – Any combustion equipment (fired with any fuel) used to produce steam. Boiler or Steam Generator does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine.
- (19) Bottom Fill Loading (Bottom Loading) – Any tank, truck, trailer or railroad tank car shall be considered to be bottom loaded when the fuel transfer and vapor return lines have separate, independent, and dedicated attachments on the delivery vehicle, when the inlet is flush with the bottom of the storage device, and when the delivery vehicle hatch remains closed during gasoline transfer.
- (20) Boundaries of the District – That region within California within which these rules are applicable. See Rule 103 – *Description of District Boundaries* for a description of the MDAQMD boundaries.
- (21) Breakdown – A condition other than a normal operating mode caused by a non-preventable mechanical or electrical failure, out of tolerance condition, or accidental occurrence such as fire, explosion, flooding, earthquake, etc.

- (22) California Air Resources Board (CARB) – The California Air Resources Board, the Executive Officer of CARB and his or her authorized representative, the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
- (23) Capture Efficiency (or Capture System Efficiency) – The portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.
- (24) CARB Certified (Certified by CARB) – A 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.
- (25) Clear Topcoat – A final Coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film. Including, but not limited to, Varnishes.
- (26) Coating – A material that is applied to a surface and forms a film in order to identify, beautify, protect, convey a message, or minimize detection of such surface. Coating includes, but is not limited to, materials such as Topcoats, stains, Sealers, primers, fillers, conversion Varnish, pigmented Coating, multicolored Coating, moldseal Coating, washcoat and toner.
- (27) Combustible Refuse – Any solid or liquid combustible waste material containing carbon in a free or combined state.
- (28) Combustion Contaminants – Particulate Matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.
- (29) Compliance Assurance Monitoring – Total equipment, mechanism(s), and/or technique(s) used to demonstrate and insure compliance with Control Device Efficiency requirements. Such monitoring is used to analyze and/or provide a permanent record of process parameters, such as temperatures, pressures and flow rates.
- (30) Compliance Schedule – The date or dates by which a source or category of sources is required to comply with specific emission limitations contained in any air pollution rule, regulation, or statute and with any increment of progress toward such compliance.
- (31) Compression-Ignited (IC) Internal Combustion Engine – An Internal Combustion Engine with operating characteristics significantly similar to the theoretical diesel combustive cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignited engine.

- (32) Confined Animal Facility – A facility where animals are corralled, penned, or otherwise caused to remain in restricted areas for commercial purposes and primarily fed by a means other than grazing for at least forty-five (45) days in any twelve (12) month period.
- (33) Continuous Emissions Monitoring System (CEMS) – All of the equipment that may be required to meet the data acquisition and availability requirements, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.
- (34) Control Device Efficiency – The ratio, in percent, of the weight of the pollutant removed by a control device from the process effluent stream entering the control device compared to the weight of pollutant entering the control device, both measured simultaneously.
- (35) Control Equipment – Air pollution control equipment which eliminates, reduces or controls the issuance of air contaminants.
- (36) Detonation Gun Spraying – A Thermal Spraying process in which the Coating material is heated and accelerated to the workpiece by a series of detonations or explosions from oxygen-fuel gas mixtures.
- (37) Dip Coat (er) – A coating process and application system that coats an object by submerging the object in a vat of Coating, and subsequently withdrawing the object and draining off the excess Coating.
- (38) District – See Mojave Desert Air Quality Management District.
- (39) Dusts – Minute solid particles released into the air by natural forces or by mechanical processes including, but not limited to, crushing, grinding, milling, drilling, demolition, shoveling, conveying, covering, bagging, grading, leveling, excavation, and sweeping.
- (40) Electrostatic Application – A method of applying Coating whereby atomized paint droplets are charged and subsequently deposited on the substrate by electrostatic attraction.
- (41) Emission Control System Operating Parameters – Any operating parameter(s) that the District deems necessary to analyze for the determination of compliance. Such parameters include, but are not limited to, the reagent flow rate, catalyst temperature, and exhaust gas flow rate.
- (42) Emissions Unit – Any article, machine, equipment, other contrivance or combination thereof which emits or has the Potential to Emit any Regulated Air Pollutant.
- (43) Enhanced Emissions Monitoring Device – Any automated data recording device or system having both data gathering and retrieval capabilities. Such equipment includes, but is not limited to, Continuous Emissions Monitoring Systems (CEMS) and Parametric or Predictive Emissions Monitoring Systems (PEMS).
- (44) Equipment – Any article, machine, or other contrivance.

- (45) Excavation – Removal of surface covering, soil, pavement, etc. to expose underground equipment to view or to prepare a subsurface area for future construction.
- (46) Excess Organic Liquid Drainage:
- (a) More than two (2) milliliters of liquid drainage per disconnect from a top loading operation; or
 - (b) More than ten (10) milliliters of liquid drainage from a bottom loading operation. Such liquid drainage shall be determined by computing the average drainage from three (3) consecutive disconnects at any one loading arm.
- (47) Executive Director – The Air Pollution Control Officer. See Air Pollution Control Officer.
- (48) Exempt Compound – Those compounds listed as excluded from the definition of volatile organic compounds in 40 CFR 51.100(s).
- (49) Existing Facility – Any Facility operating, constructed or under construction as of the date of adoption of rules related to such facility, unless otherwise specified in the rules.
- (50) Facility – Any Permit Unit, group of Permit Units, non-permitted Equipment, or any combination thereof which:
- (a) Emits or may emit an Air Pollutant; and
 - (b) Belongs to a single major industrial group in the Standard Industrial Classification Manual; and
 - (c) Is located on a single parcel of land or on Contiguous or adjacent Property within the District; and
 - (d) Which is owned or operated by the same Person or by Persons under common control.
 - (e) For the purpose of this definition, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.
- (51) Federal Ozone Non-Attainment Area (FONA) – That portion of San Bernardino County that lies within the lines which begin at:
- (a) The San Bernardino - Riverside County boundary, running north along the range line common to Range 3 East and Range 2 East;
 - (b) Then west along the township line common to Township 2 North and Township 3 North;
 - (c) Then north along the San Bernardino - Los Angeles County Boundary and the San Bernardino - Kern County Boundary;

- (d) Then east along latitude 35 degrees, 10 minutes north;
 - (e) Then south along longitude 115 degrees, 45 minutes west, and west along the San Bernardino - Riverside County Boundary.
- (52) Fixed Roof Tanks – A storage tank with a roof that is permanently affixed to the shell of the storage tank.
- (53) Flame Spraying – A Thermal Spraying process in which an oxygen/fuel gas flame is the source of heat for melting the surfacing material.
- (54) Floating Roof Tanks:
- (a) External Floating Roof – A vapor loss control device, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and which is equipped with an approved closure device between the tank shell and roof edge.
 - (b) Internal Floating Roof – A cover or roof in a fixed roof tank that rests upon or is floated upon the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- (55) Flow Coat(er) – A Coating process and application system where no air is supplied to the nozzle and where the paint flows over the part and the excess Coating drains back into the collection system.
- (56) Fugitive Dust – Any solid Particulate Matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of persons.
- (57) Fugitive Liquid Leak – A dripping of liquid organic compounds at a rate in excess of three (3) drops per minute from any single leak source other than the disconnect operations of liquid fill line and vapor line.
- (58) Fugitive Vapor Leak – An escape of organic vapors from a source other than the tank truck, trailer or railroad tank car when measured in excess of 3,000 ppm (instrument calibrated with propane) above background at a distance of two (2) centimeters (0.8 inch) from the source for more than ten (10) seconds duration, or equivalent test method as approved in writing by the APCO, CARB and USEPA. (Background is the ambient concentration of organic compounds determined at least three (3) meters upwind of the potential source and uninfluenced by any specific emission source.) A “fugitive vapor leak source” does not include liquid spillage or condensate resulting from “fugitive liquid leaks”.
- (59) Gasoline – Any organic liquid including petroleum distillate and methanol having a Reid Vapor Pressure of 200 mm Hg (3.9 pounds per square inch), or greater, and used as a motor vehicle fuel, or any fuel which is commonly or commercially known or sold as gasoline.

- (60) Gasoline Transfer and Dispensing Facility – A mobile system or stationary facility, consisting of one or more storage tanks and associated equipment, which receive, store and dispense gasoline.
- (61) Gasoline Vapors – The organic compounds of gasoline, which exist in a vapor state including, where present, entrained liquid gasoline.
- (62) Grams of VOC Per Liter of Coating Less Water and Less Exempt Compounds (VOC Content) – The weight of VOC per combined volume of VOC and Coating solids.
- (63) Grams of VOC Per Liter of Material – The weight of VOC per volume of material.
- (64) Hearing Board – The Hearing Board of the Mojave Desert Air Quality Management District.
- (65) Heat Input – The chemical heat released due to fuel combustion in a Permit Unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- (66) Higher Heating Value (HHV) – The total heat liberated, including the heat of condensation of water, per mass of fuel burned (Btu per pound) when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to standard conditions.
- (67) High-Velocity Oxy-Fuel (HVOF) Spraying – A Thermal Spray process in which particles are injected into a high-velocity jet formed by the combustion of oxygen and fuel.
- (68) High-Volume, Low-Pressure (HVLDP) – A coating application system which is operated at air pressures between 0.1 and 10 pounds per square inch gauge (psig) measured dynamically at the center of the air cap and at the air horns.
- (69) Increments of Progress – Steps to be taken by an owner or operator to bring a source of air contaminants into compliance. See definition of “Schedule of Increments of Progress”.
- (70) Ink – A fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.
- (71) Liquid Tight – A liquid leak rate of no more than three (3) drops per minute.
- (72) Loading Facility – Any aggregation or combination of organic liquid loading equipment which is under the control of one person at a single location.
- (73) Maximum Rated Capacity – The maximum design heat input of a unit at the highest heating value of the fuel used.
- (74) Mobile Fueler – Any tank truck or trailer that is used to transport and dispense gasoline from an onboard storage tank into any motor vehicle fuel tank.

- (75) Mojave Desert Air Quality Management District – The independent special district responsible for all aspects of air quality management as defined in Health and Safety Code §39038.3 and created pursuant to Chapter 13 (commencing with §41200) of Part 3, within that region of California within the boundaries as defined in Rule 103. See Rule 103 – *Description of District Boundaries*.
- (76) Motor Vehicle – Any self-propelled vehicle, including, but not limited to cars, trucks, buses, golf carts, vans, motorcycles, recreational vehicles, tanks, and armored personnel carriers as defined in Sections 415 and/or 670 of the California Vehicle Code. See Registered Motor Vehicle.
- (77) Multi-Color(ed) Coating – A Coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.
- (78) Multiple Chamber Incinerator – Any Equipment, structure or part of a structure, used to dispose of combustible refuse by burning, consisting of three (3) or more refractory lined combustion chambers, physically separated by refractory walls, interconnected by gas passage ports or ducts.
- (79) Non-Absorbent Container – A container made of non-porous material that does not allow the migration of Solvents through it.
- (80) Oil-Effluent Water Separator – Any tank, box, sump or other container in which any petroleum or product thereof, floating on or entrained or contained in water entering such tank, box, sump, or other container, is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.
- (81) Operator – That person in charge of a particular operation subject to air pollution control. See definition of “Owner”.
- (82) Organic Liquid – Any compound of carbon, including organic materials, organic solvents and gasoline, which is in a liquid phase at ambient or storage conditions.
- (83) Organic Materials – Chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.
- (84) Organic Solvents – Includes diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents, except that such materials 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).
- (85) Overall Control Efficiency (CE) – The ratio of the weight of a Regulated Air Pollutant removed by an emission control system to the total weight of that Regulated Air Pollutant emitted from a controlled operation, both measured simultaneously.
- (86) Owner – That person ultimately responsible for a particular operation. “Owner/Operator” refers to any person who owns, leases, operates, controls, or supervises a stationary source. See definition of “Person”.

- (87) Oxides of Nitrogen (NO_x) – The sum of the molecular forms of nitrogen oxide and nitrogen dioxide. When measured or calculated, the total of the two molecular forms is collectively expressed as nitrogen dioxide (NO₂).
- (88) Parametric Emissions Monitoring System (PEMS) – A monitoring system that continuously measures process parameters and uses a model or algorithm to estimate emissions based on the parameters measured.
- (89) Particulate Matter (PM) – Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (90) Particulate Matter (PM₁₀) – Particulate matter with an aerodynamic diameter of less than or equal to a nominal 10 micrometers. Gaseous emissions which condense to form particulate matter at ambient temperatures shall be included.
- (91) Particulate Matter (PM_{2.5}) – Particulate Matter with an aerodynamic diameter of less than or equal to a nominal 2.5 micrometers. Gaseous emissions which condense to form particulate matter at ambient temperatures shall be included.
- (92) Parts per Million (ppm) – Parts per million.
- (93) Parts per Million by Volume (ppmv) – The number of gas molecules of a given species, or group, in one million total gas molecules.
- (94) Parts per Million by Weight (ppmw) – The mass or weight of a component substance relative to the mass or weight of the total substance including all components, specified as a ratio with one million mass or weight units in the denominator (i.e. grams per megagram or pounds per million pounds).
- (95) Permit Unit – Any Emissions Unit or equipment which is required to have a Permit to Operate pursuant to District Rule 203 – *Permit to Operate*.
- (96) Person – Any individual, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, user or owner, or any state or local governmental agency or public district or any other officer or employee thereof. Person also means the United States or its agencies to the extent authorized by Federal Law.
- (97) Photochemically Reactive Solvent – 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; five (5) percent;
 - (b) A combination of aromatic compounds with eight (8) or more carbon atoms to the molecule except ethylbenzene, methyl benzoate and phenyl acetate: eight (8) percent; or,

- (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.

- (98) Plasma Spraying – A Thermal Spraying process in which an electric arc is used to ionize a gas and produce a plasma jet that melts and propels the Coating material to the workpiece.
- (99) Potential to Emit (PTE) – The maximum capacity of a Facility to emit any air pollutant under its physical and operational design. Calculation methods, inclusions and exclusions are program specific and can be found in other District Rules.
- (100) Precursor – A substance which, when released to the atmosphere, forms or causes to be formed or contributes to the formation of a Regulated Air Pollutant. These include, but are not limited to the following:

<u>Precursors</u>	<u>Secondary Pollutants</u>
Ammonia	(a) PM ₁₀ and PM _{2.5}
Hydrocarbons and substituted hydrocarbons (Reactive Organic Compounds and Volatile Organic Compounds)	(a) Photochemical oxidant (ozone, O ₃) (b) The organic fraction of PM ₁₀ and PM _{2.5}
Nitrogen oxides (NO _x)	(a) Nitrogen dioxide (NO ₂) (b) The nitrate fraction of PM ₁₀ and PM _{2.5} (c) Photochemical oxidant (ozone, O ₃)
Sulfur oxides (SO _x)	(a) Sulfur dioxide (SO ₂) (b) Sulfates (SO ₄) (c) The sulfate fraction of PM ₁₀ and PM _{2.5}
Hydrogen Sulfide (H ₂ S)	(a) Sulfur dioxide (SO ₂) (b) Sulfates (SO ₄) (c) The sulfate fraction of PM ₁₀ and PM _{2.5}

- (101) Predictive Emissions Monitoring System (PEMS) – The equipment necessary to monitor process and Emission Control Equipment operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, oxygen or carbon dioxide concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.
- (102) Pressure/Vacuum Relief Valve – A valve that is installed on the vent pipes of storage tanks to relieve pressure or vacuum build-up at preset values of pressure or vacuum.

- (103) Process Weight – The total weight of all materials introduced into any specific process which may discharge contaminants into the atmosphere. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and air will not.
- (104) Process Weight per Hour – The total process weight divided by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.
- (105) Rated Brake Horsepower – The continuous brake horsepower rating specified for the engine by the manufacturer or listed on the nameplate of the unit, unless otherwise physically limited and specified by a condition on the engine's permit or District registration.
- (106) Rated Heat Input – The Heat Input capacity (in MMBtu/hr) specified on the nameplate of the unit, unless:
- (a) The unit is limited by permit condition to a lesser Heat Input than specified on the nameplate, in which case the limiting condition shall be used as the Rated Heat Input; or
 - (b) The unit is operated above the Heat Input capacity specified on the nameplate, in which case the maximum operated rate shall be used as the Rated Heat Input.
- (107) Reasonably Available Control Technology (RACT) – The lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.
- (108) Receptor Area – That specified geographic area in which the air contaminants emitted from a source area are present or to which they may be transported.
- (109) Reduction of Animal Matter – Any heated process used for rendering, cooking, drying, dehydrating, digesting, evaporating and protein concentrating of animal matter.
- (110) Registered Motor Vehicle – Any motor vehicle which is registered or requires registration for use on the highway.
- (111) Regulated Air Pollutant – Any Air Pollutant that is subject to the provisions of State or Federal law or the regulations promulgated thereunder. Inclusion and exclusions of particular Air Pollutants are program specific and can be found in other District Rules.
- (112) Regulation – Any of the major subdivisions of the Rules of the Mojave Desert Air Quality Management District.
- (113) Repair Coating – A Coating used to re-coat portions of a product which has sustained mechanical damage to the Coating following normal painting operations.
- (114) Retail Gasoline Station – Any motor vehicle refueling facility subject to payment of California sales tax on gasoline sales.

- (115) Roll Coater – A type of application Equipment in which a series of mechanical rollers form a thin Coating film on the surface of a roller, which is subsequently applied to a substrate by moving the substrate underneath the roller.
- (116) Rule – A rule of the Mojave Desert Air Quality Management District.
- (117) Schedule of Increments of Progress – A statement of dates when various steps are to be taken to bring a source of air contaminants into compliance with emission standards and shall include, to the extent feasible, the following:
- (a) The date of submittal of the final plan for the control of emissions of air contaminants from that source to the District.
 - (b) The date by which contracts for emission control systems or process modifications will be awarded, or the date by which orders will be issued for the purchase of component parts to accomplish emission control or process modification.
 - (c) The date of initiation of on-site construction or installation of emission control equipment or process change.
 - (d) The date by which on-site construction or installation of emission control equipment or process modification is to be completed.
 - (e) The date by which final compliance is to be achieved.
 - (f) Such other dates by which other appropriate and necessary steps shall be taken to permit close and effective supervision of progress toward timely compliance.
- (118) Solid Particulate Matter – Particulate matter which exists as a solid at standard conditions.
- (119) Solvent – Any liquid containing a Volatile Organic Compound or combination of Volatile Organic Compounds, which is used as a diluent, thinner, dissolver, viscosity reducer, cleaning agent, or for other similar uses. A Solvent may be a single compound or a blend of two (2) or more compounds.
- (120) Source Area – That specified geographic area in which air contaminants are emitted.
- (121) South Coast Air Quality Management District (SCAQMD) – The air district created pursuant to Division 26, Part 3, Chapter 5.5 of the Health & Safety Code (commencing with §40400).
- (122) Stain – Coatings which are formulated to change the color of a surface but not completely conceal the surface, so that the grain is still visible.
- (123) Standard Conditions – A gas temperature of 15.5 °C (60 °F) and a gas pressure of 760 mm Hg (14.7 pounds per square inch) absolute.
- (124) Stripper – A liquid used to remove cured Coatings, cured Inks and/or cured Adhesives.

- (125) Submerged Fill Loading – A type of process for organic liquid loading, where the discharge opening is completely submerged below the liquid level, when the height of that liquid when measured is above the bottom of the vessel at eight centimeters (3.2 inches) or higher.
- (126) Submerged Fill Pipe:
- (a) Top Loading – Any fill pipe where the discharge opening is completely submerged when the liquid level is 15 centimeters six (6) inches above the bottom of the container.
 - (b) Side Loading – Any fill pipe where the discharge opening is entirely submerged when the liquid level is 45 centimeters (18 inches) above the bottom of the container.
- (127) Switch Loading – A transfer of Organic Liquids with a vapor pressure of less than 77.5 mm HG (1.5 psia) under actual loading condition into any tank truck, trailer or railroad tank car that was previously loaded with an organic liquid with a vapor pressure of 77.5 mm HG (1.5 psia) or greater.
- (128) Tank Replacement – The removal and installation of a new or another storage tank.
- (129) Thermal Spraying Operation – One of several processes in which metallic or nonmetallic surfacing materials are deposited in molten or semi-molten condition on a substrate to form a Coating. The surfacing material may originate in the form of powder, rod, or wire before it is heated, prior to spraying or deposition. Thermal Spraying Operations include: Detonation Gun Spraying, Flame Spraying, High-Velocity Oxy-Fuel Spraying, Plasma Spraying, and Twin-Wire Electric Arc Spraying.
- (130) Throughput – The mass or volume of a material or substance that is handled, or processed by a system in a given time period, such as gallons per year, tons per hour, etc.
- (131) Touch-Up – Any coating operation used to cover minor imperfections appearing after the main coating operation.
- (132) Transfer Efficiency – The ratio of the weight or volume of Coating solids adhering to an object to the total weight or volume, respectively, of Coating solids used in the application process, expressed as a percentage.
- (133) True Vapor Pressure – The equilibrium partial vapor pressure exerted by an organic liquid at actual storage temperature.
- (134) Twin-Wire Electric Arc Spraying – A Thermal Spraying process where two electrically conducting wires are brought close together to create an electric arc. The molten material formed in the arc is then projected by a compressed gas stream towards a workpiece on which it forms a Coating.
- (135) United States Environmental Protection Agency (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

- (136) Vapor Recovery System – A system that is designed to collect or capture the vapors released and/or generated during the dispensing, transfer and/or storage of liquids, and is capable of storage, transferring and/or disposal of the recovered vapors.
- (137) Vapor Recovery System Efficiency – The estimated efficiency of the air pollution control technology which is incorporated, by means of an enforceable permit condition(s). Emission reductions attributed to lowering throughput rates or curtailing operating hours shall not be considered in determining abatement efficiency.
- (138) Vehicle – A device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved by human power or used exclusively upon stationary rails or tracks.
- (139) Volatile Organic Compound (VOC) – Any compound of carbon excluding Exempt Compounds.

[SIP: See SIP Table at <http://www.mdaqmd.ca.gov>]

8/10/95

(Adopted: July 25, 1977)(Revised: December 19, 1988)(Amended: June 28, 1995)

Rule 103

Description of the District Boundaries

(A) District Boundaries

- (1) The district boundaries include the desert portion of San Bernardino County (as described in Section (B) below) and those portions of the County of Riverside commonly known as the Palo Verde Valley (as described in Section (C) below).

(B) Desert Portion of San Bernardino County

- (1) That portion of San Bernardino County east and north of a line described as follows: Beginning at the San Bernardino-Riverside County boundary and running north along the range line common to R 3 E and R 2 E, San Bernardino Base and Meridian; then west along the township line common to T 3 N and T 2 N to the San Bernardino-Los Angeles County boundary.

(C) Palo Verde Valley

- (1) 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 lines 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.

(Adopted: 01/09/76, CARB Ex. Ord. G-73: 02/01/77;
Readopted: 07/25/77, Amended: 12/19/88)

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.

[SIP: Approved 11/27/90, 55 FR 49281, 40 CFR 52.220(c)(179)(i)(B); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(c); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(31)(vi)(B)]

RULE 206

Posting of Permit to Operate

(A) Permit to be Posted on Equipment

- (1) A person granted a permit under Rule 201 and/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 a manner that the permit number, equipment description, and the specified operating conditions are clearly visible and accessible.
- (2) In the event that the equipment is so constructed or operated that the permit to operate or the 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.

(B) Request for Waiver

- (1) A person granted a permit under Rule 201 and/or 203 may request from the Air Pollution Control Officer (APCO), in writing, a waiver of the requirements of Section (A) above. Such requests shall specify an alternative location for placement of the permits such that the permits are easily accessible to District staff and to operators of the equipment.
- (2) The APCO shall grant or deny the request in writing within thirty (30) days of receipt. If the APCO fails to respond within thirty (30) days the request shall be deemed denied.
- (3) If a request for waiver is denied the person granted a permit under Rule 201 and/or 203 may not reapply for a waiver for at least one (1) year from the date of denial.
- (4) A waiver shall be valid until revoked in writing by the APCO.

[SIP: See SIP table at <http://www.mdaqmd.ca.gov>]

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RULE 219

Equipment Not Requiring a Permit

(A) Purpose.

- (1) The purpose of this Rule is as follows:
 - (a) To describe Equipment that does not require a permit pursuant to District Rules 201 and 203; and
 - (b) To describe Equipment which does not need to be listed on a Federal Operating Permit (FOP) issued pursuant to Regulation XII.

(B) General Provisions.

- (1) The Air Pollution Control Officer (APCO) shall not require an Owner/Operator to obtain a permit for particular Equipment pursuant to District Rules 201 and 203 if all of the following are true:
 - (a) Such Equipment does not emit air contaminants in excess of any of the following:
 - (i) Two (2) tons per year of any Regulated Air Pollutant for which a National Ambient Air Quality Standard has been promulgated;
 - (ii) A de minimis level for a Hazardous Air Pollutant, promulgated pursuant to 42 U.S.C. §7412 (FCAA §112);
 - (iii) A significance level defined in 40 CFR 52.21(b)(23)(i);
 - (iv) 0.5 tons per year of a Hazardous Air Pollutant.
 - (b) Such Equipment does not constitute any of the following:
 - (i) A Major Facility as defined in Rule 1301, or
 - (ii) A Major Modification as defined in Rule 1301, or
 - (iii) A Major PSD Facility as defined in Rule 1600(B), or
 - (iv) A Major PSD Modification as defined in Rule 1600(B).
- (2) The APCO shall not require an Owner/Operator to list particular Equipment on an application for a FOP or require the listing of such Equipment upon a FOP issued pursuant to Regulation XII if:
 - (a) Such Equipment emits Air Contaminants in an amount less than the threshold levels listed in subpart (D)(1); and

- (b) Such Equipment is contained in the list of particular Equipment in subpart (E); and
 - (c) Such Equipment is not subject to an Applicable Requirement and information regarding such Equipment is not required to determine the applicability of an Applicable Requirement; and
 - (d) Such Equipment is not included in subpart (E) solely due to size or production rate.
- (3) The APCO shall not require an Owner/Operator of an Agricultural Facility to obtain a permit for Equipment located at such a Facility which would otherwise be subject to permit pursuant to District Rules 201 and 203 if:
- (a) The Agricultural Facility emits Air Contaminants in an amount less than the threshold levels listed in subpart subsection (D)(2)(b); or
 - (b) The Agricultural Facility is a Confined Animal Facility eligible for exclusion under subsection (D)(2)(a); and
 - (c) The Agricultural Facility or particular agricultural equipment potentially exempt under this subsection is not otherwise:
 - (i) A Major Facility pursuant to District Regulation XIII – *New Source Review* or a Major PSD Facility pursuant to District Regulation XVI – *Prevention of Significant Deterioration*; and
 - (ii) Subject to Regulation pursuant to the Federal Clean Air Act (“FCAA”, 42 U.S.C. Sec. 7401 et. seq.).
- (4) Nothing in this Rule shall be interpreted to exempt the emissions from such Equipment from being considered in any emissions calculations required pursuant to District Regulation XII – *Federal Operating Permits*, Regulation XIII – *New Source Review* and Regulation XVI – *Prevention of Significant Deterioration* unless such emissions are specifically exempted by those Regulations.
- (5) Nothing in this Rule shall be interpreted to exempt Equipment, materials used by such Equipment and/or associated air pollution Control Equipment from any applicable provision of any other District Rule or Regulation.
- (6) Nothing in this Rule shall be interpreted to exempt air pollution Control Equipment venting otherwise permit exempt Equipment from obtaining permits. This provision does not apply if all Equipment venting to the Control Equipment is exempt and all relevant provisions of Section (E) specifically exempt such Control Equipment. In no case shall air pollution Control Equipment be used to meet any permit exemption threshold as set for in Section (E) of this Rule.
- (7) Nothing in this Rule shall be interpreted to exempt internal combustion engines, general combustion or heat transfer Equipment used in conjunction with or to power exempt Equipment unless the internal combustion engine, general combustion or heat transfer Equipment itself is also exempt pursuant to the

applicable provisions of subsection (E)(2). This provision does not apply to Equipment which is exempt pursuant to subsection (E)(1).

- (8) The burden of proof regarding the applicability of this Rule to particular Equipment shall be on the Owner/Operator of such Equipment. Failure to provide proof of the applicability of this rule to particular Equipment shall be considered a violation of District Rules 201 and/or 203 and may also constitute a violation of District Regulation XII – *Federal Operating Permits*, Regulation XIII – *New Source Review* or Regulation XVI – *Prevention of Significant Deterioration* if applicable.

(C) Definitions.

For the purposes of this Rule the definitions contained in District Rule 102 – *Definition of Terms*, District Rule 1301 – *New Source Review Definitions* and Section (B) of Rule 1600 – *Prevention of Significant Determination* shall apply. In case of a conflict the provisions of District Rule 1301 shall apply followed by District Rule 1600(B) then District Rule 102 unless a definition from another District Rule is specifically referenced.

(D) Threshold Criteria.

(1) Threshold Criteria for Exclusion from Federal Operating Permit

- (a) To be eligible for exclusion from a FOP pursuant to section (B)(2), any Equipment listed under this Rule shall not emit Air Contaminants in an amount greater than any of the following:
 - (i) Two (2) tons per year of any Regulated Air Pollutant for which an National Ambient Air Quality Standard has been promulgated; or
 - (ii) A de minimis level for a Hazardous Air Pollutant, promulgated pursuant to 42 U.S.C. §7412 (FCAA §112); or
 - (iii) Any significance level defined in 40 CFR 52.21(b)(23)(i); or
 - (iv) 0.5 tons per year of such Hazardous Air Pollutant, whichever is less.

(2) Threshold Criteria for Agricultural Facilities

- (a) To be eligible for exclusion from permitting requirements pursuant to section (B)(3)(b) a Confined Animal Facility must have, at all times, less than the following numbers of animals:
 - (i) 1,000 milk-producing dairy cows;
 - (ii) 3,500 beef cattle;
 - (iii) 7,500 calves, heifers or other cattle;
 - (iv) 650,000 chickens other than laying hens;
 - (v) 650,000 laying hens;
 - (vi) 650,000 ducks;
 - (vii) 100,000 turkeys;
 - (viii) 3,000 swine;

- (ix) 2,500 horses;
 - (x) 15,000 sheep, lambs, or goats; or
 - (xi) 30,000 rabbits or other animals.
- (b) To be eligible for exclusion from permitting requirements pursuant to subsection (B)(3)(a), an Agricultural Facility must, in aggregate, produce Actual Emissions less than all of the following:
- (i) Twelve and one half (12.5) tons per year of NO_x and VOC if the Agricultural Facility is located within an area designated nonattainment for Ozone as listed in 40 CFR §81.305;
 - (ii) Fifty (50) tons per year of any other Air Pollutant, for which an Ambient Air Quality Standard has been promulgated under the FCAA; or
 - (iii) Five (5) tons per year of any Hazardous Air Pollutant; or
 - (iv) Twelve and one half (12.5) tons per year of any combination of Hazardous Air Pollutants; or
 - (v) A lesser quantity of a Hazardous Air Pollutant as USEPA has established by rule.

For the purposes of determining permitting applicability, Fugitive Emissions, except Fugitive Dust Emissions, are included in determining Aggregate Emissions.

(E) Specific Equipment Not Requiring a Permit.

(1) Vehicles and Transportation Equipment.

- (a) Motor Vehicles as defined by §415 and/or 670 of the Vehicle Code of the State of California (as effective on the date of the last amendment of this rule) but not including any article, machine, Equipment, or other contrivance mounted on such Vehicle, that would otherwise require a permit under the provisions of these Rules and Regulations.
- (b) Equipment mounted upon Vehicles that are used exclusively to transport materials on streets or highways including, but not limited to, cement trucks, and Gasoline tanker trucks (does not include asphalt or coal tar pitch roofing kettles).
- (c) Locomotives, airplanes, and watercraft used to transport passengers or freight.

(2) Combustion and Heat Transfer Equipment.

- (a) Internal Combustion Engines and Gas Turbines - Piston type internal combustion engines with a manufacture's maximum continuous rating of less than 50 brake horsepower, or gas turbine engines with a maximum Heat Input rate of less than 3,000,000 Btu (756,300 kilogram-calories) per hour at International Standardization Organization (ISO) Standard Day

Conditions. The ratings of all engines or turbines used in the same process will be aggregated to determine whether this exemption applies.

- (b) General Combustion Source - Any combustion Equipment that has a maximum Heat Input rate of less than 2,000,000 Btu (504,000 kilogram-calories) per hour (gross) and is equipped to be fired exclusively with Public Utilities Commission regulated natural gas, liquefied petroleum gas or any combination thereof. The ratings of all combustion Equipment used in the same process will be aggregated to determine whether this exemption applies.
 - (c) Internal combustion engines used exclusively for training at educational institutions.
 - (d) Internal combustion engines registered pursuant to the California Statewide Portable Engine Registration Program pursuant to Health & Safety Code §§41750 et seq and the regulations promulgated thereunder (as such are in effect on the date of the last amendment of this rule) unless such engines have been determined to be stationary pursuant to the provisions of that program or are otherwise required to have a permit pursuant to the provisions of subsection (E)(16).
 - (e) Fuel cells which use phosphoric acid, molten carbonate, proton exchange membrane or solid oxide technologies.
 - (f) Power pressure washers and hot water or steam washers and cleaners, that are equipped with a heater or burner designed to be fired on diesel fuel or kerosene, have a rated maximum heat input capacity of 550,000 Btu per hour or less, are equipped with a non-resettable chronometer, and the maximum NO_x emission output is less than one (1) pound per day and use no more than 50 gallons of fuel per day.
- (3) Structures and Equipment - General.
- (a) Structural changes which cannot change the quality, nature or quantity of Air Contaminant emissions.
 - (b) Repairs or maintenance not involving structural changes to any Equipment for which a permit has been granted.
 - (c) 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.
 - (d) Laboratory Equipment used exclusively for chemical and physical analysis and bench scale or laboratory test Equipment.
 - (e) Vacuum-producing devices used in laboratory operations or in connection with other Equipment which is exempt by this Rule.

- (f) Vacuum-cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.
 - (g) Natural-draft hoods, natural-draft stacks, or natural-draft ventilators.
 - (h) Bench scale experiments or research operations and Equipment used exclusively for investigation, experimentation or research to advance the state of air pollution control knowledge or to improve techniques. Prior approval, which may include limitation of time, shall be obtained in writing from the APCO.
- (4) General Utility Equipment.
- (a) 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.
 - (b) Refrigeration units. This exemption does not apply to refrigeration units used as or in conjunction with air pollution Control Equipment.
 - (c) Water cooling towers and water-cooling ponds that have a circulation rate of less than 10,000 gallons/minute (37,800 liters/minute) and which are not used for: evaporative cooling of process water; or aqueous solutions used for evaporative cooling of barometric jets or barometric condensers; and into which no chromium compounds are added. *[Typo correction]*
 - (d) Equipment used exclusively for steam cleaning if the aggregate of all combustion sources associated with the same process is less than 2,000,000 Btu per hour and if the unit(s) is fired exclusively with natural gas or liquefied petroleum gas. The Equipment which applies steam to substrates for the sole purpose of removing grease, dirt and other residues is exempt from permitting requirements.
 - (e) Equipment used exclusively for space heating other than Boilers.
- (5) Glass, Ceramic, Metallurgical Processing & Fabrication Equipment.
- (a) Crucible-type or pot-type furnaces with a brimful capacity of less than 452 cubic inches (7400 cubic centimeters) of any molten metal.
 - (b) Crucible furnaces, pot furnaces, or induction furnaces with a capacity of less than 992 pounds (450 kilograms) 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 (provided the materials do not contain alloying elements of arsenic, beryllium, cadmium, chromium and/or lead). Percent by weight of such metals shall be determined by the referenced test method, or an equivalent method approved by CARB, USEPA, and the APCO.

- (i) Aluminum or any alloy containing over 50 percent aluminum by weight. ASTM E34-11 – *Standard Test Methods for Chemical Analysis of Aluminum and Aluminum-based Alloys*.
 - (ii) Magnesium or any alloy containing over 50 percent magnesium by weight.
 - (iii) Lead or any alloy containing over 50 percent lead by weight.
 - (iv) Tin or any alloy containing over 50 percent tin by weight.
 - (v) Zinc or any alloy containing over 50 percent zinc by weight. ASTM E536-16 – *Standard Test Methods for Chemical Analysis of Zinc and Zinc Alloys*.
 - (vi) Copper. ASTM E34-11 – *Standard Test Methods for Chemical Analysis of Aluminum and Aluminum-based Alloys*.
 - (vii) Precious metals (gold, silver, palladium, and platinum). ASTM E1335-08 – *Standard Test Methods for Determination of Gold in Bullion by Fire Assay Cupellation Analysis*.
- (c) Molds used for the casting of metals.
 - (d) Equipment used exclusively for inspection of metal products and Control Equipment exclusively venting such Equipment.
 - (e) Brazing, hand-held soldering, and hot air solder leveling, (but not hot-oil or vapor phase solder levelings), and Control Equipment venting exclusively such Equipment. Welding Equipment, oxygen gaseous fuel-cutting Equipment, laser etching Equipment, engraving of metal Equipment and associated Control Equipment. This exemption does not include facilities primarily engaged in the activities listed in 40 CFR 63.11514 using plasma arc-cutting Equipment or laser cutting Equipment that is used to cut stainless steel or alloys containing cadmium, chromium, lead, manganese or nickel, or laser cutters that are rated more than 400 watts and control Equipment exclusively venting such Equipment.
 - (f) Equipment used for washing products fabricated from metal or glass provided that no organic washing agents are used in the process.
 - (g) Foundry sand mold forming Equipment to which no heat and no VOC or chemical desiccants are applied, and Control Equipment venting such Equipment exclusively.
 - (h) Equipment used exclusively for forging, pressing, rolling, or drawing of metals or for heating metals exclusively with electricity prior to forging, pressing, rolling, or drawing.
 - (i) Equipment used exclusively for heat treating glass or metals (provided no organic compounds are present) or used exclusively for case hardening, carburizing, cyaniding, nitriding, carbonitriding, siliconizing, or diffusion treating of metal objects.
 - (j) Ladles used in pouring molten metals.

- (k) Tumblers used for the cleaning or deburring of metal products without abrasive blasting.
 - (l) Die casting machines. This exemption does not apply to die casting machines used for copper base alloys, those with an integral furnace having a brimful capacity of more than 992 pounds (450 kg), or those using a furnace not exempt pursuant to subsection (E)(2)(b).
 - (m) Wax burnout kilns where the total internal volume is less than 7.0 cubic feet (0.2 cubic meter) or kilns used exclusively for firing ceramic ware,.
 - (n) Shell-core and shell-mold manufacturing machines.
 - (o) Thermal Spraying Operations where materials sprayed contain no cadmium, chromium, copper, lead, manganese or nickel, and provided the VOC emissions from such Equipment (including clean-up) are three (3) pounds per day or less or 66 pounds per calendar month or less.
- (6) Abrasive Blasting Equipment.
- (a) Blast cleaning cabinets in which a suspension of abrasive in water is used and Control Equipment exclusively venting such Equipment.
 - (b) Abrasive blast cabinet dust-filter combination units where the total internal volume of the blast section is less than 53 cubic feet (1.5 cubic meters).
 - (c) Enclosed Equipment used exclusively for shot blast removal of flashing from rubber and plastics at sub-zero temperatures and Control Equipment exclusively venting such Equipment.
 - (d) Shot peening operations on non-ferrous materials, provided no surface material is removed, and Control Equipment exclusively venting such Equipment.
 - (e) Portable sand/water blaster Equipment provided the water in the mixture is 66 percent or more by volume is maintained during operation of such Equipment.
- (7) Machining Equipment.
- (a) Equipment used exclusively for buffing, polishing, carving, mechanical, cutting, drilling, machining, pressing, routing, sanding, surface grinding or turning of ceramic art work, ceramic precision parts, leather, metals, plastics, rubber, fiberboard, masonry, carbon or graphite provided that any lubricants, coolants, or cutting oils used have 50 grams of VOC per liter or less, or a VOC composite partial pressure of 20 mm Hg or less at 20 °C(0.4 psi or less at 68 °F), and Control Equipment exclusively venting such Equipment. This exemption does not apply to automatic tire buffers, semi-automatic tire buffers and asphalt pavement grinders.

- (b) Equipment used exclusively for carving, cutting, drilling, planing, routing, sanding, sawing, shredding or turning of wood or the extruding, pressing or storage of wood chips, sawdust, wood shavings, and Control Equipment exclusively venting such Equipment. This exemption does not apply when the source of wood includes wood that is painted or treated for exterior exposure, or wood that is commingled with other construction and demolition materials.
 - (c) Equipment used exclusively to mill or grind Coatings and molding compounds where all materials charged are in paste form.
- (8) Printing and Reproduction Equipment.
 - (a) Printing and related Coating or laminating Equipment used in Graphic Arts Operations, without dryers, using less than two (2) gallons of combined graphic arts material per day. Dryers include, but are not limited to, UV lights and infrared lamps. Graphic arts materials are any Inks, Coatings, Adhesives, fountain solutions, thinners, retarders, or cleaning solutions used in printing or related Coating or laminating processes. (Does not include Equipment associated with wood flat stock Coating operations).
 - (b) Photographic process Equipment by which an image is reproduced upon material sensitized by radiant energy and Control Equipment exclusively venting such Equipment.
 - (c) Platen presses used in laminating.
 - (d) Silk screening where the product is manually positioned.
- (9) Food Processing and Preparation Equipment.
 - (a) Smokehouses for preparing food in which the maximum horizontal inside cross-sectional area does not exceed 21.5 square feet (2 square meters).
 - (b) Confection cookers where products are edible and intended for human consumption and Control Equipment exclusively venting such Equipment.
 - (c) Equipment used exclusively to grind, blend, or package tea, cocoa, spices or roasted coffee, and Control Equipment exclusively venting such Equipment.
 - (d) Equipment used in eating establishments for the purpose of preparing food for human consumption. This exemption does not apply to equipment covered by subsections (E)(9)(f), (g), and (h) below.
 - (e) Ovens, mixers, scales, and blenders used in bakeries where products are edible and intended for human consumption whose total production is less than 1,000 pounds (454 kilograms) of product per operating day and Control Equipment exclusively venting such Equipment.

- (f) Smokehouses using exclusively liquid smoke and which are completely enclosed with no vents to any Control Equipment or the Atmosphere.
 - (g) Barbecue Equipment which is not used for commercial purposes.
 - (h) Barbecue Equipment which is used for commercial purposes within the District but for not more than a combined total of fourteen (14) days in any calendar year.
- (10) Plastics and Rubber Processing Equipment.
- (a) Any Equipment/process listed below that has uncontrolled emissions of VOCs not exceeding five pounds (2.27 kilograms) in any one day.
 - (i) Presses used for curing rubber products and plastic products where no blowing agent is present.
 - (ii) Ovens used exclusively for the forming of plastics, which are concurrently being vacuum-held to a mold, and where no foam forming or expanding process is involved.
 - (iii) Equipment used exclusively for softening or annealing plastics.
 - (b) Presses used exclusively for extruding rubber products or plastics where no plasticizer is present, or for pelletizing polystyrene foam scrap, or to extrude or pelletize acrylics. This exemption does not apply to presses used to pelletize polyvinyl chloride, polystyrene, and their copolymers.
 - (c) Equipment used for compression molding or injection molding of plastics where no blowing agent is present and Control Equipment exclusively venting such Equipment.
 - (d) Mixers, roll mills, and colanders for rubber or plastics where no material in powder form is added and no Organic Solvents, diluents, or thinners are used.
 - (e) Ovens used exclusively for the curing of vinyl plastisols by the closed-mold curing process.
 - (f) Equipment used exclusively for conveying and storing plastic pellets.
- (11) Mixing and Blending Equipment.
- (a) Batch mixers which have a brimful capacity of 55 gallons or 7.35 cubic feet (208 liters) or less.
 - (b) Equipment used exclusively for mixing and blending of materials to make Adhesives where no Organic Solvents are used and no materials in powder form are added.

- (c) 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.
 - (d) Mills, mixers, post mixing stations and dispersers, with a capacity of less than 251 gallons (950 liters) used exclusively to mix, grind, or thin liquid surface Coating, where the operation temperature does not exceed 125° F (51.7° C) and no VOC or Solvents are used and no supplemental heat is added.
 - (e) Concrete mixers, with a rated working capacity of less than one (1) cubic yard.
- (12) Fabric Cleaning and Dyeing Equipment.
- (a) Equipment used exclusively for dyeing, stripping, or bleaching of textiles where no Organic Solvents, diluents, or thinners are used.
 - (b) Laundry dryers, extractors, or tumblers used for fabrics cleaned only with water solutions of bleach or detergent, and Control Equipment exclusively venting such Equipment.
- (13) Miscellaneous Process Equipment.
- (a) Equipment used exclusively for bonding lining to brake shoes where no Organic Solvents are used.
 - (b) Equipment used exclusively to liquefy or separate oxygen, nitrogen, or the rare gases from air.
 - (c) Porcelain enameling furnaces, porcelain enameling drying ovens, or vitreous enameling drying ovens. This exemption does not apply to units fired with fuel oil.
 - (d) Equipment used exclusively for surface preparation, cleaning, and/or stripping which uses acetic acid, alkaline oxidizing agents, hydrogen peroxide, salt solutions, sodium hydroxide and/or water. This exemption does not apply to operations involving chemical milling, circuit board etching, or the stripping of chromium.
 - (e) Equipment used exclusively for application of “3M Novec 71DE Engineered Fluid” and “FluoSolv NC-786” when used for cleaning, degreasing, immersion and precision vapor-degreasing, defluxing, particulate removal, finger-print removal, and specialty applications for Coating and lubricant deposition applications only at Goldstone Deep Space Communications Complex in association with Azimuth antenna track cleaning and complex maintenance provided that the total amount used is 22 gallons per calendar month or less.

- (f) Equipment used exclusively for electrolytic plating or electrolytic stripping of brass, bronze, copper, iron, tin, zinc, precious metals, and associated rinse tanks. This exemption does not apply to electrolytic plating using chromic, hydrochloric or sulfuric acid or to electrolytic stripping using chromic, hydrochloric, nitric, or sulfuric acid.
- (g) Equipment used exclusively for packaging of lubricants or greases.
- (h) Kilns with a rating of less than 2,000,000 Btu (504,000 kilogram-calories) per hour used exclusively for firing ceramic ware. This exemption does not apply to kilns fired by fuel oil or to wax burnout kilns.
- (i) Equipment used exclusively for Coating objects with oils, melted waxes or grease and which contain no Organic Solvents, diluents, or thinners.
- (j) Equipment used exclusively for Coating objects by dipping in waxes or natural and synthetic resins which contain no Organic Solvents, diluents, or thinners.
- (k) Unheated, non-conveyorized, non-agitated Solvent rinsing containers and unheated non-conveyorized Coating dip tanks with:
 - (i) An open surface area of less than 10.8 square feet (1.0 square meter) and an internal volume of less than 92.5 gallons (350 liters), and;
 - (ii) Only Organic Solvents with an initial boiling point of 302°F (150°C) or greater as determined by ASTM D1078-11, *Standard Test Method for Distillation Range of Volatile Organic Liquids* and;
 - (iii) Less than 25 gallons (94.6 liters) of Solvent per year are lost to the Atmosphere from all such Equipment. Solvent lost shall not include Solvent that is recycled or disposed of properly.
- (l) Batch ovens of less than 53 cubic feet (1.5 cubic meters) of internal volume where no melting occurs. This exemption does not apply to:
 - (i) Ovens used to cure vinyl plastisols.
 - (ii) Ovens used to debond brake shoes.
- (m) Equipment used exclusively for washing or drying materials provided that no VOC are used in the process or that no fuel oil or solid fuel is burned.
- (n) 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.
- (o) Spray Coating Equipment operated within permitted Control Equipment.
- (p) Coating or Adhesive application or laminating Equipment such as air, airless, Air-Assisted Airless, High-Volume, Low-Pressure (HVLP), air

brushes, Electrostatic spray Equipment, roller coaters, Dip Coaters, vacuum coaters, Flow Coaters and spray machines provided that:

- (i) The VOC emissions from such Equipment (including clean-up) are three (3) pounds per day or less or 66 pounds per calendar month or less; or
- (ii) The total quantity of UV or electron beam (non-Solvent based and non-waterborne) Coatings and Adhesives and associated VOC containing Solvents (including clean-up) used in such Equipment is six (6) gallons per day or less, or 132 gallons per calendar month or less; or
- (iii) The total quantity of Organic Solvent based Coatings and Adhesives and associated VOC containing Solvents (including clean-up) used in such Equipment is one (1) gallon per day or less or 22 gallons per calendar month or less; or
- (iv) The total quantity of water reducible or waterborne Coatings and Adhesives and associated VOC containing Solvents (including clean-up) used in such Equipment is three (3) gallons per day or less or 66 gallons per calendar month or less; or
- (v) The total quantity of polyester resin and gel coat type materials and associated VOC containing Solvents (including clean-up) used in such Equipment is one (1) gallon per day or less or 22 gallons per calendar month or less; or
- (vi) All Coatings, Adhesives, polyester resin and gel coat type materials and associated VOC containing Solvents (excluding cleanup Solvents) contain fifty (50) grams or less of VOC per liter of material and all cleanup Solvents contain twenty-five (25) grams or less of VOC per liter of material, and the total quantity of VOC emissions do not exceed one ton per calendar year.

If a combination of the Coatings, Adhesives and polyester resin and gel coat type materials identified in (ii), (iii), (iv) and/or (v) are used in any Equipment, this exemption is only applicable if the operations meet the criteria specified in (i) or (vi), or the total usage of Coatings, Adhesives, polyester resin and gel coat type materials and associated VOC containing Solvents (including cleanup) meets the most stringent applicable limit in (ii), (iii), (iv) or (v). For exemptions based on usage, Solvent-based UV and waterborne UV materials are subject to the usage limits in (iii) and (iv), respectively. VOC emissions shall be determined using test methods approved by the District, CARB and USEPA. In the absence of approved test methods, the applicant can submit VOC calculation procedures acceptable to the District.

- (q) Closed loop Solvent recovery systems used for the recovery of waste Solvent generated on-site using refrigerated or liquid cooled condenser, or air-cooled (where the Solvent reservoir capacity is less than 10 gallons) condenser.

- (r) Traffic marking application Equipment used for applying thermoplastic material, or preformed plastic material as those terms are defined in District Rule 1113.
- (s) Surface Coating and spray Coating Equipment using a combined total of less than one gallon-per-day (3.8 liters per day) of paint and.
- (t) Spray Coating Equipment used exclusively in primary and secondary schools; for instructional purposes only and Control Equipment exclusively venting such equipment.
- (u) Inert gas generators. /
- (v) Hammermills used exclusively to process aluminum cans.
- (w) Heated degreasers with a liquid surface area of less than 1 square foot (930 square centimeters).
- (x) Paper baling and associated shredding Equipment and conveying systems serving such Equipment.
- (y) Architectural Coatings Equipment used for business and residential structures. This exemption does not apply to Coating application Equipment used in the manufacturing of architectural components and appurtenances that are coated before their installation as part of a structure.
- (z) Oil/water separators that process water contaminated with petroleum products whose Reid Vapor Pressure does not exceed 0.5 pound per square inch (25 mm Hg).

(14) Cleaning

The exemptions in this subsection shall not apply to Equipment using Solvents that are greater than five percent (5%) by weight of perchloroethylene, methylene chloride, carbon tetrachloride, chloroform, 1,1,1-trichloroethane, trichloroethylene, or any combination thereof, either with a capacity of more than 7.6 liters (2 gallons) or which was designed as a Solvent cleaning and drying machine regardless of size.

- (a) Cleaning Equipment and associated waste storage tanks used exclusively to store the solutions drained from this Equipment:
 - (i) Unheated batch, provided:
 - a. The volume of the Solvent reservoir is one (1) gallon or less; or
 - b. The VOC emissions from the Equipment are not more than three (3) pounds per day or 66 pounds per calendar month.
 - (ii) Devices used for cleaning of Equipment used for the application of Inks, Adhesives, and Coatings provided:

- a. The volume of the Solvent reservoir is five (5) gallons or less; or
 - b. The VOC emissions from the Equipment are not more than three (3) pounds per day or 66 pounds per calendar month.
 - (iii) Remote reservoir cleaners provided the Solvent from the sink-like area immediately drains into an enclosed Solvent container while parts are being cleaned.
 - (b) Vapor degreasers with an air/vapor interface surface area of 1.0 square foot or less, provided such degreasers have an Organic Solvent loss of three (3) gallons per day or less excluding water or 66 gallons per calendar month or less excluding water.
 - (c) Cleaning Equipment using materials with a VOC content of twenty-five (25) grams of VOC per liter of material, or less, and associated dryers exclusively serving these cleaners. This exemption does not apply to Equipment used for cleaning of diesel particulate filters (DPF) or associated Control Equipment exclusively venting such Equipment .
 - (d) Hand application of Solvents for cleaning purposes including but not limited to the use of rags, daubers, swabs, and squeeze bottles.
- (15) Storage and Transfer Equipment.
- (a) Equipment used exclusively for the storage and transfer of fresh, commercial, or purer grades of:
 - (i) Sulfuric acid or phosphoric acid with an acid strength of less than 99 percent weight by weight as determined by test method ASTM E223-16 – *Standard Test Methods for Analysis of Sulfuric Acid* or an equivalent method approved by CARB, USEPA and the APCO.
 - (ii) Nitric acid with an acid strength of less than 70 percent weight by weight as determined by test method ASTM D891-18 – *Standard Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals* or an equivalent method approved by CARB, USEPA, and the APCO.
 - (b) Equipment used exclusively for the storage of Public Utilities Commission regulated natural gas and liquefied gases.
 - (c) Equipment used exclusively for the transfer of less than 20,000 gallons (75,700 liters) per day of organic material or Equipment used exclusively for the storage of the following:
 - (i) Unheated Organic Material with an initial boiling point of 302° F (150° C) or greater, or with an organic vapor pressure of 5 mm Hg (0.1 psia) or less at 70° F (21.1° C) as determined by the following ASTM test methods:

- a. ASTM D2879-10 *Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.*
 - b. ASTM D1078-11 *Standard Test Method for Distillation Range of Volatile Organic Liquids*
- (ii) Fuel oils with 0.9042 specific gravity or higher (25° API or lower) as determined by ASTM D287-12b – *Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)* or ASTM D1298 – 12b (2017) – *Standard Test Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method*, or an equivalent method approved by CARB, USEPA and the APCO.
- (iii) Fuel oils with 0.8251 specific gravity or higher (40° API or lower) and having a storage capacity of less than 40,000 gallons (151,515 liters) as determined by test method ASTM D287-12b – *Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)* or ASTM D1298 - 12b(2017) – *Standard Test Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method*, or an equivalent method approved by CARB, USEPA, and the APCO.
- (d) Equipment used exclusively for transferring Organic Liquids, materials containing Organic Liquids, or compressed gases into containers of less than 60 gallons (225 liters) capacity. This exemption does not apply to Equipment used for transferring 1,057 gallons (4,000 liters) per day or more of those materials, liquids or gases (where those materials, liquids or gases have a vapor pressure greater than 25.8 mm Hg (0.5 psia) at operating conditions) into containers of any size.
- (e) Equipment with a capacity of less than 793 gallons (3,000 liters) used exclusively for the storage and transfer of any oil that has been used for its intended purpose and is subsequently designated for disposal or recycling.
- (f) Unheated underground Equipment used exclusively for the storage of less than 6,077 gallons (23,000 liters) of Organic Liquids with a vapor pressure of less than 77.5 mm Hg (1.5 psi) absolute under actual storage conditions as determined by ASTM D2879-10 – *Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope* or an equivalent method approved by CARB, USEPA and the APCO, and Equipment used exclusively for the transfer from such storage.
- (g) Equipment used exclusively for the storage and transfer of liquid soaps, liquid detergents, vegetable oils, fatty acids, waxes, and wax emulsions.
- (h) Equipment used exclusively for the storage and transfer of refined lubricating oils.

- (i) Equipment used exclusively for the storage and transfer of Gasoline having a storage capacity of less than 250 gallons (946 liters).
 - (j) Equipment used exclusively for the storage and transfer of "top white" (Fancy) or cosmetic grade tallow or edible animal fats intended for human consumption and of sufficient quality to be certifiable for United States markets.
 - (k) Equipment used exclusively for the storage, holding, melting, and transfer of asphalt or coal tar pitch with a capacity of less than 148 gallons (560 liters).
 - (l) Unheated Solvent dispensing containers with capacity not more than 250 gallons (947 liters).
 - (m) Mobile transport tanks or delivery tanks or cargo tanks on Vehicles for delivery of organic liquids containing VOC. This exemption does not apply to Equipment used to transfer such liquids from tanks on Vehicles if such Equipment is subject to requirements set forth in District Rules 461, 462 and/or 463. This exemption also does not apply to asphalt tankers used to transport and transfer hot asphalt for roofing application.
- (16) Exceptions.
- (a) A written permit may be required for any process, article, machine, Equipment, or other contrivance, not otherwise subject to such permit requirements, if:
 - (i) The process, article, machine, Equipment, or other contrivance is subject to New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), Maximum Available Control Technology (MACT), Airborne Toxic Control Measure (ATCM) or any source specific prohibitory Rule; or,
 - (ii) The process, article, machine, Equipment, or other contrivance emits, in quantities determined to be appropriate for review by the APCO, substances identified as toxic Air Contaminants or which are under review as candidate toxic Air Contaminants by the California Air Resources Board, or USEPA; or,
 - (iii) The APCO determines in writing that a permit shall be required because the Equipment may not operate in compliance with all District Rules and Regulations.

(F) Recordkeeping

- (1) Any Person claiming exemptions under the provisions of this Rule shall:
 - (a) Provide, upon District request, adequate records to verify and maintain any exemption. Adequate records can include, but are not limited to, any or all of the following:

- (i) Materials Safety Data Sheets (MSDS) or other materials specifications as issued by the manufacturer of such materials containing the data necessary to demonstrate compliance;
 - (ii) Purchase records;
 - (iii) On site inventory records;
 - (iv) Consistently maintained and retained logs of Equipment run time, hours of operation; gallons of fuel used; Control Efficiency of the Control Equipment; and/or amount of materials consumed as applicable for the particular exemption;
 - (v) Manufacturer's data plate or similar information indicating size, capacity, Bhp, heat input value and/or other relevant information useful to determine compliance with an exemption.
 - (vi) Control Efficiency of any attached air pollution Control Equipment if such Control Equipment is also exempt pursuant to the particular exemption.
- (b) Any Person claiming an exemption based upon an emissions limitation, including but not limited to those exemptions found in subsections (E)(5)(o), (E)(10)(a), (E)(13)(p)(i), (E)(13)(p)(iv), (E)(13)(p)(vi), (E)(14)(a)(i)b. or (E)(14)(a)(ii)b., shall provide the following to verify and maintain such emissions limitation:
 - (i) Materials Safety Data Sheets (MSDS) or other materials specifications as issued by the manufacturer of such materials containing the data necessary to demonstrate compliance; and
 - (ii) Consistently maintained use logs indicating the amount of materials used or consumed on a daily, monthly and/or annual basis as applicable. Purchase and inventory records can be used in lieu of use logs so long as such records are maintained and updated on a periodic basis sufficient to show continuous compliance with the specific emissions limitation.
- (2) All records shall be maintained and retained on-site for at least five (5) years.
- (3) Any test method used to verify the percentages, concentration, vapor pressures, etc., as required by this Rule or by any other applicable District Rule or Regulation shall be CARB, USEPA and District approved.
- (4) Failure to provide records shall be considered a violation of District Rules 201 and/or 203 and may also constitute a violation of District Regulation XII – *Federal Operating Permits*, Regulation XIII – *New Source Review* or Regulation XVI – *Prevention of Significant Deterioration* if applicable.

See SIP Table at <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45> \

3/31/95

RULE 221

Federal Operating Permit Requirement

(A) Requirement to Obtain a Federal Operating Permit.

- (1) Any Facility, as defined in District Rule 1201(M), which is subject to the provisions of Regulation XII shall obtain a Federal Operating Permit.
- (2) No Facility, as defined in District Rule 1201(M), which is subject to the provisions of Regulation XII shall operate after the time it is required to submit a complete application pursuant to the provisions of District Rule 1202 unless:
 - (a) Such Facility holds and is in compliance with a Federal Operating Permit issued pursuant to the provisions of Regulation XII; or
 - (b) Such Facility is operating without a Federal Operating Permit pursuant to the provisions of District Rule 1202(E).
- (3) Termination of a Federal Operating Permit pursuant to the provisions of District Rule 1206(C) terminates the right of the Facility to operate.

(B) Voluntary Emission Limitations.

- (1) Any Facility, as defined in District Rule 1201(M), which would otherwise be subject to the provisions of Regulation XII may elect to voluntarily limit its emissions to the extent that the Facility is no longer subject to the provisions of Regulation XII. Voluntary emissions limitations under this rule shall comply with the following:
 - (a) Application(s) and request for voluntary emission limitation.
 - (i) The Facility shall apply for or shall have previously applied for all the appropriate permits for all permit units, as defined in District Rule 1201(V), under the provisions of District Regulation II and request, in writing, a voluntary emission limitation.

- (ii) As an attachment to the application(s) or as a part of the request for a voluntary emission limitation the Facility shall identify and describe all sources of emissions at the Facility, including all permit units as defined in District Rule 1201(V) and all equipment not requiring a permit pursuant to District Rule 219.
 - (iii) Fugitive emissions of Hazardous Air Pollutants, as defined in District Rule 1201(R), shall be identified and described as a source of emissions at the Facility. Fugitive emissions of other Air Pollutants shall not be identified and described as a source of emissions at the Facility unless such Facility belongs to a category listed in 40 CFR 70.2 "Major Source"(2).
 - (iv) As an attachment to the application(s) or as a part of the request for a voluntary emission limitation the Facility shall provide a calculation of annual emissions from the sources of emissions identified in subsection (1)(a)(ii) above.
 - (v) As an attachment to the application(s) or as a part of the request for a voluntary emission limitation the Facility shall provide proposed permit conditions which would limit emissions at the Facility, to a level below that of a Major Facility as defined in District Rule 1201(S).
- (b) Permit Conditions.
- (i) The owner/operator shall accept permit conditions which implement the voluntary emission limitation, including but not limited to, requirements for monitoring, reporting and record keeping sufficient to determine compliance with the voluntary emission limitation.
 - (ii) Permit conditions imposing a voluntary emission limitation shall be at least as stringent as those imposed by any Applicable Requirement, as defined in District Rule 1201(G).
 - (iii) Permit conditions imposing a voluntary emission limitation shall be practically enforceable and any limitations, controls or requirements related to a voluntary emission limitation contained in the permit shall be permanent and quantifiable.

- (2) Until such time as a voluntary emission limitation is issued and fully effective, any Facility subject to the provisions of Regulation XII remains subject to that regulation.

(C) **Procedure for Issuance of Voluntary Emission Limitation.**

- (1) Any permit containing a voluntary emission limitation shall be issued in the following manner:
- (a) After the receipt of application(s), if any, and a request for a voluntary emission limitation by the District the APCO shall determine if the application(s) and any additional information required by subsection (B)(1)(a) above is complete.
 - (b) If the additional information is complete the APCO shall produce a draft permit containing appropriate permit conditions. The APCO shall indicate on the permit which permit conditions, including any conditions for monitoring, reporting and record keeping, implement the voluntary emission limitation.
 - (c) The APCO shall send the draft permit to USEPA, shall publish a notice in at least one daily newspaper of general circulation within the District and shall send the notice to all persons who have requested such notice and/or are on a list of persons on file with the Clerk of the Board. The APCO shall also provide notice by other reasonable means, if such notice is necessary, to assure fair and adequate notice to the affected public. The notice shall provide a 30 day period for written comments and shall include:
 - (i) The name and location of the Facility, including the name and address of the permit holder or applicant if different.
 - (ii) A statement that the Facility is applying for a Voluntary Emission Limitation.
 - (iii) The District name, address, telephone number and contact person from whom interested persons may obtain additional information.
 - (d) Upon receipt of comments from the public the APCO shall consider all comments which are germane, non-frivolous and relate to the provisions implementing the voluntary emission limitation in determining whether to issue, revise or deny the permit. The APCO shall place such comments and any response thereto in the file for the

Facility.

- (e) Upon receipt of valid comments from the public and/or from the USEPA, the APCO shall make any revisions to the permit which are necessary. Such revisions shall be thereafter resubmitted to USEPA for approval.
- (f) After the permit has been issued, the APCO shall send a copy of the permit as issued to USEPA.

(D) Renewals of Voluntary Emission Limitation.

- (1) Renewals of permits containing a voluntary emission limitation shall be processed in the same manner as any other permit issued pursuant to Regulation II unless there is a change which would qualify as a Minor Permit Modification or a Significant Permit Modification as defined in District Rule 1201(T) or (BB) in a condition which has been identified as implementing the voluntary emission limitation. A permit renewal containing such substantive change shall be processed under section (C) above.
- (2) The APCO shall send a list of all permits containing a voluntary emission limitation which have been renewed to USEPA on a quarterly basis.

E. Violations of Permit Conditions.

- (1) A violation of any permit condition(s) identified as imposing or implementing a voluntary emission limitation shall be deemed a violation of this rule.

RULE 222

LIMITATIONS ON POTENTIAL TO EMIT

(A) General

(1) Purpose

- (a) The purpose of this rule is to create federally enforceable limitations on potential to emit for all facilities, as defined in District Rule 1201(M), which meet the applicability criteria set forth below and otherwise comply with the provisions of this rule.

(2) Applicability

- (a) This rule shall apply to any facility, as defined in District Rule 1201(M), which would, if it did not comply with the limitations set forth in this rule, have the potential to emit air contaminants equal to or in excess of the threshold for a Major Facility and which meets one of the following conditions:
 - (i) In every twelve (12) month period, the actual emissions of the facility are less than or equal to the emissions limitations set forth in section (C); or
 - (ii) In every twelve (12) month period, at least ninety percent (90%) of the emissions from the facility are associated with an operation limited by any one of the alternate operational limits as set forth in section (E).
- (b) This rule shall not apply to any of the following:
 - (i) Any facility whose actual emissions, throughput, or operation, at any time after the effective date of this rule is greater than the emissions limitations set forth in section (C) or alternative operational limits set forth in section (E) and which meets the following conditions:

- a. The owner or operator of the facility has notified the District at least thirty (30) days prior to any exceedance that an application for a Federal Operating Permit pursuant to Regulation XII will be submitted, a federally enforceable voluntary emissions limitation pursuant to District Rule 221 will be obtained; and
 - b. A complete application for a Federal Operating Permit is received by the District, or the voluntary emissions limitation is approved and included on the permit for the facility, within twelve (12) months of the date of the notification.
- (ii) Any facility that has applied for a Federal Operating Permit in conformance with Regulation XII in a timely manner and is awaiting final action by the District and/or USEPA.
 - (iii) Any facility required to obtain a Federal Operating Permit for any reason other than it qualifies as a Major Facility.
 - (iv) Any facility with a valid Federal Operating Permit.
 - (v) Any facility with a valid District permit which contains federally enforceable voluntary emissions limitations issued pursuant to District rule 221 which limit the potential to emit of the facility to levels below the applicable threshold for a Major Facility.
- (c) A Facility described in subsection (A)(2)(b)(i) above, may be immediately subject to all applicable federal requirements.
 - (d) Notwithstanding subsections (A)(2)(b)(ii) and (A)(2)(b)(iv) above, nothing in this section shall prevent any facility, which has had a Federal Operating Permit, from qualifying to comply with this rule in the future in lieu of maintaining an application for a Federal Operating Permit or upon rescission of a Federal Operating Permit if the owner or operator demonstrates that the facility is in compliance with the emissions limitations set forth in section (C) or alternative operational limits set forth in section (E).
 - (e) For the purposes of determining applicability of this rule, the owner or operator of a facility may take into account the operational limitations of air pollution control equipment when determining potential to emit as long as such air pollution control equipment is required by Federal, State or District law, rule, permit or regulation.

- (i) The owner or operator of the facility shall maintain and operate such air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.
- (f) The provisions of subsection (A)(2)(e) above shall not apply after January 1, 1999 unless:
 - (i) The operational limitation requiring the air pollution control device is federally enforceable; or
 - (ii) The Governing Board of the District specifically extends this provision and such extension is submitted to USEPA.
- (g) Any extension of the provisions of subsection (A)(2)(e) pursuant to subsection (A)(2)(f) above shall remain valid unless and until USEPA disapproves such extension.

(B) Definitions

For the purposes of this rule the definitions contained in District Rule 1201 shall apply unless a term is otherwise defined herein.

- (1) "Actual Emissions" - The emissions of a regulated air pollutant from a facility for every twelve (12) month period. Actual Emissions shall be determined as follows:
 - (a) By the use of valid continuous emissions monitoring data or source tests data.
 - (b) In the absence of data as specified in subsection (B)(1)(a) above, by calculation of emissions from any one or more of the following: throughputs of process material; throughputs of material stored; usage of materials; data provided in manufacturer's product specifications; volatile organic compound content reports or laboratory analyses for the material; any other information required by this rule or by any other Federal, State or District regulations; and/or information requested in writing by the District.
 - (c) All calculations of actual emissions shall use USEPA, CARB or District approved methods, including but not limited to emissions factors and other assumptions.

- (2) "Air Pollutant" - Any air pollution agent or combination of such agents, including any physical, chemical, biological, or radioactive (including source material, special nuclear material and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air.
- (3) "Alternative Operational Limit" - A limit on a measurable parameter such as hours of operation, throughput of materials, use of materials, or quantity of product as specified in section (E).
- (4) "California Air Resources Board" (CARB) - The Air Resources Board of the State of California as established pursuant to the provisions of Part 2 of Division 26 (commencing with section 39500) of the California Health and Safety Code.
- (5) "Contiguous Property" - Two or more parcels of land with a common boundary or separated solely by a public or private roadway, or other public or private right-of-way.
- (6) "District" - The Mojave Desert Air Quality Management District the geographical area of which is described in District Rule 103.
- (7) "Emission Unit" - Any article, machine, equipment, operation, contrivance or related groupings of such that may produce and/or emit any regulated air pollutant or hazardous air pollutant.
- (8) "Facility" - Any permit unit, group of permit units, non-permitted equipment, or any combination thereof which emits or may emit an Air Pollutant; and belongs to a single major industrial group in the Standard Industrial Classification Manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.
- (9) "Federal Clean Air Act" - The Federal Clean Air Act (codified at 42 U.S.C. §§7401-7671q) as well as any amendments thereto and any implementing regulations promulgated thereunder.
- (10) "Federal Operating Permit" - An operating permit issued pursuant to District Regulation XII after the effective date of such regulation as set forth in District Rule 1200(D).
- (11) "Federally Enforceable" - Any requirement, condition or other term which is fully enforceable by USEPA pursuant to the provisions of 42 U.S.C. §7413 (Federal Clean Air Act §113) or the public pursuant to the provisions of 42 U.S.C. §7604 (Federal Clean Air Act §304).

- (12) "Hazardous Air Pollutant" - Any air pollutant listed pursuant to 42 U.S.C. §7412(b) (Federal Clean Air Act §112) or in regulations promulgated thereunder.
- (13) "Major Facility" - Any Facility which emits or has the potential to emit the following amounts and types of Air Pollutants:
- (a) For any Facility located in Zone A (Any area within the District which is designated Federal Severe-17 Non-attainment area for Ozone):
 - (i) 100 tons per year or more of any Air Pollutants other than those indicated in subparts (b) and (c) below.
 - (ii) 25 tons per year or more of the following Air Pollutants:
 - a. NO_x (nitrogen oxides)
 - b. VOC (volatile organic compounds)
 - (iii) 10 tons per year or more of any Hazardous Air Pollutant or 25 tons per year or more of any combination of Hazardous Air Pollutants or such lesser quantity as the USEPA may establish by rule.
 - (a) For any Facility located in Zone B (Any area within the District which is designated Federal Ozone Attainment or Unclassified):
 - (i) 100 tons per year or more of any Air Pollutants other than those indicated in subpart (b) below.
 - (ii) 10 tons per year or more of any Hazardous Air Pollutant or 25 tons per year or more of any combination of Hazardous Air Pollutants or such lesser quantity as the USEPA may establish by rule.
- (14) "Potential to Emit" - The maximum capacity of a Facility to emit any air pollutant under its physical and operational design.
- (a) Any physical or operational limitation on the capacity of the unit to emit a pollutant including air pollution control equipment; restrictions on hours of operation; or restrictions on the type and/or amount of material combusted, stored or processed shall be treated as part of the design if such limitation is Federally Enforceable.
 - (b) Fugitive Emissions of Hazardous Air Pollutants shall be included in the calculation of a Facility's Potential to Emit.

- (c) Fugitive Emissions of other Air Pollutants shall not be included in the calculations of a Facility's Potential to Emit unless the Facility belongs to a category listed in 40 CFR 70.2 "Major Source"(2).
 - (d) Emissions of Hazardous Air Pollutants from any oil or gas exploration well (with its associated equipment) and emissions from any pipeline compressor or pump stations shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area.
- (15) "Process Statement" - An annual report on permitted emission units from an owner or operator of a facility certified pursuant to District Rule 1208 and containing the following information as applicable: throughputs of process materials; throughputs of materials stored; usage of materials; fuel usage; any available continuous emissions monitoring data; hours of operation; any other information required by this rule; and/or any other information requested by the District in writing.
- (16) "Regulated Air Pollutant" - Any of the following Air Pollutants:
- (a) Any pollutant, and its precursors, for which a national ambient air quality standard has been promulgated.
 - (b) Any pollutant that is subject to a standard under 42 U.S.C. §7411 (Federal Clean Air Act §111) or any regulation promulgated pursuant to that section.
 - (c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or any regulation promulgated pursuant to that section.
 - (d) Any pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412 (Federal Clean Air Act §112).
- (17) "Twelve (12) Month Period" - A period of twelve consecutive months determined on a rolling basis with a new twelve month period beginning on the first day of each calendar month.
- (18) "United States Environmental Protection Agency" (USEPA) - Refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

(C) Emissions Limitations

- (1) Unless the owner or operator of a facility has chosen to operate the facility under an alternative operational limit as specified in section (E), no facility subject to this rule shall emit in every twelve (12) month period more than the following quantities of emissions:
 - (a) Fifty percent (50%) of the thresholds for regulated air pollutants (excluding all hazardous air pollutants) as set forth in District rule 1201(s);
 - (b) For hazardous air pollutants:
 - (i) Five (5) tons per year of a single hazardous air pollutant; or
 - (ii) Twelve and a half (12.5) tons per year of any combination of hazardous air pollutants; or
 - (iii) Fifty percent (50%) of any lesser threshold for a single hazardous air pollutant as the USEPA may promulgate by regulation.
- (2) The District shall evaluate the compliance by a facility with the emissions limitations stated in subsection (C)(1) above as a part of the District's annual permit renewal process required by Health & Safety Code §42301(e).
 - (a) In performing this evaluation the District shall consider any annual process statement submitted pursuant to this rule.
 - (b) In the absence of valid continuous emission monitoring data or source test data, actual emissions shall be calculated using emissions factors approved by USEPA, CARB or the District.
- (3) Unless the owner or operator has chosen to operate the facility under an alternative operational limit as specified in section (E), the owner or operator of a facility subject to this rule shall obtain any necessary permits or permit modification prior to commencing any physical or operational change or activity which will result in actual emissions that exceed the limits specified in subsection (C)(1) above.

(D) Record keeping and Reporting Requirements

(1) General Record keeping:

- (a) Immediately upon adoption of this rule, the owner or operator of a facility subject to this rule shall comply with the applicable Record keeping requirements contained in subsections (D)(1-6) below unless:
 - (i) The owner or operator has chosen to operate the facility under an alternative operational limit as specified in section (E); or
 - (ii) Such facility is exempt from Record keeping requirements pursuant to section (F)(1).
- (b) An owner or operator who has chosen to operate the facility under an alternative operational limit as specified in section (E) shall, instead, comply with the applicable Record keeping requirements contained in that section.
- (c) A facility which was previously exempt pursuant to section (F)(1) shall comply with the appropriate Record keeping requirements if such facility exceeds the limits contained in subsection (F)(1).
- (d) The Record keeping requirements contained in this rule shall not replace any Record keeping requirement contained in a permit to operate or in any applicable Federal, State or District rule or regulation.
- (e) The owner or operator of a facility subject to this rule shall maintain records required pursuant to this section for each permitted emission unit or groups of permitted emission units sufficient to determine actual emissions.
 - (i) Such records shall be summarized in a monthly log; and
 - (ii) Such records shall be maintained on site for a period of at least five (5) years and shall be made available to the District, CARB or USEPA staff upon request.

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

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

- (i) A current list of all coatings, solvents, inks and adhesives used at the facility. This list shall contain the following information: Manufacturer, brand, product name or code; VOC content in grams per liter or pounds per gallon; and hazardous air pollutant content in grams per liter or pounds per gallon.
 - (a) In the alternative to the above information the list may contain manufacturer's product specifications, material VOC content reports and/or laboratory reports which provide the information required above.
 - (ii) A description of any equipment used during and after coating or solvent application including the following: type, make and model of equipment; maximum design process rate or throughput; control device(s) type and description (if any); a description of any coating or solvent application and/or drying method(s) employed.
 - (iii) A monthly log of the consumption of each solvent, coating, ink and adhesive used, including but not limited to solvents used in clean-up and surface preparation.
 - (iv) All purchase orders, invoices, and other documents to support information contained in the monthly log.
- (3) Record keeping for Organic Liquid Storage Unit(s):
- (a) The owner or operator of a facility subject to this rule which contains a permitted organic liquid storage unit shall keep and maintain the following records:
 - (i) A monthly log identifying the liquid stored and the monthly throughput.
 - (ii) Information on the tank design and specifications including any related control equipment.
- (4) Record keeping for Combustion Emission Unit(s):
- (a) The owner or operator of a facility subject to this rule which contains a permitted combustion emission unit shall keep and maintain the following records:

- (i) Information regarding the following: equipment type, make and model; maximum design process rate or maximum power input/output; minimum operating temperature (for thermal oxidizers only); equipment capacity; type and description of control device(s), if any; all source test information for the equipment.
 - (ii) A monthly log containing the following: hours of operation; fuel type, usage and fuel heating value; percentage of sulfur contained in fuel oil and coal used; percentage of nitrogen contained in coal used.
 - a. The appropriate BTU content of the fuel shall be included in the log and stated in terms of BTU/lb or BTU/gal.
- (5) Record keeping for Emission Control Unit(s):
 - (a) The owner or operator of a facility subject to this rule that contains a permitted emission control unit shall keep and maintain the following records:
 - (i) Information regarding the equipment type, description, make and model of the control unit.
 - (ii) Information regarding the emission units served by the control unit.
 - (iii) Information regarding equipment design, including but not limited to: Pollutants controlled and /control effectiveness; maximum design or rated capacity; inlet and outlet temperatures; concentrations for each pollutant controlled; catalyst data including type, material, life, volume, space velocity, ammonia injection rate and temperature; baghouse data including design, cleaning method, fabric material, flow rate, and air/cloth ratio; electrostatic precipitator data including number of fields, cleaning method, and power input; scrubber data including type, design, sorbent type, and pressure drop; any other appropriate design data; and all source test information.
 - (iv) A monthly log of hours of operation including notation of any control equipment breakdowns, upsets, repairs, maintenance and any other deviations from design parameters.

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

- (a) The owner or operator of a facility subject to this rule that contains an emission unit not listed in subsection (D)(2-5) above, shall keep and maintain the following records:
 - (i) Information on the process and equipment including the following: equipment type, description, make and model; maximum design process rate or throughput; control device(s) type and description, if any.
 - (ii) Any additional information requested in writing by the District.
 - (iii) A monthly log of operating hours including: each raw material used and its amount; each product produced and its production rate.
 - (iv) Purchase orders, invoices, and other documents to support information in the monthly log.

(7) General Reporting Requirements:

- (a) The owner or operator of a facility subject to this rule shall comply with the applicable reporting requirements contained in this subsection unless:
 - (i) Such facility is exempt from reporting requirements pursuant to section (F)(2).
- (b) At the time of annual renewal of a permit to operate pursuant to Regulation II, each owner or operator of a facility subject to this rule shall submit to the District a process statement.
- (c) A facility which was previously exempt pursuant to section (F)(2) shall comply with the applicable reporting requirements if such facility exceeds the limits contained in subsection (F)(2).
- (d) The District may, in writing, request the submission of additional information. The owner or operator of a facility subject to this rule shall submit such requested information within thirty (30) days of the date of the request.

(E) Alternative Operational Limits

(1) General Provisions for Alternative Operational Limits:

- (a) The owner or operator of a facility subject to this rule may choose to operate under any one alternative operational limit, provided that at least ninety percent (90%) of the facility's emissions in every twelve (12) month period are associated with the operation(s) limited by the applicable alternative operational limit.
- (b) Any owner or operator of a facility choosing to operate under an alternative operational limit shall operate the facility in compliance with the terms and conditions contained in the applicable alternative operating limit and comply with the specified Record keeping and reporting requirements pursuant to subsection (D).
- (c) Any owner or operator of a facility choosing to operate under an alternative operational limit shall:
 - (i) Report within twenty-four (24) hours to the District any exceedance of the alternative operational limit; and
 - (ii) Maintain all purchase order, invoices and other documentation required to support the information contained in any monthly log specified in an alternative operational limit; and
 - (iii) Maintain all records and other documentation required to be kept pursuant to an alternative operational limit on site for a period of at least five (5) years and to have such documentation available to the District, CARB or USEPA staff upon request.
- (d) Any owner or operator of a facility choosing to operate under an alternative operational limit shall obtain any necessary permit prior to commencing any physical or operational change or activity which will result in an exceedance of an applicable operational limit.

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

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

- (i) No more than 7,000,000 gallons of gasoline shall be dispensed in every twelve (12) month period.
 - (ii) A monthly log of gallons of gasoline dispensed in the preceding month and a monthly calculation of the total gallons dispensed in the previous twelve (12) month period shall be kept on site.
 - (iii) A copy of the monthly log required by subsection (E)(2)(a)(ii), above, shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.
 - a. The owner or operator shall certify the log in compliance with the provisions of District Rule 1208.
- (3) Alternative Operational Limit for Degreasing or Solvent Using Unit(s):
- (a) The owner or operator shall operate the degreasing or solvent-using unit(s) in compliance with the following:
 - (i) If the solvents used do not include methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene) or trichloroethylene:
 - a. No more than 5,400 gallons of any combination of solvent containing materials shall be used in every twelve (12) month period; and
 - b. No more than 2,200 gallons of any one solvent containing material shall be used in every twelve (12) month period.
 - (ii) If the solvents used include methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene) or trichloroethylene:
 - a. No more than 2,900 gallons of any combination of solvent containing materials shall be used in every twelve (12) month period; and
 - b. No more than 1,200 gallons of any one solvent containing material shall be used in every twelve (12) month period.

- (iii) A monthly log of amount and type of solvent used in the preceding month with a monthly calculation of the total gallons used in the previous twelve (12) month period shall be kept on site.
 - (iv) A copy of the monthly log required by subsection (E)(3)(a)(iii) above shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.
 - a. The owner or operator shall certify the log in compliance with the provisions of District Rule 1208.
- (4) Alternative Operational Limit for Paint Spraying Unit(s):
- (a) The owner or operator shall operate the paint spraying unit(s) in compliance with the following:
 - (i) The total usage rate of all VOC containing materials, including but not limited to coatings, thinner, reducers, and cleanup solution shall not exceed 2,388 gallons in every twelve (12) month period.
 - a. The VOC content of the material used at a paint spray unit shall not exceed 6.7 lbs. solvent per gallon coating, as applied, less water and exempt compounds. Nothing in this section shall be construed to exempt an owner or operator from compliance with the applicable VOC content limitation for specific coatings as contained in District Rules 442, 1113, 1114, 1115 and/or 1116.
 - (ii) A monthly log of the gallons of VOC containing materials used in the preceding month with a monthly calculation of the total gallons used in the previous twelve (12) month period shall be kept on site.
 - (iii) A copy of the monthly log shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.
 - a. The owner or operator shall certify the log in compliance with the provisions of District Rule 1208.

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

- (a) The owner or operator shall operate the emergency standby engine(s) in compliance with the following:
 - (i) For facilities located within that portion of the District classified nonattainment for ozone and designated Severe-17, the emergency standby engine(s) shall not operate more than 1,300 hours in every twelve (12) month period and shall not use more than 66,000 gallons of diesel fuel in every twelve (12) month period.
 - (ii) For facilities located within that portion of the District which is unclassified for ozone, the emergency standby engine(s) shall not operate more than 5,200 hours in every twelve (12) month period and shall not use more than 265,000 gallons of diesel fuel in every twelve (12) month period.
 - (iii) A monthly log of hours of operation, gallons of fuel used, and a monthly calculation of the total hours operated and gallons of fuel used in the previous twelve (12) month period shall be kept on site.
 - (iv) A copy of the monthly log required by section (E)(5)(a)(iii) above shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.
 - a. The owner or operator shall certify the log in compliance with the provisions of District Rule 1208.

(F) Exemptions from Record keeping and Reporting Requirements

(1) Facilities with De Minimis Emissions:

- (a) The Record keeping and reporting requirements found in sections (C), (D)(1-6) and (E) shall not apply to a facility which meets either of the following:
 - (i) The facility emits less than or equal to the following quantities of emissions in every twelve (12) month period:
 - a. Five (5) tons per year of a regulated air pollutant excluding hazardous air pollutants.

b. For hazardous air pollutants:

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

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

- a. 1,400 gallons of any combination of solvent containing materials but no more than 550 gallons of any one solvent containing material, provided that the materials do not contain methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene), or trichlorethylene.
- b. 750 gallons of any combination of solvent containing materials where the materials contain methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene), or trichlorethylene.
- c. 597 gallons of volatile organic compound containing material used at a paint spray unit(s).
 1. The VOC content of the material used at a paint spray unit shall not exceed 6.7 lbs. solvent per gallon coating, as applied, less water and exempt compounds. Nothing in this section shall be construed to exempt an owner or operator from compliance with the applicable VOC content limitation for specific coatings as contained in District Rules 442, 1113, 1114, 1115 and/or 1116.

- d. 4,400,000 gallons of gasoline dispensed from equipment with Phase I and Phase II vapor recovery systems.
 - e. 470,000 gallons of gasoline dispensed from equipment without Phase I and Phase II vapor recovery systems.
 - f. 1,400 gallons of gasoline combusted.
 - g. 16,600 gallons of diesel fuel combusted.
 - h. 500,000 gallons of distillate oil combusted.
 - i. 71,400,000 cubic feet of natural gas combusted.
- (c) The owner or operator of any facility which is exempt from Record keeping pursuant to this subsection, shall within thirty (30) days of a written request by the District or USEPA demonstrate that the emissions or throughput rates are not in excess of the applicable quantities as set forth in this subsection.
- (2) Small Facilities with Greater than De Minimis Emissions:
- (a) The reporting requirements found in subsection (D)(7) shall not apply to a facility which meets the following:
 - (i) The facility emits less than or equal to the following quantities of emissions in every twelve (12) month period:
 - a. For any regulated air pollutant excluding hazardous air pollutants:
 - 1. Twenty five (25) tons per year of a regulated air pollutant for which the District has a Federal area designation of attainment, unclassified, transitional or moderate nonattainment.
 - 2. Fifteen (15) tons per year of a regulated air pollutant for which the District has a Federal area designation of serious nonattainment.

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

b. For hazardous air pollutants:

1. Two and five hundredths (2.50) tons per year of a single hazardous air pollutant; or
2. Six and five hundredths (6.50) tons per year of any combination of hazardous air pollutants; or
3. Twenty percent (25%) of any lesser threshold for a single hazardous air pollutant that the USEPA may promulgate by regulation.

(G) Public Notice

- (1) Within three years of the effective date of Regulation XII, the District shall maintain and make available to the public, upon request the following:
 - (a) A list of all facilities to which this rule is applicable; and
 - (b) Which provision(s) of this rule each facility is complying with.

(H) Enforcement and Violations

- (1) Interaction with other District Rules:
 - (a) This rule shall not relieve any facility from complying with requirements pertaining to any otherwise applicable preconstruction permit, or replace any condition or term contained in any preconstruction permit, or any provision of a preconstruction permitting program.
 - (b) Nothing in this rule shall preclude the issuance of any permit which contains conditions or terms necessary to ensure compliance with this or any other District rule.

- (2) A facility which is subject to this rule shall be subject to the applicable federal requirements for a major facility, including Regulation XII, on the first day following every twelve (12) month period when either of the of the following occur:
- (a) The facility exceeds a limit specified in sections (C) or (E); or
 - (b) The owner or operator of the facility can not demonstrate that the facility is in compliance with a limit specified in sections (C) or (E).
- (3) Failure to comply with any applicable provision of this rule shall constitute a violation of the rule. Each day during which a violation of this rule occurs shall constitute a separate violation.

Rule 403.1 Fugitive Dust Control for the Searles Valley Planning Area

(A) General

(1) Purpose

- (a) The purpose of this Rule is to ensure that the National Ambient Air Quality Standards (NAAQS) for Respirable Particulate Matter (PM₁₀) will not be exceeded due to anthropogenic sources within the San Bernardino County portion of the Searles Valley Planning Area (SVPA); and,
- (b) To implement the control measures contained in the Searles Valley PM₁₀ State Implementation Plan (SIP).

(2) Applicability

- (a) The requirements of this Rule shall apply to owners or operators of the following sources within the San Bernardino County portion of the SVPA:
 - (i) Unpaved roads used for industrial activity;
 - (ii) Paved roads used for industrial activity;
 - (iii) Construction/Demolition activity;
 - (iv) Industrial fugitive dust;
 - (v) Activities on Bureau of Land Management (BLM) land; and
 - (vi) Disturbed surface areas on public land.

(3) Conflicts with Other District Rules

- (a) If there is a conflict between the provisions of this Rule and those of District Rule 403, the conflicting provisions of District Rule 403 are superseded.

(B) Definitions

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

- (1) **"Active Operation"** - Activity capable of generating Fugitive Dust, including, but not limited to, storage of Bulk Material, Earth-Moving Activity, Construction/Demolition Activity, and non-emergency movement of vehicles on Unpaved Roads, including such activity on San Bernardino County and Bureau of Land Management properties.
- (2) **"Alternative PM₁₀ Control Plan (ACP)"** - A plan that incorporates emission reducing measures other than those source-specific measures in section (C), and generates Equivalent Emission Reductions.
- (3) **"Baseline Emissions"** - Baseline emissions are the product of an emission rate (pounds of PM₁₀ per unit of operations) and an activity rate (number of operations per day). Baseline emission calculations shall include data for permit units included in the ACP. Calculations shall use the lowest of either: (1) the actual emission rate; (2) SIP allowable emission limit; or (3) Reasonably Available Control Technology (RACT) limits (as defined by MDAQMD regulations as of the date of application). Also, calculations shall use the lowest of either actual, or SIP allowable values for the activity rate. Sources lacking specific daily activity rate records may substitute other records establishing daily PM₁₀ emissions. Actual values for activity rates shall be based on the average from data for two years directly preceding the source's application for an ACP, unless another two-year period can be shown to the satisfaction of the Air Pollution Control Officer (APCO) and the United States Environmental Protection Agency (USEPA) to more accurately represent the source's normal allowable operations.
- (4) **"Bulk Material"** - Sand, gravel, soil, aggregate and any other organic or inorganic solid matter capable of releasing dust, not including salt.
- (5) **"Construction/Demolition Activity"** - Any on-site mechanical activity preparatory to or related to building, alteration, rehabilitation, demolition or improvement of property that results in Disturbed Surface Area, including the following activities: grading; excavation; loading; crushing; cutting; planning; shaping or ground breaking.
- (6) **"Disturbed Surface Area"** - Portion of the earth's surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural condition, thereby increasing the potential for emission of Fugitive Dust. Disturbed surface does not include area restored to a natural state with vegetative ground cover and soil characteristics similar to adjacent or nearby natural conditions.
- (7) **"Earth-Moving Activity"** - Grading, earth cutting and filling, loading or unloading of dirt or Bulk Materials, adding to or removing from Open Storage Piles of Bulk Materials, landfilling, or soil mulching.
- (8) **"Enforceable"** - Included in a Permit to Operate (PTO) or are otherwise enforced by the District, and submitted as a source-specific SIP revision.

- (9) **"Equivalent Emission Reductions"** - Real, Enforceable, Permanent, Quantifiable, and Surplus emission reductions equal in amount to 120 percent of those required by section (C). Such emission reductions shall be calculated relative to Baseline Emissions. In addition, such emission reductions shall be demonstrated to be equivalent to the reductions required by section (C) using an USEPA-approved modeling demonstration.
- (10) **"Fugitive Dust"** - Those solid respirable particulate matter emissions which could not reasonably pass through a stack, chimney, or vent. Fugitive emissions are directly or indirectly caused by the activities of man.
- (11) **"Heavily Traveled"** - Carrying more than ten vehicle trips per day with the majority of those vehicles having three or more axles.
- (12) **"National Ambient Air Quality Standards (NAAQS)"** - Standards set by the Federal Government that define the acceptable amount of criteria pollutants in the air. Achievement of these standards protects the public's health and welfare.
- (13) **"Open Storage Pile"** - Any accumulation of Bulk Material with 5 percent or greater silt content not fully enclosed, covered or chemically stabilized. Silt content level shall be assumed to be 5 percent or greater, unless a person can show, by sampling and analysis in accordance with ASTM Method C-136, the silt content is less. Results of ASTM Method C-136 are valid for 60 days from the date the sample was taken.
- (14) **"Permanent"** - Contained in a permit or other condition which ensures the achievement on each and every operating day, and submitted as a source-specific SIP revision.
- (15) **"Quantifiable"** - Able to be measured and/or calculated before and after a reducing action using the same test methods.
- (16) **"Real"** - Represents a reduction in actual emissions.
- (17) **"Respirable Particulate Matter (PM₁₀)"** - Any material, except uncombined water, existing in a finely divided form as a liquid or solid at standard conditions whose mean aerodynamic diameter is smaller than or equal to 10 micrometers as measured by an applicable test method, or methods found in Article 2, Subchapter 6, Title 17, California Code of Regulations (commencing with Section 94100).
- (18) **"Road Surface Silt Loading"** - A measurement of the amount of loose material accumulated on a road surface in terms of weight of material per unit area (for purposes of this Rule, as calculated by the test method described in subsection (F)(1)).

- (19) **"Surplus"** - Not required by current SIP rules or regulations or relied upon for SIP planning purposes (outside of the Searles Valley PM₁₀ State Implementation Plan), and not used to meet any other regulatory requirements.
- (20) **"Searles Valley Planning Area (SVPA)"** - A region coterminous with Hydrological Unit Number 18090205 as defined by the United States Geological Survey.
- (21) **"Unpaved Road"** - Any vehicle travel way not covered by one or more of the following: concrete, asphaltic concrete, or asphalt.
- (22) **"United States Environmental Protection Agency (USEPA)"** - The Administrator of the Environmental Protection Agency or the appropriate designee.

(C) Requirements

- (1) The owner or operator of a source subject to this Rule shall comply with the requirements contained in this subsection unless the owner or operator has applied for and obtained an Alternative PM₁₀ Control Plan pursuant to section (G).
- (2) The owner or operator of a source subject to this Rule shall:
 - (a) Treat a minimum of 12 miles of heavily traveled unpaved roads on Searles Dry Lake used for industrial activity in a manner sufficient to maintain Road Surface Silt Loading less than or equal to 0.58 ounces per square yard.
 - (i) For purposes of this subsection, weekly brackish watering of non-Heavily Traveled Searles Dry Lake unpaved roads is presumed to be sufficient to maintain Road Surface Silt Loadings less than or equal to 0.58 ounces per square yard.
 - (ii) The owner or operator shall maintain records of treatment activity sufficient to establish location, type and timing of such treatment.
 - (b) Treat a minimum of eight (8) miles of certain heavily traveled unpaved roads, as identified in the Searles Valley PM₁₀ Plan on the Searles Dry Lake, used for industrial activity in a manner sufficient to maintain Road Surface Silt Loading less than or equal to 0.17 ounces per square yard.
 - (i) For purposes of this subsection, treatment with salt and weekly brackish watering is presumed to be sufficient to maintain Road Surface Silt Loadings less than or equal to 0.17 ounces per square yard.
 - (ii) The owner or operator shall maintain records of treatment activity sufficient to establish location, type and timing of treatment.

- (c) Clean paved roads used for industrial activity on a biweekly basis or more often as needed to ensure that spilled and tracked-on Bulk Material is removed rapidly.
 - (i) The owner or operator shall maintain records of cleaning activities sufficient to establish location, time and amount of cleaning activities.
- (d) Treat or clean heavily traveled paved roads and areas used for industrial activity in a manner sufficient to maintain a Road Surface Silt Loading less than or equal to 2.94 ounces per square yard.
 - (i) For purposes of this subsection, mechanical sweeping and collection on a biweekly basis is presumed to be sufficient to maintain Road Surface Silt Loadings less than or equal to 2.94 ounces per square yard.
 - (ii) The owner or operator shall maintain records of mechanical sweeping and collection sufficient to establish location, time and amount of vacuum sweeping.
- (3) For construction/demolition sources subject to this Rule, the owner or operator shall prepare and follow a District-approved Dust Control Plan that contains the following elements:
 - (a) Provisions to maintain the natural topography to the extent possible during grading and other earth movement;
 - (b) A construction schedule that specifies construction of parking lots and paved roads first, and upwind structures prior to downwind structures;
 - (c) Provisions to cover or otherwise contain Bulk Material carried on haul trucks operating on paved roads; and,
 - (d) Provisions to remove Bulk Material tracked onto paved road surfaces.
- (4) For industrial fugitive dust sources subject to this Rule, the owner or operator shall:
 - (a) Enclose exterior transfer lines greater than thirty (30) feet in length sufficient to cover the top and sides of the bulk material being transferred.
 - (b) Permanently eliminate at least 2,750 square feet of Bulk Material storage pile surface area that was exposed during 1990.

- (i) The owner or operator shall maintain records of storage pile reduction or limitation shall be maintained sufficient to identify the location, type (including storage pile silt content) and timing of storage pile modification.
- (c) Cover or otherwise contain Bulk Material carried on haul trucks while operating on paved roads as specified in the Searles Valley PM₁₀ Plan.
 - (i) Fly and bottom ash haul trucks maintaining moisture content of at least 12 percent need not be covered.
- (d) Treat heavily traveled unpaved/paved road access points in a manner sufficient to maintain a Road Surface Silt Loading of 2.94 ounces per square yard on the paved road surface adjacent to the unpaved road.
 - (i) For purposes of this subsection, mechanical sweeping and collection on a biweekly basis is presumed to be sufficient to maintain Road Surface Silt Loadings less than or equal to 2.94 ounces per square yard.
 - (ii) The owner or operator shall maintain records of activities performed to maintain the specified Road Surface Silt Loading sufficient to establish location, time and type of treatment.
- (5) For activities occurring on BLM land, the District and BLM shall jointly prepare a dust control plan that reduces BLM PM₁₀ emissions by at least 20 percent relative to 1990 levels. The dust control plan may include, but not be limited to, the following reasonably available control measures (RACM):
 - (a) Reduce PM₁₀ emissions associated with activities on BLM land by 20 percent relative to 1990 levels;
 - (b) Provide wind and water erosion controls sufficient to minimize deposition of silt on paved roads;
 - (c) Provide for paving or other stabilization of major unpaved/paved road access points;
 - (d) Provide for paving or other stabilization of major vehicle staging and parking areas;
 - (e) Provide for signage that reduces vehicular speeds, particularly during high wind episodes.

(D) Exemptions

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

- (a) Agricultural operations, as defined by California Health & Safety Code Section 41704(b);
- (b) Actions required by federal or state endangered species legislation;
- (c) Residential property;
- (d) Active Operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency;
- (e) Active Operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions;
- (f) Non-periodic (occurring no more than three times per year and lasting less than thirty cumulative days per year) or emergency maintenance of flood control channels and water spreading basins;
- (g) Blasting operations as permitted by the California Division of Industrial Safety;

(E) Recordkeeping

- (1) The owner or operator shall maintain records required by this Rule on site or be readily accessible for at least two years after the date of each entry and shall be provided to the District upon request.

(F) Test Methods

- (1) Compliance with the provisions of this District Rule shall be determined as follows:
 - (a) For Road Surface Silt Loading: shall be calculated in ounces of silt per square yard and be determined by sweeping and vacuuming at least 5 pounds of material from representative strips of known area of the surface and establishing the 75 micron or silt fraction through the use of a 200 mesh screen (USEPA AP-42 "Compilation of Air Pollutant Emission Factors" Section 11.2.6, ASTM Standard D-75 "Standard Practice for Sampling Aggregates," and ASTM Standard C-136 "Sieve Analysis of Fine and Coarse Aggregates").
 - (b) For PM₁₀ emissions and emission reductions: amounts shall be calculated using USEPA "Control of Open Fugitive Dust Sources" (EPA-450/3-88-008).

- (c) Compliance with the requirement "Cover Haul Trucks" is equivalent to complying with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code on both public and private roads.

(G) Alternative PM₁₀ Control Plans (ACPs)

- (1) An owner or operator of a source subject to this Rule may, at any time after the adoption of this Rule, apply for and obtain District approval for an ACP as set forth in this subsection.
- (2) Application
 - (a) The owner or operator may apply for an ACP by submitting a plan to the District which includes the following elements:
 - (i) Name(s), address(es), and phone number(s) of the official(s) responsible for the preparation, submittal, and implementation of the ACP;
 - (ii) Description and location of operation(s);
 - (iii) Listing of all Active Operations included in subsection (G)(2)(a)(ii) generating Fugitive Dust emissions;
 - (iv) Estimation of baseline, annual, daily emissions from each source identified in subsection (G)(2)(a)(iii);
 - (v) Description of actions required by the applicable portion of section (C);
 - (vi) Description of actions proposed to generate Equivalent Emission Reductions instead of subsection (G)(2)(a)(v). Such description shall be sufficiently detailed to demonstrate Real, Enforceable, Permanent, Quantifiable, and Surplus Equivalent Emission Reductions during all periods of Active Operations;
 - (vii) Commitment to a post-approval monitoring program to evaluate the effects of subsection (G)(2)(a)(vi) actions; and,
 - (viii) Description of contingency measures for implementation if actions proposed for subsection (G)(2)(a)(vi) prove insufficient.
 - (ix) An application for an ACP which proposes using add-on controls to achieve Equivalent Emission Reductions shall specify test methods for both the emission collection system and the control system.

(3) Issuance Procedure

- (a) The owner or operator of a source subject to this Rule electing to obtain an approved ACP shall submit an application for an ACP to the APCO in writing.**

 - (i) The owner or operator shall remain subject to federal enforcement of existing section (C) and SIP limits federal approval of unless and until USEPA approves the ACP as a source specific SIP revision pursuant to Section 110(a)(3)(A) of the Federal Clean Air Act.**
- (b) The APCO shall either approve, conditionally approve, or disapprove a proposed ACP, in writing, within 30 calendar days of receipt of the ACP, based on the following criteria:**

 - (i) The proposed ACP demonstrates equivalent emissions reductions to those required under section (C); and**
 - (ii) The proposed ACP does 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" pursuant to the provisions of 42 U.S.C. §7412, National Emission Standards for Hazardous Air Pollutants (Federal Clean Air Act §112 "NESHAPS"). The baseline emissions of a hazardous pollutant shall be determined by the lower of either actual or NESHAPS allowable emissions.**
 - (iii) Add-on controls shall not be considered part of an approved ACP unless such control are incorporated in an emissions averaging approach to compliance.**
 - (iv) The proposed ACP complies with, all requirements of subsection (G)(3) and all applicable requirements of section (G) shall be satisfied;**
- (c) If the APCO conditionally approves an ACP the APCO shall notify the applicant in writing of the ACP's conditional approval and of the deficiencies which require corrections.**

 - (i) The applicant shall submit a revised ACP within 90 days or the ACP is automatically deemed disapproved. The APCO shall evaluate the revised ACP based upon the criteria of subsection (G)(3)(b).**
- (d) After the APCO approves the proposed ACP the permits for any existing permit units included in the ACP shall be surrendered and new permits incorporating provisions of the ACP shall be issued.**

- (i) ACP emission reductions which are accomplished through equipment shutdown or production curtailment shall have their permanency ensured by permit or other conditions which limit the total PM₁₀ emissions from the equipment in question.
 - (ii) Notwithstanding provisions of District Rule 219, if the ACP encompasses the operation of equipment not requiring a permit, such equipment shall lose its exemption status and require a permit.
 - (e) After approving an ACP, the APCO shall notice a public hearing regarding the ACP before the Governing Board of the District .
 - (i) Such notice shall be published in a newspaper of general circulation at least 30 days prior to the meeting of the Governing Board at which the public hearing is scheduled to take place.
 - (f) At the public hearing the APCO shall recommend that the Governing Board adopt the approved ACP for submission to the California Air Resources Board (ARB) as a SIP submittal.
 - (g) If adopted by the Governing Board, the ACP shall thereafter be submitted by the APCO to ARB for submittal to USEPA as a source-specific revision to the SIP.
- (4) Renewal
- (a) An approved ACP shall be valid for a period of one year from the date of approval by the APCO.
 - (b) Approved ACPs shall be resubmitted, annually, at least 90 days prior to expiration date shall expire.
 - (i) If all Fugitive Dust sources and emission reduction-producing actions remain identical to those identified in the previously approved ACP, the resubmittal may contain a simple statement of "no-change." Otherwise a resubmittal shall conform to the requirements of subsection (G)(1).
 - (c) The APCO shall send a list of all approved ACPs to USEPA on an annual basis.
- (5) Recordkeeping
- (a) The owner or operator operating under an approved ACP shall maintain daily operating records, information regarding operations, source tests, laboratory analyses, monitoring data, and any other appropriate information in a manner and form sufficient to determine the compliance of the owner or operator with the ACP on a 24-hour basis.

(6) Violations

- (a) Failure to comply with any provisions in an approved or conditionally approved ACP shall be a violation of this Rule.**

(H) Contingency Measures

- (1) The requirements of this section only apply if USEPA makes a finding, as evidenced by publication in the Federal Register, that there has been a violation of the PM₁₀ NAAQS within the SVPA.**

(2) Contingent Requirements

- (a) The owner of public lands containing disturbed surface areas shall:**
 - (i) Treat a minimum of 46 acres to at least a 90 percent control level.**
 - (ii) For the purpose of this subsection chemical stabilization shall be presumed to be treatment to a 90 percent control level.**
 - (iii) Maintain records of treatment activities sufficient to establish the location, type and timing of such treatment.**

This is a detailed topographic map of the Sevier Plateau region in Utah. The map features a grid system with letters A through J along the top and numbers 1 through 10 along the right side. Key geographical features include Sevier Lake, Sevier Valley, and the Sevier Plateau. Major towns and settlements shown are Panguitch, Hatch, Tropic, Cannonville, Henrieville, and Alton. The map also depicts various mountain ranges, including the Wasatch-Catch Mountains, and several canyons such as Hatch Canyon and Cannonville Canyon. A scale bar at the bottom right indicates distances in miles (0 to 10). A north arrow is located in the upper right corner. The map is labeled with various landmarks, including Sevier Lake, Sevier Valley, and the Sevier Plateau. The map is titled "SEVIER PLATEAU" at the top center.

RULE 404

Particulate Matter Concentration

- (a) A person shall not discharge into the atmosphere from any source, particulate matter except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the table, the exact concentration permitted to be discharged shall be determined by linear interpolation.
- (b) The provisions of this rule shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.
- (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.

[SIP: Approved 12/21/78, 43 FR 52489, 40 CFR 52.220(c)(42)(xiii)(A); Disapproved, Prior rules 52A and 58A retained 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A), 40 CFR 52.227(6)(3)(i) and 40 CFR 52.227(c)(2)]

TABLE 404(a)

Volume Discharged Calculated as Dry Gas at Standard Concentrations		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas at Standard Concentrations		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic Meters Per Minute	Cubic Feet Per Minute	Milligrams Per Cubic Meter	Grains per Cubic Foot	Cubic Meters Per Minute	Cubic Feet Per Minute	Milligrams Per Cubic Meter	Grains per Cubic Foot
25 or less	883	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100

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.

- (b) 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.

[SIP: Approved 12/21/78, 43 FR 52489, 40 CFR 52.220(c)(42)(xiii)(A); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

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	2.380	7.23	250000	551200	11.56	25.5
3500	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	32500	716500	12.30	27.1
5000	11020	4.059	8.95	350000	771600	12.51	27.6
6000	13230	4.434	9.78	400000	881800	12.91	28.5
7000	15430	4.775	10.5	450000	992100	13.27	29.3
8000	17640	5.089	11.2	500000 or more	1102000 or more	13.60	30.0

(Adopted: 05/07/76; CARB Ex. Ord. G-73: 02/01/77;
Readopted: 07/25/77)

RULE 407

Liquid and Gaseous Air Contaminants

- (a) A person shall not discharge into the atmosphere from any source carbon monoxide (CO) exceeding 2000 ppm measured on a dry basis, averaged over a minimum of 15 consecutive minutes.

The provisions of this subsection shall not apply to emissions from internal combustion engines.

[SIP: Approved 9/8/78, 43 FR 40011; 40 CFR 52.220(c)(39)(ii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

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 41700 of the Health and Safety Code, or of Rule 402 of these Rules.

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.

[SIP Information: See MDAQMD SIP Table at <https://www.mdaqmd.ca.gov/rules/overview>]

Rule 442

Usage of Solvents

(A) General

(1) Purpose

- (a) To reduce volatile organic compound (VOC) emission from VOC containing materials or equipment which is not subject to VOC limits of any rule found in District Regulation XI – *Source Specific Standards*.
- (b) To provide emissions limits for the use of organic solvents which are not VOCs.

(2) Applicability

- (a) This rule applies to any person using VOC containing materials or Emissions Unit which is not subject to the VOC limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in the District Regulation XI – *Source Specific Standards*.
 - (i) VOC containing materials include, but are not limited to; coatings, resins, adhesives, inks, solvents, thinners, diluents, mold seal and release compounds, lubricants, cutting oils and quenching oils.
- (b) This rule applies to any person using a Non-VOC organic solvent and which is not subject to the limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in District Regulation XI – *Source Specific Standards*.

(B) Definitions

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

- (1) Aerosol Product – A hand held, non-refillable container that expels pressurized materials by means of a propellant-induced force.
- (2) California Air Resources Board (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).
- (3) District - The Mojave Desert Air Quality Management District the geographical area of which is described in District Rule 103.
- (4) Emissions Unit – Any article, machine, equipment contrivance or combination thereof which emits or has the potential to emit any Regulated Air Pollutant.

- (5) Facility – Any structure, building, Emissions Unit, combination of Emissions Units or installation which emits or may emit a Regulated Air Pollutant and which are:
- (a) Located on one or more contiguous or adjacent properties within the District;
 - (b) Under the control of the same person (or by persons under common control);
 - (c) Belong to the same industrial grouping, as determined by being within the same two digit Standard Industrial Classification Code (SICC).
 - (d) For the purpose of this Rule, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.
- (6) Regulated Air Pollutant – Any of the following:
- (a) Any air pollutant and its precursors for which an Ambient Air Quality Standard has been promulgated.
 - (b) Any air pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.
 - (c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.
 - (d) Any air pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.
- (7) South Coast Air Quality Management District (SCAQMD) – The local air district created pursuant to Division 26, Part 3, Chapter 5.5 of the Health & Safety Code (commencing with §40400).
- (8) United States Environmental Protection Agency (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (9) Volatile Organic Compound (VOC) – Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and those compounds listed in 40 CFR 51.100(s)(1).

(C) Requirements

(1) Emission Limitations

- (a) A person shall not discharge VOCs into the atmosphere from all VOC containing materials, Emissions Units, equipment or processes subject to this rule, in excess of 540 kilograms (1,190 pounds) per month per Facility.
 - (i) Compliance with the provisions of subsection (C)(1)(a) above may be obtained through use of any of the following or any combination thereof:
 - a. Product reformulation or substitution;
 - b. Process changes;
 - c. Improvement of operational efficiency;
 - d. Development of innovative technology;
 - e. Installation of a control device operated in accordance with section (C)(2) below.
- (b) A person shall not discharge into the atmosphere a non-VOC organic solvent in excess of 272 kilograms (600 pounds) per day as calculated on a thirty (30) day rolling average.
 - (i) For purposes of this subsection, discharge shall include a drying period of 12 hours following the application of such non-VOC solvents.

(2) Control Equipment

- (a) A person may comply with the provisions of (C)(1) above by using a VOC emission collection and control system that reduces overall emissions by eighty-five percent (85%) as follows
 - (i) The system shall capture at least ninety percent (90%), by weight, of the emissions generated by the Emissions Unit, material or operation and
 - a. Have a destruction efficiency of at least ninety-five percent (95%), by weight; or
 - b. Have an output of less than fifty parts per million(50 PPM) calculated as carbon with no dilution.

(3) Storage and Disposal

- (a) All VOC containing materials subject to this rule, whether in its form for intended use or as a waste or used product, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the Facility.

(D) Exemptions

- (1) The provisions of this rule shall not apply to:
 - (a) The manufacture, transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.
 - (b) The emissions of VOCs from VOC-containing materials or equipment which are subject to other Regulation IV rules or which are exempt from air pollution control requirements by such rules.
 - (c) The use of pesticides including insecticides, rodenticides or herbicides.
 - (d) The use of 1,1,1 trichloroethane, methylene chloride and trichlorotrifluoroethane.
 - (e) Aerosol products

[Moved to (C)(2)(a)]

(E) Monitoring, Recordkeeping and Reporting

- (1) Usage records for all VOC-containing materials subject to this Rule shall be maintained on a daily basis and shall include but not be limited to:
 - (a) The amount, type and VOC content of each solvent used; and
 - (b) The method of application and substrate type; and
 - (c) The permit units involved in the operation (if any)
- (2) Such records shall be retained for two years and shall be made available upon request.

(F) Test Methods

- (1) For the purpose of this rule, the following test methods shall be used:
 - (a) Determination of VOC Content in Solvent-containing materials
 - (i) The VOC content of VOC-containing materials subject to the provisions of this rule shall be determined by USEPA Reference Method 24 (Code of Federal Regulations, Title 40, Part60, Appendix A).
 - (ii) The exempt compounds' content shall be determined by SCAQMD Method 303 - *Determination of Exempt Compounds* or Method 304 - *Determination of Volatile Organic Compounds (VOC) in Various Materials* contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

- (iii) The following classes of Exempt Perfluorocarbon compounds: cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with Section (C)(1), only when manufacturers specify which individual compounds are used in the solvent formulation and identify the USEPA, CARB, and the District approved test methods used to quantify the amount of each exempt compound.
- (b) Determination of Presence of VOC in Clean-up Materials
 - (i) The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 - Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry (GC/MS) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.
 - (c) Determination of Efficiency of Emission Control Systems
 - (i) The capture efficiency of the capture system for purposes of determining overall efficiency shall be determined by verifying the use of a permanent total enclosure and 100% capture efficiency as defined by USEPA Method 204 - *Criteria for and Verification of a Permanent or Temporary Total Enclosure.*"
 - (ii) Alternatively, if a USEPA Method 204 defined permanent total enclosure is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA *Guidelines for Determining Capture Efficiency*, January 9, 1995."
 - (iii) Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by the Temporary Total Enclosure approach of USEPA Methods 204 through 204F.
 - (iv) The control device efficiency of an emission control system on a mass emissions basis and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Methods 25, 25A, SCAQMD Method 25.1 - *Determination of Total Gaseous Non-Methane Organic Emissions as Carbon*, or SCAQMD Method 25.3 – *Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources*, as applicable.
 - (v) USEPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

- (vi) The overall efficiency of an emission collection and control system shall be determined using the following equation (all efficiencies expressed in percent):

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

- (d) Any other applicable test methods approved by CARB, the USEPA, and the District.

(2) Multiple Test Methods

- (a) When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Air Pollution Control Officer.
- (3) All test methods referenced in this section shall be the most recent version as approved by USEPA.
- (4) Violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

[SIP: Approved 6/9/82, 47 FR 25013, 40 CFR 52.220(c)(51)(xii)(B); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C)]

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RULE 443

Labeling of Solvents

- (a) A person shall not sell or offer for sale for use in the district, in containers of 0.94 liter (one quart) capacity or larger, any organic solvent or material containing organic solvent unless it is clearly and correctly indicated on the container whether the solvent is photochemically reactive in accordance with the definition in Rule 102. This requirement may be satisfied by affixing a sticker or label to the container which sets forth this information.
- (b) A person shall not sell or offer for sale for use in the district, in containers of 150 liters (40 gallons) capacity or larger any organic solvent unless the total percentage by volume of the solvents listed under the definition of photochemically reactive solvent in Rule 102 is clearly and correctly indicated on the container. This requirement may be satisfied by affixing a sticker or label to the container which sets forth this information.
- (c) When such materials are sold in bulk, the information required in subsections (a) and (b) must appear on the invoice in lieu of the container, and a copy of the invoice must be made available for inspection by District personnel. (For the purposes of this subsection only, materials sold in bulk shall be considered to be materials which are transferred from a delivery container 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.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(B); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

Rule 444

Open Outdoor Fires

(A) General

(1) Purpose

- (a) The purpose of this Rule is to ensure that the ambient air quality is not significantly degraded due to Open Outdoor Fires; and,
- (b) To apply the District Smoke Management Program to specified applications while minimizing smoke impacts to the public.

(2) Applicability

- (a) The requirements of this Rule shall apply to persons that set and/or permit Open Outdoor Fires, including, but not limited to Tumbleweed burning, Agricultural Burning, field crop burning, Range Improvement Burning, Forest Management Burning, and Wildland Vegetation Management Burning.

(B) Definitions

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

- (1) “Agricultural Burning” – Open Outdoor Fires used in Agricultural Operations, including the burning of Agricultural Wastes, or Open Outdoor Fires used in disease and pest prevention. Agricultural Burning also includes Open Outdoor Fires used in the operation or maintenance of a system for the delivery of water in Agricultural Operations.
- (2) “Agricultural Operations” – Any operation occurring on a ranch or farm directly related to the growing of crops or raising of fowls or animals for the primary purpose of making a profit, for a livelihood, or for conducting agricultural research or instruction by an educational institution.
- (3) “Agricultural Wastes” – Unwanted or unsalable materials produced wholly from Agricultural Operations, other than forest or range management operations. Agricultural Wastes do not include pesticide and fertilizer containers, except sacks, burned in the field where they were emptied. Agricultural Wastes do not include broken boxes, pallets, sweat boxes, packaging material, packing boxes, or any other materials produced in the packing or processing of agricultural products. Agricultural Wastes do 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 Agricultural Commissioner or the

Secretary of California Department of Food and Agriculture upon his determination that the waste is infested with infectious transmittable or contagious plant disease or pest which is an immediate hazard to Agricultural Operations conducted on adjoining or nearby property.

- (4) “Air Pollution Control Officer” (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.
- (5) “Approved Ignition Devices” – Those instruments or materials that will ignite combustible material without the production of black smoke by the ignition device. This would include such items as liquid petroleum gas, butane, propane, and flares where the device produces a flame and the flame is then used for ignition. For the purposes of igniting Prescribed Burns, heli-torch, terra-torch, drip-torch, and the equivalent ignition devices and methods will be considered approved ignition devices.
- (6) “California Air Resources Board (CARB)” – The California State Air Resources Board, the powers and duties of which are described in Part 2 of Division 26 of the California Health and Safety Code (commencing with §39500).
- (7) “Forest Management Burning” – The use of Prescribed Burning, as part of a forest management practice, to remove forest debris. Forest management practices include Timber Operations, Silvicultural practices, and forest protection practices.
- (8) “Imminent and Substantial Economic Loss” – The loss of a planting season or the irreparable harm of a crop.
- (9) “Open Outdoor Fire” – Any combustion (including detonation) of combustible material of any type outdoors in the open, not in any enclosure, where the products of combustion are not directed through a flue, except: any outdoor fire burned according to an existing District permit, blasting operations permitted by the California Occupational Safety and Health Administration, and detonation associated with military operations.
- (10) “Prescribed Burning” – The planned application of fire, including natural or accidental ignition, to vegetation to achieve any specific objective on lands selected in advance of that application.
- (11) “Range Improvement Burning” – The use of Prescribed Burning to remove vegetation for a wildlife, game or livestock habitat, or for the initial establishment of an agricultural practice on previously uncultivated land.
- (12) “Silviculture” – The establishment, development, care, and reproduction of stands of timber.
- (13) “Smoke Management Plan” – A document prepared for each fire in accordance with the Smoke Management Program.

- (14) “Smoke Management Program” – The most recent version of the program required by Title 17 of the California Code of Regulations §§80100-80330 and adopted by the APCO.
- (15) “Timber Operations” – The cutting or removal of timber or other forest vegetation for the purpose of producing commercial forest products.
- (16) “Tumbleweeds” – Russian thistle (*Salsola kali*).
- (17) “Wildland Vegetation Management Burning” – The use of Prescribed Burning conducted by a public agency, or through a cooperative agreement or contract involving a public agency, to burn land predominantly covered with chaparral (as defined in Title 14, CCR, §1561.1), trees, grass, or standing brush.

(C) Requirements

- (1) All burn projects greater than 10 acres in size or estimated to produce more than 1 ton of particulate matter shall be conducted in accordance with the provisions of the Smoke Management Program.
- (2) Except as otherwise provided for in this Rule, no person shall set, permit, or use an Open Outdoor Fire for the purpose of disposal or burning of petroleum wastes; asbestos; treated wood; demolition or construction debris; residential rubbish; garbage or vegetation; tires; tar; trees; wood waste; or other combustible or flammable solid, liquid or gaseous waste; or for metal salvage or burning of motor vehicle bodies.
- (3) A person shall not set or permit an Open Outdoor Fire when prohibited by District Rule 708 or in any geographic area when CARB or the APCO (or the local fire protection agency, in the case of an existing burn permit) prohibits burning in that area due to adverse meteorological conditions, unless such burning is required to alleviate an Imminent and Substantial Economic Loss and the total area burned within the District on that day does not exceed 200 acres. Any such burning must be authorized in a special burn permit issued by the District and not by the designated fire agency.
- (4) Upon request from a permittee through a designated agency, seven days in advance of a specific Prescribed Burn, a permissive-burn, marginal-burn, or no-burn forecast will be issued by CARB up to 48 hours prior to the date scheduled for the burn. Without further request, a daily forecast will continue to be issued until a permissive-burn or marginal-burn forecast is issued.
- (5) The local fire protection agency, CARB or the APCO shall, for each geographic area, determine meteorological conditions which will cause Open Outdoor Fires to have an adverse effect on the ambient air quality in that area. A list of the geographic areas and specific meteorological conditions for each area shall be maintained at the District offices and shall be made available to the public.

- (6) A person shall not burn or permit the burning of combustible material in an Open Outdoor Fire, except for Prescribed Burns done in accordance with an approved Smoke Management Plan, unless such combustible material:
- (a) Is ignited as rapidly as practicable using Approved Ignition Devices within applicable fire control restrictions;
 - (i) Field crops shall be ignited only by strip firing into the wind or by backfiring, except where crops are determined not to lend themselves to such ignition;
 - (b) Has been stacked or piled in such a manner as to promote drying and insure combustion with a minimum of smoke production, and has dried sufficiently to ensure rapid combustion (unless agricultural or Silvicultural practices dictate otherwise). Minimum drying times are:
 - (i) Three weeks for prunings and small branches (less than two inches in diameter);
 - (ii) Six weeks for large branches and stumps (greater than two inches in diameter);
 - (iii) One week for wastes from field crops that are cut in green condition;
 - (iv) Zero days for dry cereals; or
 - (v) One week for other materials.
 - (c) Is free of tires, oil filters, rubber, tar paper, plastics, shop wastes, asbestos, treated wood, demolition debris, construction debris and other rubbish, and is reasonably free of dirt, soil and visible surface moisture; and,
 - (d) Is burned during daylight hours, with no ignition prior to 6 a.m. and with all combustion extinguished within one hour of sunset. In addition, within San Bernardino County there shall be no ignition after 12 noon, and no combustible material shall be added to an existing fire after 3 p.m.
- (7) A person shall not set or permit an Open Outdoor Fire without first obtaining a written permit for such burning from the local fire protection agency, and such burning shall be conducted in accordance with that agency's fire laws and regulations. Such permit shall have form and content approved by the APCO, as required by District Rule 208. Such permit may be granted only for any of the following reasons:
- (a) Where a fire hazard, to life or property, is declared by the local fire protection agency and such fire hazard cannot be abated by any other means;
 - (b) For Agricultural Burning;
 - (c) For disposal of Tumbleweeds;

- (d) For the burning of infectious waste other than hospital waste upon order of the County Health Officer to abate a public health hazard;
 - (e) For the burning of empty boxes and paper and fiber packing materials which have previously contained high explosives used in blasting operations permitted by the California Occupational Safety and Health Administration, as long as such burn occurs at least 670 feet from the nearest property line.
 - (f) For right-of-way clearance by a public entity or utility.
- (8) An approved burn permit must be obtained from the MDAQMD in advance of any burning for the burning of the following materials. It is required that the approved burning occur on the property where the Wood Waste and/or Brush Cuttings originated.
- (a) Wood waste from trees, vines, or brush on commercial or residential property; and
 - (b) Brush cuttings resulting from brush clearance done in compliance with local ordinances to reduce fire hazard.
- (9) Notwithstanding the provisions of section (C)(7), a person may burn or permit an Open Outdoor Fire for any of the following purposes, provided such fire is set by, or under the jurisdiction of, a designated fire agency having jurisdiction over the proposed burn location(s), the total area burned with Prescribed Burns within the District does not exceed 1,000 acres in any one day, and a valid burn permit has been issued, or a Smoke Management Plan has been approved, by the District.
- (a) For the instruction of employees in the methods of fighting fires;
 - (b) For Forest Management, Range Improvement or Wildland Vegetation Management Burning, provided the fire is a Prescribed Burn performed in accordance with an approved Smoke Management Plan; and
 - (c) For research or filming purposes.

(D) Exemptions

- (1) The requirements of this Rule shall not apply to:
 - (a) Backfires necessary to save life or valuable property pursuant to the Public Resources Code (§4426) set by, or under the jurisdiction of a fire protection agency, and the ignition devices used to set such backfires;
 - (b) Recreational fires, ceremonial fires, and cooking fires, where the combustible material is clean, dry wood or charcoal;
- (2) The notification requirement given in Section (E)(2) shall not apply to instructional fires solely involving the combustion of propane or natural gas.

- (3) The area limit in Section (C)(9) shall not apply if the following information is provided to the APCO for review and approval thirty (30) days in advance of the proposed Prescribed Burning:
- (a) Location and specific objectives of the burning;
 - (b) Acreage, type, and arrangement of vegetation to be burned;
 - (c) Directions and distances to nearby sensitive receptor areas;
 - (d) Fuel condition, combustion, and meteorological prescription elements developed for the project;
 - (e) Projected schedule and duration of project ignition, combustion, and burn down;
 - (f) Specifications for monitoring and verifying of critical parameters;
 - (g) Specifications for disseminating project information; and
 - (h) Contingent suppression measures in case of public nuisance or exceedance of state or federal ambient air quality standard.

(E) Monitoring, Recordkeeping and Reporting

- (1) The APCO shall receive a copy of any permit granted under Section (C)(7) within ninety (90) days of the issuance of such permit.
- (2) The APCO shall be notified prior to burning conducted under the provisions of Section (C)(8) and (C)(9), by written means or a phone call received prior to the start of the burn.

[SIP: Submitted as amended 11/25/96 on 3/3/97; Disapproved prior Rule 57 retained 12/21/78, 43 FR 59488, 40 CFR 52.220(c)(42)(xiii)(A) and 40 CFR 52.273(6)(12)(i)]

RULE 461

Gasoline Transfer and Dispensing

(A) General Description

- (1) Purpose:
 - (a) To limit the emissions of Volatile Organic Compounds (VOC) and toxic compounds from the transfer and dispensing of Gasoline.
- (2) Applicability:
 - (a) The provisions of this rule shall apply to the transfer of Gasoline from any tank truck, 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.
- (3) Severability:
 - (a) If any portion of this rule shall be found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the rule, which shall continue to be in full force and effect.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless a term is otherwise defined herein.

- (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) “Balance System” – A Phase II Vapor Recovery System that operates on the principle of vapor displacement.

- (4) “Bellows-Less Nozzle” – Any nozzle that incorporates both an assist system and a Gasoline Vapor capture mechanism at the Motor Vehicle filler neck, such that vapors are collected at the vehicle filler neck without the need for an interfacing flexible bellows, and which is certified by the California Air Resources Board (CARB) for operation as a Bellows-less Nozzle.
- (5) “Coaxial Hose” – A hose that contains two passages with a configuration of a hose within a hose. One of the passages dispenses the liquid Gasoline into the vehicle fuel tank while the other passage carries the Gasoline Vapors from the vehicle fuel tank to the storage tank.
- (6) “Dry Break” or poppetted Dry Break is a Phase I vapor recovery component that opens only by connection to a mating device to ensure that no Gasoline vapors escape from the underground storage tank before the vapor return line is connected and sealed.
- (7) “End of Cycle”
 - (a) For delivery vehicles - when the delivery Vehicle is emptied or, if not emptied, before taking on more Gasoline.
 - (b) For transferring Gasoline to a Motor Vehicle – upon the completion of fueling, by the last customer who was fueling, at the time the problem is detected.
- (8) “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).
- (9) “Executive Order” - Orders published by CARB that document the requirements of specific vapor Control Equipment and procedures used in Phase I and Phase II Vapor Recovery Systems.
- (10) “Fueling Position” – A fuel dispensing unit consisting of nozzle(s) and meter(s) with the capability to deliver only one fuel product at one time.
- (11) “Insertion Interlock Mechanism” – Any CARB certified mechanism that ensures a tight fit at the nozzle fill pipe interface and prohibits the dispensing of Gasoline unless the bellows is compressed.
- (12) “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.
- (13) “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.
- (14) “Onboard Refueling Vapor Recovery (ORVR)” – Vehicle emission control system that captures fuel vapors from the vehicle gas tank during refueling.

- (15) “Performance Test” – is the first test or series of tests performed on a new or altered CARB Certified Gasoline Vapor Recovery System demonstrating compliance with the CARB Executive Order and District permit conditions upon completion of construction or alteration of the Vapor Recovery System.
- (16) “Phase I Vapor Recovery System”
- Components may include, but are not limited to:
- (a) the couplers that connect tanker trucks to the underground tanks
 - (b) spill containment drain valves
 - (c) overfill prevention devices
 - (d) Pressure/Vacuum Relief (P/V) valves
- (17) “Phase II Vapor Recovery System”
- Components may include, but are not limited to:
- (a) Gasoline dispensers
 - (b) nozzles
 - (c) piping, break away, hoses, and face plates
 - (d) vapor processors
 - (e) system monitors
- (18) “Rebuild” – An action that repairs, replaces, or reconstructs any part of a component of a vapor recovery system that forms the Gasoline vapor passage of the component, or that comes in contact with the recovered Gasoline vapors in the component. Rebuild does not include the replacement of a complete component with another CARB certified complete component; nor does it include the replacement of a spout, bellows, or vapor guard of a CARB certified nozzle. The new part shall be CARB certified and as supplied by the qualified manufacturer specifically for the CARB certified nozzle.
- (19) “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.
- (20) “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.
- (21) “Standing Loss Control” – the control of vapors from aboveground storage tanks when no Phase I or Phase II gasoline transfers are occurring.
- (22) “Vacuum-Assist System” – A Phase II Vapor Recovery System that uses vacuum producing device such as a compressor or turbine to create a vacuum during Gasoline dispensing to capture Gasoline Vapors.

- (23) “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.
- (24) “Vapor Tight” – means the detection of less than 10,000 ppm, as methane, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21.

C) Requirements

(1) Gasoline Transfer into Stationary Storage Tanks and Mobile Fuelers (Phase I)

A person shall not transfer, permit the transfer or provide equipment for the transfer of Gasoline into any stationary storage tank with a capacity of more than 251 gallons (950 liters), or any Mobile Fueler tank with a capacity of more than 120 gallons (454 liters) unless the transfer is made to a storage tank equipped as required in Rule 463 or unless all of the following conditions are met:

- (a) The tank is equipped with a CARB Certified Submerged Fill Pipe.
- (b) The vent pipe opening is equipped with a CARB Certified Pressure/Vacuum Relief Valve.
- (c) The tank is equipped with a CARB Certified Vapor Recovery System capable of recovering or processing 98 percent (98%) of the displaced Gasoline Vapors.
- (d) The Mobile Fueler is equipped with a CARB Certified Vapor Recovery System capable of recovering or processing 95 percent (95%) of the displaced Gasoline Vapors.
- (e) All vapor return lines shall be connected between the tanks involved in the transfer. In addition, all associated hoses, fittings, and couplings shall be maintained in a Liquid Tight and Vapor Tight condition, as defined by the applicable CARB Certification and test procedures as referenced in section (G) of this rule.
- (f) The hatch on any tank truck, trailer, or railroad tank car shall not be opened for more than three (3) minutes for each visual inspection, provided that:
 - (i) Transfer or pumping has been stopped for at least three (3) minutes prior to opening.
 - (ii) The hatch is closed before transfer or pumping is resumed.
- (g) Underground tank lines shall be gravity drained; in such a manner that upon disconnect no liquid spillage would occur.

- (h) Aboveground storage tanks shall be equipped with Dry Breaks, such that liquid spillage upon disconnect shall not exceed 10 milliliters.
- (i) Equipment subject to this section shall be operated and maintained, according to all of the following requirements:
 - (i) All fill tubes shall be equipped with Vapor Tight covers, including gaskets;
 - (ii) All Dry Breaks shall be equipped with Vapor Tight seals and dust covers;
 - (iii) Coaxial fill tubes shall be operated and maintained so that there is no obstruction of vapor passage from any portion of the Vapor Recovery System;
 - (iv) The fill tube assembly, including fill tube, fittings and gaskets shall be maintained to prevent vapor leakage from any portion of the Vapor Recovery System; and,
 - (v) All storage tank or Mobile Fueler vapor return lines without Dry Breaks shall be equipped with Vapor Tight covers, including gaskets.
- (j) Aboveground storage tanks subject to Phase I requirements must also comply with Standing Loss Control requirements as specified in the applicable CARB Executive Orders.
- (k) Any time an underground storage tank is installed or replaced at any Gasoline Transfer and Dispensing Facility, a CARB Certified Spill Box shall be installed.
- (l) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the coaxial design at any Gasoline Transfer and Dispensing Facility unless such system was certified by CARB after January 1, 1994; and
- (m) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the dual-point design at any Gasoline Transfer and Dispensing Facility unless such system incorporates CARB Certified poppetted Dry Breaks or spring-loaded Vapor Check Valves on the vapor return coupler.
- (n) The Owner/Operator of a new or Altered Gasoline Transfer and Dispensing Facility, involving exposure of underground storage tank and associated piping, shall have all underground storage tank installation and associated piping configuration inspected prior to any Backfilling to verify that all underground equipment is properly installed in accordance with the requirements specified in the applicable CARB Executive Order. The District shall be notified by telephone at least 24 hours prior to the Backfilling.

(2) Gasoline Transfer into Vehicle Fuel Tanks (Phase II)

A person shall not transfer, or permit the transfer or provide equipment for the transfer of Gasoline from a stationary storage tank or Mobile Fueler of greater than 120 gallons (454 liters) capacity, into any Mobile Fueler of greater than 120 gallons (454 liters) capacity or into any Motor Vehicle fuel tank of greater than 5 gallons (19 liters) 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 Motor Vehicle fuel tank is equipped with a CARB Certified Vapor Recovery System capable of recovering 95 percent (95%) of the displaced Gasoline Vapors, or having an emission factor not exceeding 0.38 pounds per 1,000 gallons.
- (b) The system and associated components shall be maintained Vapor Tight and Liquid Tight at all times.
- (c) 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.
- (d) Each Gasoline-dispensing nozzle is equipped with a coaxial hose as specified in the applicable CARB Executive Order.
- (e) Dispensing nozzles shall be equipped with CARB Certified hold-open latches unless prohibited by local fire code and/or State Fire Marshall.
- (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.
- (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 section (E) of this rule, for 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) Equipment subject to this rule is operated and maintained with none of the defects listed in California Code of Regulations, Section 94006, Subchapter 8, Chapter 1, Part III of Title 17, as specified in the most recently adopted CARB “Vapor Recovery Equipment Defects List” (<https://www.arb.ca.gov/vapor/vred/vred.htm>).
- (b) A person shall not supply, offer for sale, sell or 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.
- (c) New Vapor Recovery Systems shall install CARB Certified equipment pursuant to the latest applicable Executive Order.
- (d) Vapor Recovery Systems used to comply with the provisions of this rule shall comply with all safety, fire, weights and measures, and other applicable codes and/or regulations.
- (e) Vapor Recovery Systems required under Section (C)(1) or Section (C)(2) shall at all times be operated and maintained in accordance with the manufacturer's specifications and the State's certification.
- (f) When deficiencies are detected and are associated with any vapor recovery, storage, delivery vessel or dispensing equipment, the Owner/Operator shall at the End of Cycle remove the equipment from service and not use the equipment until it has been repaired, replaced or adjusted as required to comply with the provisions of this rule and applicable Executive Order(s).
- (g) A person shall not perform or permit a "pump-out" (bulk transfer) of Gasoline from a storage tank subject to Section (C)(1) unless such bulk transfer is performed using a Vapor Recovery System capable of returning the displaced vapors from the delivery vessel or other tank being filled back to the stationary storage tank.

- (h) A person shall not store, or allow the storage of, Gasoline in any stationary storage tank with a capacity of more than 251 gallons (950 liters) unless such tank:
 - (i) Complies with Rule 463; or
 - (ii) Is equipped with a Phase I Vapor Recovery System.
- (i) The Owner/Operator of any Gasoline Transfer and Dispensing Facility subject to Section (C)(2) above shall conspicuously post District-required signs specified in Attachment A of this rule in the immediate Gasoline dispensing area.
- (j) A fueling dispenser must be clearly labeled if it is not intended to be used to fuel Motor Vehicles.
- (k) Gasoline shall not be stored in open container(s) of any size or handled in any manner (spillage, spraying, etc.) that permits Gasoline or Gasoline Vapors to enter the atmosphere, contaminate the ground, groundwater, stormwater or the sewer systems.
- (l) The Owner/Operator of a new or Altered Gasoline Transfer and Dispensing Facility, shall have all Phase I and Phase II Vapor Recovery Systems inspected upon completion of the construction to verify that all components were installed in accordance with the description specified in the Authority to Construct and in compliance with all District requirements. The District shall be notified in writing of any changes to the information and specifications submitted with the application under which the Authority to Construct was issued.
- (m) The failure of an Owner/Operator of any Gasoline Transfer and Dispensing Facility to meet any requirements of section (C) of this rule shall constitute a violation. Such non-compliant equipment shall be tagged "Out of Order."
- (n) Except during repair activity, the "Out of Order" tag specified in subsection (C)(3)(m) shall not be removed and the non-compliant equipment shall not be used, permitted to be used, or provided for use unless all of the following conditions are satisfied:
 - (i) The non-compliant equipment has been repaired, replaced, or adjusted, as necessary;
 - (ii) The Owner/Operator has notified the District of the repairs by completing, signing and submitting the form supplied by the District.
 - (iii) The non-compliant equipment has been reinspected and/or authorized for use by the District.

(4) Self-Compliance Program Requirements

The Owner/Operator of any Retail Gasoline Transfer and Dispensing Facility shall implement a self-compliance program as follows:

- (a) The self-compliance program shall include the following elements:
 - (i) Weekly maintenance inspections shall be conducted in accordance with the protocol specified in Attachment B to ensure proper operating conditions of all components of the Vapor Recovery Systems.
 - (ii) Periodic compliance inspections shall be conducted at least once every twelve months and in accordance with the protocol specified in Attachment C to verify the compliance with all applicable District rules and regulations, as well as all permit conditions.
 - (iii) Maintenance schedules consistent with the applicable Phase I and Phase II Vapor Recovery Systems and components installed at the Gasoline Transfer and Dispensing Facility.
 - (iv) An employee training program including the following:
 - a. Itemized training procedures for employees responsible for conducting any part of the self-compliance program.
 - b. A training schedule to periodically train any employee responsible for conducting any part of the self-compliance program.
 - c. A record for each employee of the dates of training provided and the next training date.
 - d. A procedure to review and establish any additional necessary training following any changes or updates to the CARB Executive Order for the installed Vapor Recovery System.
- (b) Any equipment with Major Defect(s) which are identified during the weekly maintenance inspections or periodic compliance inspections shall be removed from service, repaired, brought into compliance, and duly entered into the repair logs required under section (E) of this rule, for record keeping, before being returned to service.
- (c) Defects discovered during self-inspection and repair shall not constitute a violation of Rule 461.

(D) Exemptions

- (1) The provisions of this rule shall not apply to the transfer of Gasoline:
 - (a) Into or from any stationary storage tank of less than 550 gallons capacity, which is used for the fueling of implements of husbandry as such Vehicles are defined in Division 16 (Section 36000 et. seq.) of the California Vehicle Code, if such tank is equipped with a permanent Submerged Fill Pipe.

- (b) Into or from any underground stationary tank using only hand pumping, for the purpose of providing emergency services during loss of commercial power, where the APCO has certified that such pumping cannot comply with the provisions of Section (C)(2) and where such hand pumping capability is otherwise required by law or regulation.
- (c) Into or from any stationary storage tank of any Retail Gasoline Station installed prior to December 19, 1988 which meets all the following conditions:
 - (i) The monthly Gasoline Throughput of the Facility does not exceed 10,000 gallons and the annual Gasoline Throughput of the Facility does not exceed 60,000 gallons, on a calendar month and calendar year basis, respectively, beginning with 1988.
 - (ii) The Facility has not been modified after December 19, 1988 where modified means the installation of a new tank, replacement of any existing tank, and/or excavation (exposing) of 50 percent (50%) or more of a Facility's total underground liquid piping from the stationary storage tanks to the Gasoline dispensers.
 - (iii) The transfer of Gasoline from any delivery Vehicle into those stationary storage tanks with a capacity of more than 251 gallons (950 liters) is limited to those tanks which are equipped with permanent Submerged Fill Pipes.
 - (iv) All dispensing nozzles are equipped with a hold-open latch unless the local fire code, or State Fire Marshal prohibits the use of the hold-open latch.
 - (v) The Facility Owner/Operator provides adequate evidence:
 - a. That compliance would be economically prohibitive and the alternative would be closure of the Facility.
 - b. That the Facility provides essential emergency fueling for Motor Vehicles and closure would result in a lessening of public safety.
 - c. That no other non-exempt retail Facility open during reasonable hours exists within a driving distance of 5 miles.
 - (vi) The Owner/Operator receives written approval from the District APCO in response to a formal request for exemption. Such exemptions shall be based solely on the evidence demonstrating the validity of the conditions listed above. If during any calendar month thereafter the Gasoline throughput exceeds 10,000 gallons, the exemption shall cease, effective the first day of the following calendar month. If during any calendar year thereafter the Gasoline throughput exceeds 60,000 gallons, the exemption shall cease effective the first day of the following calendar year.
- (2) Existing facilities that no longer meet exemption criteria shall:
 - (a) Secure an Authority to Construct from the District prior to the commencement of modifications.

- (b) Secure all other permits and approvals as required.
 - (c) Assure compliance with Sections (C)(1) and (C)(2) at the time Gasoline is first received or dispensed from the Facility.
- (3) The requirements of (C)(2) shall not apply to dedicated, non-public accessible, fuel dispensing equipment serving Vehicle fleets where 95 percent (95%) of the fleet Vehicles are equipped with Onboard Refueling Vapor Recovery (ORVR) systems. To qualify for this exemption, the fleet Operator must also own the Gasoline Transfer and Dispensing operation that services the Vehicle fleet, and maintain records as outlined in (E)(3)(6) supporting ORVR fleet exemption.
 - (a) Prior to operating under the exemption in Section (D)(3), Owner/Operator shall obtain a valid Authority to Construct or Permit to Operate allowing such operations.
- (4) Any Facility classified as exempt or claiming to be exempt pursuant to this section shall meet the same record keeping requirements as expressed in Section (E) of this rule so as to be able to prove the claimed exempt status.

(E) Recordkeeping

A person who performs the installation of components, self-compliance inspections, repairs or testing at any Gasoline Transfer and Dispensing Facility, including, but not limited to, the activities for normal operation and maintenance, Performance Testing, Re-Verification Testing and those following a drive-off, shall provide to the Owner/Operator all records listed below, as applicable, at the end of each day when the service is provided.

The Owner/Operator of any Retail or non-retail Gasoline Dispensing Facility shall maintain all records listed below and any other test results or maintenance records that are required to demonstrate compliance on site for a period of at least two (2) years, or five (5) years for Title V facilities. Notwithstanding, records for non-retail Gasoline Dispensing Facilities that are unmanned may be kept at other locations approved by the APCO. All records shall be made available to the APCO upon request both on site during inspections and offsite as specified.

- (1) Records of all components installed, defective components identified or repaired during self-compliance inspections.
- (2) Repair logs, which shall include:
 - (a) Date and time of each repair.
 - (b) The name of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer.
 - (c) Description of service performed.

- (d) Each component that was installed, repaired, serviced, or removed, including the required component identification information pursuant to subsection (C)(3)(b).
 - (e) Each component that was installed as a replacement, if applicable, including the required component identification information pursuant to subsection (C)(3)(b).
 - (f) Receipts for parts used in the repair and, if applicable, work orders, which shall include the name and signature of the person responsible for performing the repairs.
- (3) Records of tests, which shall include:
- (a) Date and time of each test.
 - (b) Name, affiliation, address and phone number of the person(s) who performed the test.
 - (c) Test data and calibration data for all equipment used.
 - (d) Date and time each test is completed and the Facility Owner/Operator is notified of the results. For a test that fails, a description of the reasons for the test failure shall also be included.
 - (e) For a re-test following a failed performance or reverification test, description of repairs performed pursuant to subsection (F)(1) and (F)(2).
 - (f) Copies of test reports in District approved format.
- (4) Monthly Gasoline throughput records.
- (5) Records to prove that the installer/contractor who installed or altered the Enhanced Vapor Recovery (EVR) equipment has successfully completed a manufacturer training program and any relevant state certification program applicable to the Phase I and Phase II Enhanced Vapor Recovery systems and associated components as specified in subsection (C)(3)(b).
- (6) Recordkeeping for Exempt Fleets An Owner/Operator claiming exemption under Section (D)(3) shall keep a record of the make, model, model year, and Vehicle identification number of all Vehicles refueled at the Gasoline Dispensing Facility. These records shall be maintained on the premises for at least two (2) calendar years.

(F) Performance Testing and Re-Verification Requirements

- (1) Within 60 calendar days or after dispensing the first 60,000 gallons of fuel into a Mobile Fueler or a Vehicle fuel tank, the Owner/Operator of a new or Altered Gasoline Transfer and Dispensing Facility shall conduct and successfully pass the Performance Tests in accordance with the test methods referenced in applicable

CARB Executive Orders as specified in section (G), as well as any additional tests required by District Permits, to verify the proper installation and operation of Phase I and Phase II Vapor Recovery Systems. Test results shall be submitted as stated in subsections (F)(3)(d) and (F)(3)(e).

- (2) The Owner/Operator shall conduct and successfully pass the Re-Verification Tests in accordance with the test methods referenced in section (G), and any additional tests required by the applicable CARB Executive Orders or District Permits, to verify the proper operation of the Vapor Recovery Systems. Test results shall be submitted as stated in subsections (F)(3)(d) and (F)(3)(e).
 - (a) The Re-Verification Tests at Retail and Non-Retail Gasoline Transfer and Dispensing Facilities shall be conducted annually.
 - (b) Re-Verification Testing shall be conducted no later than the last day of the same month the testing occurred in the prior year. When a new Performance Test schedule is required due to a Facility alteration, new Re-Verification Testing months shall be established based on the date of the Performance Tests.
 - (c) In case of a change of Owner/Operator, the new Owner/Operator shall conduct the next Re-Verification Test on the same testing month as established by the previous Owner/Operator, if the previous Re-Verification Testing records are available. When no testing records are available, the new Owner/Operator shall complete all the applicable Re-Verification Testing within 60 calendar days of the change of Owner/Operator.
- (3) A person who conducts performance or Re-Verification Tests shall comply with all of the following:
 - (a) Conduct performance or Re-Verification Tests in accordance with the applicable test methods referenced in section (G) 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 at least ten calendar days prior to testing. In the event that a Performance Test or Re-Verification Test cannot be conducted at the scheduled date and time, the test may be rescheduled to a later date and time provided that the District is notified at least 24 hours prior to the originally scheduled time. All notification under this subsection shall be provided by District approved methods.
 - (c) Conduct performance and Re-Verification Tests during normal District business hours. The APCO may approve alternative testing.
 - (d) Submit a copy of the PASS/FAIL test results in a District approved format to the APCO within 30 calendar days after each test is conducted. The PASS/FAIL test results are a summary of the overall results of each test.

- (e) Submit the final test report demonstrating compliance within 30 calendar days of the date when all tests were passed. The test report shall include all the required records of all tests performed, test data, current MDAQMD Facility ID number of the location being tested, the equipment Permit to Operate or Application number and, a statement whether the system or component tested meets the required standards.
- (4) The Owner/Operator shall not operate or resume operation of a Gasoline Transfer and Dispensing Facility, unless the Facility has successfully passed the applicable performance or Re-Verification Tests. Notwithstanding the above, when a dispenser associated with any equipment that has failed a Re-Verification Test is isolated and shut down, the Owner/Operator may continue operation or resume operation of the remaining equipment at the Facility, provided that test results demonstrate that the remaining equipment is in good operating condition. All test results and the method of isolating the defective equipment shall be documented in the test reports to be submitted to the APCO pursuant to subsection (F)(3)(c)-(e).

(G) Test Methods for Compliance Verification

When more than one test method is specified, a violation of any one test is a violation of the rule.

- (1) 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, and the District.

See SIP Table at <http://www.mdaqmd.ca.gov/>

ATTACHMENT A

MDAQMD-REQUIRED SIGNS

(A) The Operator shall post the following signs:

- (1) "NOZZLE" operating instructions;
- (2) Mojave Desert AQMD's toll-free telephone number (800) 635-4617; and
- (3) A "warning" stating:

TOXIC RISK

FOR YOUR OWN PROTECTION DO NOT BREATHE FUMES

DO NOT TOP OFF TANKS"

(B) All required signs shall conform to all of the following:

- (1) For decal signs:
 - (a) Each sign shall be visible from all Fueling Positions it serves; and
 - (b) Sign shall be readable from a distance of 3 feet.
- (2) All other signs:
 - (a) For pump toppers, one double-back sign per island;
 - (b) For permanent (non-decal) signs, two single-sided or one double-sided sign(s) per two (2) dispensers; and
 - (c) All signs shall be readable from a distance of 6 feet

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ATTACHMENT B

MAINTENANCE INSPECTION PROTOCOL

The Owner/Operator of a Retail Gasoline Transfer and Dispensing Facility shall at minimum verify the following during required maintenance inspections:

(A) 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.

(B) RECORDS OF DEFECTIVE COMPONENTS

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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 CARB Certified Pressure/Vacuum Relief Valves.

(C) PHASE II VAPOR RECOVERY SYSTEM INSPECTION

- (1) The fueling instructions are clearly displayed.
- (2) Each nozzle is the current CARB-certified model.
- (3) Each nozzle is installed in accordance with the applicable CARB Executive Orders.
- (4) The following nozzle components are in place and in good condition, as specified in CARB Executive Orders or California Code of Regulations, Title 17, Part III, Chapter 1, subchapter 8, section 94006 or Health and Safety Code Section 41960.2 (e):
 - (a) faceplate/facecone; vapor splash guard/fill guard/efficiency compliance device (ECD)
 - (b) bellows
 - (c) latching device spring
 - (d) Vapor Check Valve
 - (e) spout (proper diameter/vapor collection holes)
 - (f) Insertion Interlock Mechanism
 - (g) automatic shut-off mechanism
 - (h) hold open latch
- (5) The hoses are not torn, flattened or crimped.
- (6) The vapor recovery hoses are the required size and length.
- (7) The hoses with retractors are adjusted to maintain a proper loop, and the bottom of the loop is within the distance from the island surface certified by the CARB Executive Order for that particular dispenser configuration.
- (8) The vapor recovery nozzles are equipped with required hoses.
- (9) The bellows-equipped vapor recovery nozzles are equipped with "CARB Certified" Insertion Interlock Mechanisms.
- (10) If required, the flow limiter is not missing and is installed properly.
- (11) The swivels are not missing, defective, or leaking, and the dispenser-end swivels, if applicable, are Fire-Marshall approved with 90-degree stops.

- (12) If required, the Liquid Removal Devices comply with required CARB certifications and are properly installed.
- (13) For Bellows-Less Nozzles, the hoses are inverted coaxial type except for Hirt systems, and the vapor collection holes are not obstructed.
- (14) For Vacuum-Assist Systems, the vapor processing unit and burner are functioning properly.
- (15) For Aspirator-Assist Systems, the major components (i.e. aspirator or jet pump, modulating valve, and Vapor Check Valve) are present inside each dispenser. For Aspirator-Assist Systems with certification-required calibration stickers, the current calibration sticker is present.

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RULE 462

Organic Liquid Loading

(A) General Description

- (1) Purpose:
 - (a) To control emissions of Volatile Organic Compounds (VOC) and toxic compounds from facilities that transport and load organic liquids into tanks, including Motor Vehicle fuel tanks, tank trucks, trailers or railroad tank cars.
- (2) Applicability:
 - (a) The provisions of this rule shall apply to all Class “A” or “B” Facilities, Retail and non-retail service stations or any other facility where Organic Liquids are stored or transferred.
- (3) Severability:
 - (a) If any portion of this rule shall be found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the rule, which shall continue to be in full force and effect.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms*, shall apply unless a term is otherwise defined herein:

- (1) “Class A Facility” – Any Organic Liquid Loading Facility loading 5,000,000 gallons (18,925,000 liters) or more per year and/or 20,000 gallons (73,700 liters) or more on any day of Organic Liquids with a True Vapor Pressure, determined at actual storage conditions, of 77.5 mm (1.5 psia) or greater into any tank truck, trailer, or railroad tank car.
- (2) “Class B Facility” – Any Organic Liquid Loading Facility loading less than 5,000,000 gallons (18,925,000 liters) per year. with a True Vapor Pressure, determined at actual storage conditions, of 77.5 mm (1.5 psia) or greater into any tank truck, trailer, or railroad tank car.
- (3) “Vapor Tight” – means the detection of less than 3,000 ppm, as methane, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21

(C) Requirements

(1) Loading Requirements at Class “A” Facilities

- (a) Each Class A Facility loading Organic Liquids shall be equipped with:
 - (i) A CARB Certified Vapor Recovery and/or disposal system.
- (b) The loading 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.
- (c) 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.
- (d) The backpressure in the Vapor Recovery and/or disposal system shall not exceed 18 inches of water column pressure.
- (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 maintained Vapor Tight and Liquid Tight, and operated so that there are no overfills.
- (g) Tanker truck liquid loading hoses and vapor return hoses shall be capped, plugged, or have a secondary valve closed whenever the hoses are not in active use to maintain equipment in a Vapor Tight and Liquid Tight condition.

(2) Loading Requirements at Class “B” Facilities

- (a) Each Class B Facility loading Organic Liquids shall be equipped with:
 - (i) A CARB Certified Vapor Recovery and/or disposal system with a Vapor Recovery Efficiency of 95 percent (95%).
 - a. The backpressure in the Vapor Recovery and/or disposal system shall not exceed 18 inches of water column pressure.
 - (ii) A Submerged Fill Loading or bottom fill loading system. All Gasoline or equivalent vapor pressure Organic Liquids shall be transferred in this manner.
 - (iii) A pressure vacuum valve on the aboveground stationary storage tank with a minimum pressure valve setting of eight (8) ounces per square inch, provided that such setting will not exceed the tank’s maximum pressure rating. This requirement does not pertain to Floating Roof Tanks.

- (b) 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.

(D) Additional Requirements

- (1) Other agency requirements - The Vapor Recovery Systems used to comply with the provisions of this Rule shall also comply with all safety, fire, weights and measures, and other applicable codes and/or regulations, including those listed in the California Health and Safety Code Sections 41950 - 41974.
- (2) Vapor Tight and Liquid Tight - All of the components of the facility including but not limited to tanks, flanges, seals, pipes, pumps, valves, meters, connectors, shall be maintained Vapor Tight and Liquid Tight and operated so as to prevent excess Organic Liquid drainage during transfer, storage and handling operations.
- (3) Organic Liquid Transport
 - (a) A person shall not allow loading or unloading of Organic Liquid, or other use or operation of any designated transporting 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(9) and the California Administrative Code Title 17, Section 94004.
 - (b) Vapor leaks from dome covers, pressure vacuum vents or other sources shall be determined in accordance with EPA Method 21.
- (4) Switch Loading

Uncontrolled Switch Loading is prohibited except at Class B Facilities where:

 - (a) Any vapors vented to the atmosphere do not at any point during the transfer exceed 10,000 ppmv, measured as equivalent methane, with a portable hydrocarbon analyzer in accordance with EPA Method 21, or
 - (b) Emissions are controlled by a Vapor Recovery System.
- (5) Leak Inspection Requirements
 - (a) The Owner/Operator of any Class A or B, 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 schedules:
 - (i) Monthly if sight, sound, and smell are used as detection methods.

- a. If leak inspections are conducted monthly by sight, sound and smell, an organic vapor analyzer (OVA) must be used to conduct checks every six months.
 - (ii) Quarterly if an 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 replaced component shall be reinspected the first time the component is in operation after the repair or replacement.
- (6) Distribution of Responsibilities
- (a) The Owner/Operator of an Organic Liquid Loading Facility is responsible and liable for complying with the provisions 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/Operator of the facility supervise or otherwise facilitate the transfer operation, the Owner/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.
 - (b) The Owner/Operator, or driver of a tank truck, trailer, or railroad tank car is responsible for complying with Subsections (D)(2) and (D)(3) of this rule.

(E) Exemptions

- (1) The provisions of subparagraphs (C)(1)(e) and (C)(2)(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/Operator, provided the repair or replacement of applicable equipment is completed within the specified period as given in subparagraph (D)(5)(b).

(F) Record Keeping and Reporting

- (1) Any facility subject to this rule shall, as a minimum, maintain the following records:
 - (a) The Owner/Operator shall maintain a log of all inspections, repairs, description of leaks, and maintenance on equipment subject to this rule. Such logs or records shall be maintained at the facility for at least 2 years (5 years for Title V facilities and sources subject to MACT standards) and shall be made available to the APCO upon request.

- (b) The Owner/Operator of a Class A or Class B Facility shall prepare a log demonstrating:
 - (i) Daily Throughput.
 - (ii) Monthly Throughput Summary - for a rolling twelve month period.
 - (iii) Average stored volume over the 24 hour period (midnight to midnight).
 - (iv) Daily storage and transfer temperatures of the organic liquid.
 - (v) Results of leak inspection checks.
 - (vi) Stored product's name and Chemical Abstracts Service (CAS) number.
- (2) Any facility classified as exempt or claiming to be exempt shall meet the same record keeping requirements of this rule so as to be able to prove the exemption status.

(G) Test Methods for Compliance Verification

- (1) When more than one test method is specified for testing, a violation determined by any one of these test methods shall constitute a violation of the rule.
 - (a) ASTM METHOD D-323-06: Reid vapor pressure shall be determined in accordance with American Society of Testing and Materials D323-06, Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).
 - (b) ASTM METHOD D-2879-97 (2002)(e1): True vapor pressure shall be determined in accordance with American Society of Testing and Materials D2879-97(2002)(e1), Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
 - (c) EPA METHODS 2A OR 2B: The gas flow rate shall be determined in accordance with EPA Method 2A, Direct Measurement of Gas Volume Through Pipes and Small Ducts; or EPA Method 2B, Determination of Exhaust Gas volume flow rate From Gasoline Vapor Incinerators, as applicable.
 - (d) EPA METHOD 21: The gas tight condition shall be determined in accordance with EPA Method 21, Determination of Volatile Organic Compound Leaks, using a portable analyzer calibrated with methane gas.
 - (e) EPA METHODS 25, 25A OR 25B: VOC emissions shall be determined in accordance with EPA Method 25 – Gaseous Nonmethane Organic Emission, or 25A - Gaseous Organic Concentration, Flame Ionization; or EPA Method 25B - Gaseous Organic Concentration, Infrared Analyzer, as applicable.

- (f) CARB TEST PROCEDURE TP-203.1: The terminal vapor recovery system efficiency shall be determined in accordance with CARB Vapor Recovery Test Procedure TP-203.1, Determination of Emission Factor of Vapor Recovery Systems of Terminals.
 - (g) CARB CERTIFICATION PROCEDURE CP-202 – CERTIFICATION PROCEDURE FOR VAPOR RECOVERY SYSTEMS OF BULK PLANTS: Vapor Recovery efficiency for shall be determined in accordance with CARB Certification Procedure CP-202.
- (2) Other test methods demonstrated to provide results that are acceptable for determining Reid or true vapor pressure for purposes of demonstrating compliance with this rule, after review and approval in writing by the District, the ARB, and the U.S. EPA, may also be used.

See SIP Table at <http://www.mdaqmd.ca.gov/>

RULE 463

Storage of Organic Liquids

(A) General Description

(1) Purpose:

To control the emissions of Volatile Organic Compounds (VOC) and toxic compounds during the storage of organic liquids.

(2) Applicability:

- (a) All aboveground Gasoline storage tanks of capacity of at least 250 gallons (950 liters);
- (b) All aboveground Organic Liquid storage tanks of capacity of at least 19,815 gallons (75,000 liters); and
- (c) All Organic Liquid storage tanks of capacity of at least 39,630 gallons (150,000 liters).

(3) Severability:

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

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms*, shall apply unless a term is otherwise defined herein:

- (1) “Metallic-Shoe Seal” - A type of seal used to minimize evaporative losses of Organic Liquids from a storage tank equipped with an External Floating Roof. It serves as a primary seal, and is constructed with vertical metal plates or "shoes", connected by braces or other devices to the circumference of the floating roof. They are partially immersed in the liquid being stored, and are suspended in such a way that they are forced outward against the inner tank wall.
- (2) “Resilient-Toroid Seal” - A type of seal used to minimize evaporative losses of Organic Liquids from a storage tank equipped with an External Floating Roof. It is a toroidal tube, or "donut", made of fabric or other resilient material, that rests on the surface of the stored liquid. It serves as a primary seal that minimizes evaporative losses from the tank. The toroid seal may be filled with air, foam, or other resilient material.

- (3) “Vapor Tight” – is the detection of less than 1,000 ppm, as methane, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21.

(C) Requirements

- (1) Tanks Over 39, 630 gallons of Capacity

No person shall place, store or hold in any storage tank, with a capacity of 39,630 gallons (150,000 liters) or greater, any organic liquid having a True Vapor Pressure of 25.8 mm Hg (0.5 psi) or greater, unless such tank is a pressure tank maintaining working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere, or is designed and equipped with one of the following vapor loss control devices, which is properly installed, properly maintained, and in good operating order:

- (a) An External Floating Roof, that rests on the surface of the liquid contents at all times, except as provided in Subsection (C)(3)(c) and is equipped with a closure device between the tank shell and roof edge. Except as provided in Subsections (C)(1)(a)(iii) and (C)(1)(a)(iv), the closure device shall consist of two seals, one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred to as the secondary seal. Seal designs shall be submitted to the APCO and shall not be installed or used unless they are approved by the APCO as meeting the criteria set forth in Section (F) - Specifications for Closure Devices, as applicable.
- (i) For a closure device on a welded tank shell which uses a Metallic-Shoe- Seal as its primary seal: refer to Section (F)(1) for specifications.
- (ii) For a closure device which uses a Resilient-Toroid- Seal as its primary seal: refer to Section (F)(2) for specifications.
- (iii) For a closure device on a riveted tank shell which uses a Metallic-Shoe- Seal as its primary seal: refer to Section (F)(3) for specifications.
- (iv) EXEMPTION: The requirements of Subsections (F)(1) through (F)(3) shall not apply to any person who demonstrates to the APCO that a closure device has been installed, which by itself or in conjunction with other vapor loss control devices, controls vapor loss at all tank levels with an effectiveness equivalent to a closure device on a welded tank which meets the requirements of Subsection (F)(1). This exemption is subject to the specifications of Section (F)(4) of this rule.
- (v) ANNUAL DISTRICT INSPECTIONS: The primary seal envelope shall be made available for unobstructed inspection by the APCO on an annual basis at the location selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, eight such locations shall be made available; in all other cases, four such locations shall be made

available. If a violation is discovered during an annual inspection, the APCO may require further unobstructed inspection of the primary seal to determine the seal condition for its entire circumference. In addition, for tanks installing a secondary seal the primary seal envelope shall be made available for inspection by the APCO prior to installation of the secondary seal. Secondary seals that are already in place shall be made available for unobstructed inspection by the APCO for its full length every five (5) years. In the event that a secondary seal is voluntarily removed by the Owner/Operator, it shall be made available for such inspection at that time. The Owner/Operator shall provide notification to the APCO no less than seven (7) working days prior to voluntary removal of the secondary seal.

- (vi) All openings in the roof except Pressure-Vacuum Valves, which shall be set to within ten percent (10%) of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal, or lid. The cover, seal, or lid shall at all times be in closed position, with no visible gaps, except when the device or appurtenance is in use.
 - (vii) Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least nine-tenths of the area of the opening.
 - (viii) A floating roof shall not be used if the organic liquid stored has a True Vapor Pressure of 569 mm Hg (11 psi) absolute or greater under storage conditions.
- (b) A fixed roof with an internal-floating-type cover that rests on the surface of the liquid contents at all times except as provided in Subsection (C)(3)(c) and is equipped with a closure device.
- (i) For a fixed roof tank the closure device shall consist of either a liquid mounted primary seal only, or two seals: a primary and a secondary seal. All openings and fittings shall be fully gasketed and/or controlled in a manner specified by the APCO. The closure device shall control vapor loss with an effectiveness equivalent to the outlined criteria in Subsection (F)(1). Internal Floating Roof and seal designs shall be submitted to the APCO and shall not be installed or used unless they are approved by the APCO.
 - (ii) A fixed roof tank with an internal-floating-type cover shall not be used if the organic liquid stored has a True Vapor Pressure of 569 mm Hg (11 psi) absolute or greater under actual storage conditions.
 - (iii) Compliance shall be verified by measuring the vapor space above the floating roof with an explosimeter, which will determine the lower explosive limit (LEL). LEL readings for the Internal Floating Roof shall not exceed 50 percent (50%) for those installed

prior to December 19, 1988 and 30 percent (30%) of the LEL for those installed after December 19, 1988.

- (iv) Visual inspection of the secondary seal shall be performed by the tank operators semi-annually. A record of such inspections shall be maintained and such records shall be made available for review by the APCO upon request.
 - (v) The primary and secondary seals shall be inspected and repaired, if necessary, each time the tank is emptied and gas-freed. The APCO shall be notified at least 48 hours in advance of each such gas-freeing.
- (c) A fixed roof tank with a vapor recovery system consisting of a system capable of collecting all organic vapors and gases, and a vapor return or disposal system capable of processing such vapors and gases, so as to prevent their emission to the atmosphere at an efficiency of at least 95 percent (95%) by weight.
- (i) 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.
 - (ii) All piping, valves and fittings shall be constructed and maintained both Liquid Tight and Vapor Tight, such that no organic vapor or gas leaks are detectable.
- (d) Other equipment, having a vapor loss control efficiency of at least 95 percent (95%) by weight, shall provide an application for installation and obtain written approval from the APCO prior to the commencement of construction and/or operation.

(2) Tanks with 39,630 Gallons or Less Capacity

A person shall not place, store or hold in any aboveground storage tank with a capacity of 39,630 gallons (150,000 liters)) or less, any organic liquid having a True Vapor Pressure of 77.5 mm Hg (1.5 psia) or greater under actual storage conditions, unless such tank is equipped with a pressure-vacuum valve which is set to within ten percent (10%) of the maximum allowable working pressure of the tank, or is equipped with a vapor loss control device which complies with the requirements set forth in Section (C)(1).

(3) Additional Requirements

- (a) All of the components of a facility including but not limited to tanks, flanges, seals, pipes, pumps, valves, meters, connectors, shall be maintained and operated so as to prevent Fugitive Vapor Leaks, Fugitive Liquid Leaks, and excess organic liquid drainage during transfer, storage and handling operations.
- (b) Efficiency, as outlined in Subsections (C)(1)(c) and (C)(1)(d) means a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor

control system. Base line emissions shall be calculated by using the criteria outlined in American Petroleum Institute Bulletin 2518.

- (c) The roof of any Internal or External Floating Roof tank is to be floating on the 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, and/or refilling, when the roof is resting on the leg supports, shall be continuous and shall be accomplished as rapidly as possible, and;
 - (i) If the tank has been gas-freed and is to be refilled with Gasoline, the roof shall be refloated with water, or equivalent procedure approved by the APCO.
- (d) Floating Roof Tank Inspection Requirements:
 - (i) All floating roof tanks subject to this rule shall be inspected twice per year at 4 to 8 months intervals.
 - (ii) Additionally, the primary and secondary seals shall be inspected each time a floating roof tank is emptied and degassed. Gap measurements shall be performed on an External Floating Roof tanks when the liquid surface is still but not more than 24 hours after the tank roof is refloated.
- (e) Floating Roof Tank 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. The repaired or replacement component shall be reinspected the first time the component is in operation after the repair or replacement.
- (f) Non-Floating Roof Tank Inspection Requirements:

Any tank in retail service shall be inspected for compliance with this rule not less frequently than once per month. All other tanks shall be inspected not less than once a year.

(D) Record Keeping and Recording

- (1) A person whose tanks are subject to this rule shall keep an accurate record of liquids stored in such tanks and the True Vapor Pressure ranges of such liquids.
- (2) 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 as recorded on a daily basis.
- (3) The Owner/Operator shall maintain a log of all inspections, repairs and maintenance on equipment subject to this rule. Such a log or records shall be

maintained at the facility for at least five (5) years and shall be made available to the APCO upon request.

(E) Exemptions

- (1) The provisions of Subsection (C)(3)(c) shall not apply to Gasoline storage tanks at bulk Gasoline distribution terminals which do not have:
 - (a) Existing facilities for treatment of wastewater used to refloat the tank roof; or
 - (b) Facilities for equivalent emission control when refloating the roof with product.
- (2) Notwithstanding the secondary and primary seal requirements of subparagraphs (F)(1), a secondary or primary seal may be loosened or removed for preventive maintenance, inspection and/or repair upon prior notification and subject to the prior written approval of the APCO and for a period not exceeding 72 hours.

(F) Specifications for Closure Devices

- (1) For a closure device on a welded tank shell which uses a Metallic-Shoe- Seal as its primary seal:
 - (a) Gaps between the tank shell and the primary seal shall not exceed 1 ½ inches (3.8 centimeters) for an accumulative length of 10 percent (10%), ½ inch (1.3 centimeters) for another 30 percent (30%), and 1/8 of an inch (0.32 centimeter) for the remaining 60 percent (60%) of the circumference of the tank. No gap between the tank shell and the primary seal shall exceed 1 ½ inches (3.8 centimeters). No continuous gap greater than a 1/8 of an inch (0.32 centimeter) shall exceed 10 percent (10%) of the circumference of the tank.
 - (b) Gaps between the tank shell and the secondary seal shall not exceed a 1/8 of an inch (0.32 centimeter) for an accumulative length of 95 percent (95%) of the circumference of the tank, and shall not exceed a ½ an inch (1.3 centimeters) for an accumulative length of the remaining 5 percent (5%) of the circumference of the tank. No gap between the tank shell and the secondary seal shall exceed ½ an inch (1.3 centimeters).
 - (c) Metallic-Shoe- Seals installed on or after date of adoption of this rule, shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches (61 centimeters) above the stored liquid surface.
 - (d) 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 for a length of at least 18 inches (46 centimeters) in the vertical plane above the liquid surface. There shall be no holes or tears in, or openings which allow the emission of organic vapors through the

secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric.

- (e) The secondary seal shall allow easy insertion of probes up to 1 ½ inches (3.8 centimeters) in width in order to measure gaps in the primary seal in accordance with section (C)(1)(a)(v).
 - (f) The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.
- (2) For a closure device which used a Resilient-Toroid- Seal as its primary seal:
- (a) If installation was commenced prior to February 20, 1980, gaps between the tank shell and the primary seal shall not exceed an 1/8 of an inch (0.32 centimeter) for an accumulative length of 95 percent (95%) of the circumference of the tank, and shall not exceed a ½ an inch (1.3 centimeters) for an accumulative length of the remaining 5 percent (5%) of the tank circumference. No gap between the tank shell and the primary seal shall exceed a ½ an inch (1.3 centimeters).
 - (b) If installation was commenced prior to February 20, 1980 gaps between the tank shell and the secondary seal shall not exceed an 1/8 of an inch (0.32 centimeter) for an accumulative length of 95 percent (95%) of the circumference of the tank, and shall not exceed a ½ an inch (1.3 centimeters) for an accumulative length of the remaining 5 percent (5%) of the tank circumference. No gap between the tank shell and the secondary seal shall exceed a ½ an inch (1.3 centimeters).
 - (c) If installation is commenced after February 20, 1980, the tank Owner/Operator shall, prior to installation, demonstrate to the APCO, that the closure device controls vapor loss with an effectiveness equivalent to a closure device on a welded tank which meets the requirements of Subsection (F)(1)(a). The APCO shall determine whether equivalence exists in accordance with Subsection (C)(1)(a)(iv). If equivalence is demonstrated using primary or secondary seal gap criteria (if any) different from the criteria specified in Subsections (F)(2)(a) or (b), those criteria shall be controlling for all purposes of this rule in lieu of the criteria specified in Subsections (F)(2)(a) and (b).
 - (d) There shall be no holes or tears in, or openings which allow the emission of organic vapors through the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, seal fabric and secondary seal.
 - (e) The secondary seal shall allow easy insertion of probes up to 1 ½ inches (3.8 centimeters) in width in order to measure gaps in the primary seal.
 - (f) The secondary seal shall extend from the roof of the tank shell and not be attached to the primary seal.

- (3) For a closure device on a riveted tank shell which uses a Metallic-Shoe- Seal as its primary seal;
- (a) The closure device shall consist of two seals, one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred to as the secondary seal.
 - (b) The closure device shall control vapor loss with an effectiveness equivalent to a closure device on a welded tank which meets the requirements of Subsection (F)(1). The APCO shall determine whether equivalence exists in accordance with Subsection (C)(1)(a)(iv). Gaps between the primary and secondary seals shall not exceed the gaps (if any) associated with the closure device approved as equivalent by the APCO, and shall be controlling for all purposes of this rule.
 - (c) Metallic-Shoe- Seals installed on or after February 20, 1979 shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches (61 centimeters) above the stored liquid surface. 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 for a length of at least 18 inches (46 centimeters) in the vertical plane.
 - (d) There shall be no holes or tears in, or openings which allow the emission of organic vapors through the envelope surrounding the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric.
 - (e) Any secondary seal shall allow easy insertion of probes up to 1 ½ inches (3.8 centimeters) in width in order to measure gaps in the primary seal.
 - (f) Any secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.
- (4) The Owner/Operator of any tank with a closure device, or proposed to be equipped with such a system, shall, prior to use on installation, demonstrate equivalence to the USEPA, CARB and the APCO as follows:
- (a) By an actual emissions test in a full-size or scale sealed tank facility which accurately collects and measures all hydrocarbon emissions associated with a given closure device, and which accurately simulates other emission variables, such as temperature, barometric pressure and wind. The test facility shall be subject to prior approval by the USEPA, CARB and the APCO, or,
 - (b) By a pressure leak test, engineering evaluation or other means, where the USEPA, CARB and the APCO determines that the same is an accurate method of determining equivalence.

(H) Compliance Verification Test Methods

- (1) When more than one test method is specified for testing, a violation determined by any one of these test methods shall constitute a violation of the rule.
 - (a) ASTM METHOD D-323-06: Reid vapor pressure shall be determined in accordance with American Society of Testing and Materials D323-06, Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).
 - (b) ASTM METHOD D-2879-97 (2002)(e1): True vapor pressure shall be determined in accordance with American Society of Testing and Materials D2879-97(2002)(e1), Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
 - (c) EPA METHODS 2A OR 2B: The gas flow rate shall be determined in accordance with EPA Method 2A, Direct Measurement of Gas Volume Through Pipes and Small Ducts; or EPA Method 2B, Determination of Exhaust Gas volume flow rate From Gasoline Vapor Incinerators, as applicable.
 - (d) EPA METHOD 18: Exempt compounds shall be determined in accordance with EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography.
 - (e) EPA METHOD 21: The gas tight condition shall be determined in accordance with EPA Method 21, Determination of Volatile Organic Compound Leaks, using a portable analyzer calibrated with methane gas.
 - (f) EPA METHODS 25, 25A OR 25B: VOC emissions shall be determined in accordance with EPA Method 25 – Gaseous Nonmethane Organic Emission, or 25A - Gaseous Organic Concentration, Flame Ionization; or EPA Method 25B - Gaseous Organic Concentration, Infrared Analyzer, as applicable.
 - (g) CARB TEST PROCEDURE TP-203.1: The terminal vapor recovery system efficiency shall be determined in accordance with CARB Vapor Recovery Test Procedure TP-203.1, Determination of Emission Factor of Vapor Recovery Systems of Terminals.
- (2) Other test methods demonstrated to provide results that are acceptable for determining Reid or true vapor pressure for purposes of demonstrating compliance with this rule, after review and approval in writing by the District, the CARB, and the USEPA, may also be used.

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
RULE 463 - ADDENDUM

STORAGE TEMPERATURES vs. TRUE VAPOR PRESSURE
(gravity/initial boiling points referenced)

	Reference Property A - API B - IBP, °F		Temperature, °F Not to Exceed Vapor Pressure	
<u>Organic Liquids</u>	<u>A</u>	<u>B</u>	<u>0.5 pisa</u>	<u>1.5 pisa</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
<u>Middle Distillates</u>				
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
<u>Jet Fuels</u>				
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

	Reference Property A - API B - IBP, °F		Temperature, °F <u>Not to Exceed Vapor Pressure</u>	
<u>Fuel Oil</u>				
# 1	42.5	350	195	250
# 2	36.4	372	230	290
# 3	26.2	390	249	310
# 4	23.0	421	275	340
# 5	19.9	560	380	465
# 6	16.2	625	450	---
<u>Asphalts</u>				
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
Cyclohexane	49.7	177	35	70
Ethylacetate	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
Mehylethyl Ketone	44.3	175	30	70
Toluene	30.0	231	73	115
Vinyl Acetate	19.6	163	---	60
Carbon Disulfide	10.6	116	---	10
Carbon Tetra-Chloride	13.4	170	30	60
Chloroform	12.5	142	---	40

	Reference Property		Temperature, °F	
	A - API	B - IBP, °F	<u>Not to Exceed Vapor Pressure</u>	
1,2-Dichloro-ethane	10.5	180	35	77
Methylene Chloride	11.1	104	---	70
1,1,1-Trichloro-ethane	11.2	165	60	100
Trichloroethylene	12.3	188	50	91

See SIP Table at <http://www.mdaqmd.ca.gov/>

RULE 464

Oil-Water Separators

(A) General

- (1) Purpose
 - (a) The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs) from Oil-Water Separators.
- (2) Applicability
 - (a) This rule applies to Oil-Water Separators including Air Flotation Units as defined in this rule, and process units or containers used to store skimmed oil or tar from Oil-Water Separators.

(B) Definitions

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

- (1) “Air Flotation Unit” – Equipment used to remove suspended matter, both oil and solid, from water by dissolving air under pressure and then releasing the air at atmospheric pressure in a tank or basin.
- (2) “Air Pollution Control Officer” (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.
- (3) “California Air Resources Board” (CARB) – The California State Air Resources Board, the Executive Officer of CARB and his or her authorized representative, the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with Section 39500).
- (4) “Control Device” – Any device for reducing emissions of VOC to the atmosphere.
- (5) “Effluent Water” – Any wastewater generated as a byproduct of industrial processes and containing dissolved, particulate organic materials. Consists of a mixture of water with a petroleum product, including but not limited to the following: gasoline, kerosene, distillate fuel oils, residual fuel oils and lubricants.
- (6) “Fixed Cover” – Any cover made out of metal(s), polymer(s) or other material, and installed in a permanent position over the liquid.

- (7) “Floating Cover” – Any cover made out of metal(s), polymer(s) or other material, which is in contact with a liquid surface at all times.
- (8) “Forebay” – That section of a gravity-type separator which (a) receives the untreated, contaminated Effluent Water from the preseparator flume, and (b) acts as a header which distributes the influent to the separator channels.
- (9) “Fugitive Vapor Leak” (Leak) – The detection of 500 ppm or greater above background (expressed as methane), measured at the interface of the component using an appropriate hydrocarbon analyzer according to the procedures specified in EPA Method 21.
- (10) “Non-Contact Water Cooling Systems” – Any system which involves the cooling of organic vapors via coolant injected through piping. There is no contact between the cooling fluid and the vapors being cooled.
- (11) “Oil-Water Separator” – Any device or piece of equipment, which utilizes the difference in density between oil or petroleum products and water to remove the oil or associated chemicals from the water, or any device, such as a flocculation tank, clarifier, etc. that removes petroleum-derived compounds from wastewater.
- (12) “Operator” – Includes, but is not limited to, any person who owns, leases, supervises, or operates a facility and/or equipment.
- (13) “Organic Materials” – Chemical compounds of carbon, excluding carbon monoxide, carbon dioxide, metallic carbides, metallic carbonates and ammonium carbonate.
- (14) “Organic Vapors” – Chemical compounds of carbon, excluding carbon monoxide, carbon dioxide, metallic carbides, metallic carbonates and ammonium carbonate in their gaseous state.
- (15) “Overall Control Efficiency” – The product of the capture efficiency multiplied by the control efficiency; the weight per unit time of VOC removed by a control device divided by the weight per unit time of VOC emitted by an emission source, expressed as a percentage.
- (16) “Petroleum Products” – Any crude oil or oil distillate derived from tar sands, shale or coal, including, but not limited to gasoline, kerosene, distillate fuel oils, residual fuel oils and lubricants.
- (17) “Reid Vapor Pressure” – The absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids, except liquified petroleum gases, as determined by ASTM D 323-89.
- (18) “United States Environmental Protection Agency” (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

- (19) “Vapor Recovery System” – A vapor-gathering system capable of collecting VOC vapors and gases emitted during the operation of equipment.
- (20) “Volatile Organic Compound” (VOC) – Any volatile compound containing at least one atom of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and those compounds listed in 40 CFR 51.100(s).

(C) General Requirements

(1) Fugitive Vapor Control Devices

- (a) A person shall not use any Oil-Water Separator subject to the provisions of Section (A)(2), unless it has been equipped with one of the following vapor loss control devices, except when gauging or sampling is taking place:
 - (i) A Fixed Cover with all openings sealed and totally enclosing the liquid contents of the compartment, except for such breathing vents as are structurally necessary; or
 - (ii) A Floating Cover or double-deck type cover, equipped with closure seals that have no holes or tears, installed and maintained so that gaps between the compartment wall and seal shall not exceed one-eighth inch for an accumulative length of 97 percent of the perimeter of the tank, and shall not exceed one-half inch for an accumulative length of the remaining three percent of the tank. No gap between the compartment wall and the seal shall exceed one-half inch; or
 - (iii) Route all vapors to a Control Device with an Overall Control Efficiency (collection and control efficiencies) of at least 95 percent by weight of VOCs, measured according to the test method specified in Section (G)(3).
- (b) Any oil-water separator subject to this rule shall provide the following vapor loss control device:
 - (i) A Fixed Cover for all Forebays, such that no liquid surface is exposed to the atmosphere.
- (c) Skimmed oil or tar removed from Oil-Water Separators shall be either charged to process units with feed or transferred to a container with a control system with at least 90 percent control efficiency by weight. A Control Device must be under District permit.

(2) Requirements for Covers

- (a) Covers for oil-water separators shall meet the following requirements:

- (i) The cover material shall be impermeable to VOCs, and free from holes or openings.
- (ii) Any gauging or sampling devices on the compartment cover shall be covered. The latter cover shall be kept closed, with no visible gaps between the cover and the compartment, except when the sampling device is being used.
- (iii) Hatches on covers shall be kept closed and free of gaps, except when opened for inspection, maintenance or repair.
- (iv) The perimeter of a cover, except for a Floating Cover, shall form a seal free of gaps with the foundation to which it is installed.

(3) Fugitive Vapor Leak Monitoring

- (a) When an instrument reading of 500 parts per million (ppm) or greater is measured, a leak has been detected and the reading shall constitute a violation of this rule.

(D) Exemptions

- (1) The provisions of this rule shall not apply to:
 - (a) Segregated storm water runoff drain systems or to non-contact cooling water systems, where applicable.
 - (b) Any system which collects and processes effluent or process water contaminated with oil or other petroleum products and recovers less than 760 liters (201 gallons) a day of oil or other petroleum products
 - (c) Oils, tars and petroleum products with a Reid Vapor Pressure of less than 25 mm Hg (0.5 pound per square inch).

(E) Monitoring

- (1) Monitoring for Fugitive Vapor Leaks shall be performed on a monthly basis and in accordance to test method specified in Section (G)(1). Monitoring records shall be kept on file as prescribed in Section (F)(1).
- (2) Monitoring of the control device shall be performed on an annual basis and in accordance to the test method specified in Section (G)(4).

(F) Record Keeping

- (1) A log of the monthly leak inspection shall be kept on file at the facility. The log shall record, at a minimum, the following information:
 - (a) Date of the inspection.

- (b) Documentation of all written or machine recorded operator inspections, VOC measurements including corresponding background levels, source tests, repairs, replacements, and reinspection records.
 - (c) Leak determination method (shall be in accordance to the test method specified in Section (G)(1), using an appropriate hydrocarbon analyzer).
 - (d) Corrective action (date of leak repair and a written justification for any repair interval in excess of 15 calendar days).
 - (e) Inspector's name and signature.
- (2) Any person using an emission control device/system pursuant to Section (C)(1) as a means of complying with provisions of this rule shall maintain records of key system operating and maintenance data for the purpose of demonstrating continuous compliance during periods of emission producing activities. The data shall be recorded in a manner as prescribed by the District.
 - (3) Any facility claiming exemption pursuant to Sections (D)(1)(a) or (D)(1)(b) of this rule shall keep records to substantiate the claimed exempt status.
 - (4) Any record required or produced pursuant to this rule shall be retained on site for a minimum of five (5) years and shall be made available to the APCO upon request.

(G) Test Methods for Compliance Verification

A violation determined by any one of these test methods shall constitute a violation of the rule:

- (1) Fugitive Vapor Leaks - Detection of VOCs - EPA Method 21 shall be used to determine compliance with this rule in regards to fugitive or VOC leaks. Instrument shall be calibrated with Method 21 using zero air (less than 10 parts per million (ppm) of hydrocarbon in air) with a mixture of methane or n-hexane.
- (2) Determination of Reid Vapor Pressure - Shall be determined by measuring the Reid Vapor pressure in accordance with *Test Method for Vapor Pressure for Petroleum Products (Reid Method)*, ASTM D 323-82 (April 8, 1987).
- (3) Control Device Efficiency - Determining the destruction or removal efficiency of a control device shall be:
 - (a) For systems utilizing add-on control equipment, EPA Method 25 or 25A, as applicable and analysis of halogenated exempt compounds shall be by ARB Method 22.
 - (b) For incinerators or catalytic incinerators, EPA Method 25, unless the concentration of VOC in the outlet stream is below 50 ppm as carbon, in

which case EPA Method 25A shall be used.

- (c) Where add-on control equipment is utilized, collection efficiency shall be determined by EPA document “Model Regulatory Language for Capture Efficiency Testing,” August 3, 1990.
- (4) Any applicable alternative test method may be used so long as such method has been approved by USEPA, CARB and the APCO.

[SIP: See SIP Table at

[http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45\]](http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45)

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.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220 (c)(39)(ii)(C); Approved 6/14/78, 43 FR 26584, 40 CFR 52.220(c)(37)(i)(A)]

RULE 469

Sulfuric Acid Units

A person shall not discharge into the atmosphere from any sulfuric acid unit, effluent process gas containing more than:

- (a) 500 ppm of sulfur compounds 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.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220 (c)(39)(ii)(C); Approved 6/14/78, 43 FR 26584, 40 CFR 52.220(c)(37)(i)(A)]

12/22/94

(Adopted: 5/5/76; Amended: 9/3/76; Readopted
by CARB Ex. Order G-73: 2/1/77; Readopted
w/o changes: 7/25/77; Amended: 12/21/94)

Rule 471

Asphalt Roofing Operations

(A) General

- (1) Purpose: To reduce emissions of volatile organic compounds (VOC) from asphalt or coal tar pitch roofing operations.
- (2) Applicability: This rule shall apply to any person who operates equipment used for melting, heating, or holding asphalt or coal tar pitch.

(B) Definitions

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

- (1) "Asphalt": a brownish-black cementitious material (solid, semi-solid or liquid in consistency) of which the main constituents are bitumens which occur naturally or are a residue of petroleum refining.
- (2) "Close Fitting Lid": a VOC impermeable cover that fits securely over a roofing kettle or other container so that no gap exists between the kettle body and lid greater than $\frac{3}{8}$ inch.
- (3) "Coal Tar": a viscous black liquid obtained by the destructive distillation of coal and used as a raw material for dyes, drugs, and organic chemicals and for waterproofing, paints, roofing, and insulation materials.
- (4) "Coal Tar Pitch": a thick, dark, and sticky substance obtained from the distillation residue of coal tar.
- (5) "Gap": an opening between a roofing kettle body and the edges of the kettle lid from which VOC vapors can be emitted to the atmosphere.

(Amended: 12/21/94)

- (6) "Roofing Kettle": a device used to heat and melt asphalt or coal tar pitch so that the asphalt or coal tar pitch can be applied onto a rooftop to provide a protective coating.
- (7) "Roof Transfer Pipe": a pipe or hose that connects to a roofing kettle's pump outlet and serves to convey hot roofing material from a kettle to a roof.
- (8) "Volatile Organic Compounds (VOC)": any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, excluding those exempt compounds listed in 40 CFR 51.100(s)(1).

(C) Requirements

- (1) A person shall not operate or use equipment for melting, heating or holding asphalt or coal tar pitch for the on-site construction, installation or repair of roofs unless:
 - (a) the vapors from such equipment are contained by one or more close fitting lids. The lid(s) shall not be opened except for loading the kettle with solid roofing material or unless the material in the roofing kettle is less than 150°F; and
 - (b) for roofing kettles, the temperature of the material inside is no greater than:
 - (i) 500°F for asphalt; and
 - (ii) 400°F for coal tar pitch.
- (2) During a roofing kettle draining operation, the VOC vapors from the kettle shall be contained by a close fitting lid. Within 2 minutes after the draining operation has been completed, the vessel that received the hot roofing material shall be covered with a close fitting lid or capped to prevent the release of visible smoke from the vessel.
- (3) Any kettle vent shall remain closed except during a pressure release caused by flashing of the roofing material.

(Amended: 12/21/94)

- (4) A person operating equipment subject to this rule shall provide, properly install and maintain in good working order, devices capable of correctly indicating and controlling the operating temperatures of such equipment.

(D) Exemptions

- (1) The provisions of this rule shall not apply to equipment having a capacity of 100 liters (26.4 gallons) or less.
- (2) The provisions of this rule shall not apply to equipment having a capacity of 600 liters (159 gallons) or less which is equipped with a close fitting lid, except that such equipment shall comply with subsection (C)(1)(a).

(E) Test Methods

The temperature limits specified in this rule shall be measured with a thermometer and shall apply to any location within the equipment where asphalt or coal tar pitch exists.

(F) Compliance Schedule

- (1) This rule is effective upon December 21, 1994 for all equipment not completed and put into service.
- (2) The owner or operator of any equipment subject to this rule which has been completed and put into service prior to December 21, 1994 shall comply with all pertinent provisions of the rule by February 1, 1995.

RULE 472

Reduction of Animal Matter

- (a) A person shall not operate or use any equipment for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from such equipment are:
 - (1) Incinerated at temperatures of not less than 650°C (1202°F) for a period of not less than 0.3 second, or
 - (2) Processed in such a manner determined by the Air Pollution Control Officer to 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.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C); Approved 6/14/78, 43 FR 26584, 40 CFR 52.220(c)(iv)(A)]

3/10/98

(Adopted: 05/07/76; Amended: 10/08/76; Readopted:
07/25/77; Amended: 05/16/81; Amended 01/22/96;
Amended: 08/25/97)

Rule 474

Fuel Burning Equipment

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) from non-Mobile, Fuel Burning Equipment.

(2) Applicability

- (a) The rule applies to new and existing non-Mobile Fuel Burning Equipment having a rated heat input of more than 1,775 million Btu (MMBtu) per hour.
- (b) The provisions of this rule shall not apply to Fuel Burning Equipment which is subject to a NO_x emission limit in District Rule 475, 476, 1157, 1158, 1159, 1160 or 1161.

(B) Definitions

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

- (1) "Air Contaminant" - 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 matter, acids or any combination thereof.
- (2) "California Air Resources Board" (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
- (3) "Emission Control System Operating Parameters" - any operating parameter(s) of installed emission control equipment that the District deems necessary to

analyze for the determination of compliance. Such parameters may include, but are not limited to, the ammonia and gas flow rates, exhaust temperature, humidity, water injection rate, exhaust gas flow rate and the temperature for water injection.

- (4) "Fuel Burning Equipment" - any article, machine, equipment or contrivance which combusts any fuel. If the simultaneous operations of more than one such article, machine, equipment or contrivance are required for the production of useful heat or power, then the minimum number necessary shall be considered as one piece of Fuel Burning Equipment.
- (5) "Heat Input" - the chemical heat released due to fuel combustion in a piece of Fuel Burning Equipment, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- (6) "Mobile" - describes a device by which any person or property may be propelled, moved, or drawn upon the surface, waterways, or through the atmosphere, and which emits Air Contaminants. For the purpose of this rule, the description "Mobile" includes registered motor vehicles which are licensed and/or driven on the public roadways of the state of California.
- (7) "Monitoring Plan" - a document which specifies the parameters to be monitored and records to be kept for each piece of Fuel Burning Equipment subject to the Rule. Parameters to be monitored and/or recorded may include, but are not limited to: annual hours of operation; equipment load; the type, higher heating value and annual usage of each fuel; occurrence and duration of start-up, shut-down and breakdown periods; the results of compliance tests; monitored NO_x, Particulate Matter and stack-gas oxygen (O₂) concentrations; and Emission Control System Operating Parameters.
- (8) "Particulate Matter" - any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (9) "Rated Heat Input" - the Heat Input capacity in MMBtu per hour specified on the nameplate(s) of the Fuel Burning Equipment, unless the Fuel Burning Equipment is operated, consistent with the Permit to Operate, above the Heat Input capacity specified on the nameplate(s), in which case the maximum operated rate(s) shall be used as the Rated Heat Input.

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

(C) Requirements

- (1) Fuel Burning Equipment shall not emit NO_x, referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen, in excess of:
- (a) 125 parts per million by volume (ppmv), when operated on gaseous fuel;
 - (b) 225 ppmv, when operated on liquid and/or solid fuels; or
 - (c) the heat input weighted average of the limits specified in (C)(1)(a) and (C)(1)(b) above, when operated on combinations of both gaseous and liquid and/or solid fuels.
 - (d) Emission concentrations shall be corrected to 3.00 percent oxygen as follows:

$$[ppm\ NO_x]_{corrected} = \frac{17.95\%}{20.95\% - [\%O_2]_{measured}} \times [ppm\ NO_x]_{measured}$$

(D) Exemptions

- (1) The provisions of this rule shall not apply to Fuel Burning Equipment with Rated Heat Inputs of 1,775 MMBtu/hr or less.

(E) Monitoring and Records

- (1) Frequency
- (a) All Fuel Burning Equipment covered under subsection (C)(1) shall demonstrate compliance through emission compliance testing not less than once every 12 months. This 12 month period shall be measured based upon the permit renewal date.

(2) Procedures

- (a) Compliance testing required by this rule shall follow the administrative procedures outlined in the District's Compliance Test Procedural Manual. All emission determinations shall be made as stipulated in the test protocol accepted by the District.
- (b) All emission concentrations and emission rates shall be based on hourly averages.
- (c) The owners or operators of Fuel Burning Equipment subject to this rule shall submit all required compliance test reports to the District.
- (d) Any owner or operator of Fuel Burning Equipment subject to this Rule shall submit a Monitoring Plan to the District for approval. Upon approval of the Monitoring Plan, the District will notify the owner or operator in writing. The owner or operator shall keep current and on site for a minimum of two years such records as are specified in the District-approved Monitoring Plan. Records shall be updated routinely and made available to the District, CARB and USEPA upon request.

(F) Test Methods

- (1) Compliance with the NO_x emission limits in Section (C) shall be determined using one of the following test methods, as appropriate:
 - (a) USEPA Method 7, 7A, 7C, or 7E.
- (2) Determination of percent by volume stack-gas oxygen shall be determined using USEPA Method 3A.
- (3) Alternative test methods may be used upon obtaining the approval of the Air Pollution Control Officer, CARB and USEPA.

[SIP Information: Submitted as amended 08/25/97 on _____; Submitted as amended 01/24/96 on 11/26/96; Disapproved and prior Rule 68 retained 12/21/78, 43 FR 59489, 40 CFR 52.280(a)(3)(i) and 52.220(c)(42)(viii)(A); Approved 06/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A).]

3/10/98

(Adopted: 05/07/76; Amended: 10/08/76; Readopted: 7/25/77; Amended: 3/16/81; Amended: 08/26/96; Amended: 08/25/97)

Rule 475

Electric Power Generating Equipment

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) and Particulate Matter from non-mobile, Electric Power Generating Equipment.

(2) Applicability

- (a) The rule applies to non-Mobile Electric Power Generating Equipment having a maximum Rated Heat Input of more than 50 million Btu (MMBtu) per hour. If the non-Mobile Electric Power Generating Equipment is operated in such a manner that exceeds the maximum Rated Heat Input such that the equipment operates over 50 MMBtu per hour, such equipment is also subject to this rule.
- (b) The NO_x emission limits of this rule shall not apply to Electric Power Generating Equipment which is subject to a NO_x emission limit in District Rule 1157, 1158, 1159 or 1160.

(B) Definitions

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

- (1) "Air Contaminant" - 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 matter, acids or any combination thereof.

- (2) "Air Pollution Control Officer" (APCO) - the person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of the California Health & Safety Code §40750, and his or her designee.
- (3) "California Air Resources Board" (CARB) - the California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
- (4) "Continuous Emissions Monitoring System (CEMS)" - The total equipment necessary for the continuous determination and record keeping of process gas NO_x concentrations and NO_x emission rates. The system must meet the requirements of 40 CFR Part 60, Subpart A, and Appendix B, and must comply with the quality assurance procedures specified in 40 CFR Part 60, Appendix F.
- (5) "District" - the Mojave Desert Air Quality Management District the geographical area of which is described in District Rule 103.
- (6) "Electric Power Generating Equipment" - any article, machine, equipment or contrivance which is used to generate electric power. If the simultaneous operations of more than one internal combustion engine, Gas Turbine or other such equipment are required for the generation of electric power, then the minimum number necessary shall be considered as one piece of Electric Power Generating Equipment.
- (7) "Emission Control System Operating Parameters" - any operating parameter(s) of installed emission control equipment that the District deems necessary to analyze for the determination of compliance. Such parameters may include, but are not limited to, the ammonia and gas flow rates, exhaust temperature, humidity, water injection rate, exhaust gas flow rate and the temperature for water injection.
- (8) "Gas Turbine" - an internal combustion engine fired on natural gas that operates with rotary rather than reciprocating motion.
- (9) "Heat Input" - the chemical heat released due to fuel combustion in Electric Power Generating Equipment, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- (10) "Higher Heating Value" - the total heat liberated, including the heat of condensation of water, per mass of fuel burned (Btu per pound) when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to standard conditions.

- (11) "Mobile Source" - a device by which any person or property may be propelled, moved, or drawn upon the surface, waterways, or through the atmosphere, and which emits Air Contaminants. For the purpose of this rule, mobile source includes registered motor vehicles which are licensed and/or driven on the public roadways of the state of California.
- (12) "Monitoring Plan" - a document which specifies the parameters to be monitored and records to be kept for each piece of Electric Power Generating Equipment subject to the Rule. Parameters to be monitored and/or recorded may include, but are not limited to: annual hours of operation; equipment load; the type, higher heating value and annual usage of each fuel; occurrence and duration of start-up, shut-down and breakdown periods; the results of compliance tests; monitored NO_x, Particulate Matter and stack-gas oxygen (O₂) concentrations; and Emission Control System Operating Parameters.
- (13) "Particulate Matter" - any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (14) "Rated Heat Input" - the Heat Input capacity of the Electric Power Generating Equipment as specified by the manufacturer, expressed in terms of MMBtu per hour.
- (15) "United States Environmental Protection Agency" (USEPA) - the United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(C) Requirements

- (1) Gas Turbines
 - (a) A person shall not emit from Gas Turbines which are used to produce electric power:
 - (i) NO_x, expressed as nitrogen dioxide (NO₂), referenced at dry stack-gas conditions and 15.0 percent by volume stack-gas oxygen, in excess of 42 parts per million by volume (ppmv).
 - (ii) Particulate Matter that exceeds **both** of the following two limits:
 - 1. 5 kilograms (11 pounds) per hour; and

2. 7.6 milligrams per standard cubic meter (0.003 grains/standard cubic foot), referenced at standard, dry stack-gas conditions and 15.0 percent by volume stack-gas oxygen.

(2) All Other Electric Power Generating Equipment

- (a) A person shall not emit from any Electric Power Generating Equipment, except Gas Turbines:

- (i) NO_x, expressed as NO₂, referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen, in excess of:

1. 80 ppmv, when operated on gaseous fuel;
2. 160 ppmv, when operated on liquid fuel;
3. 225 ppmv, when operated on solid fuel; or
4. the heat input weighted average of the limits specified in (C)(2)(a)(i) 1-3 above, when operated on combinations of gaseous, and/or liquid, and/or solid fuels.

- (ii) Particulate Matter that exceeds **both** of the following two limits:

1. 5 kilograms (11 pounds) per hour; and
2. 23 milligrams per standard cubic meter (0.01 gr/standard cubic foot), referenced at standard, dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen.

(D) Monitoring and Records

(1) Frequency

- (a) All Electric Power Generating Equipment subject to subsection (C)(1)(a)(i) or (C)(2)(a)(i) shall demonstrate compliance with the NO_x emission limits through emission compliance testing not less than once every twelve months. This twelve month period shall be measured based upon the permit renewal date or on an annual schedule as otherwise specified in writing by the District.

- (b) Electric Power Generating Equipment shall demonstrate compliance with the Particulate Matter emission limits through emission compliance testing not less than once every 12 months, unless the equipment is fired exclusively on natural gas. Electric Power Generating Equipment fired exclusively on natural gas shall demonstrate compliance with the Particulate Matter emission limits not less than once every 60 months. If the Electric Power Generating Equipment is fired on any fuel other than natural gas within the 60 month period, compliance with the Particulate matter emission limits shall be demonstrated when firing natural gas and when firing the fuel other than natural gas not less than once every twelve months.

(2) Procedures

- (a) Compliance testing required by this rule shall follow the administrative procedures outlined in the District's Compliance Test Procedural Manual. All emission determinations shall be made as stipulated in the test protocol accepted by the District. The results from compliance testing must be submitted to the District:
 - (i) For NO_x testing, on or before each annual permit renewal date or on an annual schedule as otherwise specified in writing by the District; and
 - (ii) For Particulate Matter testing, on a five year schedule beginning with the annual permit renewal date in 1998 or on a five year schedule as otherwise specified in writing by the District, unless subject to a shorter time frame pursuant to subsection (D)(1)(b), in which case results from compliance testing must be submitted on or before each annual permit renewal date or on an annual schedule as otherwise specified in writing by the District.
- (b) Compliance with the NO_x emission limit in subsection (C)(1) shall be based upon fifteen consecutive minute averages. Particulate Matter emission concentrations and emission rate shall be based upon the average of three (3) one-hour runs.
- (c) Compliance with the NO_x emission limits in subsection (C)(2) shall be based upon hourly averages. Particulate Matter emission concentrations and emission rate shall be based upon the average of three (3) one-hour runs.
- (d) Any owner or operator of Electric Power Generating Equipment subject to the NO_x limits of this Rule shall submit a Monitoring Plan to the

District for approval. Upon approval of the Monitoring Plan, the District will notify the owner or operator in writing. The owner or operator shall keep current and on site for a minimum of two years such records as are specified in the District-approved Monitoring Plan. Records shall be updated routinely and made available to the District, CARB and USEPA upon request.

- (e) Any owner or operator of Electric Power Generating Equipment subject to the Particulate Matter limits of this Rule shall keep records current and on site for a minimum of two years.

(E) Test Methods

- (1) Compliance with the Particulate Matter limits in subsections (C)(1) and (C)(2) may be demonstrated using USEPA Method 5.
- (2) For Electric Power Generating Equipment not equipped with CEMS, compliance with the NO_x emission limit in subsection (C)(1) may be determined using USEPA Method 20 with the following modifications for a 15 minute average: each test shall consist of 15 minutes of sampling and the average over the 15 minutes shall be determined by integrating the area under the curve of the strip chart recorder or by averaging, at a minimum, the measurements from 30 equally spaced integrals over the 15 minute period.
- (3) For Electric Power Generating Equipment equipped with CEMS, compliance with the NO_x emission limit in subsection (C)(1) may be determined using USEPA Method 7E with the following modifications for a 15 minute average: each test shall consist of 15 minutes of sampling and the average over the 15 minutes shall be determined by integrating the area under the curve of the strip chart recorder or by averaging, at a minimum, the measurements from 30 equally spaced integrals over the 15 minute period.
- (4) Compliance with the NO_x emission limit in subsection (C)(2) may be demonstrated using USEPA Method 7E.
- (5) Determination of percent by volume stack-gas oxygen shall be determined using USEPA Method 3A or USEPA Method 3.
- (6) Certification of the higher heating value of a fuel, if not provided by a third party fuel supplier, shall be determined by one of the following methods:
 - (i) ASTM Test Method D240-87 or D2382-88 for liquid hydrocarbon fuels.

- (ii) ASTM Test Method D1826-88, or D1945-81, in conjunction with ASTM D3588-89 for gaseous fuels.
- (7) Alternative test methods may be used upon obtaining the approval of the Air Pollution Control Officer, CARB and USEPA.

(F) Compliance Schedule

- (1) The owner or operator of Electrical Power Generating Equipment which had previously been, or was in operation as of August 26, 1996 shall demonstrate final compliance with all applicable standards and requirements of the rule and submit verification to the District by January 1, 1998.
- (2) The owner or operator of Electric Power Generating Equipment which was not yet in operation as of August 26, 1996 shall comply with the provisions of this rule immediately upon commencing operation.

(G) Effective Date

- (1) The amendments to this Rule shall become effective on the date on which USEPA takes final action approving the Rule as a revision to the applicable State Implementation Plan and under conditions consistent with the provisions of Resolution 96-15 governing the effective date of those amendments.
- (2) Notwithstanding subsection (G)(1), the amendments to this Rule shall become effective as to the gas fired GE Frame 5 Model R Turbine located at Trona California on such earlier date as set forth in Resolution No. 96-15.

[SIP: Submitted as amended 08/25/97 on _____; Submitted as amended 08/26/96 on 10/18/96; Approved 43 FR 40011, 09/08/78; Approved 43 FR 25684, 06/14/78]

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(Adopted: 05/07/76; Amended: 10/08/76; Readopted: 07/25/77; Amended: 03/16/81; Amended: 01/22/96; Amended: 10/28/96; Amended: 08/25/97)

Rule 476

Steam Generating Equipment

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) and Particulate Matter from non-Mobile, Steam Generating Equipment.

(2) Applicability

- (a) The rule applies to non-Mobile Steam Generating Equipment having a maximum heat input rate of:
 - (i) more than 50 million BTU (MMBtu) but no greater than 500 MMBtu per hour, for which a permit to build, erect, install or expand was required after May 7, 1976; or
 - (ii) more than 500 MMBtu per hour, regardless of whether new or existing.
- (b) The NO_x emission limits of this rule shall not apply to Steam Generating Equipment which is subject to a NO_x emission limit in District Rule 1157 or 1158.

(B) Definitions

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

- (1) "California Air Resources Board" (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
- (2) "Emission Control System Operating Parameters" - any operating parameter(s) of installed emission control equipment that the District deems necessary to analyze for the determination of compliance. Such parameters may include, but

are not limited to, the ammonia and gas flow rates, exhaust temperature, humidity, water injection rate, exhaust gas flow rate and the temperature for water injection.

- (3) "Heat Input" - the chemical heat released due to fuel combustion in Steam Generating Equipment, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- (4) "Mobile" - describes a device by which any person or property may be propelled, moved, or drawn upon the surface, waterways, or through the atmosphere, and which emits Air Contaminants. For the purpose of this rule, the description "Mobile" includes registered motor vehicles which are licensed and/or driven on the public roadways of the state of California.
- (5) "Monitoring Plan" - a document which specifies the parameters to be monitored and records to be kept for each piece of Steam Generating Equipment subject to the Rule. Parameters to be monitored and/or recorded may include, but are not limited to: annual hours of operation; equipment load; the type, higher heating value and annual usage of each fuel; occurrence and duration of start-up, shut-down and breakdown periods; the results of compliance tests; monitored NO_x, Particulate Matter and stack-gas oxygen (O₂) concentrations; and Emission Control System Operating Parameters.
- (6) "Particulate Matter" - any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (7) "Rated Heat Input" - the Heat Input capacity in MMBtu per hour specified on the nameplate(s) of the Steam Generating Equipment, unless the Steam Generating Equipment is operated, consistent with the Permit to Operate, above the Heat Input capacity specified on the nameplate(s), in which case the maximum operated rate shall be used as the Rated Heat Input.
- (8) "Steam Generating Equipment" - boilers or other combustion equipment, fired with any fuel, used to produce steam. If the simultaneous operations of more than one boiler or other such equipment are required for the production of steam, then the minimum number necessary shall be considered as one piece of Steam Generating Equipment.
- (9) "United States Environmental Protection Agency" (USEPA) - refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

(C) Requirements

- (1) Any Steam Generating Equipment shall not emit:
 - (a) NO_x , expressed as nitrogen dioxide (NO_2), referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen, in excess of:
 - (i) 125 parts per million by volume (ppmv), when operated on gaseous fuel;
 - (ii) 225 ppmv, when operated on liquid or solid fuel; or
 - (iii) the heat input weighted average of the limits specified in (C)(1)(a)(i) and (ii) above, when operated on combinations of both gaseous and liquid and/or solid fuels.
 - (iv) Emission concentrations shall be corrected to 3.00 percent oxygen as follows:

$$[\text{ppm NO}_x]_{\text{corrected}} = \frac{17.95\%}{20.95\% - [\% \text{O}_2]_{\text{measured}}} \times [\text{ppm NO}_x]_{\text{measured}}$$

- (b) Particulate matter that exceeds both of the following two limits:
 - (i) 5 kilograms (11 pounds) per hour; and
 - (ii) 23 milligrams per cubic meter (0.01 gr/SCF)

(D) Exemptions

- (1) The provisions of this rule shall not apply to any Steam Generating Equipment:
 - (a) which has a Rated Heat Input of 50 MMBtu per hour or less; and/or
 - (b) that continues to operate less than 200 hours within any continuous four consecutive calendar quarter period.

(E) Monitoring and Records

(1) Frequency

- (a) All Steam Generating Equipment subject to the requirements of subsection (C)(1)(a) shall demonstrate compliance with the NO_x emission limits through emission compliance testing not less than once every 12 months. This 12 month period shall be measured based upon the permit renewal date.
- (b) Steam Generating Equipment shall demonstrate compliance with the Particulate Matter emission limits through emission compliance testing not less than once every 12 months, unless the equipment is fired exclusively on natural gas. Steam Generating Equipment fired exclusively on natural gas shall demonstrate compliance with the Particulate Matter emission limits not less than once every 60 months. If the Steam Generating Equipment is fired on any fuel other than natural gas within the 60 month period, compliance with the Particulate matter emission limits shall be demonstrated when firing natural gas and when firing the fuel other than natural gas not less than once every twelve months.

(2) Procedures

- (a) Compliance testing required by this rule shall follow the administrative procedures outlined in the District's Compliance Test Procedural Manual. All emission determinations shall be made as stipulated in the test protocol accepted by the District.
- (b) All emission concentrations and emission rates shall be based upon hourly averages.
- (c) The owners or operators of Steam Generating Equipment subject to this rule shall submit all required compliance test reports to the District.
- (d) Any owner or operator of Steam Generating Equipment subject to the NO_x limits of this Rule shall submit a Monitoring Plan to the District for approval. Upon approval of the Monitoring Plan, the District will notify the owner or operator in writing. The owner or operator shall keep current and on site for a minimum of two years such records as are specified in the District-approved Monitoring Plan. Records shall be updated routinely and made available to the District, CARB and USEPA upon request.

- (e) Any owner or operator of Electric Power Generating Equipment subject to the Particulate Matter limits of this Rule shall keep records current and on site for a minimum of two years.

(F) Test Methods

- (1) Compliance with the NO_x emission limits in subsection (C)(1)(a) shall be determined using one of the following test methods, as appropriate:
 - (a) USEPA Method 7, 7A, 7C, or 7E.
- (2) Compliance with the Particulate Matter limits in subsection (C)(1)(b) shall be determined using one of the following test methods, as appropriate:
 - (a) USEPA Method 5, 5B, 5D, or 5F.
- (3) Determination of percent by volume stack-gas oxygen shall be determined using USEPA Method 3A.
- (4) Alternative test methods may be used upon obtaining the approval of the Air Pollution Control Officer, CARB and USEPA.

[SIP: Submitted as amended 08/25/97 on _____; Submitted as amended 10/28/96 on 11/1/96; Approved 09/08/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C); Approved 06/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A).]

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11/30/94

(Adopted: October 26, 1994)

Rule 1102

Fugitive Emissions of VOCs from Components at Pipeline Transfer Stations

(A) General

- (1) Purpose: To control fugitive emissions of volatile organic compounds (VOCs) due to component leaks at facilities involved in the transfer and/or storage of petroleum products, crude oil or natural gas in pipelines.
- (2) Applicability: This rule applies to components at pipeline transfer stations which may be sources of fugitive VOC emissions.

(B) Definitions

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

- (1) "Appropriate Analyzer" - A hydrocarbon analyzer that meets the requirements of EPA Reference Method 21 and is calibrated with methane.
- (2) "Background" - The ambient concentration of volatile organic compounds in the air determined at least one (1) meter upwind of the component to be inspected.
- (3) "Component" - Any pump, compressor, pressure relief device, flange, valve, fitting, diaphragm, open ended line, hatch, seal packing, sealing mechanism, sight glass or meter. They are further classified as:
 - (a) "Major Component" - Any four inch or larger valve, any 5-hp or larger pump, any compressor and any four inch or larger pressure relief device.
 - (b) "Minor Component" - Any component that is not a major component.

(Adopted: October 26, 1994)

- (c) "Critical Component" - Any component which would require the shutdown of the process unit if the component was shut down. Such components must be identified by the source and approved by the APCO.
- (4) "Component Types" - Any of the following groups: pumps, compressors, pressure relief devices, flanges, valves, fittings, diaphragms, open ended lines, hatches, seal packings, sealing mechanisms, sight glasses or meters
- (5) "Compressor" - A device used to compress gases and/or vapors by the addition of energy, and includes all associated components used for connecting and sealing purposes.
- (6) "Fitting " - A component used to attach or connect pipes or piping details, including but not limited to flanges and threaded connections.
- (7) "Flange" - A projecting rim on a pipe used to attach it to another pipe or any other component in a piping system.
- (8) "Fugitive Emissions" - Hydrocarbon emissions that are released into the atmosphere from any point other than a stack, chimney, vent or other functionally equivalent opening.
- (9) "Good Performance Level" - A "Good Performance Level" has been accomplished when: (1) two percent or less of the components within a component type subject to the provisions of this rule are found to leak during an inspection and (2) have not been cited with a Notice of Violation from the District for violation of Section I of this rule within the previous five quarters. A reduction in inspection frequency based on a "good performance level" shall apply to all component types, except for pumps, compressors and pressure relief valves.
- (10) "Hatch" - Any covered opening system that provides access to a tank or container, usually through the top deck.
- (11) "Heavy Liquid Service" - Any component which contains or contacts a liquid containing VOCs of which 10 percent or less by weight evaporate at 150 degrees centigrade and atmospheric pressure, as measured according to the test method specified in Section (H)(4).

(Adopted: October 26, 1994)

- (12) "Inaccessible" - A location that is over 15 feet above ground when access is required from the ground; or a location that is over six (6) feet away from a platform when access is required from the platform.
- (13) "Inspection" - Either of the following:
 - (a) "Operator Inspection" - A survey of components by the operator for the purpose of determining compliance with this rule.
 - (b) "District Inspection" - A survey of components by District personnel or their representatives.
- (14) "Leak" - Any of the following:
 - (a) The dripping at a rate of more than three (3) drops per minute of liquid containing VOCs; or
 - (b) A reading of methane on an appropriate analyzer in excess of 10,000 ppmv above background when measured with an instrument calibrated with methane, according to EPA Method 21.
- (15) "Notice of Violation" - An official notice to an operator for violating requirements of this rule which may result in District enforcement action.
- (16) "Open Ended Line" - Any valve, except pressure relief valves, having one side of the valve seat in contact with the process fluid and one side open to the atmosphere.
- (17) "Pipeline Transfer Station" - Any facility which handles the transfer and/or storage of petroleum products or crude petroleum in pipelines. Includes pumping stations and natural gas compressor stations.
- (18) "Platform" - Any raised, permanent, horizontal surface for the purpose of gaining access to components.
- (19) "Pressure Relief Device" - A pressure relief valve or a rupture disc.
- (20) "Pressure Relief Valve" - A valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

(Adopted: October 26, 1994)

- (21) "Pump" - A machine or device for transferring a liquid or gas from a source or container through tubes or pipes to another container or receiver.
- (22) "Repair" - Any corrective action for the purpose of eliminating leaks
- (23) "Rupture Disc" - A diaphragm held between flanges for the purpose of isolating a VOC from the atmosphere or from a downstream pressure relief valve.
- (24) "Turnaround" - The scheduled shutdown of a unit for maintenance and repair work.
- (25) "Unsafe" - Refers to components installed at locations that prevent the safe inspection or repair of components as defined by OSHA standards or in provisions for worker safety found in 29 CFR 1910.
- (26) "Valve" - A device that regulates or isolates the flow of liquids or gases in a piping system by means of an external actuator.
- (27) "Visible Leak" - Any indication of liquid leaking, visible mist, or audible leak.
- (28) "Volatile Organic Compound (VOC)" - Any compound containing at least one atom of carbon, except for the following exempt compounds: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and those compounds listed in 40 CFR 51.100(s)(1).

(C) Operating Requirements

- (1) Hatches shall be closed at all times except during sampling, adding process material or attended maintenance operations.
- (2) Each open-ended line that has the potential to emit vapors shall be sealed with a second valve, a blind flange, a cap or a plug, except when open end is in use.

(D) Operator Inspection Requirements

- (1) Except as provided in Sections (D)(4) and (D)(6), operators shall monitor accessible components at least every calendar quarter for gaseous leaks in accordance with the test method specified in Section (H)(2).
- (2) Inaccessible and unsafe components shall be subject to the inspection requirements of Section (F)(2)(b).
- (3) A pressure relief valve shall be inspected quarterly, and within 14 calendar days after every functional pressure relief, pursuant to the test method specified in Section (H)(2).
- (4) All threaded and flanged connections shall be inspected by the operator according to the test method specified in Section (H)(2) immediately after assembly and annually thereafter.
- (5) All accessible pumps, compressors and pressure relief valves shall be audio-visually inspected for leaks not less than daily, except for unmanned pipeline transfer stations, which shall be inspected monthly. If a leak is detected, the VOC concentration shall be determined pursuant to the test method specified in Section (H)(2).
- (6) The inspection frequency for all accessible components, except pumps, compressors and pressure relief valves, may be changed from quarterly to annual, provided all of the following conditions are met:
 - (a) Achieve a "good performance level" as defined in Section (B)(9) for five (5) consecutive quarters.
 - (b) The above is substantiated by documentation and submitted to and approved by the APCO.
- (7) Quarterly monitoring shall be reinstated by the operator during the next calendar quarter upon failure to achieve a "good performance level."
- (8) An operator shall be in violation of this section when the leak rate of a component type exceeds two (2) percent of the total number of components of that type subject to the requirements of this rule.

(Adopted: October 26, 1994)

(E) Operator Repair Requirements

- (1) Any component found leaking shall be repaired to a leak-free condition within fifteen days of detection.
- (2) The requirements of Section (E)(1) shall not apply to leaking critical components, as identified under Section (G)(1) of this rule. Repair of critical components shall be accomplished during the next scheduled shutdown or process turnaround of the unit, but not later than three (3) months from the date of detection.
- (3) Any component leak identified by the District shall be inspected and repaired as required by Sections (D) and (E), respectively.
- (4) The operator shall reinspect components for leaks as soon as practicable, but not later than thirty (30) days after the date on which the component is repaired and placed in service, in accordance to the test method specified in Section (H)(2).

(F) Exemptions

- (1) The provisions of this rule shall not apply to the following cases, where the person seeking the exemption shall supply the proof of the applicable criteria to the satisfaction of the APCO or his designee:
 - (a) Any component exclusively handling liquids, gasses or gaseous process fluids with a VOC concentration of 10% or less by weight, as determined by the test method specified in Section (H)(3); or
 - (b) Any component in heavy liquid service.
 - (c) Components which are part of a process unit not in service.
 - (d) Components incorporated in lines, while operating under negative pressure.
 - (e) Components totally contained or enclosed such that there are no VOC emissions into the atmosphere.

(Adopted: October 26, 1994)

- (f) Components buried below ground.
 - (g) One-half inch and smaller stainless steel tube fittings which have been demonstrated to the APCO to be leak-free based on an initial inspection in accordance with the test method specified in Section (H)(2).
 - (h) Pressure vacuum valves on storage tanks.
- (2) The operator inspection requirements of Section (D) shall not apply to the following components; all other requirements of the rule shall remain in force:
- (a) Pressure relief valves, pumps and compressors that are equipped with a closed-vent system capable of capturing and transporting any leak to a vapor control system.
 - (b) Any component situated in an unsafe or inaccessible location. Components in unsafe areas shall be inspected and repaired at the next process turnaround. Inaccessible components shall be inspected at least annually.
 - (c) Components handling liquids of:
 - (i) less than or equal to 20 degree API gravity after the point of primary separation; or
 - (ii) between 20 and 30 degree API gravity, which are located after the point of primary separation of oil and gas, provided the separation vessel is equipped with a vapor recovery system and is operated at a pressure less than 25 psig.
 - (d) Components qualifying for the exemptions in Section (F)(2)(c)(i) and (ii) shall be subject to the following:
 - (i) The operator shall perform visual inspections on a quarterly basis. Upon detection of a visible leak, the leak shall be measured to quantify emission concentrations according to the test method specified in Section (H)(2).

(Adopted: October 26, 1994)

- (ii) The quarterly visual inspection can be changed to an annual inspection if the requirements of Sections (D)(6) and (7) are satisfied.
- (iii) Any leak detected during a District inspection may constitute a violation of this rule.

(G) Recordkeeping and Reporting

- (1) Any person subject to the requirements of this rule shall maintain an inspection and identification log, containing, at a minimum, the information specified below. The log must be initially approved by the APCO for the purposes of inspection, repair, replacement and recordkeeping, and shall comply with the compliance schedule requirements specified in Section (J):
 - (a) All major and critical components subject to this rule shall be physically identified, clearly and visibly. The identification shall consist of labels, tags or other system which enables the District or the operator to locate each individual component. The log must identify the system to be used, the affected components and their locations.
 - (b) All major, critical, inaccessible and unsafe components subject to this rule, except flanges and fittings, shall be clearly identified in diagrams, as approved by the APCO.
 - (c) The APCO shall be notified of any change in the identification of a major component and the operator shall document such a change in the inspection and identification log.
 - (d) For each component identified pursuant to Sections (G)(1)(a) and (b), and for minor components subject to the provisions of this rule, the following information shall be recorded following each operator inspection:
 - (i) Name, location, components types and description of any unit where leaking components are found.
 - (ii) Date of leak detection, emission level (ppmv) and method of leak detection.

(Adopted: October 26, 1994)

- (iii) Date of repair.
 - (iv) Date and emission level of reinspection after leak is repaired.
 - (v) Total number of components inspected, and total number and percentage of leaking components found, by component types.
- (2) Copies of the inspection and identification log shall be retained on site for a minimum of two years.
 - (3) Copies of the inspection and identification log shall be made available to the APCO or his designee at the time of District inspection.

(H) Test Methods for Compliance Verification

- (1) The determination of the exempt compounds shall be determined by ASTM D4457-85 and be consistent with the provisions set forth in the Federal Register (FR, Vol. 56, No. 52, March 18, 1991.) Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies a specific compound(s) from the broad classes of perfluorocarbon compounds listed in 40 CFR 51.100(S)(1)) as being present in the product or process. When such compounds are identified, the facility shall provide the validated test method to determine the amounts of the specific compound(s).
- (2) The measurement of gaseous VOC leak concentrations shall be determined according to EPA Method 21 by using an appropriate analyzer calibrated with methane.
- (3) The VOC content of fluids shall be determined using ASTM Methods E168-88, E169-87 or E260-85 or updated versions of these methods approved by EPA and published in 40 CFR Part 60.
- (4) The determination of percent evaporation at 150° shall be performed in accordance with ASTM D86-82.
- (5) The determination of API gravity of crude oil shall be performed in accordance with ASTM D287.

(Adopted: October 26, 1994)

(I) Violations

The failure to comply with any requirements of this rule shall constitute a violation of this rule.

(J) Compliance Schedule

- (1) The operator of any existing facility subject to this rule shall submit a copy of the inspection and identification log to be utilized pursuant to Section (G) of this rule to the District for approval by January 26, 1995. Upon approval, the operator shall comply with all provisions of this rule, including the initiation of the required inspection and recordkeeping.
- (2) After October 26, 1994 and prior to commencement of operation, the operator of a new facility subject to this rule shall submit an inspection and identification log to the District for approval. Upon approval, the operator shall comply with all provisions of this rule, including the initiation of the required inspection and recordkeeping.

12/22/94

(Adopted: December 21, 1994)

Rule 1103 Cutback and Emulsified Asphalt

(A) General

- (1) Purpose: To reduce emissions of volatile organic compounds (VOC) from the use of cutback and emulsified asphalts.
- (2) Applicability. The provisions of this rule apply to the manufacture, mixing, storage, use, and application of cutback and emulsified asphalts.

(B) Definitions

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

- (1) "Asphalt": a brownish-black cementitious material (solid, semi-solid or liquid in consistency) of which the main constituents are bitumens which occur naturally or are a residue of petroleum refining.
- (2) "Cutback Asphalt": paving grade asphalt liquified with petroleum distillate and as further defined by American Society for Testing and Materials (ASTM) specifications as follows:
 - (a) Rapid cure type: ASTM D2028-76
 - (b) Medium cure type: ASTM D2027-76
 - (c) Slow cure type (road oils): ASTM D2026-72
- (3) "Dust Palliative": any light application of liquified asphalt (cutback or emulsified asphalt) for the express purpose of controlling loose dust.
- (4) "Emulsified Asphalt": any asphalt liquified with water containing an emulsifier. The two kinds of emulsions most pertinent are the anionic and cationic types.

(Adopted: December 21, 1994)

- (5) "Exempt Compounds": Any of the following compounds: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and those compounds listed in 40 CFR 51.100(s)(1).
- (6) "Long-period": a time period of ninety days or greater.
- (7) "Penetrating Prime Coat": any application of asphalt to an absorbent surface to penetrate and bind the aggregate surface and promote adhesion between it and the new superimposed construction. Prime coats do not include dust palliatives or tack coats.
- (8) "Tack Coat": any application of asphalt to an existing surface to provide a bond between new surfacing and existing surface and to eliminate slippage places where the new and existing surfaces meet.
- (9) "Volatile Organic Compounds (VOC)": any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, excluding those exempt compounds listed in 40 CFR 51.100(s)(1).

(C) Requirements

- (1) A person shall not manufacture for sale nor use for paving, road construction or road maintenance any:
 - (a) Rapid cure cutback asphalt;
 - (b) Medium cure cutback asphalt; or
 - (c) Slow cure cutback asphalt containing more than 0.5 percent by volume of VOC which evaporate at 260°C (500°F) as determined by ASTM Method D402-76.
- (2) A person shall not manufacture for sale nor use for paving, road construction or road maintenance any emulsified asphalt containing more than 3 percent by volume of VOC which evaporate at 260°C (500°F) as determined by ASTM Method D244-92.

(Adopted: December 21, 1994)

(D) Exemptions

- (1) The requirements of Section (C) shall not apply to the use of cutback asphalt or emulsified asphalt in the manufacturing of paving materials where such materials are for immediate shipment and eventual use outside of the District.
- (2) The provisions of subsections (C)(1)(b) and (C)(2)(b) shall not apply to the following uses of medium cure cutback asphalt and slow cure cutback asphalt which contains more than 0.5 percent by volume of VOC:
 - (a) As a penetrating prime coat for aggregate bases prior to paving;
 - (b) For the manufacture of asphalt for long-period storage or stockpiling of patching mixes used in pavement maintenance but not for general paving;
or
 - (c) When the National Weather Service official forecast of the high temperature for the 24 hour period following application is below 10°C (50°F).

(E) Monitoring and Records

- (1) For cutback asphalts and emulsified asphalts which contain solvents, the following records shall be maintained on a daily basis and retained on site for at least two years in such a manner as to be easily accessible and available for inspection by the Air Pollution Control Officer:
 - (a) Any person who manufactures such asphalts shall maintain records showing the types and amounts of such asphalts which were produced and the destination of these products.
 - (b) Any person who uses such asphalts shall maintain records showing the types, amounts received, and amounts used of such asphalts.

(F) Test Methods

- (1) Analysis of cutback asphalt samples for VOC content shall be in accordance with ASTM Method D402-76.

(Adopted: December 21, 1994)

- (2) Analysis of emulsified asphalt samples for VOC content shall be in accordance with ASTM Method D244-92.
- (3) Measurement of exempt compound content in shall be in accordance with ARB Method 432. Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific individual compounds (from the broad classes of perfluorocarbon compounds) and the amounts present in the product or process and identifies a validated test method which can be used to quantify the specific compounds.

(G) Compliance Schedule

- (1) Any person manufacturing, mixing, storing, using and/or applying cutback and emulsified asphalts shall comply with the provisions of this rule by April 30, 1995.

RULE 1104

Organic Solvent Degreasing Operations

(A) General

(1) Purpose

- (a) The purpose of this Rule is to limit the emission of Volatile Organic Compounds (VOCs) from Wipe Cleaning and degreasing operations using Organic Solvents.

(2) Applicability

- (a) This Rule applies to any Facility engaged in Wipe Cleaning, Cold Solvent Cleaning and/or Vapor Cleaning (Degreasing) operations for metal/non-metal parts/products, which utilize volatile Organic Solvents.
- (b) This Rule does not apply to janitorial supplies used for cleaning offices, bathrooms or other similar areas.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) “Air-Vapor Interface” - The Degreaser surface area between the sides of the cleaner, the top of the solvent-vapor layer, and the air touching this layer.
- (2) “Batch-loaded” - The material placed in a nonconveyorized container for a vapor or cold cleaning process.
- (3) “Cold Solvent Cleaning” - A process or activity, such as Wipe Cleaning, of removing Soils from the surfaces of Workloads by spraying, brushing, flushing, or immersing the parts with/in liquid solvent which is not heated or, when heated does not reach the solvent's boiling point.
- (4) “Cold Solvent Degreaser” - Any Equipment using solvent which, if heated is maintained below the boiling temperature. Such Equipment includes, but is not limited to, Remote Reservoirs, spray sinks and Batch-loaded dip tanks.
- (5) “Condenser” (Primary Condenser) - The primary device, such as cooling coils, used to condense (liquify) solvent vapor.

- (6) “Condenser Flow Switch” - A safety switch connected to a thermostat which shuts off the sump heater if the Condenser coolant is either not circulating or exceeds its designed operating temperature.
- (7) “Conveyorized Degreaser” - Any continuously loaded, conveyorized cold solvent or vapor Degreaser, including but not limited to gyro, vibra, monorail, cross-rod, mesh, belt and strip cleaners. Also strip Degreasers which clean material by drawing the strip itself through the unit.
- (8) “Degreaser” - The Solvent cleaning Equipment used to clean Soils from the surfaces of parts/Workloads, and include the following types of Equipment: Cold Solvent Degreasers, Vapor Degreasers, Conveyorized Degreasers, and Sealed Chamber Degreasers.
- (9) “Emulsion” - A suspension of small droplets of one liquid in a second liquid with which the first will not mix.
- (10) “Evaporation” - To change into a vapor, normally from a liquid state.
- (11) “Evaporative Surface Area for a Cold Solvent Degreaser” - The surface area of the top of the Solvent.
- (12) “Evaporative Surface Area for a Conveyorized Degreaser”
- (a) For a Cold Solvent Degreaser, the surface area of the top of the Solvent; or
 - (b) For a Vapor Degreaser, the surface area of the top of the Solvent vapor-air interface.
- (13) “Evaporative Surface Area for a Vapor Degreaser” - The surface area of the top of the Solvent vapor-air interface.
- (14) “Freeboard Height for a Batch-loaded Vapor Degreaser” - The vertical distance from the top of the Solvent vapor-air interface to the top of the Degreaser.
- (15) “Freeboard Height for a Cold Solvent Degreaser” - The vertical distance from the top of the Solvent to the lip of the Cold Solvent Degreaser. For the purposes of this Rule, Remote Reservoirs do not have a freeboard.
- (16) “Freeboard Height for a Conveyorized Degreaser”
- (a) For non-boiling (cold) Solvent, the vertical distance from the top of the Solvent to the bottom of the first opening in the Solvent containing compartment or to the bottom of the lowest opening in the Degreaser, whichever distance is greater; or
 - (b) For boiling (vaporized) Solvent, the vertical distance from the top of the Solvent vapor-air interface to the bottom of the first opening in the vapor

containing compartment or to the bottom of the lowest opening in the Degreaser, whichever distance is greater.

- (17) "Freeboard Ratio" - The Freeboard Height divided by the smaller of the inside length, diameter, or the inside width of the Degreaser evaporative area.
- (18) "High Volatility Solvent" - Any Solvent that is not classified as a Low Volatility Solvent.
- (19) "Initial Boiling Point" - The boiling point of a Solvent as defined by ASTM Test Method D1078-11.
- (20) "Lip Exhaust" - A system which captures Solvent vapors which escape from the top of an open top Degreaser by directing the vapors away from Persons operating the Degreaser.
- (21) "Low Volatility Solvent" - A Solvent with an Initial Boiling Point greater than 120 degrees Celsius (248 degrees Fahrenheit) and with an operating temperature at least 100 degrees Celsius (180 degrees Fahrenheit) below the Initial Boiling Point, as used.
- (22) "Refrigerated Freeboard Chiller" (Secondary Condenser) - A secondary cooling coil mounted above the Primary Condenser to provide a chilled air blanket above the Solvent vapor-air interface and cause the condensation of additional Solvent vapor.
- (23) "Remote (Enclosed) Reservoir" - A Cold Solvent Degreaser with a tank which is completely enclosed except for a Solvent return opening which allows used Solvent to drain into it from a separate Solvent sink or work area. The return opening must be no larger than 100 square centimeters and the reservoir must not be accessible for soaking Workloads.
- (24) "Sealed Chamber Degreaser" - A Degreaser in which all spraying is contained inside the cleaning Equipment.
- (25) "Soil" - Any surface contaminant which is to be removed by either Cold Solvent Cleaning or Vapor Cleaning. Surface contaminants include, but are not limited to, for metal/non-metal cleaning operations: oils, greases, waxes, tars, Stains, Ink and/or particulate matter such as sand, metal chips, abrasives, or fibers. In addition, for circuit board operations, surface contaminants include the resist (a maskant) and flux from soldering.
- (26) "Solvent Leak" - The fugitive loss of three (3) or more drops of liquid Solvent per minute.
- (27) "Spray Safety Switch" - A manually reset switch which shuts off the spray pump if the vapor level drops more than ten (10) centimeters (4 inches) from the design operating height.

- (28) “Ultrasonics” - The enhancement of the cleaning process by agitation of liquid Solvents with high frequency sound waves. The induced vibrations cause implosions of the microscopic vapor cavities within the liquid Solvent. Such implosions within the Solvent which is in contact with a solid surface, facilitates the removal of grease, dirt and other material from that surface.
- (29) “Vapor Cleaning” - A process using the condensation of vaporized Solvent to remove/flush Soils and Soil-held debris from the surfaces of the Workload.
- (30) “Vapor Degreaser” - Any Degreaser that cleans through the condensation of Solvent vapor on colder Workload surfaces.
- (31) “Vapor Level Control Thermostat” - A manually reset safety switch which turns off the sump heater if the thermostat senses the temperature rising above the design operating level at the Air-Vapor Interface.
- (32) “Volatile Organic Compound” (VOC) - Any compound containing at least one atom of carbon, except for the following exempt compounds: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and those compounds listed in 40 CFR 51.100(s).
- (33) “Waste” - Material which may contain dirt, oil, metal particles, and/or other Waste products concentrated after heat distillation of the Waste Solvent either in the Degreaser itself or after distillation in a separate still.
- (34) “Wipe Cleaning” - That method of cleaning which utilizes a material such as a rag, wetted with a Solvent, coupled with a physical rubbing process, to remove contaminants from surfaces. For the purposes of this Rule, Wipe Cleaning materials shall not be considered “Equipment.”
- (35) “Workload” - The objects, i.e. parts, put in a cleaner for the purpose of removing oil, grease, Soil, a Coating, dirt or other undesirable matter from the surface of the objects.
- (36) “Workload Area”
- (a) The plane geometric surface area of the top of the submerged parts basket;
or
 - (b) When no basket is used, the combined plane geometric surface area(s) displaced by the submerged Workload.

(C) Standards

(1) VOC Content

- (a) An Owner/Operator shall not use a Solvent with a VOC content that exceeds 25 grams VOC per liter, as applied, for cleaning or surface preparation in any operation subject to this Rule.
- (b) As an alternative to, or in lieu of, subsection (C)(1)(a), an Owner/Operator may use cleaning materials with a VOC composite vapor pressure limit of 8 millimeters of mercury (mmHg) or less at 20 degrees Celsius.

(2) Control Equipment

- (a) Owners and/or Operators may comply with subsection (C)(1)(a) by using approved air pollution Control Equipment provided that the VOC emissions from such operations and/or materials are reduced in accordance with the following:
 - (i) The Control Equipment shall reduce emissions from an emission collection system by at least 95 percent (95%), by weight, or by reducing the output of the air pollution Control Equipment to less than 25 ppm calculated for carbon with no dilution; and
 - (ii) The Owner/Operator demonstrates that the system collects at least 90 percent (90%), by weight, of the emissions generated by the sources of emissions.

(3) Cleaning Equipment and Method Requirements

An Owner/Operator shall not perform Solvent cleaning unless one of the cleaning devices or methods contained in subsections (a) through (e) below is used, and the applicable requirements in subsections (f) through (k) below are used:

- (a) Wipe Cleaning;
- (b) Closed containers or hand held spray bottles from which Solvents are applied without a propellant-induced force;
- (c) Cleaning Equipment which has a Solvent container that can be, and is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during non-operation with the exception of maintenance and repair to the Equipment itself;
- (d) Non-atomized Solvent flow method where the cleaning Solvent is collected in a container or a collection system which is closed except for Solvent collection openings and, if necessary, openings to avoid pressure build-up inside the container; or

- (e) Solvent flushing method where the cleaning Solvent is discharged into a container which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged Solvent from the Equipment must be collected into containers without atomizing into the open air. The Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- (f) All Degreasers shall be equipped with the following:
 - (i) An apparatus or cover(s) which reduces Solvent Evaporation, except for Remote Reservoirs.
 - (ii) A permanent, conspicuous label summarizing the applicable operating requirements contained in subsection (C)(4). In lieu of a label, operating instructions may be posted near the Degreaser where the Operators can access the proper operating requirements of this Rule.
- (g) Remote Reservoirs shall be equipped with the following:
 - (i) A sink, platform or work area which is sloped sufficiently towards a drain to prevent pooling of Solvent within the work area.
 - (ii) A single or total drain hole area, not larger than 100 square centimeters (15.5 square inches) in area, for the Solvent to flow from the sink (platform/work area) into the Enclosed Reservoir.
 - (iii) If High Volatility Solvent is used, a drain cover/plug/closure device or a cover for placement over the top of the sink (platform/work area), when the Equipment is not being used, cleaned or repaired.
 - (iv) A minimum sink depth of six (6) inches, as measured from the top of the drain to the top of the side of the sink.
- (h) Cold Solvent Degreasers - Freeboard Requirements:
 - (i) Cold Solvent Degreasers using only Low Volatility Solvents which are not agitated, shall operate with a Freeboard Height of not less than six (6) inches.
 - (ii) Cold Solvent Degreasers using only Low Volatility Solvents may operate with a Freeboard Ratio equal to or greater than 0.50 when the Cold Solvent Degreaser has a cover which remains closed during the cleaning operation.
 - (iii) Any Cold Solvent Degreasers using Solvent which is agitated, or heated above 50 degrees Celsius (120 degrees Fahrenheit) shall operate with a Freeboard Ratio equal to or greater than 0.75.
 - (iv) A water cover may be used as an acceptable control method to meet the freeboard requirements, when the Solvent is insoluble in water and has a specific gravity greater than one (1).

Cold Solvent Degreasers - Cover Requirements:

- (v) Cold Solvent Degreasers using High Volatility Solvent shall have a cover that is a sliding, rolling or guillotine (bi-parting) type which is designed to easily open and close without disturbing the vapor zone.

Cold Solvent Degreasers - Solvent Level Identification:

- (vi) A permanent, conspicuous mark locating the maximum allowable Solvent level conforming to the applicable freeboard requirements.
- (i) Conveyorized Cold Solvent Degreasers shall be equipped with the following:
- (i) A rotating basket or other method, to prevent cleaned parts from carrying out Solvent liquid.
 - (ii) Minimized entrance and exit openings which silhouette the Workloads such that the average clearance between material and the edges of the cleaner openings are less than 10 centimeters (4 inches) or less than ten (10) percent of the opening width, whichever is greater.
 - (iii) A Freeboard Ratio equal to or greater than 0.75.
 - (iv) Alternately, a hood or enclosure to collect emissions which are vented to Control Equipment may be used to satisfy requirement of subsection (C)(3)(i)(iii) above, provided that the air pollution Control Equipment meets the provisions of subsection (C)(2). The collection system shall have a ventilation rate of 15-20 cubic meters per minute per square meter of Solvent cleaner opening (at each Air-Vapor Interface), unless the rate must be changed to meet Federal and State Occupational Safety and Health Administration requirements, and is approved in writing by the Air Pollution Control Officer (APCO).
- (j) Batch-loaded Vapor Degreasers shall be equipped with the following:
- (i) A cover that is a sliding, rolling or guillotine (bi-parting) type which is designed to easily open and close without disturbing the vapor zone.
 - (ii) A Vapor Level Control Thermostat, a Condenser Flow Switch and a Spray Safety Switch.
 - (iii) A Freeboard Ratio greater than or equal to 0.75.
 - (iv) A Primary Condenser.
 - (v) In addition, Degreasers with an Evaporative Surface Area greater than or equal to one (1) square meter, shall be equipped with a Refrigerated Freeboard Chiller for which the chilled air blanket temperature (degrees Fahrenheit) at the coldest point on the vertical axis in the center of the Air-Vapor Interface shall be no greater than

30 percent of the Initial Boiling Point (degrees Fahrenheit) of the Solvent used, or 40 degrees Fahrenheit, whichever is greater. (If the chiller operates below the freezing temperature of water, it shall be equipped with an automatic defrost).

- (vi) Alternately, a hood or enclosure to collect emissions which are vented to Control Equipment may be used to satisfy the requirements of subsections (C)(3)(j)(i) and (iii) above, provided that the air pollution Control Equipment meets the provisions of subsection (C)(2). The collection system shall have a ventilation rate of 15-20 cubic meters per minute per square meter of Solvent cleaner opening (at each Air-Vapor Interface), unless the rate must be changed to meet Federal and/or State Occupational Safety and Health Administration requirements, and is approved in writing by the APCO.
- (k) Conveyorized Vapor Degreasers shall be equipped with the following:
- (i) An enclosed drying tunnel or other method, such as a rotating basket, sufficient to prevent cleaned parts from carrying out Solvent liquid or vapor.
 - (ii) Minimized entrance and exit openings which silhouette the Workloads such that the average clearance between material and the edges of the Degreaser openings are less than ten (10) centimeters (four (4) inches) or less than ten (10) percent of the opening, whichever is greater.
 - (iii) A Primary Condenser.
 - (iv) A Freeboard Ratio equal to or greater than 0.75.
 - (v) A vapor control thermostat, a Condenser Flow Switch, and a Spray Safety Switch.
 - (vi) Additionally, a Refrigerated Freeboard Chiller for which the chilled air blanket temperature (degrees Fahrenheit) at the coldest point on the vertical axis in the center of the Air-Vapor Interface shall be no greater than 30 percent of the Initial Boiling Point (degrees Fahrenheit) of the Solvent used, or 40 degrees Fahrenheit, whichever is greater. (If the chiller operates below the freezing temperature of water, it shall be equipped with an automatic defrost).
 - (vii) Alternately, a hood or enclosure to collect emissions which are vented to Control Equipment may be used to satisfy requirements of subsections (C)(3)(k)(iv) and (vi) above, provided that the air pollution Control Equipment meets the provisions of subsection (C)(2). The collection system shall have a ventilation rate of 15-20 cubic meters/min per square meter of Degreaser opening (at each Air-Vapor Interface), unless the rate must be changed to meet Federal and State Occupational Safety and Health Administration requirements, and is approved in writing by the District APCO.

(4) Operating Requirements

- (a) All Degreasers shall comply with the following:
- (i) Any Solvent cleaning Equipment and any emission Control Equipment shall be operated and maintained in strict accord with the recommendations of the manufacturer.
 - (ii) Degreasers shall not be operating with any detectable Solvent Leaks.
 - (iii) All Solvent, including Waste Solvent, Waste Solvent residues, and used applicators shall be stored in closed containers at all times. All containers for any Solvent(s) shall have a label indicating the name of the Solvent/material they contain.
 - (iv) Waste Solvent and any residues shall be disposed of by one of the following methods: a commercial Waste Solvent reclamation service licensed by the State of California; or a federally or state licensed Facility to treat, store or dispose of such Waste; or the originating Facility may recycle the Waste Solvent and materials in conformance with requirements of Section 25143.2 of the California Health and Safety Code.
 - (v) Degreasers shall be covered to prevent fugitive leaks of vapors, except when processing work or to perform maintenance.
 - (vi) Solvent carry-out shall be minimized by the following methods:
 - a) Rack Workload arranged to promote complete drainage.
 - b) Limit the vertical speed of the power hoist to 3.3 meters per minute (11 feet per minute) or less when such a hoist is used.
 - c) Retain the Workload inside of the vapor zone until condensation ceases.
 - d) Tip out any pools of Solvent remaining on the cleaned parts before removing them from the Degreaser if the Degreasers are operated manually.
 - e) Do not remove parts from the Degreaser until the parts are visually dry and not dripping/leaking Solvent. (This does not apply to an Emulsion cleaner Workload that is rinsed with water within the Degreaser immediately after cleaning.)
 - (vii) The cleaning of porous or absorbent materials such as cloth, leather, wood or rope is prohibited.
 - (viii) Except for Sealed Chamber Degreasers, all Solvent agitation shall be by either pump recirculation, a mixer, or Ultrasonics.
 - (ix) The Solvent spray system shall be used in a manner such that liquid Solvent does not splash outside of the container. The Solvent spray shall be a continuous stream, not atomized or shower type, unless, the spray is conducted in a totally enclosed space, separated from the environment.
 - (x) For those Degreasers equipped with a water separator, no Solvent shall be visually detectable in the water in the separator.

- (xi) Wipe Cleaning materials, including shop towels, containing Solvent shall be kept in closed containers at all times, except during use.
 - (xii) Cleaning operations shall be located so as to minimize air circulation and drafts being directed across the cleaning Equipment, the exposed Solvent surface, or the top surface of the vapor blanket.
 - (xiii) A method for draining cleaned material, such as a drying rack suspended above the Solvent and within the freeboard area, shall be used so that the drained Solvent is returned to the Degreaser or container.
- (b) Batch-loaded and Conveyorized Degreasers shall, in addition to the requirements in subsection (C)(4)(a), meet the following operating requirements:
- (i) When starting the Degreaser, the cooling system shall be turned on before, or simultaneously with, the sump heater.
 - (ii) When shutting down the Degreaser, the sump heater shall be turned off before, or simultaneously with, the cooling system.
 - (iii) The Workload Area shall not occupy more than half of the Evaporative Surface Area of the Degreaser.
 - (iv) Except for Sealed Chambers, the spray must be kept at least ten (10) centimeters (four (4) inches) below the top of the vapor level and be pointed downward, to prevent turbulence at the air-Solvent vapor interface.
- (c) Remote Reservoir Degreasers shall, in addition to the applicable requirements in subsection (C)(4)(a), meet the following operating requirements:
- (i) The Solvent pump shall not circulate Solvent into the sink unless a Workload is being actively processed.
 - (ii) The sink of a Remote Reservoir Degreaser or any container placed therein may not be used to soak a Workload. Such use is prohibited and such use will cause the unit to be classified as a Cold Solvent Degreaser and be subject to provisions of subsection (C)(3)(h) of this Rule.
 - (iii) Parts shall be visually dry and not dripping/leaking Solvent before being removed from the sink. Parts shall be tipped to release any trapped pools of Solvent before being removed from the sink.
 - (iv) The Workload must “drip-dry” while being contained completely within the sink.

(D) Prohibition

A Lip Exhaust system shall not be used on any Degreaser unless it is vented to a hood or enclosure system as defined in subsection (C)(3)(j)(vi).

(E) Exemptions

- (1) The provisions of this Rule shall not apply to:
 - (a) Solvents Containing Less Than two (2) percent VOC: Solvent cleaning/degreasing operations using total liquid Solvent containing less than two (2) percent by weight of VOC.
 - (b) Small Cold Solvent Degreasers: Any Cold Solvent Degreaser with a Solvent surface area of less than 929 square centimeters (1 square foot) shall meet the requirements of subsection (C)(4)(a)(v) and (E)(2) of this rule.
 - (c) Consumer products such as aerosol cans or small containers (one quart or smaller) unless the total accumulative use is greater than 160 ounces (five quarts) of Solvent per day. Persons using these products are subject to subsection (C)(4)(a)(iii, iv & xi), subsection (E)(2), subsection (G)(1)(a)(v) and subsections (G)(1)(c) and (d) of this Rule.
 - (d) Any source operation that is subject to or specifically exempted by any of the following Rules:
 - (i) Rule 1106 – *Marine Coating Operations*.
 - (ii) Rule 1113 – *Architectural Coatings*.
 - (iii) Rule 1114 – *Wood Products Coating Operations*.
 - (iv) Rule 1115 – *Metal Parts & Products Coating Operations*.
 - (v) Rule 1116 – *Automotive Refinishing Operations*.
 - (vi) Rule 1117 – *Graphic Arts and Paper, Film, Foil and Fabric Coatings*.
 - (vii) Rule 1118 – *Aerospace Vehicle Parts and Products Coating Operations*.
 - (viii) Rule 1162 – *Polyester Resin Operations*.
 - (e) Film cleaning operations that use 1,1,1-trichloroethane exclusively.
 - (f) The surface preparation standards in subsection (C)(1) and (C)(2) shall not apply to the following:
 - (i) The surface preparation of electrical and electronic components, precision optics, or numismatic dies;
 - (ii) Stripping of cured Inks, Coatings and Adhesives or cleaning of resin, Coating, Ink and Adhesive mixing, molding and application Equipment; or,

- (iii) Surface preparation associated with research and development operations; medical device or pharmaceutical manufacturing operations; performance testing to determine Coating, Adhesive or Ink performance; or testing for quality control or quality assurance purposes.
- (2) Any Facility classified as exempt or claiming to be exempt under Section (E), shall meet the record keeping requirements of this Rule so as to be able to prove the exemption status.

(F) Administrative Requirements

Rule 442 Applicability: Any Solvent using operation or Facility which is not subject to this source-specific Rule shall comply with the provisions of Rule 442 – *Usage of Solvents*. Any Solvent using operation or Facility which is exempt from all or a portion of the VOC limits, Equipment limits or the operational limits of this Rule shall be subject to the applicable provisions of Rule 442 – *Usage of Solvents*.

- (1) A Solvent using operation or Facility which may be considered exempt from all or a portion of Rule 1104, but is still compliant with the limits of Rule 1104, may request in writing that the Solvent be considered subject to Rule 1104 requirements for compliance purposes.

(G) Recordkeeping Requirements

- (1) Solvent Usage Records: All Persons subject to this Rule and any Person claiming any exemption under Section (E) shall comply with the following requirements:
 - (a) Maintain and have available during an inspection, a current list of Solvents in use at the Facility which provides all of the data necessary to evaluate compliance, including the following information separately for each Degreaser, as applicable:
 - (i) Product name(s) used in the Degreaser;
 - (ii) The mix ratio of mixtures containing Solvents as used;
 - (iii) VOC content of Solvent or mixture of compounds as used;
 - (iv) The total volume of the Solvent(s) used for the Facility, on a monthly basis: and
 - (v) The name and total volume applied of Wipe Cleaning Solvent(s) used, on a monthly basis.
 - (b) Additionally, for any Degreaser utilizing an add-on emission Control Equipment/system as a means of complying with provisions of this Rule shall, maintain and produce daily records of key operating parameters and maintenance procedures which will demonstrate continuous operation and compliance of the air pollution abatement Equipment during periods of

emission producing activities. Key system operating parameters are those necessary to ensure compliance with subsection (C)(2)(a), such as temperatures, pressures and flow rates. The data shall be recorded in a manner as prescribed by the District.

- (c) Documentation shall be maintained on site of the disposal or on site recycling of any Waste Solvent or residues.
- (d) Such records shall be retained on site (at the Facility) and available for inspection by the APCO for the previous five (5) years.

(H) Test Methods

- (1) A violation determined by any one of these test methods shall constitute a violation of this Rule.
- (2) The following specified test methods shall be used to determine compliance with the provisions of this Rule.
 - (a) Determination of the VOC Content of Solvent Samples - The determination of the VOC content shall be by the appropriate procedures contained in EPA Method 24 – *Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coating*.
 - (b) Determination of Initial Boiling Point of Solvents - The Initial Boiling Point of the Solvent shall be determined by ASTM Test Method D1078-11.
 - (c) Determination of Capture Efficiency - Capture efficiency shall be determined by the appropriate procedures set out in Guidelines for Determining Capture Efficiency (January 9, 1995).
 - (d) Determination of Control Efficiency – Control Efficiency shall be determined by using:
 - (i) EPA Method 25 – *Determination of Total Gaseous Nonmethane Organic Emissions as Carbon*;
 - (ii) EPA Method 25A – *Determination of Total Gaseous Organic Concentration Using a Flame Ion Analyzer*,
 - (iii) SCAQMD Test Method 25.1 – *Determination of Total Gaseous Non-Methane Organic Emissions as Carbon* (February 1991); or
 - (iv) SCAQMD Test Method 25.3 – *Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Lean Fueled Combustion Sources* (March 2000).

- (e) Determination of the Ventilation/Draft Rate - The ventilation/draft rate shall be determined by using:
 - (i) EPA Method 2 – *Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)*;
 - (ii) EPA Method 2A – *Direct Measurement of Gas Volume through Pipes and Small Ducts*;
 - (iii) EPA Method 2C – *Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks of Ducts (Standard Pitot Tube)*; and
 - (iv) EPA Method 2D – *Measurement of Gas Volume Flow Rates in Small Pipes and Ducts*.
- (f) Determination of Exempt Compounds - Exempt Compound content shall be determined by using:
 - (i) CARB Method 432, “*Determination of Dichloromethane and 1,1,1Trichloroethane in Paints and Coatings*” (September 12, 1998);
 - (ii) CARB Method 422, “*Determination of Volatile Organic Compounds in Emissions from Stationary Sources*” (January 22, 1987).
 - a) It is only approved for the compounds listed in Method 422, section 2, that have been exempted from USEPA’s definition of VOC; and
 - b) If aqueous impingers are used, the solution also shall be analyzed for the target VOCs; or
 - (iii) SCAQMD Method 303-91, “*Determination of Exempt Compounds*” (February 1993).

Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or Facility Operator identifies a specific compound or compounds from the broad classes of perfluorocarbons listed in 40 CFR 51.100(s)(1) as being present in the product or process. When such compounds are identified, the Facility shall provide the test method to determine the amount(s) of the specific compound(s).

See SIP Table at <http://www.mdaqmd.ca.gov>

Rule 1106

Marine and Pleasure Craft Coating Operations

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit the emissions of Volatile Organic Compounds (VOC) from Marine and Pleasure Craft Coating Operations.

(2) Applicability

- (a) This rule applies to all Coating Operations of both commercial boats and Ships, Pleasure Craft and their appurtenances, and to the Coating of buoys and oil drilling rigs, or their parts and components intended for the marine environment, which occur within the Mojave Desert Air Quality Management District.
- (b) Any Coating, Coating Operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the applicable provisions of Rules 1114 – *Wood Products Coating Operations*, 1115 – *Metal Parts & Products Coating Operations* and 442 – *Usage of Solvents*.

(B) Definitions

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

- (1) “Adhesive” – Any substance that is used to bond one surface to another surface by attachment.
- (2) “Aerosol Coating Product” – A hand-held, non-refillable container that expels pressurized materials by means of a propellant-induced force.
- (3) “Air-Dried Coating” – Any Coating that is not heated above 90°C (194°F) for the purpose of curing or drying.
- (4) “Air Flask Coating” – A Coating applied to the interior surfaces of high pressure breathing air flasks to provide corrosion resistance and which is certified safe for use with breathing air supplies.
- (5) “Antenna Coating” – Any Coating applied to equipment and associated structural appurtenances that are used to receive or transmit electronic signals.
- (6) “Antifoulant Coating” – Any Coating applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms and is registered with the United States Environmental Protection Agency (USEPA) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act.

- (7) “As Applied” – The condition of a Coating at the time of application to the substrate, including any thinning solvent.
- (8) “As Supplied” – The condition of a Coating before any thinning, as sold and delivered by the Coating manufacturer to the user.
- (9) “Baked-Coating” – Any Coating that is cured at a temperature at or above 90°C (194°F).
- (10) “Bitumens” – Black or brown materials that are soluble in carbon disulfide and consist mainly of hydrocarbons.
- (11) “Bituminous Resin Coating” – Any Coating that incorporates Bitumens as a principal component and is formulated primarily to be applied to a substrate or surface to resist ultraviolet radiation and/or water.
- (12) “Clear Topcoat” – A final Coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film. Including, but not limited to, Varnishes.
- (13) “Clear Wood Finishes” – Clear and semi-transparent Topcoats applied to wood substrates to provide a transparent or translucent film.
- (14) “Coating” – A material that is applied to a surface and forms a film in order to identify, beautify, protect, convey a message, or minimize detection of such surface. Coating includes, but is not limited to, materials such as Topcoats, stains, Sealers, primers, fillers, conversion Varnish, pigmented Coating, multicolored Coating, moldseal Coating, washcoat and toner.
- (15) “Compliance Assurance Monitoring” – The combined total equipment, mechanism(s), and/or technique(s) used to demonstrate and insure compliance with control device efficiency requirements. Such monitoring is used to analyze and/or provide a permanent record of process parameters, such as temperatures, pressures and flow rates.
- (16) “District” – The Mojave Desert Air Quality Management District the geographical area of which is described in District Rule 103 – *Description of District Boundaries*.
- (17) “Elastomeric Adhesive” – Any Adhesive containing natural or synthetic rubber.
- (18) “Epoxy” – Any thermoset Coating formed by reaction of an Epoxy resin (i.e., a resin containing a reactive epoxide with a curing agent).
- (19) “Exempt Compound” – Those compounds listed in 40 CFR §51.100(s).
- (20) “Extreme High-Gloss Coating” – A Coating that achieves at least a 95 percent reflectance on a 60° meter when tested by American Society for Testing and Materials (ASTM) Method D523–89 *Standard Test Method for Specular Gloss*.

- (21) “Extreme Performance Coating” – A Coating that is used on a metal surface where the coated surface, in its intended use, is acutely and chronically exposed to salt water, corrosives, caustics, acids, oxidizing agents, wind or ocean driven debris or electromagnetic pulse.
- (22) “Finish Primer/Surfacer” – A Coating applied with a wet film thickness of less than 10 mils (0.01 inch) prior to the application of a Topcoat for purposes of providing corrosion resistance, adhesion of subsequent Coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.
- (23) “General Use Coating” – Any Coating that is not a Specialty Coating, or does not have an otherwise specified limit.
- (24) “Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds” (VOC Content) – The weight of VOC per combined volume of VOC and Coating solids, calculated using the formula in subsection (E)(1)(a).
- (25) “Grams of VOC per Liter of Material” – The weight of VOC per volume of material, calculated using the formula found in subsection (E)(1)(b).
- (26) “Heat-Resistant Coating” – Any Coating which during normal use must withstand temperatures of at least 204°C (400°F).
- (27) “High Build Primer/Surfacer” – A Coating applied with a wet film thickness of 10 mils (0.01 inch) or more prior to the application of a Topcoat for purposes of providing corrosion resistance, adhesion of subsequent Coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.
- (28) “High Gloss Coating” – Any Coating which achieves at least 85 percent reflectance on a 60° meter when tested by ASTM Method D523–89 *Standard Test Method for Specular Gloss*.
- (29) “High-Temperature Coating” – Any Coating that during normal use must withstand temperatures of at least 426°C (800°F).
- (30) “High-Volume, Low-Pressure (HVLP) Spray” – Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure, measured dynamically at the center of the air cap and at the air horns.
- (31) “Inorganic Zinc (High-Build) Coating” – A Coating that contains 960 grams per liter (eight (8) pounds per gallon) or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance. These Coatings are typically applied at more than two (2) mil (0.002 inch) dry film thickness.

- (32) “Low Activation Interior Coating” – Any Coating used on interior surfaces aboard Ships to minimize the activation of pigments on painted surfaces within a radiation environment.
- (33) “Marine Coating” – Any Coating, except unsaturated polyester resin (fiberglass) Coatings, containing Volatile Organic Compounds and applied by any means to Ships, boats, and their appurtenances, and to navigational aids and oil drilling rigs intended for the marine environment.
- (34) “Marine Deck Sealant Primer” – Any sealant primer intended by the manufacturer to be applied to wooden marine decks. A sealant primer is any product intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.
- (35) “Metallic Heat-Resistant Coating” – Any Coating which contains more than five (5) grams of metal particles per liter of Coating As Applied and which must withstand temperatures over 80°C (175°F).
- (36) “Military Exterior Coating” or “Chemical Agent Resistant Coating” (CARC) – Any exterior Topcoat intended by the manufacturer to be applied to military vessels (including US Coast Guard) that are subject to specified chemical, biological, and radiological washdown requirements.
- (37) “Mist Coating” – Any low viscosity, thin film, Epoxy Coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the paint film prior to curing.
- (38) “Navigational Aids Coating” – Any Coating applied to US Coast Guard Buoys or other US Coast Guard waterway markers when they are recoated aboard Ship at their usage site and immediately returned to the water.
- (39) “Non-Skid Coating” – Any Coating which has, as its primary purpose, the creation of traction to prevent slippage for personnel, vehicles or aircraft.
- (40) “Nuclear Coating” – Any protective Coating used to seal porous surfaces such as steel (or concrete) that otherwise would be subject to intrusion by radioactive materials. These Coatings must be resistant to long-term (service life) cumulative radiation exposure as tested by ASTM D4082–89 *Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants*, relatively easy to decontaminate as determined by ASTM D4256–89, 94 *Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants*, and resistant to various chemicals to which the Coatings are likely to be exposed as tested by ASTM D3912–80 *Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants*.
- (41) “Organic Zinc Coating” – Any Coating derived from zinc dust incorporated into an organic binder that contains more than 960 grams of elemental zinc per liter (eight (8) pounds per gallon) of Coating, As Applied, and that is used for the expressed purpose of corrosion protection.

- (42) “Overall Control Efficiency” (CE) – The ratio, expressed as a percentage, of the weight of the VOC removed by the emission control system to the total weight of VOC emitted from Coating application operations, both measured simultaneously, calculated pursuant to the formula found in subsection (E)(1)(c).
- (43) “Pleasure Craft” – Vessels which are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes. The owner or operator of such vessels shall be responsible for certifying that the intended use is for recreational purposes.
- (44) “Pleasure Craft Coating” – Any Coating, except unsaturated polyester resin (fiberglass) Coatings, applied by brush, spray, roller, or other means to a Pleasure Craft.
- (45) “Pretreatment Wash Primer” – A Coating which contains no more than 12 percent solids, by weight, and at least one-half (½) percent acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent Coatings.
- (46) “Repair and Maintenance Thermoplastic Coating” – Any resin-bearing Coating, such as vinyl, chlorinated rubber, or Bituminous Resin Coatings, in which the resin becomes pliable with the application of heat, and is used to recoat portions of a previously coated substrate which has sustained damage to the Coating following normal operations purposes.
- (47) “Rubber Camouflage Coating” – Any specially formulated Epoxy Coating used as a camouflage Topcoat for exterior submarine hulls and sonar domes.
- (48) “Sealant for Wire-Sprayed Aluminum” – Any Coating of up to one (1) mil (0.001 inch) in thickness of an Epoxy material which is reduced for application with an equal part of an appropriate solvent (naphtha, or ethylene glycol monoethyl ether).
- (49) “Sealer” – A low viscosity Coating, containing binders, applied to bare wood to seal surface pores to prevent subsequent Coatings from being absorbed into the wood.
- (50) “Ship” – Any marine or fresh-water vessel used for military or commercial operations, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). This definition includes, but is not limited to, all military and US Coast Guard vessels, commercial cargo and passenger (cruise) Ships, ferries, barges, tankers, container Ships, patrol and pilot boats, and dredges. For purposes of this rule, Pleasure Crafts and offshore oil and gas drilling platforms are not considered Ships.
- (51) “South Coast Air Quality Management District” (SCAQMD) – The air quality District created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health and Safety Code (commencing with §40400).
- (52) “Special Marking Coating” – Any Coating used for items such as flight decks, Ship numbers, and other safety/identification applications.

- (53) “Specialty Coating” – Any Coating that is manufactured and used for one of the specialized applications described in this rule.
- (54) “Specialty Interior Coating” – An Extreme Performance Coating used on interior surfaces aboard Ships which has fire retardant properties and has a toxicity index of less than 0.03 in addition to existing military physical and performance requirements.
- (55) “Tack Coating” – An Epoxy Coating of up to two (2) mils (0.002 inch) thick applied to an existing Epoxy Coating. The existing Epoxy Coating must have aged beyond the time limit specified by the manufacturer for application of the next coat.
- (56) “Teak Primer” – A Coating applied to teak or previously oiled decks in order to improve the adhesion of a seam Sealer to wood.
- (57) “Topcoat” – Any final Coating applied to the interior or exterior of a Pleasure Craft for purposes such as appearance, identification, or protection. Includes but is not limited to Varnishes.
 - (a) “One-Component Topcoat” – Any Topcoat where the Coating resin cures without the need for added catalyst or converter. Addition of reducers or other additives to a Topcoat shall not change the Coating’s status as a one-component Topcoat.
 - (b) “Two-Component Topcoat” – Any Topcoat where the Coating resin cures only after adding a catalyst or converter.
- (58) “Touch-Up Coating” – Any Coating used to cover minor imperfections prior to shipment appearing after the main Coating operation.
- (59) “Underwater Weapons Systems Coating” – A Coating applied to any or all components of a weapons system that is intended to be launched or fired from underwater.
- (60) “United States Environmental Protection Agency” (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (61) “Varnishes” – Clear Wood Topcoats formulated with various resins to dry by chemical reaction on exposure to air.
- (62) “Volatile Organic Compound” (VOC) – Any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and Exempt Compounds.
- (63) “Weld-Through Preconstruction Primer” – A Coating that provides corrosion protection for steel during inventory, is typically applied at less than one (1) mil (0.001 inch) dry film thickness, does not require removal prior to welding, is temperature resistant (burn back from a weld is less than 1.25 centimeters (0.5

inch)), and does not normally require removal before applying film-building Coatings, including Inorganic Zinc (high-build) Coatings. When constructing new vessels, there may be a need to remove areas of Weld-Through Preconstruction Primer due to surface damage or contamination prior to application of film-building Coatings.

(C) Requirements

(1) VOC Content of Coatings

- (a) A person shall not apply any Coating to commercial boats or Ships, Pleasure Craft and their appurtenances, and to buoys and oil drilling rigs or their parts and components intended for the marine environment, including any VOC-containing materials added to the original Coating supplied by the manufacturer, which contains VOC in excess of the limits specified in Table 1.

Table 1
COATING LIMITS
(Grams of VOC Per Liter of Coating, Less Water
and Less Exempt Compounds)

Marine and Pleasure Craft Coating Materials Categories	VOC Limit Grams per Liter Coating Minus Water and Exempt Compounds	
	Air-Dried	Baked
General Use Coating – Non Pleasure Craft	340	275
General Use Coating – Pleasure Craft	420	
Specialty Coating		
Air Flask	340	
Antenna	340	
Antifoulant – Non Pleasure Craft	400	
Antifoulant – Aluminum Substrate Pleasure Craft	560	
Antifoulant – Other Substrates Pleasure Craft	330	
Clear Wood Finishes – Sealers	340	
Clear Wood Finishes – Topcoats	490	
Elastomeric Adhesives with 15%, by weight, Natural or Synthetic Rubber	730	
Extreme Performance	420	360
Extreme High Gloss	490	420
Finish Primer/Surfacer	420	
Heat-Resistant	420	360
High Build Primer/Surfacer	340	
High Gloss	340	275
High Temperature	500	
Inorganic Zinc (High-Build)	340	
Low Activation Interior	420	
Marine Deck Sealant Primer	760	
Metallic Heat-Resistant	530	

Military Exterior or CARC	340	
Mist	610	
Navigational Aids	340	
Non-Skid	340	
Nuclear	420	
Organic Zinc	360	
Pretreatment Wash Primer – Non Pleasure Craft	420	420
Pretreatment Wash Primer – Pleasure Craft	780	780
Repair and Maintenance Thermoplastic	340	340
Rubber Camouflage	340	
Sealant for Wire-Sprayed Aluminum	610	
Special Marking	420	420
Specialty Interior	340	
Tack Coat	610	
Teak Primer	775	
Topcoats – Pleasure Craft		
Extreme High-Gloss	490	420
High-Gloss	420	
One Component	490	
Two Component	650	
Underwater Weapons Systems	340	275
Weld-Through Preconstruction Primer	340	

- (b) In lieu of complying with the VOC content limitations in Table 1, air pollution control equipment with a capture and control system Overall Control Efficiency of at least 90 percent, as determined pursuant to subsections (E)(2)(d) and (E)(2)(e) of this rule may be used.
 - (c) Any Coating, Coating operation, or facility which is exempt from all or a portion of the VOC content limits of this rule shall comply with the provisions of Rule 442 – *Usage of Solvents*, 1114 – *Wood Products Coating Operations* and 1115 – *Metal Parts & Products Coating Operations* unless compliance with the limits specified in this rule are achieved.
- (2) Extreme Performance Coatings – Military Installations
- (a) The VOC limits of Table 1 shall not apply to military installation use of an Extreme Performance Coating which has been approved by the Air Pollution Control Officer (APCO) in writing pursuant to this subsection.
 - (b) Any person seeking to use an Extreme Performance Coating in any military Coating operation which is subject to the provisions of this rule shall:
 - (i) Submit a petition to the APCO stating the performance requirements, volume of Coating, and VOC content which is attainable. Such petition shall include a technical justification of the attainable VOC content and an explanation why the Coating cannot meet the limits set forth in subsection (C)(1)(a).

- (ii) If the APCO grants written approval, such petition shall be resubmitted for approval on an annual basis.
- (iii) If the APCO grants written approval, such approval shall contain volume and VOC limit conditions.
- (iv) Records shall be maintained pursuant to Section (D).

(3) Transfer Efficiency

A person shall not apply any Coating subject to the provisions of this rule, unless the Coating is applied with equipment properly operated according to the manufacturer's suggested guidelines, and using one of the following application methods:

- (a) Electrostatic attraction; or
- (b) High Volume Low Pressure (HVLV) spray equipment; or
- (c) Dip coat; or
- (d) Hand application methods; or
- (e) Other Coating application methods as are demonstrated to have a transfer efficiency at least equal to method (C)(3)(b), and which are used in a manner that the parameters under which they were tested are permanent features of the method. Prior to their use, such alternative Coating application methods shall be approved in writing by the APCO.

(4) Prohibition of Specification

- (a) No person shall solicit or require for use or specify the application of a Coating if such use or application results in a violation of the provisions of this rule. The prohibition of this subsection shall apply to all written or oral contracts under the terms of which any Coating which is subject to the provisions of this rule is to be applied to any marine vessel, or part or component at any physical location within the District.

(5) Prohibition of Sale

- (a) A person shall not offer for sale or sell within the District any Coating that does not meet the VOC content limits, as set forth in Table 1 of this rule. The prohibition of this section shall apply to the sale of any Coating subject to this rule which will be applied at any physical location within the District, except those which are specifically exempted in Section (C) and (G) of this rule.

(6) Compliance Statement Requirement

- (a) The manufacturer of Coatings subject to this rule shall include a designation of VOC, As Supplied, on data sheets; including Coating

components, expressed in grams per liter or pounds per gallon, excluding water and Exempt Compounds.

(7) Surface Preparation and Cleanup Solvent

- (a) The requirements of this section shall apply to any person using solvent for surface preparation, cleanup, and paint removal, including paint spray equipment.
- (b) A person shall not use VOC-containing materials for the cleanup of application equipment used in Coating operations subject to this rule, unless such material is collected in a closed container when not in use; and
 - (i) The application equipment is disassembled and cleaned in an enclosed system during the washing, rinsing and draining processes; and
 - (ii) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned equipment or equipment parts are drained in the container until dripping ceases; and
 - (iii) VOC-containing material spills are minimized; and
 - (iv) VOC-containing materials are conveyed in closed containers or pipes.
 - (v) Other application equipment cleaning methods that are demonstrated to be as effective as the equipment described above in minimizing emissions of VOC to the atmosphere are used, provided that the device has been approved in writing prior to use, by the APCO.
- (c) A person shall not use VOC-containing materials for surface preparation unless:
 - (i) The material contains 25 grams or less of VOC per liter of material (0.21 pounds per gallon); or
 - (ii) The material has an initial boiling point of 190°C (374°F) or greater; or
 - (iii) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20°C (68°F); or
 - (iv) The cleaning operation is performed within air pollution control equipment with a capture efficiency that meets the requirements of subsection (C)(1)(b).
- (d) A person shall use closed, nonabsorbent containers for the storage of fresh or spent solvent, and disposal of cloth, paper, or any other absorbent material used for solvent surface preparation and cleanup.

(D) Monitoring and Records

(1) Coating Records

- (a) Any person subject to Section (C) or claiming exemption under Section (G) shall comply with the following requirements:
 - (i) The person shall maintain and have available during an inspection, a current list of Coatings in use which provides all of the Coating data necessary to evaluate compliance, including the following information, as applicable:
 - 1. Coating, catalyst, and reducer used.
 - 2. Mix ratio of components used.
 - 3. VOC content of Coating, As Applied.
 - (ii) The person shall maintain records on a daily basis including:
 - 1. Coating and mix ratio of components used in the Coating; and
 - 2. Quantity of each Coating applied.
 - (iii) The person shall maintain records on a daily basis showing the type and amount of solvent used for cleanup, surface preparation, and paint removal.
- (b) Notwithstanding the provisions of subsection (D)(1)(a), a person or facility which exclusively uses Coating formulations compliant with subsection (C)(1)(a) may maintain usage records on a monthly basis.

(2) Compliance Assurance Monitoring

- (a) Each Coating operation subject to subsection (C)(1) which is using air pollution control equipment to meet the control requirement shall:
 - (i) Utilize Compliance Assurance Monitoring, as approved by the APCO. Each monitoring device(s), mechanism and/or technique shall be calibrated/maintained as recommended by the manufacturer; and
 - (ii) Maintain and produce daily records of key system operating parameters and maintenance procedures which will demonstrate continuous operation and compliance of the air pollution control equipment during periods of emissions-producing activities. Key system operating parameters are those necessary to ensure compliance with VOC content of Coating requirements, such as temperatures, pressures and flow rates.
 - (b) Compliance with subsection (C)(1) shall be determined by compliance testing as prescribed in subsection (E)(2) and/or by evaluating Compliance Assurance Monitoring data.
- (3) All records for the previous five (5) year period maintained and produced pursuant to this Section shall be retained and available for inspection by the APCO upon request.

(E) Compliance Procedures and Test Methods

(1) Calculation Methods

- (a) Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds shall be determined by the following equation:

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

Where: G_v = Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds

W_s = Weight of volatile compounds in grams

W_w = Weight of water in grams

W_{es} = Weight of Exempt Compounds in grams

V_m = Volume of material in liters

V_w = Volume of water in liters

V_{es} = Volume of Exempt Compounds in liters

- (b) Grams of VOC per Liter of Material shall be determined by the following equation:

$$G_v = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: G_v = Grams of VOC Per Liter of Coating Less Water and Less Exempt Compounds

W_s = Weight of volatile compounds in grams

W_w = Weight of water in grams

W_{es} = Weight of Exempt Compounds in grams

V_m = Volume of material in liters

- (c) Overall Control Efficiency shall be determined by the following equations

$$\text{Capture Efficiency} = \left(\frac{W_c}{W_e} \right) \times 100$$

Where: W_c = Weight of VOC entering control device
 W_e = Weight of VOC emitted

$$\text{Control Device Efficiency} = \left(\frac{W_c - W_a}{W_c} \right) \times 100$$

Where: W_c = Weight of VOC entering control device
 W_a = Weight of VOC discharged from the control device

$$CE = \frac{[(\text{Capture Efficiency}) \times (\text{Control Device Efficiency})]}{100}$$

- (2) The following specified test methods shall be used to determine compliance with the provisions of this rule.

- (a) Determination of VOC Content:

The VOC content of Coatings, subject to the provisions of this rule shall be determined by the following methods:

- (i) USEPA Reference Method 24 – *Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings* (40 CFR 60, Appendix A) for VOC content, ASTM D4457–85 *Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph*, or CARB Method 432 – *Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings* for determination of Exempt Compounds. The Exempt Compound content shall be determined by SCAQMD Method 303-91 – *Determination of Exempt Compounds* contained in the SCAQMD Laboratory Methods of Analysis for Enforcement Samples manual; or,
- (ii) SCAQMD Method 304-91 *Determination of Volatile Organic Compounds (VOC) in Various Materials* contained in the SCAQMD Laboratory Methods of Analysis for Enforcement Samples manual.
- (iii) Exempt Perfluorocarbon Compounds: The following classes of compounds: cyclic, branched, or linear, completely fluorinated

alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as Exempt Compounds for compliance with Section (C), only when manufacturers specify which individual compounds are used in the Coating formulation. In addition, the manufacturers shall identify the USEPA, California Air Resources Board (CARB), or other approved test methods used to quantify the amount of each Exempt Compound.

- (iv) Determination of the initial boiling point of liquid containing VOC, subject to subsection (C)(1)(a), shall be conducted in accordance with ASTM D1078–86 *Standard Test Method for Distillation Range of Volatile Organic Liquids*.
- (v) Calculation of total VOC vapor pressure for materials subject to subsection (C)(1)(a) shall be conducted in accordance with ASTM D2879–97 *Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope*. The fraction of water and Exempt Compounds in the liquid phase shall be determined by using ASTM D3792–91 *Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatography* and D4457–85 *Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph* and shall be used to calculate the partial pressure of water and Exempt Compounds. The results of vapor pressure measurements obtained using ASTM D2879–97 *Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope* shall be corrected for partial pressure of water and Exempt Compounds.
- (vi) Measurement of solvent losses from alternative application cleaning equipment subject to (C)(7)(b)(v) shall be conducted in accordance with the SCAQMD *General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems* (10/03/89).

(b) Determination of Metal Content:

- (i) The metal content in metallic Coatings subject to the provisions of this rule shall be determined by the SCAQMD Method 311-91 – *Determination of Percent Metal in Metallic Coatings by Spectrographic Method* contained in the SCAQMD) *Laboratory Methods of Analysis for Enforcement Samples* manual.

(c) Determination of Acid Content

- (i) The acid content of Coating subject to the provisions of this rule shall be determined by ASTM D1613-96 *Standard Test Method for*

Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products.

- (d) Determination of Efficiency of Air Pollution Control Equipment
 - (i) The Overall Control Efficiency of the collection device of the air pollution control equipment as specified in subsection (C)(1)(b) shall be determined by the USEPA method cited in 55 Federal Register 26865 (June 29, 1990), or any other method approved by USEPA, CARB, and the District.
 - (ii) The Overall Control Efficiency of the control device of the air pollution control equipment as specified in subsection (C)(1)(b) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Methods 25 (*Determination of total gaseous nonmethane organic emissions as carbon*), 25A (*Determination of total gaseous organic concentration using a flame ionization analyzer*), or SCAQMD Method 25.1 (*Determination of Total Gaseous Non-Methane Organic Emissions as Carbon*) as applicable. USEPA Test Method 18 (*Measurement of gaseous organic compound emissions by gas chromatography*), or CARB Method 422 – *Determination of Volatile Organic Compounds in Emissions from Stationary Sources*, (December 13, 1991) shall be used to determine emissions of Exempt Compounds.
- (e) Determination of Capture Efficiency
 - (i) Capture efficiency shall be determined according to the USEPA's technical document, *Guidelines for Determining Capture Efficiency* (01/9/95).
- (f) Determination of Extreme High-Gloss and High-Gloss
 - (i) Gloss shall be determined by ASTM Method D523–89 *Standard Test Method for Specular Gloss*.
- (g) Determination of Transfer Efficiency
 - (i) Demonstration of Transfer Efficiency of alternative application methods subject to subsection (C)(3)(e) shall be conducted in accordance with SCAQMD *Spray Equipment Transfer Efficiency Test Procedure for Equipment User* (05/24/89).
- (3) All test methods referenced in this section shall be those incorporated by reference into the Federal Register or by USEPA for use in State Implementation Plan rules.
- (4) Alternative Test Methods
 - (a) Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with any provisions of this rule may

also be used after review and approval in writing by the District, CARB and USEPA.

(F) Violations

- (1) Failure to comply with any provision of this rule shall constitute a violation of this rule.
- (2) A violation of the limits contained in this rule as determined by any one of these test methods shall constitute a violation of this rule.
- (3) When more than one (1) test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

(G) Exemptions

The provisions of this rule shall not apply to:

- (a) The use of Aerosol Coating Products.
- (b) Facilities whose rate per day of Coating use is less than one (1) gallon, including any VOC-containing materials added to the original Coating, As Supplied, by the manufacturer. Only Coatings subject to this rule shall be included in the calculation of rate per day, or; Coating application operations that emit not more than three (3) pounds of VOC per day and not more than 200 pounds of VOC per calendar year.
- (c) Marine Coatings applied to interior surfaces of potable water containers.
- (d) Touch-Up Coatings.

See SIP Table at www.mdaqmd.ca.gov

RULE 1113

Architectural Coatings

(A) General

- (1) Purpose: The purpose of this rule is to limit the quantity of Volatile Organic Compounds (VOC) in Architectural Coatings.
- (2) Applicability: Except as provided in subsection (A)(3), this rule is applicable to any person who supplies, sells, offers for sale, manufactures, blends or repackages any Architectural Coating for use within the Mojave Desert Air Quality Management District as well as any person who applies or Solicits the application of any Architectural Coating within the District.
- (3) This rule does not apply to:
 - (a) Any Architectural Coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
 - (b) Any Aerosol Coating Product.
 - (c) With the exception of Section (E), any Architectural Coating that is sold in a container with a volume of one (1) liter (1.057 quart) or less.

(B) Definitions

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

- (1) “Adhesive”- Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.
- (2) “Aerosol Coating Product”- A pressurized Coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.
- (3) “Air Pollution Control Officer” (APCO)- The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.

- (4) “Aluminum Roof”- A Coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of Coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with method referenced in subsection (G)(5)(b).
- (5) “Antenna Coating”- A Coating labeled and formulated exclusively for application to equipment and associated structural Appurtenances that are used to receive or transmit electromagnetic signals.

Effective January 1, 2013 the Antenna Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (6) “Antifouling Coating”- A Coating labeled and formulated for application to submerged stationary structures and their Appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling Coating, the Coating must be registered with both the USEPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. §§136 *et seq.*) and with the California Department of Pesticide Regulation.

Effective January 1, 2013 the Antifouling Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (7) “Appurtenance”- Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.
- (8) “Architectural Coating”- A Coating to be applied to stationary structures or their Appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in Shop Applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and Adhesives are not considered Architectural Coatings for the purposes of this rule.
- (9) “Basement Specialty Coating”- A clear or opaque Coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Coating must meet the following criteria:
 - (a) Coating must be capable of withstanding at least 10 psi of hydrostatic pressure, as determined in accordance with test method referenced in

subsection (G)(5)(i).

- (b) Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of eight (8) or more, as determined in accordance with test methods referenced in subsection (G)(5)(i).
- (10) “Bitumens”- Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.
- (11) “Bituminous Roof Coating”- A Coating which incorporates Bitumens that is labeled and formulated exclusively for roofing.
- (12) “Bituminous Roof Primer”- A primer which incorporates Bitumens that is labeled and formulated exclusively for roofing and intended for the purpose of preparing a weathered or aged surface or improving the adhesion of subsequent surfacing components.
- (13) “Bond Breaker”- A Coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.
- (14) “California Air Resources Board” (CARB)- The California Air Resources Board, the Executive Officer of CARB and his or her authorized representative, the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
- (15) “Clear Brushing Lacquers”- Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush, and which are labeled as specified in subsection (D)(1)(f).

Effective January 1, 2013 the Antenna Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (16) “Clear Wood Coatings”- Clear and semi-transparent Coatings, including lacquers and varnishes, applied to Wood Substrates to provide a transparent or translucent solid film.

Effective January 1, 2013 the Clear Wood Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (17) “Coating”- A material applied onto or impregnated into a substrate for protective,

decorative, or functional purposes. Such materials include, but are not limited to, paints, Varnishes, Sealers, and Stains.

- (18) “Colorant”- A concentrated pigment dispersion in water, solvent, and/or binder that is added to an Architectural Coating after packaging in sale units to produce the desired color.
- (19) “Concrete Curing Compound”- A Coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water and/or harden or dustproof the surface of freshly poured concrete.
- (20) “Concrete/Masonry Sealer”- A clear or opaque Coating that is labeled and formulated primarily for application to concrete and masonry surfaces to perform one or more of the following functions:
 - (a) Prevent penetration of water; or
 - (b) Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
 - (c) Harden or dustproof the surface of aged or cured concrete.
- (21) “District”- The Mojave Desert Air Quality Management District, the geographical area of which is described District Rule 103.
- (22) “Driveway Sealer”- A Coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:
 - (a) Fill cracks; or
 - (b) Seal the surface to provide protection; or
 - (c) Restore or preserve the appearance.
- (23) “Dry Fog Coating”- A Coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface Coating activity.
- (24) “Exempt Compounds”- Those compounds listed in 40 Code of Federal Regulation (CFR) 51.100(s). The Exempt Compounds content shall be determined by South Coast Air Quality Management District Method 303-91 (Revised August 1996), Bay Area Air Quality Management District Method 41, or Bay Area Air Quality Management District Method 43, incorporated by reference in subsections (G)(5)(m), (G)(5)(c), and (G)(5)(d).
- (25) “Faux Finishing Coating”- A Coating labeled and formulated to meet one or more of the following:

- (a) A glaze or textured Coating used to create artistic effects including, but not limited to, dirt, suede, old age, smoke damage, and simulated marble and wood grain.
 - (b) A decorative Coating used to create a metallic, iridescent, or Pearlescent appearance that contains at least 48 grams of Pearlescent mica pigment or other iridescent pigment per liter of Coating applied (at least 0.4 pounds per gallon).
 - (c) A decorative Coating used to create a metallic appearance that contains less than 48 grams of elemental metallic pigment per liter of Coating as applied (less than 0.4 pounds per gallon), when tested in accordance method referenced subsection (G)(5)(e).
 - (d) A decorative Coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of Coating as applied (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with method referenced subsection (G)(5)(e).
 - (e) A clear topcoat to seal and protect a Faux Finishing Coating that meets one or more of the requirements of subsection (a) –(d) above. These clear topcoats must be sold and used solely as a part of a Faux Finishing Coating system, and must be labeled in accordance with subsection (D)(1)(d).
- (26) “Fire-Resistive Coating”– A Coating labeled and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials. The category includes sprayed fire resistive materials and intumescent Fire-Resistive Coatings that are used to bring structural materials into compliance with federal, state, and local building code requirements. The Fire-Resistive Coating and the testing agency must be approved by building code officials and shall be tested in accordance with the applicable test method found in subsection (G)(5)(g).
- (27) “Fire-Retardant Coating”- A Coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The Fire-Retardant Coating and the testing agency must be approved by building code officials and shall be tested in accordance with the test method referenced in subsection (G)(5)(f).

Effective January 1, 2013 the Fire-Retardant Coating category is eliminated and Coatings with fire retardant properties will be subject to the VOC limit of their primary category (eg., Flat, Nonflat, etc.).

- (28) “Flat Coating”- A Coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to the applicable test method found in subsection (G)(5)(h).
- (29) “Floor Coating”- An opaque Coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, garage floors, and other horizontal surfaces which may be subject to foot traffic.
- (30) “Flow Coating”- A Coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective Coating systems present on utility transformer units.

Effective January 1, 2013 the Flow Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (31) “Form-Release Compound”- A Coating labeled and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.
- (32) “Graphic Arts Coating or Sign Paint”- A Coating labeled and formulated for hand-application by artists using brush, airbrush, or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers, and bulletin enamels.
- (33) “High-Temperature Coating”- A high performance Coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).
- (34) “Industrial Maintenance Coating”- A high performance Architectural Coating, including Primers, Sealers, Undercoaters, intermediate coats, and topcoats, formulated for application to substrates, including floors, exposed to one or more of the following extreme environmental conditions listed in subsections (a) - (e) below, and labeled as specified in subsection (D)(1)(e).
- (a) Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
 - (b) Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
 - (c) Frequent exposure to temperatures above 121°C (250°F);
 - (d) Frequent heavy abrasion, including mechanical wear and frequent scrubbing with industrial solvents, cleansers, or scouring agents; or
 - (e) Exterior exposure of metal structures and structural components.

- (35) “Lacquer”- A clear or opaque wood Coating, including clear lacquer sanding Sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film.

Effective January 1, 2013 the Lacquer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (36) “Low Solids Coating”- A Coating containing 0.12 kilogram or less of solids per liter (one (1) pound or less of solids per gallon) of Coating material as recommended for application by the manufacturer. The VOC Content for Low Solids Coating shall be calculated in accordance with subsection (G)(1)(ii).
- (37) “Magnesite Cement Coating”- A Coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- (38) “Manufacturer’s Maximum Thinning Recommendation”- The maximum recommendation for thinning that is indicated on the label or lid of the Coating container.
- (39) “Mastic Texture Coating”- A Coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.
- (40) “Medium Density Fiberboard” (MDF)- A composite wood product, panel, molding, or other building material composed of cellulosic fibers (usually wood) made by dry forming and pressing of a resinated fiber mat.
- (41) “Metallic Pigmented Coating”- A Coating labeled and formulated to provide a metallic appearance. The Coating must contain at least 48 grams of elemental metallic pigment (excluding zinc) per liter of Coating as applied (at least 0.4 pounds per gallon), when tested in accordance with the applicable test method found in subsection (G)(5)(j). The Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers.
- (42) “Multi-Color Coating”- A Coating that is packaged in a single container and that is labeled and formulated to exhibit more than one color when applied in a single coat.
- (43) “Nonflat Coating”- A Coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter and five (5) or greater on a 60-degree meter according to the applicable test method found in subsection (G)(5)(h).

- (44) “Nonflat - High Gloss Coating”- A Nonflat Coating that registers a gloss of 70 or above on a 60-degree meter according to applicable test method found in subsection (G)(5)(h) and labeled in accordance with subsection (D)(1)(l)(i).
- (45) “Nonindustrial Use”- Nonindustrial use means any use of Architectural Coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.
- (46) “Particleboard”- A composite wood product panel, molding, or other building material composed of cellulosic material (usually wood) in the form of discrete particles, as distinguished from fibers, flakes, or strands, which are pressed together with resin.
- (47) “Pearlescent”- Exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl.
- (48) “Plywood”- A panel product consisting of layers of wood Veneers or composite core pressed together with resin. This includes panel products made by either hot or cold pressing (with resin) Veneers to a platform.
- (49) “Post-Consumer Coating”- A finished Coating that would have been disposed of in a landfill, having completed its usefulness to a consumer, and is recovered from, or otherwise diverted from, the waste stream for the purpose of recycling.
- (50) “Pre-Treatment Wash Primer”- A primer that contains a minimum of 0.5 percent acid, by weight, is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats, and is tested in accordance with the applicable test method found in subsection (G)(5)(n).
- (51) “Primer, Sealer, and Undercoater”- A Coating labeled and formulated for one or more of the following purposes:
- (a) To provide a firm bond between the substrate and the subsequent Coatings; or
 - (b) To prevent subsequent Coatings from being absorbed by the substrate; or
 - (c) To prevent harm to subsequent Coatings by materials in the substrate; or
 - (d) To provide a smooth surface for the subsequent application of Coatings; or
 - (e) To provide a clear finish coat to seal the substrate; or
 - (f) To block materials from penetrating into or leaching out of a substrate.
- (52) “Quick-Dry Enamel”- A nonflat Coating that is labeled as specified in subsection

(D)(1)(k)(i) and that is formulated to have the following characteristics:

- (a) Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16° and 27°C (60° and 80°F);
- (b) When tested in accordance with ASTM Designation D 1640-95 sets to touch in 2 hours or less, is tack free in 4 hours or less, and dries hard in 8 hours or less by the mechanical test method; and
- (c) Has a dried film gloss of 70 or above on a 60 degree meter.

Effective January 1, 2013 the Quick-Dry Enamel category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (53) “Quick-Dry Primer, Sealer, and Undercoater”- A primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be recoated in 2 hours when tested in accordance with ASTM Designation D 1640- 95.

Effective January 1, 2013 the Quick-Dry Primer, Sealer, and Undercoater category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (54) “Reactive Penetrating Sealer”- A clear or pigmented Coating that is labeled and formulated for application to above-grade concrete and masonry substrates to provide protection from water and waterborne contaminants, including, but not limited to, alkalis, acids, and salts. These Sealers must penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. They line the pores of concrete and masonry substrates with a hydrophobic Coating, but do not form a surface film. Reactive Penetrating Sealers must meet all of the following criteria:

- (a) The Reactive Penetrating Sealer must improve water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified in accordance with applicable test methods found in subsection (G)(5)(p); and
- (b) The Reactive Penetrating Sealer must not reduce the water vapor transmission rate by more than two (2) percent after application on a concrete or masonry substrate. This performance must be verified in accordance with applicable test method found in subsection (G)(5)(q); and
- (c) Products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria referenced in subsection (G)(5)(o).

- (d) Reactive Penetrating Sealers must be labeled in accordance with subsection (D)(1)(i)(i).
- (55) “Recycled Coating”- An Architectural Coating formulated such that it contains not less than 50 percent by volume post-consumer Coating, with a maximum of 50 percent by volume Secondary Industrial Materials or Virgin Materials.
- (56) “Residential”- Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.
- (57) “Roof Coating”- A non-bituminous Coating labeled and formulated for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation.
- (58) “Rust Preventative Coating”- A Coating formulated to prevent the corrosion of metal surfaces for one or more of the following applications:
 - (a) Direct-to-metal Coating; or
 - (b) Coating intended for application over rusty, previously coated surfaces

The Rust Preventative Coatings does not include the following:

- (c) Coatings that are required to be applied as a topcoat over a primer; or
- (d) Coatings that are intended for use on wood or any other non-metallic surface.

Rust Preventative Coatings must be labeled as specified in subsection (D)(1)(g)(i).

- (59) “Sanding Sealer”- A clear or semi-transparent wood Coating labeled and formulated for application to bare wood to seal the wood and to provide a coat that can be abraded to create a smooth surface for subsequent applications of Coatings. A Sanding Sealer that also meets the definition of a Lacquer is not included in this category, but is included in the Lacquer category.

Effective January 1, 2013 the Sanding Sealer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (60) “Secondary Industrial Materials”- Products or by-products of the paint manufacturing process that are of known composition and have economic value but can no longer be used for their intended purpose.
- (61) “Semitransparent Coating”- A Coating that contains binders and colored pigments and is formulated to change the color of the surface, but not conceal the grain

pattern or texture.

- (62) “Shellac”- A clear or opaque Coating formulated solely with the resinous secretions of the lac beetle (*Lacifer lacca*), and formulated to dry by evaporation without a chemical reaction.
- (63) “Shop Application”- Application of a Coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (e.g., original equipment manufacturing Coatings).
- (64) “Solicit”- To require for use or to specify, by written or oral contract.
- (65) “Specialty Primer, Sealer, and Undercoater”- A Coating labeled as specified in subsection (D)(1)(h)(i) and that is formulated for application to a substrate to block water-soluble Stains resulting from: fire, smoke or water damage.
- (66) “Stain”- A semitransparent or opaque Coating labeled and formulated to change the color of a surface but not conceal the grain pattern or texture.
- (67) “Stone Consolidant”- A Coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms.
 - (a) Must penetrate into stone substrates to create bonds between particles and consolidate deteriorated material;
 - (b) Must be specified and used in accordance with method referenced in subsection (G)(5)(r); and
 - (c) Labeled for professional use only, in accordance with the labeling requirements in subsection (D)(1)(i).
- (68) “Swimming Pool Coating”- A Coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals. Swimming Pool Coatings include Coatings used for swimming pool repair and maintenance.
- (69) “Swimming Pool Repair and Maintenance Coating”- A rubber based Coating labeled and formulated to be used over existing rubber based Coatings for the repair and maintenance of swimming pools.

Effective January 1, 2013 the Swimming Pool Repair and Maintenance Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (70) “Temperature-Indicator Safety Coating”- A Coating labeled and formulated as a

color-changing indicator Coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

Effective January 1, 2013 the Temperature-Indicator Safety Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (71) “Tint Base”- An Architectural Coating to which Colorant is added after packaging in sale units to produce a desired color.
- (72) “Traffic Marking Coating”- A Coating labeled and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.
- (73) “Tub and Tile Refinish Coating”- A clear or opaque Coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop. The Coatings must meet all the following criteria:
 - (a) A scratch hardness of 3H or harder and a gouge hardness of 4H or harder. This must be determined in accordance with test method referenced in subsection (G)(5)(v).
 - (b) A weight loss of 20 milligrams or less after 1000 cycles. This must be determined in accordance with test method referenced in subsection (G)(5)(t).
 - (c) Capability to withstand 1000 hours or more of exposure with few or no #8 blisters. This must be determined in accordance with test method referenced in subsection (G)(5)(w).
 - (d) An adhesion rating of 4B or better after 24 hours of recovery. This must be determined in accordance with test method referenced in subsection (G)(5)(u).
- (74) “United States Environmental Protection Agency” (USEPA)- The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (75) “Varnish”- A clear or semi-transparent wood Coating, excluding lacquers and Shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

Effective January 1, 2013 the Varnish category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (76) “Veneer”- Thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as Plywood, laminated Veneer lumber, or other products.
- (77) “Virgin Materials”- Materials that contain no Post-Consumer Coatings or Secondary Industrial Materials.
- (78) “Volatile Organic Compound” (VOC)- Any volatile compound containing at least one atom of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and those compounds listed in 40 CFR 51.100(s).
- (79) “VOC Content”- The weight of VOC per volume of Coating. VOC Content is VOC Regulatory, as defined in subsection (G)(1)(a)(i), for all coatings except those in the Low Solids category. For coating in the Low Solids category, the VOC Content is VOC Actual, as defined in subsection (G)(1)(a)(ii). If the coating is a multi-component product, the VOC Content is VOC Content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.
- (80) “Waterproofing Sealer”- A Coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.

Effective January 1, 2013 the Waterproofing Sealer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (81) “Waterproofing Concrete/Masonry Sealer”- A clear or pigmented film-forming Coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and Staining.

Effective January 1, 2013 the Waterproofing Concrete/Masonry Sealer Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

- (82) “Waterproofing Membrane”- A clear or opaque Coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into substrate. Intended for the following applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials.

Waterproofing Membranes must meet the following criteria:

Coating must be applied in a single coat of at least 25 mils (at least 0.025 inch)

dry film thickness; and Coating must meet or exceed the requirements referenced in subsection (G)(5)(y).

The Waterproofing Membrane category does not include topcoats that are included in the Concrete/Masonry Sealer category (e.g., parking deck topcoats, pedestrian deck topcoats, etc.).

- (83) “Wood Coatings”- Coatings labeled and formulated for application to Wood Substrates only. The category includes the following: clear and Semitransparent Coatings; Lacquers; Varnishes; Sanding Sealers; penetrating oils; clear Stains; wood conditioner used as undercoats; wood Sealers used as topcoats; opaque Wood Coatings: opaque lacquers; opaque sanding Sealers; and opaque lacquer Undercoaters. The category does not include the following: clear Sealers that are labeled and formulated for use on concrete/masonry surfaces; or Coatings intended for substrates other than wood. Wood Coatings must be labeled “For Wood Substrates Only”, in accordance with subsection (D)(1)(m)(i).
- (84) “Wood Preservative”- A Coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. §§136 *et seq.*) and with the California Department of Pesticide Regulation.
- (85) “Wood Substrate”- A substrate made of wood, Particleboard, Plywood, Medium Density Fiberboard, rattan, wicker, bamboo, or composite products with exposed wood grain. Wood Products do not include items comprised of simulated wood.
- (86) “Zinc-Rich Primer”- A Coating that meets all of the following specifications:
 - (a) Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids; and
 - (b) Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of Coating; and
 - (c) Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection (D)(1)(n)(i).

(C) Requirements

(1) VOC Content Limits

- (a) Except as provided in subsections (C)(2) and (C)(5), no person shall:
 - (i) Manufacture, blend, or repackage for use within the District;
 - (ii) Supply, sell, or offer for sale for use within the District; or
 - (iii) Solicit for application or apply within the District,

any Architectural Coating with a VOC Content in excess of the corresponding limit specified in Table 1 or Table 2, after the specified effective date in Table 1 or Table 2. Limits are expressed as VOC Content, thinned to the Manufacturer's Maximum Thinning Recommendation, excluding any Colorant added to Tint Bases.

(2) Most Restrictive VOC Limit

- (a) If anywhere on the container of any Architectural Coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer, or anyone acting on their behalf, any representation is made that indicates that the Coating meets the definition of, or is recommended for use for more than one of the Coating categories listed in Table 1 or Table 2, then the most restrictive VOC Content limit shall apply. This provision does not apply to the following Coating categories:

	Applicable Only to Coatings Manufactured Before 1/1/2013
Aluminum Roof Coatings	
Antenna Coatings	X
Antifouling Coatings	X
Bituminous Roof Primers	
Flow Coatings	X
Fire-retardant Coatings	X
High temperature Coatings	
Industrial maintenance Coatings	
Lacquer Coatings	X
Low-solids Coatings	
Metallic Pigmented Coatings	
Pretreatment Wash Primers	
Shellacs	
Specialty Primers, Sealers, and Undercoaters	
Temperature indicator safety Coatings	X
Wood Coatings	
Wood Preservatives	
Zinc-Rich Primers	

(3) Specialty Coating Categories

- (a) If a Coating meets a definition in Section (B) for one or more specialty coating categories that are listed in Table 1 or Table 2, then that Coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat-High

Gloss Coatings, but is required to meet the VOC limit for the applicable specialty Coating listed in Table 1 or Table 2.

- (b) For any Coating that does not meet any of the definitions for the specialty Coatings categories listed in Table 1 or Table 2, the VOC Content limit shall be determined by classifying the Coating as a Flat Coating, Nonflat Coating, or Nonflat - High Gloss Coating based on its gloss, as defined in subsections (B)(28), (B)(43), and (B)(44) and the corresponding Flat, Nonflat, or Nonflat High Gloss VOC limit shall apply.
- (4) Eliminated Categories
 - (a) Effective January 1, 2013 the Coating categories listed in Table 2 are eliminated, and these Coatings will be subject to the VOC limit for the applicable category in Table 1, except as provided in subsections (C)(2), (C)(3) and (C)(5).
- (5) Sell-Through of Coatings
 - (a) A Coating listed in Table 1 or Table 2 and manufactured prior to January 1, 2013 effective date may be sold, supplied, or offered for sale for up to three years after the January 1, 2013, so long as the Coating complied with the standards in effect at the time the Coating was manufactured. A Coating listed in Table 1 or Table 2 and manufactured before the January 1, 2013 effective date may be applied at any time, both before and after January 1, 2013, so long as the Coating complied with the standards in effect at the time the Coating was manufactured. This subsection does not apply to any Coating that does not display the date or date-code required by subsection (D)(1)(a).
- (6) Painting Practices
 - (a) All Architectural Coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These Architectural Coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers.
 - (b) Containers of any VOC-containing materials used for thinning and cleanup shall be closed when not in use.
- (7) Thinning

- (a) No person who applies or Solicits the application of any Architectural Coating shall apply a Coating that is thinned to exceed the applicable VOC limit specified in Table 1 or Table 2.
- (8) Rust Preventative Coatings
 - (a) Effective until January 1, 2013, a person shall only apply or Solicit the application of a rust preventative Coating for non-industrial uses, unless the rust preventative Coating complies with the industrial maintenance Coating VOC limit specified in Table 1.
- (9) Early Compliance Provision
 - (a) Prior to January 1, 2013, any coating that meets a definition in Section (B) for a coating category listed in Table 1 and complies with the applicable VOC limit in Table 1 and with Sections (C)(2) and (D) shall be considered in compliance with this rule.

(D) Container Labeling Requirements

- (1) Each manufacturer of any Architectural Coating subject to this rule shall display the following information on the Coating container (or label) in which the Coating is sold or distributed.
 - (a) Date Code
 - (i) The date the Coating was manufactured, or a date code representing the date the Coating was manufactured, shall be indicated on the label, lid, or bottom of the container.
 - (ii) If the manufacturer uses a date code for any Coating, the manufacturer shall file an explanation of each code with CARB.
 - (b) Thinning Recommendations
 - (i) A statement of the manufacturer's recommendation regarding thinning of the Coating shall be indicated on the label or lid of the container.
 - (ii) This requirement does not apply to the thinning of Architectural Coatings with water.
 - (iii) If thinning of the Coating prior to use is not necessary, the recommendation must specify that the Coating is to be applied without thinning.
 - (c) VOC Content

Each container of any Coating subject to this rule shall display one of the following values in grams of VOC per liter of coating:

- (i) Maximum VOC Content as determined from all potential product formulations; or
- (ii) VOC Content as determined from actual formulation data; or
- (iii) VOC Content as determined using the applicable test methods in Section (G)(2).
- (iv) If the manufacturer does not recommend thinning, the container must display the VOC content, as supplied.
- (v) If the manufacturer recommends thinning, the container must display the VOC content, including the maximum amount of thinning solvent recommended by the manufacturer.
- (vi) Effective January 1, 2013, if the coating is a multi-component product, the container must display the VOC content as mixed or catalyzed.
- (vii) Effective January 1, 2013, if the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

(d) Faux Finishing Coatings

- (i) Effective 01/01/2013 the labels of all clear topcoat Faux Finishing Coatings shall prominently display the statement “This product can only be sold or used as part of a Faux Finishing Coating system”.

(e) Industrial Maintenance Coatings

- (i) The labels of all Industrial Maintenance Coating subject to this rule shall display on the label or lid of the container in which the Coating is sold or distributed one or more of the descriptions listed in subsections (a) - (c) below:
 - a. “For industrial use only”.
 - b. “For professional use only”.
 - c. “Not for Residential use” or “Not intended for Residential use”.

(f) Clear Brushing Lacquers

- (i) The labels of all Clear Brushing Lacquers shall prominently display the statements “For brush application only,” and “This product must not be thinned or sprayed”.

- (ii) Category is eliminated as of January 1, 2013.
- (g) Rust Preventative Coatings
 - (i) The labels of all Rust Preventative Coatings shall prominently display the statement “For Metal Substrates Only”.
- (h) Specialty Primers, Sealers, and Undercoaters
 - (i) The labels of all Specialty Primers, Sealers, and Undercoaters shall prominently display one or more of the descriptions listed in subsections (a) - (c) below.
 - a. “For fire-damaged substrates”.
 - b. “For smoke-damaged substrates”.
 - c. “For water-damaged substrates”.
 - (ii) Until January 1, 2013, the Specialty Primer, Sealer, and Undercoater category includes coatings formulated to seal excessively chalky surfaces. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-98. Until January 1, 2013, the labels of Specialty Primers, Sealers, and Undercoaters may display “For excessively chalky substrates” instead of, or in conjunction with, one or more of the descriptions listed in Section (D)(1)(h)(i) above.
- (i) Reactive Penetrating Sealers
 - (i) Effective 01/01/2013, the labels of all Reactive Penetrating Sealers shall prominently display the statement “Reactive Penetrating Sealer”.
- (j) Stone Consolidants
 - (i) Effective 01/01/2013 the labels of all Stone Consolidants shall prominently display the statement “Stone Consolidant – For Professional Use Only”
- (k) Quick Dry Enamels
 - (i) The labels of all quick dry enamels shall prominently display the words “Quick Dry” and the dry hard time.

- (ii) Category is eliminated as of January 1, 2013.
- (l) Nonflat - High Gloss Coatings
 - (i) The labels of all Nonflat - High Gloss Coatings shall prominently display the words "High Gloss".
- (m) Wood Coatings
 - (i) Effective 01/01/2013, the labels of all Wood Coatings shall prominently display the statement "For Wood Substrates Only".
- (n) Zinc Rich Primers
 - (i) Effective 01/01/2013, the labels of all Zinc Rich Primers shall prominently display the statement display one or more of the descriptions listed in subsections (a) - (c) below.
 - a. "For professional use only".
 - b. "For industrial use only".
 - c. "Not for residential use" or "Not intended for residential use".

(E) Reporting Requirements

- (1) Sales Data
 - (a) A responsible official from each manufacturer shall upon request of the Executive Officer of the CARB, or his or her delegate, provide data concerning the distribution and sales of Architectural Coatings. The responsible official shall within 180 days provide information, including, but not limited to:
 - (i) The name and mailing address of the manufacturer;
 - (ii) The name, address and telephone number of a contact person;
 - (iii) The name of the Coating product as it appears on the label and the applicable Coating category;
 - (iv) Whether the product is marketed for interior or exterior use or both;
 - (v) The number of gallons sold in California in containers greater than one (1) liter (1.057 quart) and equal to or less than one (1) liter (1.057 quart);
 - (vi) The VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content

and VOC Regulatory content after maximum recommended thinning. If containers less than one (1) liter have a different VOC Content than containers greater than one (1) liter, list separately. If the Coating is a multi-component product, provide the VOC Content as mixed or catalyzed;

- (vii) The names and Chemical Abstracts Service (CAS) numbers of the VOC constituents in the product;
 - (viii) The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(78);
 - (ix) Whether the product is marketed as solventborne, waterborne, or 100 percent solids;
 - (x) Description of resin or binder in the product;
 - (xi) Whether the Coating is a single-component or multi-component product;
 - (xii) The density of the product in pounds per gallon;
 - (xiii) The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(78); and
 - (xiv) The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(78).
- (b) All sales data listed in subsections (E)(1)(a)(i) through (E)(1)(a)(xiv) shall be maintained by the responsible official for a minimum of three (3) years. Sales data submitted by the responsible official to the Executive Officer of the CARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022.
- (c) Although Tertiary Butyl Acetate (TBAc) is exempt as a VOC when determining VOC content of a coating and compliance with emission limitations, it remains a VOC for purposes of all recordkeeping, emissions inventory, and dispersion modeling and must be treated as such.

(F) Administrative Requirements

(1) District Rule 442 Applicability

- (a) Any Coating, Coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of District Rule 442.

(2) Severability

- (a) Each provision of this rule shall be deemed severable, and in the event that any provision of this rule is held to be invalid, the remainder of this rule shall continue in full force and effect.

(G) Compliance Provisions and Test Methods

(1) Calculation of VOC Content

- (a) For the purpose of determining compliance with the VOC Content limits in Table 1 and Table 2, the VOC Content of a Coating shall be determined by using the procedures described in subsection (i) or (ii) below, as appropriate. If the manufacture does not recommend thinning, the VOC Content must be calculated for the product as supplied. The VOC Content of a Tint Base shall be determined without Colorant that is added after the Tint Base is manufactured. Effective January 1, 2013 if the coating is a multi-component product, the VOC Content must be calculated as mixed or catalyzed. Effective January 1, 2013, if the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC Content must include the VOCs emitted during curing.
 - (i) With the exception of Low Solids Coatings, determine the VOC Content in grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and Exempt Compounds. Determine the VOC Content using equation 1 as follows:

$$\text{VOC Regulatory} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})}$$

Where:

VOC Regulatory	=	grams of VOC per liter of Coating
W_s	=	weight of volatiles, in grams
W_w	=	weight of water, in grams
W_{ec}	=	weight of Exempt Compounds, in grams
V_m	=	volume of Coating, in liters
V_w	=	volume of water, in liters
V_{ec}	=	volume of Exempt Compounds, in liters

- (ii) For Low Solids Coatings, determine the VOC Content in units of grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, including the volume of any water and Exempt Compounds. Determine the VOC Content using equation

$$\text{VOC Actual} = \frac{(W_s - W_w - W_{ec})}{(V_m)}$$

2 as follows:

Where:

VOC Actual	=	the VOC content of a low solids Coating grams of VOC per liter of Coating
Ws	=	weight of volatiles, in grams
Ww	=	weight of water, in grams
Wec	=	weight of Exempt Compounds, in grams
Vm	=	volume of Coating, in liters

(2) VOC Content of Coatings

- (a) To determine the physical properties of a Coating in order to perform the calculations in subsection (G)(1), the reference method for VOC Content is USEPA Method 24, incorporated by reference in subsection (G)(5)(x), except as provided in subsections (G)(3) and (G)(4).
- (b) An alternative method to determine the VOC Content of Coatings is South Coast Air Quality Management District Method 304-91 (Revised February 1996), incorporated by reference in subsection (G)(5)(a).
- (c) The Exempt Compounds content shall be determined by South Coast Air Quality Management District Method 303-91 (Revised August 1996), Bay Area Air Quality Management District Method 41, or Bay Area Air Quality Management District Method 43, incorporated by reference in subsections (G)(5)(m), (G)(5)(c), and (G)(5)(d).
- (d) To determine the VOC Content of a Coating, the manufacturer may use USEPA Method 24, or an alternative method as provided in subsection (G)(3), formulation data, or any other reasonable means for predicting that the Coating has been formulated as intended (e.g., quality assurance checks, record keeping).
 - (i) However, if there are any inconsistencies between the results of USEPA Method 24 test and any other means for determining VOC Content, the USEPA Method 24 test results will govern, except when an alternative method is approved as specified in subsection (G)(3). The APCO may require the manufacturer to conduct a USEPA Method 24 analysis.

(3) Alternative Test Methods

- (a) Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with subsection (G)(2), after review and approved in writing by the District, CARB, and USEPA, may also be used.
- (4) Methacrylate Traffic Marking Coatings
 - (a) Analysis of methacrylate multicomponent Coatings used as Traffic Marking Coatings shall be conducted according to a modification of USEPA Method 24 (40 CFR 59, subpart D, Appendix A), incorporated by reference in subsection (G)(5)(k).
 - (b) This method has not been approved for methacrylate multicomponent Coatings used for other purposes than as Traffic Marking Coatings or for other classes of multicomponent Coatings.
- (5) Test Methods: The following test methods are incorporated by reference herein, and shall be used to test Coatings subject to the provisions of this rule:
 - (a) Acid Content of Coatings: The acid content of a coating shall be determined by ASTM Designation D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products".
 - (b) Alternative VOC Content of Coatings: The VOC Content of Coatings may be analyzed either by U.S. EPA Method 24 or South Coast Air Quality Management District Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.
 - (c) Aluminum Roof Coatings: The metallic content of the Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction".
 - (d) Exempt Compounds--Parachlorobenzotrifluoride (PCBTF): The Exempt Compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section (G) by Bay Area Air Quality Management District Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," *Bay Area Air Quality Management District Manual of Procedures*, Volume III, adopted 12/20/95.

- (e) Exempt Compounds--Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as Exempt Compounds for compliance with Section (G) by Bay Area Air Quality Management District Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," *Bay Area Air Quality Management District Manual of Procedures*, Volume III, adopted 11/6/96.
- (f) Faux Finishing Coating: The metallic content of the Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction".
- (g) Flame Spread Index: The flame spread index of a fire-retardant Coating shall be determined by ASTM Designation E 84-07, "Standard Test Method for Surface Burning Characteristics of Building Materials".
- (h) Fire Resistance Rating: The fire resistance rating of a fire-resistive Coating shall be determined by ASTM Designation E 119-07, "Standard Test Methods for Fire Tests of Building Construction Materials".
- (i) Gloss Determination: The gloss of a Coating shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss"
- (j) Hydrostatic Pressure for Basement Specialty Coatings: ASTM D7088-04, "Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry.
- (k) Metal Content of Coatings: The metallic content of a Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.
- (l) Methacrylate Traffic Marking Coatings: The VOC Content of methacrylate multicomponent Coatings used as Traffic Marking Coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998).
- (m) Mold and Mildew Growth for Basement Specialty Coatings: ASTM D3273-00, "Standard Test Method for Resistance to Growth of Mold on

the Surface of Interior Coatings in an Environmental Chamber” and ASTM D3274-95, “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation”.

- (n) Other Exempt Compounds: The content of compounds exempt under U.S. EPA Method 24 shall be analyzed by South Coast Air Quality Management District Method 303-91 (Revised 1993), “Determination of Exempt Compounds,” *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.
- (o) Pre-Treatment Wash Primer: ASTM D1613-06, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products”.
- (p) Reactive Penetrating Sealer: Chloride Screening Applications: National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the Protection of Bridge Structures”.
- (q) Reactive Penetrating Sealer Water Repellency: ASTM C67-07, “Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile”; or ASTM C97-02, “Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone”; or ASTM C140-06, “Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units”.
- (r) Reactive Penetrating Sealer Water Vapor Transmission: ASTM E96/E96M-05, “Standard Test Method for Water Vapor Transmission of Materials”.
- (s) Stone Consolidants: ASTM E2167-01, “Standard Guide for Selection and Use of Stone Consolidants”.
- (t) Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM Designation D 4214-98, “Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films”. (u) Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser”.
- (u) Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser”.

- (v) Tub and Tile Refinish Coating Adhesion: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D3359-02, “Standard Test Methods for Measuring Adhesion by Tape Test” (see Section (B), Tub and Tile Refinish Coating.
- (w) Tub and Tile Refinish Coating Hardness: ASTM D 3363-05, “Standard Test Method for Film Hardness by Pencil Test”.
- (x) Tub and Tile Refinish Coating Water Resistance: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D714-02e1, “Standard Test Method for Evaluating Degree of Blistering of Paints”.
- (y) VOC Content of Coatings: The VOC Content of a Coating shall be determined by U.S. EPA Method 24 as it exists in appendix A of 40 *Code of Federal Regulations* (CFR) part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings”.
- (z) Waterproofing Membrane: ASTM C836-06, “Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course”.

[SIP: See SIP Table at

<http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>]

Table 1
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Limits are expressed in grams of VOC per liter^a of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, Exempt Compounds, or Colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

Coating Category	Effective, 02/24/2003	Effective, 01/01/2013
Primary Coatings		
Flat Coatings	100	50
Nonflat Coatings	150	100
Nonflat-High Gloss Coatings	250	150
Specialty Coatings		
Aluminum Roof Coatings	n/a	400
Basement Specialty Coatings	n/a	400
Bituminous Roof Coatings	300	50
Bituminous Roof Primers	350	350
Bond Breakers	350	350
Concrete Curing Compounds	350	350
Concrete/Masonry Sealers	n/a	100
Driveway Sealers	n/a	50
Dry Fog Coatings	400	150
Faux Finishing Coatings	350	350
Fire Resistive Coatings	350	350
Floor Coatings	250	100
Form-Release Compounds	250	250
Graphic Arts Coatings (Sign Paints)	500	500
High Temperature Coatings	420	420
Industrial Maintenance Coatings	250	250
Low Solids Coatings	120 _a	120 _a
Magnesite Cement Coatings	450	450
Mastic Texture Coatings	300	100
Metallic Pigmented Coatings	500	500
Multi-Color Coatings	250	250
Pre-Treatment Wash Primers	420	420
Primers, Sealers, and Undercoaters	200	100
Reactive Penetrating Sealers	n/a	350
Recycled Coatings	250	250
Roof Coatings	250	50
Rust Preventative Coatings	400	250
Shellacs:		
Clear	730	730
Opaque	550	550
Specialty Primers, Sealers, and Undercoaters	350	100
Stains	250	250
Stone Consolidants	n/a	450
Swimming Pool Coatings	340	340
Traffic Marking Coatings	150	100
Tub and Tile Refinish Coatings	n/a	420
Waterproofing Membranes	n/a	250
Wood Coatings	n/a	275
Wood Preservatives	350	350
Zinc-Rich Primers	n/a	340
a: Limit is expressed as VOC Actual (G)(1)(a)(ii)		

Table 2

VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Effective January 1, 2013 the coating categories in Table 2 are eliminated and will be subject to the VOC limit of the applicable category in Table 1, except as provided in Section (C)(2), (C)(3), and (C)(5).

Limits are expressed in grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, Exempt Compounds, or Colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

Coating Category	Effective 02/24/2003
Antenna Coatings	530
Antifouling Coatings	400
Clear Wood Coatings	
Clear Brushing Lacquers	680
Lacquers (including lacquer sanding sealers)	550
Sanding Sealers (other than lacquer sanding sealers)	350
Varnishes	350
Fire-Retardant Coatings:	
Clear	650
Opaque	350
Flow Coatings	420
Quick-Dry Enamels	250
Quick-Dry Primers, Sealers, and Undercoaters	200
Swimming Pool Repair and Maintenance Coatings	340
Temperature-Indicator Safety Coatings	550
Waterproofing Sealers	250
Waterproofing Concrete/Masonry Sealers	400

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Rule 1114

Wood Products Coating Operations

(A) General

- (1) Purpose
 - (a) The purpose of this Rule is to limit the emission of Volatile Organic Compounds from Wood Products Coating Application Operations.
- (2) Applicability
 - (a) This Rule applies to Wood Products Coating Application Operations within the Mojave Desert Air Quality Management District.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) “Binders” – Non-volatile polymeric Organic Materials (resins) which form the surface film in Coating applications.
- (2) “Clear Sealer” – A Coating containing Binders, but not opaque pigments, which seals the Wood Products prior to application of the subsequent Coatings.
- (3) “Coating Application Operations” – A combination of Coating application steps which may include use of spray guns, flash-off areas, spray booths, ovens, conveyors, and/or other Equipment operated for the purpose of applying Coating materials and associated surface preparation and cleanup.
- (4) “Composite Wood” – A manufactured material consisting of tightly compressed wood fibers bonded with resins which includes, but is not limited to, particleboard, fiberboard and hardboard.
- (5) “Conversion Varnish” – A topcoat or sealer which is comprised of an alkyd or other resin, blended with amino resin, in a homogeneous liquid that, when acid catalyzed and applied, hardens by evaporation and polymerization.
- (6) “Crackle Lacquer” – A clear or Pigmented Topcoat intended to produce a cracked or crazed appearance when dry.

- (7) “Custom Replica Furniture” – New, made-to-order furniture that looks like antique furniture, rather than new furniture. It features detailed wood carvings and bruising of the wood to simulate antique furniture.
- (8) “Faux Finishes” – A finish intended to simulate a surface other than wood, including sand, slate, marble, metal, metal flake, or leather.
- (9) “Filler” – A material which is applied to a Wood Product, and whose primary function is to build up, or fill the voids and imperfections in the Wood Product to be coated.
- (10) “High-Solids Stains” – Stains containing more than one (1) pound of solids per gallon by weight.
- (11) “Imitation Wood Grain” – A hand applied finish that simulates the appearance of a specific natural wood grain.
- (12) “Leaf Finishes” – A finish used in conjunction with metal leaf or foil.
- (13) “Low-Solids Stains, Toners and Washcoats” – Stains, Toners and Washcoats containing one (1) pound of solids per gallon, or less, by weight.
- (14) “Low-Volume, Low-Pressure” (LVLP) – Spray Coating application Equipment with air pressure between 0.1 and 10.0 psig and air volume less than 15.5 cfm per spray gun and which operates at a maximum fluid delivery pressure of 50 psig.
- (15) “Medium Density Fiberboard (MDF) Coatings” – The initial Coating which is applied directly to the surface of MDF. MDF is a wood product composed of tightly compressed wood fibers bonded with resins, and has a density greater than 45 pounds per cubic foot.
- (16) “Mold-Seal Coating” – The initial Coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release Coating, prevents products from sticking to the mold.
- (17) “New Wood Product” – A Wood Product which has not been previously coated. A Wood Product from which Coatings have been removed to repair flaws in initial Coating applications is a New Wood Product.
- (18) “Panel” – A flat piece of wood or Wood Products, usually rectangular, and used inside homes and mobile homes for wall decorations.
- (19) “Pigmented Primers, Sealers and Undercoats” – Opaque Coatings which contain Binders and colored pigments which are formulated to hide the wood surface, that are applied prior to the topcoat to provide a firm bond, level the wood product surface, or seal the wood product surface.

- (20) “Pigmented Topcoat” – A final opaque Coating which contains Binders and colored pigments, and is specifically formulated to hide the wood surface and form a solid protective film.
- (21) “Rate Per Day” – The amount applied between 12:00 a.m. and 11:59 p.m. on the same calendar day.
- (22) “Refinished Wood Product” – A post-consumer Wood Product which has had some or all of the Coatings removed, and to which new Coatings are applied in order to preserve or restore the post-consumer wood product to its original condition. A wood product from which Coatings have been removed to repair flaws in initial Coating applications is not a Refinished Wood Product.
- (23) “Shutter” – An exterior screen or cover for a window, usually hinged and often fitted with louvers. This includes non-functional Shutters.
- (24) “Simulated Wood Materials” – Materials, such as plastic, glass, metal, that are made to give a wood-like appearance or are processed like Wood Products.
- (25) “Stencil Coating” – An Ink or a pigmented Coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to Wood Products.
- (26) “Tint” – A colorant added in small quantities to a Stain to achieve a particular color for the finished product.
- (27) “Toner” – A Wash Coat which contains Binders and dyes or pigments to add Tint to a coated surface.
- (28) “VOC Content” – The weight of VOC per volume of Coating. VOC Content is VOC Regulatory, as defined in subsection (G)(4)(a)(i), for all Coatings except those in the Low Solids category. For Coating in the Low Solids category, the VOC Content is VOC Actual, as defined in subsection (G)(4)(a)(ii). If the Coating is a multi-component product, the VOC Content is VOC Content as mixed or catalyzed. If the Coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.
- (29) “Wash Coat” – A Coating that contains no more than 1.0 pounds of solids per gallon, by weight, which is used to seal wood surfaces, prevent undesired staining, and control penetration.
- (30) “Wood Products” – Those surface coated room furnishings which include cabinets (kitchen, bath, and vanity), tables, chairs, beds, sofas, Shutters, art objects, and any other coated object made of solid wood and/or Composite Wood and/or made of Simulated Wood Material used in combination with solid wood or Composite Wood.

(C) Requirements

(1) Limits for VOC Content of Coatings & Adhesives for New Wood Products

- (a) Except as provided in subsections (C)(4) or (C)(5), no Person shall apply any Coatings to a New Wood Product if such materials have a VOC Content exceeding the applicable limits specified in Table 1. The VOC Content of Coatings, except Low-Solids Stains, Toners, Washcoats and Solvents shall be determined in accordance with subsection (G)(4)(a)(i) and (G)(2)(a). The VOC Content of Low-Solids Stains, Toners, Washcoats and Solvents shall be determined in accordance with subsection (G)(4)(a)(ii) and (G)(2)(a). VOC limits expressed in grams VOC per liter of Coating shall be used.

Table 1
VOC Content of Coatings and Adhesives for New Wood Products

Coating	g/L (lb/gal) Less Water and Less Exempt Compounds
General	275 (2.3)
Adhesives	250 (2.1)
Clear Sealers	275 (2.3)
Clear Topcoats	275 (2.3)
Conversion Varnish	550 (4.6)
Fillers	275 (2.3)
High-Solids Stains	240 (2.0)
Inks	500 (4.2)
Low-Solids Stains, Toners and Washcoats	120 (1.0)
Medium Density Fiberboard (MDF) Coatings	275 (2.3)
Mold Seal	750 (6.3)
Multi-Colored Coatings	275 (2.3)
Pigmented Primers, Sealers and Undercoats	275 (2.3)
Pigmented Topcoats	275 (2.3)

(2) Limits for VOC Content of Coatings & Adhesives for Refinishing, Repairing, Preserving or Restoring Wood Products

- (a) Except as provided in subsections (C)(4) or (C)(5), no Person shall apply any Coatings to refinish, repair, preserve or restore a wood product if such materials have a VOC Content exceeding the applicable limits specified in Table 2. The VOC Content of Coatings, except Low-Solids Stains, Toners, Washcoats and Solvents shall be determined in accordance with subsection (G)(4)(a)(i) and (G)(2)(a). The VOC Content of Low-Solids Stains, Toners, Washcoats and Solvents shall be determined in accordance

with subsection (G)(4)(a)(ii) and (G)(2)(a). VOC limits expressed in grams VOC per liter of Coating shall be used.

Table 2
VOC Content of Coatings and Adhesives for Refinishing,
Repairing, Preserving, or Restoring Wood Products

Coating	g/l (lb/gal) Less Water and Less Exempt Compounds
General	420 (3.5)
Clear Topcoats	680 (5.7)
Conversion Varnishes	550 (4.6)
Fillers	500 (4.2)
High-Solids Stains	700 (5.8)
Inks	500 (4.2)
Low-Solids Stains, Toners and Washcoats	480 (4.0)
Medium Density Fiberboard (MDF) Coatings	680 (5.7)
Mold-Seal Coating	750 (6.3)
Multi-Colored Coatings	680 (5.7)
Pigmented Coatings	600 (5.0)
Sealers	680 (5.7)

(3) Transfer Efficiency

- (a) A Person or Facility shall not apply Coatings to Wood Products subject to the provisions of this Rule unless the Coating is applied with properly operating Equipment, according to manufacturer's suggested guidelines, and by the use of one of the following methods:
- (i) Flow Coat;
 - (ii) Dip Coat;
 - (iii) High-Volume Low-Pressure (HVLP) spray;
 - (iv) Low-Volume Low-Pressure spray Equipment;
 - (v) Paint brush;
 - (vi) Hand roller;
 - (vii) Roll Coater;
 - (viii) Air-Assisted Airless Spray (for Touch-Up and Repair Coating only);
 - (ix) Electrostatic Application Equipment; or
 - (x) Such other Coating application methods as are demonstrated to the Air Pollution Control Officer to have a Transfer Efficiency equal to or better than achieved by HVLP spraying and for which written approval of the Air Pollution Control Officer has been obtained.

(4) Strippers, Surface Preparation, Clean-up Solvent and Equipment Cleaning

- (a) The requirements of this Section shall apply to any Person using Solvent for surface preparation and cleanup.
 - (i) A Person shall not use an organic compound for surface preparation or cleanup, except Strippers, with a VOC Content in excess of 25 Grams of VOC Per Liter of Material (0.21 pounds per gallon).
 - (ii) A Person shall use closed, non-leaking, and non-absorbent containers for the storage or disposal of cloth or paper used for Solvent surface preparation and cleanup.
 - (iii) A Person shall store fresh or spent Solvent in closed containers.
 - (iv) A Person shall not use organic compounds for the cleanup of spray Equipment, including paint lines, unless Equipment for collecting the cleaning compounds and minimizing their evaporation to the Atmosphere is used.
 - (v) Spray gun nozzles only, may be soaked in Solvent-based materials for cleaning, provided the container is not more than five (5) gallons in size, and is kept tightly covered at all times except when accessing the container.
 - (vi) A Person shall not use Solvent based VOC-containing materials for the clean-up of spray Equipment used in Wood Products Coating Application Operations, unless the spray Equipment is disassembled and cleaned in an enclosed gun cleaner.
- (b) A Person shall not use a Stripper on wood products unless:
 - (i) The Stripper contains less than 200 Grams of VOC Per Liter of Material; or
 - (ii) The VOC composite partial vapor pressure for the Stripper is 2 mm Hg (0.04 psia) or less at 68 °F (20 °C), as calculated pursuant to subsection (G)(5).

(5) Add-On Control System

- (a) In lieu of complying with the VOC Content limitations in subsection (C)(1), (C)(2), and/or (C)(4) above, air pollution Control Equipment with a capture and control system combined efficiency of at least 90 percent, as determined pursuant to subsections (G)(2)(b) and (G)(2)(c) of this Rule, may be used.
- (b) A Person using Control Equipment pursuant to (C)(5)(a) shall submit to the APCO for approval an Operation and Maintenance Plan for the proposed emission control device and emission collection system and receive approval prior to operation of the Control Equipment. Such Plan shall:

- (i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with subsection (C)(5)(a), such as temperature, pressure, and/or flow rate; and
 - (ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding key operating system parameters.
- (6) Prohibition of Specifications
 - (a) Any Person shall not specify the use in the District of any Coating to be applied to any Wood Products subject to the provisions of this Rule that does not meet the limits and requirements of this Rule. The requirements of this paragraph shall apply to all written or oral contracts.
- (7) Compliance Statement Requirement
 - (a) The manufacturer of Coatings subject to this Rule shall include a statement of VOC Content as supplied on data sheets; including Coating components, expressed in grams per liter or pounds per gallon, excluding water and exempt Solvents.
- (8) Work Practice Implementation Plan Requirement
 - (a) Any Person subject to this Rule shall prepare and maintain a written work practice implementation plan ensuring that the following requirements are met:
 - (i) Finishing, Cleaning, and Washoff:
 - a. Covered storage of finishing, cleaning, and washoff materials.
 - b. Develop a written inspection and maintenance plan to address and prevent leaks. The plan must identify a monthly (minimum) inspection frequency and procedures for addressing malfunctions. Repairs to leaking equipment must be made within 15 days, unless replacement equipment has to be ordered.
 - c. Coatings must be applied with HVLP, electrostatic, and/or airless spray equipment.
 - (ii) Cleaning and Washoff Operations
 - a. Gun/Line Cleaning
 - i. Cleaning solvent must be collected in a container that can be closed.
 - ii. Cleaning solvent containers must be closed when not in use.

- b. Spray Booth Cleaning
 - i. Use of organic solvents for spray booth cleaning is prohibited.
 - ii. Use strippable spray booth coating with a VOC content of no greater than 0.8 kg VOC/kg solids (lb VOC/lb solids).
 - iii. Do not use solvents unless cleaning conveyors or metal filters, or refurbishing the spray booth.
 - c. Furniture Washoff
 - i. Cover washoff tanks when not in use.
 - ii. Minimize dripping by tilting and/or rotating pieces.
 - d. General Cleaning/Washoff Activities
 - i. Cleaning and washoff accounting system.
 - aa. Log of quantity and type of solvent used for washoff and cleaning, the number of pieces washed off, and reason for washoff.
 - bb. Record quantity of spent solvent generated from each activity and its ultimate fate.
 - cc. Calculate net cleaning and washoff solvent usage quantities, accounting for disposal and recycling of spent solvent, monthly.
 - ii. Keep washoff tanks must be closed when not in use.
 - iii. Minimize dragout by tilting and/or rotating part to drain as much solvent as possible and allowing sufficient dry time.
 - iv. Maintain a log of the quantity and type of solvent used for washoff and cleaning, as well as the quantity of waste solvent shipped offsite, and the fate of this waste (recycling or disposal).
 - v. Maintain a log of the number of pieces washed off, and the reason for the washoff.
- (iii) Operator Training Requirements: The work practice implementation plan shall include an Operator training program with the following requirements:
- a. An Operator training program to train new employees must be implemented for hiring and retraining all employees annually. Any Person hired after the effective date of this Rule shall be trained upon hiring, and any existing Person hired before the effective date of this Rule shall be trained within 6 months of the effective date of this Rule.
 - b. The Operator training program must address the requirements stated in Subsection (8)(a)(i), Subsection (8)(a)(ii), and Subsection (8)(a)(iii) of this Rule.
 - c. The Operator training program shall also include:
 - i. A list of all current personnel by name and job description that are required to be trained;

- ii. An outline of the subjects to be covered in the initial and refresher training for each position, or group of personnel;
 - iii. Lesson plans for courses to be given at the initial hire and the annual refresher training that include, at a minimum:
 - aa. Appropriate application techniques;
 - bb. Appropriate cleaning and washoff procedures;
 - cc. Appropriate equipment setup and adjustment to minimize material usage and overspray; and
 - dd. Appropriate management of cleanup wastes;
 - iv. A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion and a record of the date each employee is trained.
- d. The Operator training program shall be written and retained onsite.
- (iv) Record Requirements: Any Person subject to this Rule shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:
 - a. Records demonstrating that the operator training program is in place;
 - b. Records maintained in accordance with the inspection and maintenance plan;
 - c. Copies of logs and other documentation developed to demonstrate that the other provisions of the work practice implementation plan are followed.
- (v) General Work Practice Requirements
 - a. Implementation plan must be developed and maintained onsite to demonstrate compliance with work practice requirements.
 - b. The written work practice implementation plan shall be developed within no more than 60 days after the adoption of this Rule.
 - c. The written work practice implementation plan shall be available for inspection by the District, upon request.

(D) Exemptions

- (1) The provisions of subsections (C)(1)(a), (C)(2)(a), (C)(3)(a) and (C)(4) of this Rule shall not apply to:
 - (a) The use of Aerosol Products.
 - (b) Facilities whose Rate Per Day of Coating use is less than one (1) gallon including any VOC-containing materials added to the original Coating as supplied by the manufacturer (only Coatings subject to this Rule shall be included in this calculation), and whose Wood Coating Application Operations do not emit more than 3 pounds of VOCs per day and not more than 200 pounds of VOCs per calendar year.
 - (c) Laminating of fiberglass, metal, or plastic sheets to wood Panels.
 - (d) The application of Coatings to musical instruments.
 - (e) The application of Coatings to billiard tables.
- (2) The provisions of subsection (C)(1)(a), and (C)(2)(a) shall not apply to Touch-Up and Repair Coatings or Stencil Coatings.
- (3) Any Facility classified as exempt or claiming to be exempt under this Section (D), shall meet the record keeping requirements of this Rule so as to be able to certify the exemption status.
- (4) Residential non-commercial operations are exempt from the provisions of this Rule.
- (5) Facilities which use less than 20 gallons per year of Wood Products Coatings and/or Strippers (singly or in any combination) are exempt from the provisions of this Rule with the exception of Section (F).
- (6) Coatings used to provide the following finishes are exempt from the provision of subsection (C)(1)(a) and (C)(2)(a), provided that the records are maintained as specified in Section (F):
 - (a) Crackle Lacquers;
 - (b) Faux Finishes;
 - (c) Imitation Wood Grain;
 - (d) Leaf Finishes.

- (7) Tints applied to Stains in quantities not to exceed one (1) pint of Tint in any operating day are exempt from all the provisions of this Rule, provided that the records are maintained as specified in Section (F).

(E) Administrative Requirements

(1) Rule 442 Applicability

- (a) Any Coating, Coating Operation, or Facility which is exempt from all or a portion of the VOC Content limits of this Rule shall comply with the provisions of Rule 442 regulating those exempted activities unless compliance with the limits specified in this Rule are achieved.

(F) Monitoring and Records

(1) Coating Records

- (a) Any Person subject to this Rule shall comply with the following requirements:
 - (i) The Person shall maintain and have available during an inspection, a current list of Coatings in use which provides all of the Coating data necessary to evaluate compliance, including the following information, as applicable:
 - a. Coating, catalyst, and reducer used.
 - b. Mix ratio of components used.
 - c. VOC Content of Coating as applied.
 - d. A data sheet, material list, or invoice giving material name, manufacturer, identification, material application and VOC Content.
 - (ii) The Person shall maintain records on a daily basis including:
 - a. Coating and mix ratio of components used in the Coating; and
 - b. Quantity of each Coating applied.
 - (iii) The Person shall maintain records on a daily basis showing the type and amount of Solvent and Stripper used for cleanup, surface preparation, and paint removal.
- (b) Notwithstanding the provisions of subsection (F)(1)(a), a Person or Facility which exclusively uses Coating formulations compliant with subsection (C)(1)(a) and (C)(2)(a) may maintain usage records on a monthly basis.
- (c) Persons using Stains and/or Tints and subject to this Rule shall maintain records on a monthly basis that provide the following information:

- (i) Name, description, container size and actual VOC Content of any Tints used to color Stains.
 - (ii) Records of any Tint use shall be maintained on a daily basis.
- (2) Compliance Assurance Monitoring
 - (a) Each Coating Application Operation subject to subparagraph (C)(1)(a) or (C)(2)(a) which is using air pollution abatement Equipment to meet the control requirement shall:
 - (i) Utilize Compliance Assurance Monitoring, as approved by the APCO. Each monitoring device(s), mechanism and/or technique shall be calibrated/maintained in a manner approved by the APCO; and
 - (ii) Maintain and produce daily records of key system operating parameters and maintenance procedures which will demonstrate continuous operation and compliance of the air pollution abatement Equipment during periods of emission-producing activities. Key system operating parameters are those necessary to ensure compliance with subsection (C)(5), such as temperatures, pressures and flow rates.
 - (b) Compliance with subsection (C)(5) shall be determined by compliance testing as prescribed in subsections (G)(2)(b) and (c) and by evaluating Compliance Assurance Monitoring data.
- (4) All records for the previous five (5) year period maintained and produced pursuant to this Section shall be retained and available for inspection by the APCO upon request.

(G) Test Methods

- (1) A violation of the limits contained in this Rule, as determined by any one of these test methods, shall constitute a violation of this Rule.
- (2) The following specified test methods shall be used to determine compliance with the provisions of this Rule.
 - (a) Determination of VOC Content and solids content: Samples of Coatings and Solvent as specified in Section (C) shall be analyzed as prescribed by EPA Reference Method 24 – *Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings* for VOC Content and solids content (without correction for Exempt Compounds) and ASTM D4457-02(2008) - *Standard Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph*, or

ARB Method 432 – *Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings* (09/12/1989) for determination of emissions of Exempt Compounds. Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or Facility Operator identifies the specific individual compounds (from the broad classes of perfluorocarbon compounds) and the amounts present in the product or process and provides a test method acceptable to EPA and ARB which can be used to quantify the specific compounds.

- (b) Determination of Emissions: For any Owners and/or Operators who choose to comply with the provisions of Section (C)(1)(a) or (C)(2)(a) through the use of air pollution abatement Equipment, emission of VOCs shall be measured as prescribed by EPA Reference Method 25 – *Gaseous Nonmethane Organic Emissions* and EPA Reference Method 25A – *Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer* for determination of VOC emissions (without correction for Exempt Compounds) and EPA Method 18 – *Volatile Organic Compounds by Gas Chromatography*, or ARB Method 422 – *Determination of Volatile Organic Compounds in Emissions from Stationary Sources (Exempt VOCs)* (12/13/1991) for measuring emission of Exempt Compounds.
- (c) Determination of Overall Control Efficiency: The Overall Control Efficiency of air pollution abatement Equipment shall be determined by a minimum of three sampling runs conducted according to USEPA’s technical guidance document “Guidelines for Determining Capture Efficiency”, January 9, 1995, and 40 CFR 51, Appendix M, Methods 204-204F, as applicable.
- (3) Demonstration of Transfer Efficiency of alternative application methods subject to subsection (C)(3)(a) shall be conducted in accordance with South Coast Air Quality Management District’s “Spray Equipment Transfer Efficiency Test Procedure for Equipment User” (May 24, 1989), and South Coast Air Quality Management District “Guidelines for Demonstrating Equivalency With District Approved Transfer Efficiency Spray Gun” September 26, 2002.
- (4) Calculation of VOC Content:
 - (a) For the purpose of determining compliance with the VOC Content limits in Section (C), the VOC Content of a Coating shall be determined by using the procedures in subsection (i) or (ii) below, as appropriate. If the manufacturer does not recommend thinning, the VOC Content must be calculated for the product as supplied. The VOC Content of a Tint Base shall be determined without Colorant that is added after the Tint Base is manufactured. Effective (1 year after date of adoption), if the Coating is a multi-component product, the VOC Content must be calculated as mixed or catalyzed. Effective (1 year after date of adoption), if the Coating

contains Silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC Content must include the VOCs emitted during curing.

- (i) Regulatory VOC Content – The weight of VOC per combined volume of VOC and Coating solids, shall be calculated by the following equation:

$$VOC_{Regulatory} = \frac{W_v - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

Where:

$VOC_{Regulatory}$ = Weight of VOC per liter of Coating, less water and less Exempt Compounds

W_v = Weight of all volatile compounds, in grams

W_w = Weight of water, in grams

W_{ec} = Weight of Exempt Compounds, in grams

V_m = Volume of Coating material, in liters

V_w = Volume of water, in liters

V_{ec} = Volume of Exempt Compounds, in liters

- (ii) Actual VOC Content – The weight (in grams) of VOC per liter of Wood Products Coating material is expressed as grams VOC per liter of material, and shall be calculated by the following equation:

$$VOC_{Actual} = \frac{W_v - W_w - W_{ec}}{V_m}$$

VOC_{Actual} = Weight of VOC per liter of Coating

W_v = Weight of all volatile compounds, in grams

W_w = Weight of water, in grams

W_{ec} = Weight of Exempt Compounds, in grams

V_m = Volume of Coating material, including any added VOC-containing Solvents or reducers but excluding any colorant added to Tint the base in liters

(5) VOC Composite Partial Vapor Pressure:

$$PP_c = \frac{\sum_{i=1}^n (W_i)(VP_i)/(MW_i)}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- PP_c = VOC composite partial pressure at 68 °F (20 °C), in mm Hg
- W_i = Weight of the “I”_{th} VOC compound, in grams
- W_w = Weight of water, in grams
- W_e = Weight of Exempt Compounds, in grams
- MW_i = Molecular weight of the “I”_{th} VOC compound, in (g/g-mole)
- MW_w = Molecular weight of water, in (g/g-mole)
- MW_e = Molecular weight of Exempt Compound, in (g/g-mole)
- VP_i = Vapor pressure of the “I”_{th} VOC compound at 68 °F (20 °C), in mm Hg

(6) Overall Control Efficiency (C.E.) shall be calculated using the following equations:

$$\text{Capture Efficiency (\%)} = \left(\frac{W_c}{W_e} \right) \times 100$$

Where:

- W_c = Weight of VOC entering control device
- W_e = Weight of VOC emitted from the source

$$\text{Control Device Efficiency (\%)} = \frac{(W_c - W_a)}{W_c} \times 100$$

Where:

W_c = Weight of VOC entering control device

W_a = Weight of VOC discharged from the control device

$$C.E. (\%) = \frac{(\text{Capture Efficiency}) \times (\text{Control Device Efficiency})}{100}$$

See SIP Table at <http://www.mdaqmd.ca.gov>

RULE 1115

Metal Parts & Products Coating Operations

(A) General

(1) Purpose

- (a) The purpose of this Rule is to limit the emission of Volatile Organic Compounds from the coating of Metal Parts and Products.

(2) Applicability

- (a) This Rule shall apply to all metal coating operations, except those performed on Aircraft or Aerospace Vehicles; Magnet Wire; Metal Containers, Closures and Coils; marine vessel exteriors; Motor Vehicles; Motor Vehicle Assembly Lines; Mobile Equipment; or those operations subject to the coating provisions of any other source-specific rule of the District.
- (b) Any Coating, coating operation or Facility which is exempt from all or a portion of the VOC limits of this Rule shall comply with the provisions of Rule 442.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) “Aircraft or Aerospace Vehicle” – Any fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile or space vehicle.
- (2) “Assembly Line” – An arrangement of industrial Equipment and workers in which the product passes from one specialized operation to another until complete, either by automatic or manual means.
- (3) “Camouflage Coating” – A Coating used, principally by the military, to conceal Equipment from detection.
- (4) “Chemical Agent Resistant Coating” (CARC) – A Coating applied to military tactical Equipment in order to protect the Equipment from chemical warfare agents.
- (5) “Clear Coating” – A Coating that either lacks color and opacity, or is transparent, and uses the surface to which it is applied as a reflective base or undertone color.
- (6) “Closure” – Any component which is used to close or seal a filled can, jar or bottle.

- (7) “Coil” – Any flat metal sheet or strip that is rolled or wound in concentric rings.
- (8) “Combined Efficiency” – The capture efficiency multiplied by the Control Equipment efficiency, expressed as an overall weight percent.
- (9) “Contract Painter” – A non-manufacturer of Metal Parts and Products who applies Coatings to such products at his Facility exclusively under contract with one or more parties that operate under separate ownership and control.
- (10) “Drum” – Any cylindrical metal shipping container of 13 to 110-gallon capacity.
- (11) “Electric-Insulating and Thermal-Conducting Coating” – A Coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.
- (12) “Electric-Insulating Varnish” – A non-convertible-type Coating applied to electrical motors, components of electrical motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.
- (13) “Electrocoating (Electrodeposition)” – A process that uses Coating concentrates or pastes added to a water bath. The Coating is applied using either an electric current in either an anodic or cathodic bath.
- (14) “Etching Filler” – A Coating that contains less than 23 percent solids by weight and at least 1/2 percent acid by weight, and is used instead of applying a pretreatment Coating followed by a primer.
- (15) “Extreme High-Gloss Coating” – A Coating which, when tested by the American Society for Testing Material (ASTM) Method D-523-1980, shows a reflectance of 75 percent or more on a 60° meter.
- (16) “Extreme-Performance Coating” – A Coating used on a metal surface where the coated surface is, in its intended use, exposed to any of the following:
 - (a) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial-grade Solvents, detergents, cleaners, or abrasive scouring agents;
 - (b) Frequent or chronic exposure to salt water, corrosives, caustics, acids, oxidizing agents, chemicals, chemical fumes, chemical mixtures or solutions;
 - (c) Repeated exposure to temperatures in excess of 250 °F.

Extreme performance Coatings include, but are not limited to, Coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks.

- (17) “Hand Application Methods” – The application of Coatings by manually held, non-mechanically operated Equipment. Such Equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags and sponges.
- (18) “Heat-Resistant Coating” – A Coating that must withstand a temperature of at least 400 °F (204°C) during normal use.
- (19) “High-Gloss Coating” – A Coating which, when tested in accordance with ASTM Method D-523-89, shows a reflectance of 85 percent or more on a 60° meter.
- (20) “High-Performance Architectural Coating” – A Coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).
- (21) “High-Temperature Coating” – A Coating that is certified to withstand a temperature of 1000 °F for 24 hours.
- (22) “Ink” – A fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.
- (23) “Magnetic Data Storage Disk Coating” – A Coating used on a metal disk which stores data magnetically.
- (24) “Magnet Wire” – Wire used in electro-magnetic field application in electrical Equipment, such as transformers, motors, generators, and magnetic tape recorders.
- (25) “Metal Container, Closure and Coil Coating Operations” – The application of any VOC-containing Coating to the surfaces of metal cans, Drums, Pails, lids, Closures, or to the surface of flat metal sheets, strips, rolls, or Coils during the manufacturing and/or reconditioning process.
- (26) “Metallic Coating” – A Coating which contains more than five (5) grams of metal particles per liter of Coating, as applied. Metal Particles are pieces of a pure elemental metal or a combination of elemental metals.
- (27) “Metal Parts and Products” – Any components or complete units fabricated from metal, excluding Aircraft or Aerospace Vehicles, Magnet Wire, Metal Containers, Closures and Coils, marine vessel exteriors, Motor Vehicles, Motor Vehicle Assembly Lines, Mobile Equipment or those subject to the coating provisions of any other source-specific rule of the District.
- (28) “Mobile Equipment” – Any Equipment which may be drawn or is capable of being driven on a roadway, including, but not limited to, truck bodies, truck

trailers, camper shells, mobile cranes, bulldozers, street cleaners, golf carts and implements of husbandry.

- (29) “Mold-Seal Coating” – The initial Coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release Coating, prevents products from sticking to the mold.
- (30) “Motor Vehicle Rework” – The reconditioning of Motor Vehicles.
- (31) “Multi-Component Coating” – A Coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.
- (32) “One-Component Coating” – A Coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.
- (33) “Pail” – Any cylindrical metal shipping container of at least 1 but less than 13 gallon capacity and constructed of 29 gauge or heavier material.
- (34) “Pan-backing Coating” – A Coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.
- (35) “Performance Test” – A test conducted primarily for the purpose of researching and developing new processes and products, that is conducted under the close supervision of technically trained personnel, and that is not involved in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.
- (36) “Prefabricated Architectural Component Coatings” – Coatings applied to Metal Parts and Products which are to be used as an architectural structure.
- (37) “Pretreatment Wash Primer” – Any Coating which contains no more than 12 percent solids by weight, and a minimum of 0.5 percent acid by weight, is necessary to provide surface etching and is applied directly to bare metal surfaces to provide corrosion resistance and adhesion, and ease of Stripping.
- (38) “Safety-Indicating Coating” – A Coating which changes physical characteristics, such as color, to indicate unsafe conditions.
- (39) “Silicone-Release Coating” – Any Coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.
- (40) “Solar-Absorbent Coating” – A Coating which has as its primary purpose the absorption of solar radiation.

- (41) “Solid-Film Lubricant” – Any very thin Coating consisting of a binder system, containing primarily one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids which act as dry lubricants between faying surfaces.
- (42) “Stencil Coating” – An Ink or a pigmented Coating which is rolled or brushed onto a template or stamp for the purpose of adding identifying letters, numbers and/or other markings to Metal Parts and Products.
- (43) “Surface Preparation” – The removal of contaminants, including dust, oil and grease, prior to Coating applications.
- (44) “Textured Finish” – Any rough surface produced by spraying large drops of Coating onto a previously coated surface.
- (45) “Theoretical Potential Emissions” – The maximum capacity of a stationary source to emit a regulated air pollutant, based on the greater of design capacity or maximum production (based on 8760 hours/year), before add on controls.
- (46) “Vacuum-Metalizing Coating” – The undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.

(C) Requirements

- (1) Transfer Efficiency
 - (a) A Person shall not apply any Coatings to Metal Parts and Products subject to the provisions of this Rule, unless the Coating is applied with Equipment properly operated according to manufacturer's suggested guidelines, and using one of the following application methods:
 - (i) Electrostatic Application;
 - (ii) High Volume Low Pressure (HVLP) Spray Equipment;
 - (iii) Dip coat (including electrodeposition);
 - (iv) Flow coat;
 - (v) Roller Coat;
 - (vi) Airless spray;
 - (vii) Air-assisted airless spray;
 - (viii) Hand Application Methods;
 - (ix) Other coating application methods as are demonstrated to have a Transfer Efficiency at least equal to or better than achieved by HVLP spraying; or
 - (x) Equipment as approved by the APCO, CARB and USEPA, provided that the Owner/Operator submits an application and demonstrates that the use of HVLP spray Equipment would result in greater emissions than the proposed system Equipment. The approval shall be limited to only those Coatings listed in the application plan.

(2) VOC Content of Coatings

- (a) A Person shall not apply any Coating to Metal Parts and Products, including any VOC-containing materials added to the original Coating supplied by the manufacturer, which contains VOC in excess of the limits specified in subsection (C)(2)(a)(i) below:

(i) COATING LIMITS

(Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds)

Coating Category	Air-Dried		Baked	
	g/L	lb/gal	g/L	lb/gal
General One-Component*	340	(2.8)	275	(2.3)
General Multi-Component*	340	(2.8)	275	(2.3)
Military Specification	340	(2.8)	275	(2.3)
Etching Filler	420	(3.5)	420	(3.5)
Solar-Absorbent	420	(3.5)	360	(3.0)
Heat-Resistant	420	(3.5)	360	(3.0)
High-Gloss	420	(3.5)	360	(3.0)
Extreme High-Gloss	420	(3.5)	360	(3.0)
Metallic	420	(3.5)	360	(3.0)
Extreme-Performance	420	(3.5)	360	(3.0)
Prefabricated Architectural One-Component	420	(3.5)	275	(2.3)
Prefabricated Architectural Multi-Component	420	(3.5)	275	(2.3)
Touch-Up	420	(3.5)	360	(3.0)
Repair	420	(3.5)	360	(3.0)
Silicone-Release	420	(3.5)	420	(3.5)
High-Performance Architectural	420	(3.5)	420	(3.5)
Camouflage	420	(3.5)	360	(3.0)
Vacuum-Metalizing	420	(3.5)	420	(3.5)
Mold-Seal	420	(3.5)	420	(3.5)
High-Temperature	420	(3.5)	420	(3.5)
Electric-Insulating Varnish	420	(3.5)	420	(3.5)
Pan-Backing	420	(3.5)	420	(3.5)
Pretreatment Wash Primer	420	(3.5)	420	(3.5)
Drum (New, Exterior)	340	(2.8)	340	(2.8)
Drum (New, Interior)	420	(3.5)	420	(3.5)
Drum (Reconditioned, Exterior)	420	(3.5)	420	(3.5)
Drum (Reconditioned, Interior)	500	(4.2)	500	(4.2)
Chemical Agent Resistant	340	(2.8)	280	(2.3)

*A General Coating is a Coating that does not meet a specific Coating category definition and is assumed to be a general use Coating and subject to the VOC limit for a General Coating.

(3) Sell-Through and Use of Coatings

- (a) The provisions of subsection (C)(2)(a)(i) above shall not apply to the General or Military Specification coating Category limits until (one year from rule amendment). Until (one year from rule amendment), the following limits shall apply:

Category	Air-Dried		Baked	
	g/L	lb/gal	g/L	lb/gal
General (One- or Multi-Component)	420	(3.5)	360	(3.0)
Military Specification	420	(3.5)	360	(3.0)

(4) Add-On Control Alternative

- (a) In lieu of complying with the VOC content limitations in subsection (C)(2) and (C)(3) above, air pollution Control Equipment with a capture and control system Combined Efficiency of at least 90%, as determined pursuant to subsections (G)(2)(g) and (G)(2)(h) of this Rule, may be used.

(5) Strippers, Surface Preparation and Cleanup Solvent

- (a) The requirements of this Section shall apply to any Person using Solvent for Surface Preparation, cleanup, stripping, and paint removal, including paint spray Equipment.
- (b) A Person shall not use VOC-containing materials for the cleanup of application Equipment used in coating operations, unless;
- (i) Application Equipment cleaning Equipment requirements:
- The application Equipment is disassembled and cleaned in an enclosed system during the washing, rinsing and draining processes; or
 - The application Equipment or Equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned Equipment or Equipment parts are drained to the container until dripping ceases; or
 - Other application Equipment cleaning methods that are demonstrated to be as effective as the Equipment described above in minimizing emissions of VOC to the atmosphere are used, provided that the device has been approved in writing prior to use by the APCO, CARB and USEPA.

- (ii) Closed containers or pipes to store and convey VOC-containing cleaning and cleaning waste materials are used;
 - (iii) Spills of VOC-containing cleaning and cleaning waste materials are minimized;
 - (iv) VOC emissions are minimized during cleaning operations.
 - (c) A Person shall not use VOC-containing materials for Surface Preparation and cleanup unless:
 - (i) The material contains 25 grams or less of VOC per liter of material (0.21 pounds per gallon); or
 - (ii) The material has an initial boiling point of 190 °C (374°F) or greater; or
 - (iii) The material has a total VOC vapor pressure of 8 mm Hg or less, at 20 °C (68 °F).
 - (d) A Person shall not use a Stripper on miscellaneous metal parts and products unless:
 - (i) The material contains 200 grams or less of VOC per liter of material (1.7 pounds per gallon).
 - (e) A Person shall use closed, nonabsorbent containers for the storage or disposal of cloth, paper, or any other absorbent material used for Solvent Surface Preparation and cleanup.
- (6) Prohibition of Specifications
- (a) A Person shall not specify the use in the District of any Coating to be applied to any metal parts and products subject to the provisions of this Rule that does not meet the limits and requirements of this Rule.
- (7) Prohibition of Sale
- (a) A Person shall not offer for sale or sell within the District any Coating, if such product is prohibited by any provisions of this Rule. The prohibition of this section shall apply to the sale of any Coating which will be applied at any physical location within the District.
- (8) Compliance Statement Requirement
- (a) The manufacturer of Coatings subject to this Rule shall provide on Coating containers or on separate data sheets the designation of VOC content as supplied, including Coating constituents. The VOC content shall be expressed in grams per liter or pounds per gallon, excluding water and exempt Solvents.

(9) Compliance Assurance Monitoring

- (a) Any coating operation subject to subsection (C)(4) shall utilize Compliance Assurance Monitoring, as approved by the APCO, for any add-on Control Equipment used to meet the control requirement.
- (b) Records of the monitoring device(s), mechanisms and/or techniques, and other data necessary to demonstrate compliance with the control requirements, shall be maintained and produced upon request of the APCO, pursuant to Section (F).
- (c) Compliance with the add-on control requirements stipulated in subsection (C)(4) shall be determined by source testing and/or evaluating Compliance Assurance Monitoring data.
- (d) Each monitoring device(s), mechanism and/or technique shall be calibrated/maintained in a manner approved by the APCO.

(D) Exemptions

- (1) The provisions of this Rule shall not apply to Aerosol Spray Cans.
- (2) The provisions of subsection (C)(2), (C)(3) and (C)(4) of this Rule shall not apply to any Facility that does not exceed 2.7 tons Theoretical Potential Emissions of VOC per 12-month rolling period, as defined in subsection (B)(51), subject to the following conditions:
 - (a) Any Person claiming exemption under this paragraph shall meet the certification requirements specified in subsection (E)(1) and the recordkeeping requirements specified in Section (F); and
 - (b) Any Facility operating under this exemption whose emissions exceed 2.7 tons on a 12-month rolling period shall henceforth be subject to subsections (C)(2), (C)(3) and (C)(4) of this Rule.
- (3) The provisions of subsections (C)(1), (C)(2), (C)(3) and (C)(4) of this Rule shall not apply to:
 - (a) Any Facility which has a daily usage of less than one (1) gallon of Coating, including any VOC-containing materials added to the original Coating as supplied by the manufacturer, subject to this Rule;
 - (b) Total noncompliant Coating use per Facility that does not exceed 55 gallons per year;
 - (c) Stencil Coatings;
 - (d) Safety-indicating Coatings;
 - (e) Magnetic Data Storage Disk Coatings;

- (f) Solid-film Lubricants;
 - (g) Adhesives;
 - (h) The coating of Motor Vehicle bodies at Motor Vehicle Rework facilities;
 - (i) Electric-insulating and thermal conducting Coatings.
- (3) The provisions of subsection (C)(1) of this Rule shall not apply to Contract Painters while applying Coatings to objects on trays, provided no object has any dimension greater than 12 inches.
 - (4) The provisions of subsection (C)(1) of this Rule shall not apply to the application of Touch-Up coatings, Repair Coatings, Textured Finishes, Metallic Coatings which have a metallic content of more than 30 grams per liter, Mold-seal Coatings, or to facilities that use less than three (3) gallons of such Coatings per day, as applied, including any VOC-containing materials added to the original Coatings as supplied by the manufacturer.
 - (5) The provisions of subsections (C)(1), (C)(2), (C)(3), (C)(4) and (C)(5) of this Rule shall not apply to the application of Coatings and use of cleaning Solvents while conducting Performance Tests on the Coatings at paint manufacturing facilities.
 - (6) The provisions of subsection (C)(1)(a)(ix) shall not apply to metal Coatings with a viscosity of 650 centipoise or greater, as applied, so long as (C)(1)(a)(x) is complied with.

(E) Administrative Requirements

- (1) Certification Requirements for Facilities with Theoretical Potential Emissions of 2.7 Tons VOC or Less per Year:
 - (a) Any Person claiming an exemption under subsection (D)(2) of this Rule shall certify the exemption on an annual basis, by:
 - (i) Submitting a written certification to the APCO certifying that the affected Facility shall not emit VOCs in excess of 10 tons annually. At a minimum, the certification shall include the following information:
 - a. A summary of past annual usage of VOC-containing materials and related emissions; and
 - b. The Facility's Theoretical Potential Emissions of VOC, as defined in subsection (B)(45).

(F) Monitoring and Records

(1) Coating Records

- (a) Any Facility or Person claiming exemption pursuant to subsections (D)(2), (D)(3)(a), (D)(3)(b) or (D)(5) shall meet the recordkeeping requirements of this Rule so as to be able to certify the exemption status.
- (b) Any Person subject to subsections (C)(1), (C)(2), (C)(3), (C)(4), (C)(5) or (F)(1)(a) shall comply with the following requirements:
 - (i) The Person shall maintain and produce a current list of Coatings in use which provides all of the Coating data necessary to evaluate compliance, including, but not limited to, the following information, as applicable:
 - a. Coating, catalyst, and reducer used.
 - b. mix ratio of components used.
 - c. VOC content of Coating as applied.
 - (ii) The Person shall maintain and produce records on a daily basis, by permit unit, including:
 - a. Coating and mix ratio of components used in the Coating; and
 - b. quantity of each Coating applied.
 - (iii) The Person shall maintain and produce records on a daily basis showing the type and amount of Solvent used for cleanup, Surface Preparation, or paint removal.
- (c) Any Facility or Person claiming an exemption pursuant to subsection (D)(2) of this Rule shall maintain and produce records of purchase orders and invoices of VOC-containing materials which specify the name of the materials in use. The requirements of this paragraph shall be in addition to all other applicable recordkeeping requirements specified in this Section.

(2) Add-on Control Equipment Records

- (a) Any Person using emission Control Equipment, pursuant to subsection (C)(4), shall maintain and produce daily records of key system operating parameters and maintenance procedures which will demonstrate continuous operation and compliance of the emissions Control Equipment during periods of emissions-producing activities. Key system operating parameters are those necessary to ensure compliance with VOC content of Coating requirements, such as temperatures, pressures and flow rates.
- (3) All records for the previous five (5) year period maintained and produced pursuant to this Section shall be retained and available for inspection by the APCO upon request.

(G) Test Methods

- (1) A violation of the limits contained in this Rule, as determined by any one of the test methods listed below, shall constitute a violation of this Rule.
- (2) The following specified test methods shall be used to determine compliance with the provisions of this Rule:
 - (a) The VOC content of Coatings and Solvents, as specified in subsections (C)(2), (C)(3), (C)(5)(c)(i) and (C)(5)(d)(i), shall be analyzed as prescribed by USEPA Reference Method 24 - *Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings* for VOC content (without correction for exempt compounds) and ASTM D4457-85 - *Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph*, or CARB Method 432 - *Determination of Dichloromethane and 1,1,1 - Trichloroethane in Paints and Coatings* (09/12/1989), for determination of emissions of exempt compounds. Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or Facility Operator identifies the specific individual compounds (from the broad classes of perfluorocarbon compounds) and the amounts present in the product or process and provides a validated test method which can be used to quantify the specific compounds.
 - (b) Determination of the initial boiling point of liquid containing VOC, subject to subsection (C)(5)(c)(ii), shall be conducted in accordance with ASTM D1078-86 - *Test Method for Distillation Range of Volatile Organic Liquids*.
 - (c) Calculation of total VOC vapor pressure for materials subject to subsection (C)(5)(c)(iii) shall be conducted in accordance with ASTM D2879-97 - *Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope*. The fraction of water and Exempt Compounds in the liquid phase shall be determined by using ASTM D3792-91 - *Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph* and D4457-85 - *Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph* and shall be used to calculate the partial pressure of water and Exempt Compounds. The results of vapor pressure measurements obtained using ASTM D2879-97 shall be corrected for partial pressure of water and Exempt Compounds.
 - (d) Measurement of Solvent losses from alternative application cleaning Equipment subject to (C)(5)(b)(i)c shall be conducted in accordance with the South Coast Air Quality Management District's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" (10/03/1989).

- (e) Measurement of acid content of a substance shall be determined by ASTM D1613-85.
 - (f) Measurement of metal content of Coatings shall be determined in accordance with South Coast Air Quality Management District's "Laboratory Methods of Analysis for Enforcement Samples" manual, Method 311-91 – *Analysis of Percent Metal in Metallic Coatings by Spectrographic Method*, (06/01/1991).
 - (g) Capture Efficiency shall be determined according to USEPA's technical document, *Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions* (February 7, 1995).
 - (h) The control efficiency of the Control Equipment shall be determined according to USEPA Test Methods 25 - *Determination of Total Gaseous Nonmethane Organic Emissions as Carbon*, 25A - *Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer* or 25B - *Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer* for measuring the total gaseous organic concentrations at the inlet and outlet of the emissions Control Equipment, as contained in 40 CFR Part 60, Appendix A. USEPA Test Method 18 or CARB Method 422 - *Determination of Volatile Organic Compounds in Emissions from Stationary Sources (Exempt VOCs)* shall be used to determine emissions of Exempt Compounds.
 - (i) Measurement of solids content by weight of a substance shall be conducted in accordance with ASTM D1475-90 - *Test Method for Density of Paint, Varnish Lacquer, and Related Products*.
 - (j) Measurement of viscosity shall be conducted in accordance with ASTM D1200-14 – *Standard Test Method for Viscosity by Ford Viscosity Cup*.
 - (k) Alternative test methods may be used upon obtaining the approval of the APCO, CARB and USEPA.
- (3) The following calculations shall be used to determine compliance with the provisions of this Rule:
- (a) Grams of VOC Per Liter of Coating Less Water and Less Exempt Compounds (VOC Content):

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

Where:

G_v = Grams of VOC Per Liter of Coating Less Water and Less Exempt Compounds
 W_s = Weight of volatile compounds in grams

W_w	=	Weight of water in grams
W_{es}	=	Weight of Exempt Compounds in grams
V_m	=	Volume of material in liters
V_w	=	Volume of water in liters
V_{es}	=	Volume of Exempt Compounds in liters

(b) Grams of VOC Per Liter of Material:

Where:

$$G_v = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:

G_v	=	Grams of VOC Per Liter of Coating Less Water and Less Exempt Compounds
W_s	=	Weight of volatile compounds in grams
W_w	=	Weight of water in grams
W_{es}	=	Weight of Exempt Compounds in grams
V_m	=	Volume of material in liters

(4) The following test method is required for use in determining Transfer Efficiency of alternative application methods:

- (a) Demonstration of Transfer Efficiency of alternative application methods subject to subsection (C)(1)(a)(ix) shall be conducted in accordance with South Coast Air Quality Management District's "*Spray Equipment Transfer Efficiency Test Procedure for Equipment User*" (5/24/89).

See SIP Table at <http://www.mdaqmd.ca.gov>

RULE 1116

Automotive Refinishing Operations

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit the emission of Volatile Organic Compounds (VOC) from Coatings associated with the Refinishing of Motor Vehicles, Mobile Equipment and their Associated Parts and Components. It also limits the VOC emissions from Solvent cleaning, storage, and disposal associated with such operations.

(2) Applicability

- (a) This rule is applicable to:
 - (i) Any Person who uses, applies, or, solicits the use or application of any Automotive Coating or associated Solvent within the District.
 - (ii) Any Person who supplies, sells, offers for sale, manufactures, or distributes any Automotive Coating or associated Solvent for use within the District.

(B) Definitions

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

- (1) “Additive”- Any substance added in small quantities to another substance in order to increase volume and/or change the physical properties of the mixture.
- (2) “Adhesion Promoter”- A Coating which is labeled and formulated to be applied to uncoated plastic surfaces to facilitate bonding of subsequent Coatings, and on which, a subsequent Coating is applied.
- (3) “Aerosol Coating Product”- A pressurized Coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held applications, or for use in specialized equipment for ground traffic/marketing applications.
- (4) “Air Pollution Control Officer (APCO)”- The Person appointed by the Air Pollution Control Board and assigned full time to manage and direct the business and operations of the District. The Air Pollution Control Officer is also the Executive Director, and is that Person described for state purposes as the Air Pollution Control Officer.

- (5) “Assembly Line”- An arrangement of industrial equipment and workers in which the product passes from one specialized operation to another until complete by either automatic or manual means.
- (6) “Associated Parts and Components”- Structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of Motor Vehicles or Mobile Equipment that are designed to be part of Motor Vehicles or Mobile Equipment but which are not attached to Motor Vehicles or Mobile Equipment at the time of coating the structure, device, piece, module, section, assembly, subassembly, or element. The Associated Parts and Components definition does not include circuit boards.
- (7) “Automotive Coating”- Any coating or Automotive Coating Component, used or recommended for use, in Motor Vehicle or Mobile Equipment Refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. Any reference to automotive Refinishing or Automotive Coating made by a Person, on the container, or in product literature constitutes a recommendation for use in Motor Vehicle or Mobile Equipment Refinishing.
- (8) “Automotive Coating Component”- Any portion of a coating, including, but not limited to, a Reducer or thinner, toner, hardener, and Additive, which is recommended by any Person to distributors or end-users, for use in an Automotive Coating, or which is supplied for or used in an Automotive Coating. The raw materials used to produce the components are not considered Automotive Coating Components.
- (9) “Automotive Refinishing Facility”- Any shop, business, location, or parcel of land where Motor Vehicles or Mobile Equipment or their Associated Parts and Components are coated, including autobody collision repair shops. Automotive Refinishing Facility does not include the Original Equipment Manufacturing (OEM) plant where the Motor Vehicle or Mobile Equipment is completely assembled.
- (10) “Catalyst”- A substance whose presence initiates/enhances the reaction between chemical compounds.
- (11) “Cleaning Operations”- The removal of loosely held uncured adhesives, inks, Coatings, or contaminants, including, but not limited to, dirt, soil, or grease, from Motor Vehicles, Mobile Equipment, Associated Parts and Components, substrates, parts, products, tools, machinery, equipment, or general work areas.
- (12) “Clear Coating”- Any coating that contains no pigments and is labeled and formulated for application over a Color Coating or Clear Coating.
- (13) “Coating”- Any material which is applied to a surface and which forms a film in order to beautify, preserve, repair, and/or protect such surface.

- (14) “Color Coating”- Any pigmented Coating, excluding Adhesion Promoters, Primers, and Multi-color Coatings, that requires a subsequent Clear Coating and which is applied over a Primer or Adhesion Promoter. Color Coatings include metallic/iridescent Color Coatings.
- (15) “District”- The Mojave Desert Air Quality Management District. The geographical area of which is described in Mojave Desert Air Quality Management District Rule 103.
- (16) “Electrostatic Application”- Any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.
- (17) “Emission Control System”- Any combination of capture systems and control devices used to reduce VOC emissions from Automotive Coating operations.
- (18) “Exempt Compounds”- Those compounds listed in 40 Code of Federal Regulation (CFR) 51.100(s).
- (19) “Finish”- The Coating of incomplete vehicles, their parts and components, or Mobile Equipment for which the original Coating was not applied from an Original Equipment Manufacturer (OEM) plant Coating Assembly Line.
- (20) “Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds”- The weight of VOC per combined volume of VOC and Coating solids is calculated by the following equation:

$$G_{VOC/LoC} = \frac{W_S - W_W - W_{ES}}{V_M - V_W - V_{ES}}$$

Where:

$G_{VOC/LoC}$ = Grams VOC per Liter of Coating Less Water and Exempt Compounds

W_S = weight of volatile compounds in grams

W_W = weight of water in grams

W_{ES} = weight of Exempt Compounds in grams

V_M = volume of material in liters

V_W = volume of water in liters

V_{ES} = volume of Exempt Compounds in liters

- (21) “Grams of VOC per Liter of Material”- The weight of VOC per volume of material and shall be calculated by the following equation:

$$G_{VOC / LoM} = \frac{W_S - W_W - W_{ES}}{V_M}$$

Where:

$G_{VOC/LoM}$	= Grams VOC per Liter of Material
W_S	= weight of volatile compounds in grams
W_W	= weight of water in grams
W_{ES}	= weight of exempt compounds in grams
V_M	= volume of material in liters

- (22) “Group II Exempt Compounds”- Compounds that are restricted because they are either toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. These compounds are listed as follows:

methylene chloride (dichloromethane)
 1,1,1-trichloroethane (methyl chloroform)
 Trichlorofluoromethane (CFC-11)
 dichlorodifluoromethane (CFC-12)
 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)
 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114)
 chloropentafluoroethane (CFC-115)
 cyclic, branched, or linear, completely methylated siloxanes (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)

- (23) “High-Volume, Low-Pressure (HVLP) Spray”- Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure, measured dynamically at the center of the air cap and at the air horns.
- (24) “Metallic/Iridescent Color Coating”- Any Coating which contains more than 5 grams per liter (0.042 pounds per gallon) of metal or iridescent particles, as applied, where such particles are visible in the dried film.

- (25) “Mobile Equipment”- Any equipment or device which may be drawn, or is capable of being driven, on rails or a roadway including, but not limited to, trains, railcars, truck bodies, truck trailers, utility bodies, camper shells, mobile cranes, bulldozers, street cleaners, and implements of husbandry or agriculture.
- (26) “Motor Vehicle”- Any self-propelled vehicle, including, but not limited to cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.
- (27) “Multi-color Coating”- Any Coating that exhibits more than one color in the dried film after a single application, is packaged in a single container, and hides surface defects on areas of heavy use, and which is applied over a Primer or Adhesion Promoter.
- (28) “Person” - Shall have the same meaning as defined in the California Health and Safety Code §39047.
- (29) “Pretreatment Coating”- Any Coating that contains a minimum of one-half (0.5) percent acid by weight, and not more than 16 percent solids by weight, necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.
- (30) “Primer”- Any Coating which is labeled and formulated for application to a substrate to provide:
- (a) A bond between the substrate and subsequent coats;
 - (b) Corrosion resistance;
 - (c) A smooth substrate surface; or
 - (d) Resistance to penetration of subsequent coats, and on which a subsequent Coating is applied. Primers may be pigmented.
- (31) “Primer Sealer”- Any Coating which is labeled and formulated for application prior to the application of a Color Coating for the purpose of color uniformity, and to promote the ability of an undercoat to resist penetration by the Color Coating.
- (32) “Reducer”- The Solvent used to thin enamel.
- (33) “Refinishing”- Any Coating of Motor Vehicles, their Associated Parts and Components, or Mobile Equipment, including partial body collision repairs, for the purpose of protection or beautification and which is subsequent to the original Coating applied at an original equipment manufacturing (OEM) plant Coating Assembly Line.

- (34) “Single-stage Coating”- Any pigmented Coating, excluding Primers, and Multi-color Coatings, labeled and formulated for application without a subsequent clear coat. Single-stage coatings include Single-stage Metallic/Iridescent Coating.
- (35) “Solvent”- a VOC-containing fluid used to perform cleaning operations, primarily for the conditioning of a surface to receive a Coating or in Cleaning Operations.
- (36) “Spot Repair”- Repair of an area on a Motor Vehicle, piece of Mobile Equipment, or Associated Parts or Components of less than 1 square foot (929 square centimeters).
- (37) “Stripping”- The use of Solvent to remove material such as cured adhesives, cured inks, cured or dried paint, cured or dried paint residue, or Temporary Protective Coatings.
- (38) “Targeted HAP Compounds”- The hazardous air pollutant (HAP) compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) targeted by 40 CFR 63 Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.
- (39) “Temporary Protective Coatings”- Any Coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- (40) “Topcoat”- Any Coating applied over a Primer, Primer system or an original equipment manufacturer (OEM) Finish for the purpose of protection or appearance.
- (41) “Transfer Efficiency”- The ratio of Coating solids adhering to the object being coated to the total amount of Coating solids used in the application process, expressed as a percentage.
- (42) “Truck Bed Liner Coating”- Any Coating, excluding Clear, Color, Multi-color, and Single-stage Coatings, labeled and formulated for application to a truck bed to protect it from surface abrasion.
- (43) “Underbody Coating”- Any Coating labeled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the Motor Vehicle.
- (44) “Uniform Finish Coating”- Any Coating labeled and formulated for application to the area around a Spot Repair for the purpose of blending a repaired area’s color or clear coat to match the appearance of an adjacent area’s existing Coating.
- (45) “VOC Actual” - This definition is the same as the definition of Grams of VOC per Liter of Material as listed under subsection (B)(21).

- (46) “VOC Regulatory” - This definition is the same as the definition of Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds as listed under subsection (B)(20).
- (47) “Volatile Organic Compound (VOC)” - Any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and Exempt Compounds.

(C) Requirements

(1) VOC Contents of Coatings

- (a) Effective on the dates specified, a Person shall not apply Coating to a Motor Vehicle, Mobile Equipment, or Associated Parts or Components, that has a VOC content in excess of the limits contained in Table 1 and Table 2 of this subsection.

Table 1 - Coating Categories and VOC Limits

	VOC Regulatory Limit, as applied, in grams per Liter (pounds per gallon)
Coating Categories	Effective on and after 7/1/2011
Adhesion Promoter	540 (4.5)
Clear Coating	250 (2.1)
Color Coating	420 (3.5)
Multi-color Coating	680 (5.7)
Pretreatment Coating	660 (5.5)
Primer	250 (2.1)
Primer Sealer	250 (2.1)
Single-stage Coating	340 (2.8)
Temporary Protective Coating	60 (0.5)
Truck Bed Liner Coating	310 (2.6)
Underbody Coating	430 (3.6)
Uniform Finish Coating	540 (4.5)
Any Other Coating Type	250 (2.1)

Table 2 - Coating Categories and VOC Limits

Coating Categories	VOC Regulatory Limit, as applied, in grams per Liter (pounds per gallon)	
	Group 1* Vehicles prior to 7/1/2011	Group 2** vehicles prior to 7/1/2011
Pretreatment Wash Primer	780 (6.5)	780 (6.5)
Primer	250 (2.1)	250 (2.1)
Primer Sealer	250 (2.1)	340 (2.8)
Topcoat	340 (2.8)	420 (3.5)
Metallic Topcoat	420 (3.5)	420 (3.5)
Extreme Performance	420 (3.5)	420 (3.5)

*Group 1 Vehicles are public transit buses and mobile equipment including but not limited to: truck bodies, truck trailers, utility bodies, camper shells, mobile cranes, bulldozers, street cleaners, golf carts, and implements of husbandry, where color match is not required.

**Group 2 Vehicles are passenger cars; large/heavy duty truck cabs and chassis with a manufacturer's gross vehicle weight over 10,000 pounds; light and medium duty trucks and vans having a manufacturer's gross vehicle weight rating of 10,000 pounds or less; and motorcycles; and Group 1 Vehicles where color match is required.

- (b) Compliance with the VOC limits shall be based on VOC content, including any VOC material added to the original coating supplied by the manufacturer, less water and Exempt Compounds, as applied to the Motor Vehicle, Mobile Equipment, or Associated Parts or Components.
- (2) Most Restrictive VOC Limit
 - (a) If anywhere on the container of any Automotive Coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature, any representation is made that indicates that the Coating meets the definition of, or is recommended for use of, more than one of the Coating categories listed in subsection (C)(1)(a) and (b), then the lowest applicable VOC content limit in Table 1 and Table 2 shall apply.
- (3) Alternative Compliance
 - (a) Emission Control System

A Person may comply with the provisions of subsection (C)(1) by using an approved Emission Control System consisting of collection and control devices, that is approved, in writing, by the APCO for reducing emissions of VOC. The APCO shall approve such Emission Control Systems only if the VOC emissions resulting from the use of non-compliant Automotive Coatings will be reduced to a level equivalent to or lower than that which would have been achieved by the compliance with the terms of subsection (C)(1). The approved Emission Control System must achieve a control efficiency of at least 85 percent. The required efficiency of an Emission

Control System at which an equivalent or greater level of VOC emission reduction will be achieved shall be calculated by the following equation:

$$CE = \left[1 - \left\{ \frac{VOC_{LWc}}{VOC_{LWn,Max}} \times \frac{1 - \left(\frac{VOC_{LWn,Max}}{D_{n,Max}} \right)}{1 - \left(\frac{VOC_{LWc}}{D_c} \right)} \right\} \right] \times 100$$

Where:

- CE = Control Efficiency, as a percent
- VOC_{LWc} = VOC Limit of Rule 1116, less water and less Exempt Compounds, pursuant to subsection (C)(1)
- VOC_{LWn,Max} = Maximum VOC content of non-compliant Automotive Coating used in conjunction with a control device, less water and Exempt Compounds
- D_{n,Max} = Density of VOC solvent, Reducer, or thinner contained in the non-compliant Automotive Coating containing the maximum VOC
- D_c = Density of corresponding VOC solvent, Reducer, or thinner used in the compliant Automotive Coating system = 880 grams per liter

(4) Prohibited Compounds

- (a) A Person shall not manufacture, sell, offer for sale, distribute for use in the District, or apply any Automotive Coating which contains any Group II Exempt Compounds.

(5) Carcinogenic Materials

- (a) A Person shall not manufacture, sell, offer for sale, distribute for use in the District, or apply any Automotive Coatings that contain cadmium or hexavalent chromium. This includes any Automotive Coating in which cadmium or hexavalent chromium was introduced as a pigment or as an agent to impart any property or characteristic to the Coatings during manufacturing, distribution, or use of the applicable Coatings as defined by the Air Toxic Control Measure (ATCM) for Emissions of Hexavalent Chromium and Cadmium from Motor Vehicle and Mobile Equipment Coatings, Title 17 CCR, section 93112.

(6) Application Methods

- (a) For all Automotive Coatings, any Person shall not apply any Coating to Motor Vehicles or Mobile Equipment or their Associated Parts and Components unless one of the following methods is used:
 - (i) Electrostatic Application equipment, operated in accordance with the manufacturer's recommendations and in compliance with permit conditions.
 - (ii) HVLP Spray equipment, operated in accordance with the manufacturer's recommendations and in compliance with permit conditions.
 - (iii) Any other Coating application which has been demonstrated to the satisfaction of the APCO to be capable of achieving a Transfer Efficiency equivalent to, or higher than, the application methods listed in subsections (C)(6)(a)(i) and (C)(6)(a)(ii) above, but not less than 65 percent, as per subsections (G)(2)(c) and (G)(2)(d), and for which written approval of the APCO has been obtained.

(7) Prohibition of Possession, Specification and Sale

- (a) No Person that applies Automotive Coatings subject to this rule shall possess any Automotive Coating that is not in compliance with requirements of subsection (C)(1), unless one or more of the following conditions apply:
 - (i) The Coating is located at a facility that utilizes an approved Emission Control System pursuant to subparagraph (C)(3)(a), and the Coating meets the limits specified in permit conditions.
 - (ii) The Coating is located at a training center and the Coating is used for educational purposes, provided that the VOC emissions from Coatings not meeting VOC limits of subsection (C)(1) do not exceed twelve (12) pounds per day.
 - (iii) The Topcoat is located at a prototype Motor Vehicle manufacturing facility and the Coating is supplied by an Assembly Line Motor Vehicle manufacturer for use in the Refinishing of a prototype Motor Vehicle, provided that the VOC emissions from Coatings not meeting the VOC limits of subsection (C)(1) do not exceed twenty-one (21) pounds per day and 930 pounds in any one calendar year.
- (b) No Person shall solicit from, or require any other Person to use, in the District any Automotive Coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

- (i) Applicable VOC limits required by subsection (C)(1) for the specific application unless:
 - a. The Coating is located at a Automotive Refinishing Facility that utilizes an approved Emission Control System pursuant to subsection (C)(3)(a), and the Coating meets the limits specified in permit conditions.
 - b. The Coating is specifically exempt pursuant to section (D) of this rule.
- (c) No Person shall offer for sale, sell, or distribute for use in the District any Automotive Coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:
 - (i) Applicable VOC limits required by subsection (C)(1) for the specific application, unless:
 - a. The Coating is located at an Automotive Refinishing Facility that utilizes an approved Emission Control System pursuant to subsection (C)(3)(a), and the Coating meets the limits specified in permit conditions.
 - b. The Coating is specifically exempt under section (D) of this rule.
 - c. The Person that offers for sale or distributes the Coating keeps the following records for at least five (5) years and makes them available to the APCO upon request, the following information:
 - 1. Coating name and manufacturer;
 - 2. Application method;
 - 3. Automotive Coating category and mix ratio specific to the Coating;
 - 4. VOC content of Coating;
 - 5. Documentation that the material is a Coating;
 - 6. Current manufacturer specification sheets, material safety data sheets (MSDS), technical data sheets, or air quality data sheets, which list the VOC content of each ready-to-spray Coating (based on the manufacturer's stated mix ratio), Automotive Coating Components, and VOC content of each solvent;
 - 7. Purchase records identifying the Automotive Coating category, name, and volume of Coatings; and,
 - 8. The name and address of the Person purchasing the Coating, a statement of the basis the purchase will comply with this paragraph, including if use is for

outside the District, and acknowledgement by the purchaser that this statement is correct.

(ii) Requirements of subsections (C)(4) and (C)(5).

(d) No Person shall solicit from, require, offer for sale to, sell to, or distribute to any other Person for use in the District any Automotive Coating application equipment that does not meet the requirements of subsection (C)(6).

(e) The requirements of subsections (C)(1), (C)(2), and (C)(3) shall apply to all written or oral agreements executed and entered into under terms of which an Automotive Coating or Coating application equipment shall be used at any location within the District.

(8) Surface Preparation and Cleaning Operations

(a) The requirements of this subsection shall apply to any Person using Solvent for Surface Preparation and Cleaning Operations.

(i) Any Person shall not use an organic compound(s), or mixture thereof, (excluding Exempt Compounds) for Surface Preparation with a VOC content in excess of twenty-five (25) grams per liter (0.21 pounds per gallon) of material.

(ii) Any Person shall use closed, non-absorbent containers for the storage or disposal of any applicator (including brushes, swabs, cloth or paper) used for solvent Surface Preparation and Cleaning Operations.

(iii) Any Person shall store fresh or spent solvent in vapor tight and closed containers.

(iv) Any Person shall not use organic compounds for the Cleaning Operations of spray equipment including paint liners unless an enclosed system is used for Cleaning Operations. The system shall enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures. Equipment used shall minimize the evaporation of organic compounds to the atmosphere.

(b) Effective July 1, 2011, no Person shall possess at any Automotive Refinishing Facility, any Solvent with a VOC content that does not comply with the requirements in subsection (C)(8)(a)(i).

(D) Exemptions

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

- (a) Any Coating applied to Motor Vehicle or Mobile Equipment, or their Associated Parts and Components, during manufacture on an Assembly Line.
 - (b) Any Automotive Coating that is offered for sale, sold, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
 - (c) Any Aerosol Coating Product.
 - (d) Any Automotive Coating that is sold, supplied, or offered for sale in one-half (0.5) fluid ounces or smaller containers.
- (2) The requirements of subsection (C)(1) shall not apply to Automotive Coatings applied for educational purposes at Coating training centers, which are owned and operated by Coating manufacturers, provided that the VOC emissions emitted at a Coating training center from Coatings not complying with subsection (C)(1) does not exceed twelve (12) pounds per day.
 - (3) The requirements of subsection (C)(1) shall not apply to Coatings supplied by an Assembly-Line Motor Vehicle manufacturer for use by a prototype Motor Vehicle manufacturing facility in the Finishing of a prototype Motor Vehicle, provided that the VOC emissions at the prototype Motor Vehicle manufacturing facility from such Topcoats do not exceed twenty-one (21) pounds in a calendar day and 930 pounds in a calendar year.
 - (4) Any facility or Person classified as exempt or claiming to be exempt under this section, (D), shall meet the record keeping requirements of this rule so as to be able to prove the exemption status.
 - (5) Rule 442 Applicability
 - (a) Any Coating, Coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(E) Administrative Requirements

- (1) Manufacturer's Compliance Statement Requirement
 - (a) For each individual Automotive Coating, Automotive Coating Component, and ready-to-spray mixture (based on the manufacturers stated mix ratio), the manufacturer shall include the following information on a product data sheet, or an equivalent medium:

- (i) The VOC Actual and the VOC Regulatory for Coatings (in grams per liter).
- (ii) The weight percentage of volatiles, water, and Exempt Compounds.
- (iii) The volume percentage of water and Exempt Compounds.
- (iv) The density of the material (in grams per liter).
- (v) The weight percentage of all Targeted HAP Compounds.

(2) Manufacturer's Labeling Requirements

- (a) The manufacturer of Automobile Coatings or Automotive Coating Components shall include, on all containers, the applicable use Coating category(ies), and the VOC Actual and the VOC Regulatory for Coatings, as supplied (in grams per liter).
- (b) The manufacturer of Solvents subject to this rule shall include on all containers the VOC content for Solvents, as supplied (in grams per liter)

(F) Monitoring and Records

- (1) All Persons subject to this rule and any Person claiming any exemption under subsection (D)(1) shall comply with the following requirements:

- (a) Maintain and have available during an inspection, a current list of Automotive Coatings in use which provides all of the Coating data necessary to evaluate compliance, including the following information:
 - (i) The Additive, Automotive Coating, Catalyst, and Reducer used, i.e. material name and manufacturer.
 - (ii) The mix ratio of components used.
 - (iii) The VOC Actual and the VOC Regulatory content of each Automotive Coating as applied.
 - (iii) The Targeted HAP Compounds content as applied in weight percentage.
 - (v) The application method used .
- (b) Maintain records on a daily basis including:
 - (i) Automotive Coating and mix ratio of components used in the Automotive Coating.
 - (ii) Quantity of each Automotive Coating applied.
 - (iii) Application method used to apply Automotive Coating.
 - (iii) Any Person/facility utilizing an add-on Emission Control System as a means of complying with provisions of this rule shall also maintain records of key system operating and maintenance data for the purpose of demonstrating continuous compliance during

periods of emission producing activities. The data shall be recorded in a manner as prescribed by the District.

- (c) Maintain records on a monthly basis for Surface Preparation and Cleaning Operations including:
 - (i) The name and manufacturer of the Solvent used, including methylene chloride (MeCl).
 - (i) The amount of each Solvent and methylene chloride (MeCl) consumed for any use, in gallons.
 - (ii) The weight percentage of each Solvent and methylene chloride (MeCl) consumed for any use.
- (d) Such records shall be retained and available for inspection by the APCO for a minimum of five (5) years.

(G) Test Methods

- (1) A violation of the limits contained in this rule as determined by any one of these test methods shall constitute a violation of this rule.
- (2) The following specified test methods shall be used to determine compliance with the provisions of this rule.
 - (a) VOC Determination
 - (i) Samples of Automotive Coatings as specified in subsection (C)(1)) shall be analyzed as prescribed by EPA Reference Method 24, as set forth in appendix A of Title 40 of the Code of Federal Regulations (40 CFR) Part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings" for VOC content (without correction for Exempt Compounds) and the American Society for Testing Materials (ASTM) Test Method D4457-85, 91 (*Standard Test Method for Volatile Content of Coatings*), or ARB Method 432 ("Determination of Dichloromethane and 1,1,1 – Trichloroethane in Paints and Coatings", 1989) for determination of emissions of Exempt Compounds. Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific individual compounds (from the broad classes of perfluorocarbon compounds) and the amounts present in the product or process and provides a validated test method which can be used to quantify the specific compounds.

- (b) Determination of Emissions-Operations with Emission Control Systems
 - (i) For operations with Emission Control Systems, VOC emissions as specified in subsection (C)(3)(a) shall be measured as prescribed by EPA Reference Method 25, 25A, or 25B, Title 40 Code of Federal Regulations, Part 60, Appendix A, for determining VOC emissions and control device efficiency, in combination with the methods prescribed in U.S. EPA's "Guidelines for Determining Capture Efficiency." (January 9 1995) and Title 40 Code of Federal Regulations, Part 51, Appendix M, Methods 204-204f, as applicable, for determination of capture efficiency.
- (c) Determination of HVLP Transfer Efficiency Equivalence
 - (i) Transfer Efficiency equivalent to HVLP as required by subsection (C)(6)(a)(iii) shall be determined by procedures as prescribed in the South Coast Air Quality Management District (SCAQMD) document "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002".
- (d) Determination of Transfer Efficiency
 - (i) Transfer Efficiency as required by subsection (C)(6)(a)(iii) shall be determined by procedures as prescribed in the SCAQMD document "South Coast Air Quality management District Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989".
- (e) Determination of Percentage of Metal in Metallic/Iridescent Color Coatings
 - (i) Determinations shall be made using SCAQMD Method 311, "Determination of Percent Metal in Metallic Coatings by Spectrographic Method", as found in the SCAQMD document *Laboratory Methods Of Analysis For Enforcement Samples* (February 1997).
- (f) Acid Content in Pretreatment Coatings
 - (i) Determinations of acid content in Pretreatment Coatings shall be made using ASTM Test Method D1613-03 "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products".
- (g) Determination of Methyl Acetate, Acetone, and PCBTF Content

- (i) The quantity of methyl acetate , acetone, t-butyl acetate, and parachlorobenzotrifluoride (as specified in subsections (B)(18), (B)(20), (B)(21), and (B)(44) shall be determined by using ASTM Method D6133-02: “Standard Test Method for Acetone, *p*-Chlorobenzotrifluoride, Methyl Acetate or *t*-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw materials by Direct Injection Into a Gas Chromatograph” (February 2003).
- (h) Exempt Compound Content
 - (i) Exempt Compound content, other than as determined pursuant to subsection (G)(f)(i) shall be determined by using CARB Method 432, “Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings” (September 12, 1998); CARB Method 422, “Determination of Volatile Organic Compounds in Emissions form Stationary Sources” (January 22, 1987); or, SCAQMD Method 303-91, “Determination of Exempt Compounds” (February 1993).

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RULE 1117

Graphic Arts and Paper, Film, Foil and Fabric Coatings

(A) General

(1) Purpose

- (a) To reduce emissions of Volatile Organic Compounds (VOC) from Graphic Arts Printing Operations, Digital Printing Operations, and Paper, Film, Foil or Fabric Coating Operations.

(2) Applicability

- (a) This rule is applicable to any Graphic Arts Printing Operations, Digital Printing Operations, and Paper, Film, Foil or Fabric Coating Operation and to the Solvent cleaning materials and processes associated with such Operations.
- (b) This rule is applicable to any person who manufactures any Ink, Coating, or Adhesive containing VOC which is sold, offered for sale, or supplied for use in Graphic Arts and Paper, Film, Foil and Fabric Coating Operations in the District.

(B) Definitions

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

- (1) “Adhesive” – A material that is applied for the primary purpose of bonding two surfaces together by surface attachment. Adhesives may be used to facilitate the attachment of two surfaces or substances in varying degrees of permanence.
- (2) “Aerosol Product” – A hand-held, non-refillable container that expels a pressurized Solvent-containing product by means of a Propellant induced force.
- (3) “Application Equipment” – A device, including, but not limited to, a spray gun, brush, roller, and a printing press, used to apply Adhesives, Coatings, or Inks.
- (4) “Bench Scale Project” – A project (other than at a Research and Development facility) that is operated on a small scale, such as one capable of being located on a laboratory bench top.
- (5) “Blanket” – A synthetic rubber mat used to transfer or ”offset” an image from a printing plate to paper or other substrate, commonly used in Offset Lithography.

- (6) “Blanket Repair Material” – The material used in Offset Lithographic Printing to correct low spots in the press Blanket.
- (7) “Blanket Wash” – A Solvent used to remove Ink from the Blanket of a press.
- (8) “California Air Resources Board (CARB)” – The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with Section 39500).
- (9) “Capture Efficiency (CE)” – In percent, is the ratio of the weight of the VOC in the effluent stream entering the Control Device to the weight of VOC emitted from the Operation, both measured simultaneously, and can be calculated by the following equation:

$$Capture\ Efficiency = \left[\frac{W_c}{W_e} \right] \times 100$$

Where:

W_c = weight of VOC entering Control Device
W_e = weight of VOC emitted from the Operation

- (10) “Coating” – The application of a uniform layer of material across the entire width of a substrate. Those machines which have both Coating and printing units should be considered as performing a printing Operation. Coating applications that are not performed in association with a printing Operation are considered Coating Operations and are not Graphic Arts Printing Operations.
- (11) “Coating Line” – A series of Coating applicators, flash-off areas, and any associated curing/drying equipment between one or more unwind/feed stations and one or more rewind/cutting stations.
- (12) “Control Device” – Equipment such as an incinerator or adsorber, or cooler/condenser filtration used to prevent air pollutants from being emitted into the atmosphere.
- (13) “Control Device Efficiency” – In percent, is the ratio of the weight of the VOC removed by the Control Device from the effluent stream entering the Control Device to the weight of the VOC in the effluent stream entering the Control Device, both measured simultaneously, and can be calculated by the following equation:

$$Control\ Device\ Efficiency = \left[\frac{(W_c - W_d)}{W_c} \right] \times 100$$

Where:

W_c = Weight of VOC entering Control Device

W_d = Weight of VOC discharged from the Control Device

- (14) “Conventional Printing Operations” – Those printing Operations that utilize physical masters, stencils, screens or plates during the printing process. Conventional Printing Operations use technologies including but not limited to Offset Lithographic, Flexographic, Gravure, Letterpress, and Screen Printing.
- (15) “Cured Adhesive, Cured Coating, or Cured Ink” – An Adhesive, Coating, or Ink that is dry to the touch.
- (16) “Die Coater (or Slit Coater)” – A type of Application Equipment that coats an object by flowing Coatings through a slit directly onto the object moving past the slit.
- (17) “Digital Printer” – A printing device that uses a computer-driven machine to transfer an electronic image to a substrate through the use of Inks, toners, or other graphic materials. Digital printing technologies include, but are not limited to, various forms of Ink Jet, Thermography, Electrophotography, Ionography, and Magnetography.
- (18) “Digital Printing Operations” – Those Operations that do not use a physical master, stencils, or plates but use digital data to control the deposition of Ink, toner, or dye to create images.
- (19) “Dip Coater” – A type of Application Equipment that coats an object by submerging the object in a vat of Coating, and subsequently withdrawing the object and draining off the excess Coating.
- (20) “Doctor Blade” – A steel blade used to scrape excess Ink from a printing plate or inking cylinder.
- (21) “Dryer” – A hot air, high velocity system used to dry Inks on printed or coated substrate.
- (22) “Dye Sublimation” – An imaging process that vaporizes colorant with heat and pressure, and deposits it onto a substrate in order to simulate a continuous tone image. Dye Sublimation is a digital printing technology.
- (23) “Electron Beam Ink” – Ink that, when exposed to electron energy, crosslinks or solidifies in milliseconds.
- (24) “Electron Charge Deposition Printing” – See Ionography

- (25) “Electrophotography” – A digital printing technology that works by recording an image on a drum in the form of an electrostatic charge, which is then transferred to the substrate. Electrophotography includes such technologies as laser printers, xerography, and Liquid Electrophotography.
- (26) “Electrostatic Application” – A method of applying Coating whereby atomized paint droplets are charged and subsequently deposited on the substrate by electrostatic attraction.
- (27) “Exempt Compound” – Those compounds listed in 40 Code of Federal Regulations (CFR) 51.100(s)(1).
- (28) “Extreme Performance Ink/Coating” – An Ink or Coating used in Screen Printing on a Non-Porous Substrate that is designed to resist or withstand any of the following:
 - (a) More than two years of outdoor exposure; or
 - (b) Exposure to industrial-grade chemicals, Solvents, acids, detergents, oil products, cosmetics, temperatures exceeding 170°F, vacuum-forming, embossing or molding.
- (29) “Fabric Coating” – Any decorative or protective Coating or reinforcing material applied or impregnated into textile fabric, vinyl coated textile fabric, or vinyl sheets.
- (30) “Film Coating” – A Coating applied in a Web Coating process on any film substrate other than paper or fabric, including but not limited to typewriter ribbons, photographic film, magnetic tape, and metal foil gift wrap, but excluding Coatings applied to packaging used exclusively for food and health care products for human or animal consumption.
- (31) “Fine Arts Painting” – Any unique visual representation, consisting of paint, Ink, or other media, hand applied to a substrate of canvas, wood, paper, metal, or other material.
- (32) “Flexible Packaging” – Any package or part of a package the shape of which can readily be changed. Flexible Packaging includes, but is not limited to, bags, pouches, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.
- (33) “Flexographic Printing” – The application of words, designs, or pictures to a substrate by means of a roll printing technique in which the pattern is applied to an image carrier made of rubber or other elastomeric material. The image to be printed is raised above the carrier surface, while the non-image area is not raised.

- (34) “Flow Coater” – A Coating application system with no air supplied to the nozzle and where paint flows over the part and the excess Coating drains back into the collection system.
- (35) “Foam Coater” – A Coating application system that coats an object by flowing foam through holes or a slit directly onto the object moving underneath it.
- (36) “Foil Coating” – A Coating applied in a Web Coating process on any foil substrate other than paper or fabric, including but not limited to typewriter ribbons, photographic film, magnetic tape, and metal foil gift wrap, but excluding Coatings applied to packaging used exclusively for food and health care products for human and animal consumption.
- (37) “Fountain Solution” – Solution composed mainly of water and contains at least one of the following materials: etchants such as mineral salts; hydrophilic gums; or other additives, which is applied to the image plate to maintain the hydrophilic properties of the non-image areas.
- (38) “Fugitive Emissions” – Uncollected emissions of VOC from any portion of the printing, Coating or Laminating Operation other than from the Dryer.
- (39) “Grams of VOC per Liter of Ink, Coating, Adhesive, or Wash Primer Less Water and Less Exempt Compounds (VOC Content)” – The weight of VOCs emitted during use, Coating, curing or drying per combined volume of VOC and of Ink, Coating, Adhesive, or Wash Primer solids and can be calculated by the following equation:

$$\frac{\text{Grams VOC}_{(\text{less water and exempt compounds})}}{\text{Liter of Coating}} = \left[\frac{(W_s - W_w - W_{es})}{(V_m - V_w - V_{es})} \right] |$$

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

- (40) “Grams of VOC Per Liter of Material” – The weight of VOC per volume of material and to be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \left[\frac{(W_s - W_w - W_{es})}{V_m} \right] |$$

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 materials, in liters

- (41) “Graphic Arts Coating” – The application of a uniform layer of material across the entire width of a substrate. Those machines which perform both Coating and printing should be considered as performing a printing Operation. For purposes of this rule, digital printing is not considered a Graphic Arts Coating Operation.
- (42) “Graphic Arts Printing Operations” – Those Operations employing Conventional Printing Operations, or any Coating or Laminating process associated with Conventional Printing Operations to produce published products and packages. Solvent cleaning Operations performed in order to produce published products and packages are considered to be part of Graphic Arts Printing Operations.
- (43) “Gravure Printing” – An Intaglio Printing Operation in which the Ink is transferred from minute etched wells on a cylinder to the substrate, which is supported by an impression roller, with excess Ink removed from the cylinder by a Doctor Blade.
- (44) “Hand Application Method” – A method of applying a Coating to a substrate using manually held, non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.
- (45) “Heatset Ink” – A quick-drying Ink in which the Solvents are vaporized by passing the printed surface through a heater or Oven.
- (46) “High-Volume, Low-Pressure (HVLP) Spray Equipment” – Equipment used to apply materials by means of a spray gun which is designed and intended to be operated, and which is operated, between 0.1 and 10.0 psig of air atomizing pressure, measured dynamically at the center of the air cap and the air horns.
- (47) “Ink” – A pigmented and/or dyed liquid or paste used in a graphic arts operation typically for printing, impressing, or transferring an image onto a substrate.
- (48) “Ink Jet” – A digital printing technology in which Ink is ejected through printheads onto a substrate to create an image.
- (49) “Intaglio Printing” – Printing done from a plate or cylinder in which the image is sunk below (etched or engraved into) the surface.
- (50) “Ion Deposition Printing” – See Ionography

- (51) “Ionography” – A Digital Printing technology that utilizes a directed array of ions to create a charge on a nonconductive surface to create an image. Ionography can also be known as ion deposition or electron charge deposition printing.
- (52) “Key System Operating Parameters” – Those parameters necessary to ensure compliance with (C)(6), including, but not limited to, temperature, pressure drop, and air flow rate.
- (53) “Lamination” – A process of bonding two or more layers of material to form a single, multiple-layer sheet by using an Adhesive.
- (54) “Letterpress Printing” – A printing method where the image area is raised relative to the non-image area and the Ink is transferred to the paper directly from the image surface.
- (55) “Line” – The minimum equipment which is required for the application, drying, and/or curing of Inks, Ultraviolet Inks, and/or Coatings on a substrate, including the Ink and/or Coating applicators and drying systems, and associated Ink and Coating agitation and delivery systems.
- (56) “Liquid Leak” – A visible Solvent leak from a container at a rate of more than three drops per minute, or a visible liquid mist.
- (57) “Liquid Electrophotography (LEP)” – A digital printing technology that records a latent electrostatic image on a photoconductive surface, such as a drum or belt. The image created by applying toner to the charged areas of the photoconductor is electrically transferred to an intermediate surface. In a second transfer process, the image is released from the Blanket surface to the final substrate, cooling rapidly as the substrate passes between the Blanket and an impression drum, causing the image to “peel off” the Blanket and be affixed to the substrate. This Operation repeats itself on the one printing station for every color separation in the image.
- (58) “Lithographic Printing” – Printing by a planographic method in which the image and non-image areas are on the same plane.
- (59) “Magnetography” – A digital printing technology whereby an image is printed using a magnetic toner, electromagnetic write heads, and magnetic fields on an imaging drum.
- (60) “Maintenance Cleaning” – A Solvent cleaning Operation or activity carried out to keep tools, machinery, equipment (excluding Ink, Coating, or Adhesive Application Equipment) or general work areas in clean and good operational condition.

- (61) “Manufacturing Process” – The process of making goods or articles by hand or by machine.
- (62) “Matte Finish Ink” – A Specialty Ink which is applied on Non-Porous Substrates in Flexographic Printing Operations and contains at least five percent by weight silicon dioxide flattening agent.
- (63) “Metallic Finish Ink” – A Ink which is applied on Non-Porous Substrates in Flexographic Printing Operations and contains at least 28 percent by weight elemental metal particles.
- (64) “Metallic Ink” – A Specialty Ink containing at least 50 grams of elemental metal particles per liter of Ink (0.4 lb/gal) as applied and which is not used in the manufacture of an electronic circuit.
- (65) “Non-Absorbent Container” – A container made of non-porous material that does not allow the migration of Solvents through it.
- (66) “Non-Atomized Solvent Flow” – Solvents in the form of a liquid stream without the introduction of any Propellant.
- (67) “Non-Heatset Ink” – An Ink which dries by oxidation and/or absorption into the substrate without use of heat from Dryers or Ovens.
- (68) “Non-Leaking Container” – A container without Liquid Leak.
- (69) “Non-Porous” – Any substrate whose surface prevents penetration by water, including but not limited to foil, polyethylene, polypropylene, cellophane, metalized polyester, nylon, and polyethylene terephthalate (mylar), paper or paperboard coated with non-porous surface. Clay coated printing paper as defined by the American Paper Institute Classification System, and paperboard coated with clay to prevent water penetration, shall be considered Non-Porous.
- (70) “Offset Lithographic Printing” – A planographic method in which the image and non-image areas are on the same plane and where the Ink is transferred from an image plate on one cylinder to an image Blanket on a different cylinder. The Ink is finally transferred from the image Blanket to the surface to be printed.
- (71) “On-Press Component” – A part, component, or accessory of a press that is cleaned while still being physically attached to the press.
- (72) “Operation” – Any physical action resulting in a change in the location, form, or physical properties of a material, or any chemical action resulting in a change in the chemical composition or the chemical or physical properties of a material.
- (73) “Operator” – Includes but is not limited to any person who owns, leases, supervises, or operates a facility and/or equipment.

- (74) “Oven” – A heating chamber which uses heat, ultraviolet (UV) radiation, or electron beam (EB) radiation to bake, cure, polymerize, or dry a surface Coating.
- (75) “Packaging Gravure” – Gravure Printing on paper, paperboard, foil, film or other substrates which are to be used to produce containers or packages.
- (76) “Pantone Ink” – An Ink created for color matching by combination of Process Inks.
- (77) “Paper Coating” – Any Coating applied on or impregnated into paper, including, but not limited to, Adhesive tapes and labels, book covers, post cards, office copier paper, drafting paper, and pressure sensitive tapes.
- (78) “Plastisizer” – A material used to keep plastic material soft and viscous.
- (79) “Plastisol” – A Coating that is a liquid dispersion of small particles of resins and Plastisizers that are fused to become a plastic.
- (80) “Porous” – A substrate whose surface does not prevent penetration by water, including but not limited to, paper, paperboard, and any paper product coated with a porous material.
- (81) “Process Ink” – The hues yellow, magenta, and cyan, plus black used in the four-color print process.
- (82) “Proof Press” – A press used only for printing a sample copy of a graphic art product to check the quality of print, color reproduction and editorial content.
- (83) “Propellant” – Any gas, including air, in a pressure container for expelling the contents when the pressure is released.
- (84) “Publication Gravure” – Gravure Printing on a substrate which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements or other types of printed material.
- (85) “Removable Press Component” – A part, component, or accessory of a press that is physically attached to the press but is disassembled and removed from the press prior to being cleaned. Rollers, Blankets, metering rollers, fountains, impression cylinders and plates shall not be considered as Removable Press Components.
- (86) “Repair Process” – The process of returning a damaged object or an object not operating properly to good condition.

- (87) “Research and Development” – A facility or portion thereof used to further the development of useful materials, devices, systems, or methods, including, but not limited to, design, development, and improvement of prototypes and processes. Research and Development does not include the Manufacturing Process itself.
- (88) “Resists” – Inks that are Screen Printed to form the required patterns, alphabets, numerals, designs, or symbols on the surface of the substrate; protect the Screen Printed or covered surface from the subsequent application of etching or plating solution; and are later removed from the substrate by a resist stripper. Resist applications include, but are not limited to, etched electronic circuits, display screens, chemical milling of parts, nameplates and signage.
- (89) “Roll Coater” – A type of Application Equipment in which a series of mechanical rollers form a thin Coating film on the surface of a roller, which is subsequently applied to a substrate by moving the substrate underneath the roller.
- (90) “Roller Wash” – A Solvent used to remove Ink from the rollers of a press.
- (91) “Screen Printing” – A process where the Ink passes through a Web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.
- (92) “Screen Printing Metallic Ink” – An Ink used in Screen Printing that contains greater than 50 grams of elemental metal per liter (0.4 lb/gal) of Ink as applied.
- (93) “Sign Ink/Coating” – An Ink or Coating used in Screen Printing indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.
- (94) “Slit Coater” – See Die Coater
- (95) “Solvent” – Any liquid containing a volatile organic compound or combination of volatile organic compounds, which is used as a diluent, thinner, dissolver, viscosity reducer, cleaning agent, or for other similar uses.
- (96) “Solvent Flushing” – The use of a Solvent to remove uncured Adhesives, uncured Inks, uncured Coatings, or contaminants from the internal surfaces and passages of equipment by flushing Solvent, by a Non-Atomized Solvent Flow, through the equipment.
- (97) “Specialty Flexographic Printing” – A Flexographic Printing on polyethylene or polypropylene food packaging, fertilizer bags, or liquid-tight food containers.
- (98) “Specialty Gravure Printing” – Printing that uses the gravure process for production of wall and floor covering, decorated household paper products such as towels and tissues, cigarette filter tips, vinyl upholstery, woodgrains, and a wide variety of other products.

- (99) “Specialty Ink” – An Ink that is applied only on Non-Porous Substrates in Flexographic Printing Operations, and is either:
- (a) A Metallic Ink that contains at least 28 percent elemental metallic powder, by weight; or
 - (b) A Matte Finish Ink containing at least 5 percent silicon dioxide flattening agent, by weight.
- (100) “Stripping” – The use of Solvent to remove material such as Cured Adhesives, Cured Inks, cured or dried paint, cured or dried paint residue or temporary protective Coating.
- (101) “Substrate Retention Factor” – A fraction, expressed in percent, of VOCs in lithographic Inks which is retained in the substrate when the Inks dry by adsorption or absorption.
- (102) “Surface Preparation” – The removal of contaminants from a surface prior to the application of Coatings, Inks, or Adhesives or before proceeding to the next step of a Manufacturing Process.
- (103) “Thermography” – A digital printing technology that creates an image via a chemical reaction that occurs when portions of a thermal-coated substrate are subjected to heat. Thermographic technologies include but are not limited to thermal wax transfer, multi-bit thermal wax transfer, and Dye Sublimation.
- (104) “Thin Film UV Ink” – An Ultraviolet Ink for which <0.2 g will cover an area of ≥ 225 cm² (35 in²), using the following formula:

$$C = F \times A \times D_c$$

Where:

- A = area of substrate in cm² (or in²)
- C = amount of Ink added to the substrate in g
- D_c = density of Ink in g/cm³ (or g/in³)
- F = manufacturer’s recommended film thickness in cm (or in)

- (105) “Thinner” – A Solvent that is used to dilute Coatings or Inks to reduce viscosity, color strength, and/or solids, or to modify drying conditions.
- (106) “Ultraviolet (UV) Ink” – An Ink which dries by polymerization reaction by ultraviolet or electron beam radiation.
- (107) “USEPA” – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

- (108) “Volatile Organic Compound (VOC)” – Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and those compounds listed in 40 CFR 51.100(s)(1).
- (109) “Wash Primer” – A material used to clean and/or to activate surfaces of paper or fabric that contains no more than 5 percent, by weight, solid materials.
- (110) “Waste Solvent Material” – Any Solvent which may contain dirt, oil, metal particles, sludge, and/or waste products, or wiping material containing VOCs including, but not limited to, paper, cloth, sponge, rag, or cotton swab used in Solvent cleaning.
- (111) “Water Slide Decal” – A decal that is Screen Printed onto treated paper stock and is removable from the stock by the dissolution of an underlying water- soluble Adhesive or similar carrier.
- (112) “Web” – A continuous sheet of substrate.
- (113) “Web Feed” – An automatic system which supplies substrate from a Web.
- (114) “Web Splicing Adhesive” – An Adhesive used to join two continuous rolls of substrate materials.
- (115) “Wipe Cleaning” – A Solvent cleaning activity performed by hand rubbing an absorbent material such as a rag, paper, sponge, brush, or cotton swab containing Solvent.

(C) Requirements

- (1) Graphic Arts Printing Operation
 - (a) An Operator performing a Graphic Arts Operation, not subject to (C)(2), (C)(3), (C)(4), and (C)(5), shall not use graphic arts materials containing VOC in excess of the limits in Table 1 and Table 2, in accordance with the effective date.

Table 1

VOC Content Limits for Inks, Coatings and Adhesives		
Material	Grams of VOC per liter (lb/gal), less water and less exempt compounds, as applied, effective through July 31, 2010	Grams of VOC per liter (lb/gal), less water and less Exempt Compounds, as applied, effective on and after August 1, 2010
Flexographic Ink on Porous Substrates	300 (2.5)	225 (1.88)
All other Inks	300 (2.5)	300 (2.5)
Coatings	300 (2.5)	300 (2.5)
Adhesives	300 (2.5)	150 (1.25)
Web Splicing Adhesives	300 (2.5)	150 (1.25)

Table 2

VOC Content Limits for Fountain Solutions	
Fountain Solution	Percent VOC by volume, effective on and after August 1, 2010
Heatset Web Offset Lithographic	1.6
Coldset Web Offset Lithographic	5.0
Sheet-fed Offset Lithographic with maximum sheet size greater than 11 x 17 inches	5.0
All other presses	8.0

- (2) Flexographic Specialty Ink
- (a) An Operator using a Flexographic Printing Operation shall not use a Specialty Ink in excess of the VOC limit in Table 3, and shall not use more than two (2) gallons of Specialty Inks in a calendar day and 120 gallons of Specialty Inks in a calendar year.

Table 3

VOC Content Limits for Flexographic Specialty Ink	
Material	Grams of VOC per liter (lb/gal), less water and less exempt compounds, as applied, effective on and after August 1, 2010
Metallic Ink	460 (3.8)
Matte Finish Ink	535 (4.5)
Metallic Ink and Matte Finish Ink on Flexible Package Printing	383 (3.2)

- (b) On and after August 1, 2010, facilities with the potential to emit or with actual emissions of at least 10 tons VOC in any calendar year shall not use Specialty Inks with VOC content greater than 300 grams VOC per liter, less water and Exempt Compounds, as applied.
- (3) Coldset Web Offset Lithographic Fountain Solution
- (a) On and after August 1, 2010, an Operator performing coldset Web Offset Lithographic Printing shall use Fountain Solution that is five percent alcohol substitute or less, by weight, and shall have no alcohol in the Fountain Solution.
- (4) Screen Printing Operation
- (a) An Operator using a Screen Printing Operation shall not use graphic arts materials in excess of the VOC content limits, as applied, in Table 4.

Table 4

VOC Content Limits for Screen Printing Inks, Coatings, and Adhesives	
Material	Grams of VOC per liter (lb/gal), less water and less Exempt Compounds on and after August 1, 2010
Inks and Coatings, including Extreme Performance, Metallic and Sign/Ink	400 (3.3)
Adhesives	150 (1.25)
Resists	600 (5.0)

- (5) Paper, Film, Foil, or Fabric Coating Operations
- (a) An Operator using a Paper, Film, Foil, or Fabric Coating Operation shall not use any Coating or Wash Primer in excess of the VOC content limits, as applied, in Table 5.

Table 5

VOC Content Limits of Paper, Film, Foil, or Fabric Coating and Wash Primer		
Material	VOC Content Limit, effective through July 31, 2010	VOC Content Limit, effective on and after August 1, 2010
Coating	300 gm/liter (2.5 lb/gal) of Coating, less water and less Exempt Compounds	265 gm/liter (2.2 lb/gal) of Coating, less water and less Exempt Compounds
Wash Primer	300 gm/liter (2.5 lb/gal) of Coating, less water and less Exempt Compounds	265 gm/liter (2.2 lb/gal) of Coating, less water and less Exempt Compounds
Plastisols	—	20 gm/liter (0.16 lb/gal)

- (b) On and after August 1, 2010, an Operator performing pressure sensitive tape and label surface Coating Operations shall not use any VOC content materials or combinations of materials that exceed a VOC content of either 0.20 kg of VOC/kg of solids (0.20 lb VOC/lb of solids), as applied, or an additional limit of 0.067 kg VOC/kg of Coating (0.067 lb of VOC/lb of Coating), as applied.

(6) Approved VOC Emission Control System

(a) Heatset Web Offset Lithographic or Letterpress

On or after August 1, 2010, an Operator performing Heatset Web Offset Lithographic or Letterpress Printing that has greater than 25 tpy potential to emit prior to controls shall use an add-on Control Device on the Dryers, as follows:

- (i) Heatset Web offset lithographic or letterpress printer Control Device installed on or prior to July 31, 2010 shall have an overall capture and control efficiency of 90 percent.
 - (ii) Heatset Web offset lithographic or letterpress printer Control Device installed on or after August 1, 2010 shall have an overall capture and control efficiency of 95 percent.
- (b) In lieu of the requirements of Subsection (C)(1), (C)(2), (C)(3), (C)(4) and (C)(5), emissions of VOC may be controlled by an emission capture and control system, which reduces VOC emissions to the atmosphere, provided that:

- (i) The VOC emission control system is approved, in writing, by the Air Pollution Control Officer (APCO).
- (ii) During continuous operation, not to exceed 24 hours, the VOC emission control system shall have a minimum overall VOC capture and control efficiency as specified in Table 6, in accordance with the corresponding effective date;

Table 6

VOC Emission Control System Overall Capture and Control Efficiency		
Process	Overall VOC capture and control efficiency %, by weight, effective through July 31, 2010	Overall VOC capture and control efficiency %, by weight, effective on and after August 1, 2010
Flexible Package Printing (All Technologies)	65%	80%
Publication Gravure	75%	85%
Flexographic Printing Operations	60%	n/a
Other Printing Operations	n/a	75%
Paper, Film, Foil, or Fabric Coating Operations	n/a	90%

- (c) The collection system shall vent all drying Oven exhaust to the Control Device and shall have one or more inlets for collection of Fugitive Emissions; and,
- (d) During any period of operation of a thermal incinerator, combustion temperature shall be continuously monitored; and,
- (e) During any period of operation of a catalytic incinerator, exhaust gas temperature shall be continuously monitored; and,
- (f) Appropriate permit(s) for the emission capture and control system are obtained pursuant to District regulations.
- (g) The VOC emission control system shall reduce VOC emissions, at all times, to a level that is not greater than the emissions which would have been achieved through the use of compliant materials, compliant equipment or compliant work practices in Sections (C)(1), (C)(2), (C)(3), (C)(4), (C)(5), and (C)(8).

(7) Coating Application Equipment

No Operator shall apply Coatings unless Coatings are applied with equipment operated according to manufacturer's specifications, and only by the use of one of the following types of Coating Application Equipment:

- (a) Flow Coater;
- (b) Roll Coater;
- (c) Dip Coater;
- (d) Foam Coater;
- (e) Die Coater;
- (f) Hand Application Methods; or
- (g) High-volume, low-pressure (HVLP) spray for air dried Coatings.
 - (i) For HVLP spray guns manufactured prior to January 1, 1996, the end user shall demonstrate that the gun meets HVLP spray equipment standards. Satisfactory proof will be either in the form of manufacturer's published technical material or by a demonstration using a certified air pressure tip gauge, measuring the air atomizing pressure dynamically at the center of the air cap and at the air horns.
 - (ii) A person shall not sell or offer for sale for use within the District any HVLP spray gun without a permanent marking denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in (B)(46).
- (h) Other Coating application methods which are demonstrated to the APCO to be capable of achieving at least 65 percent transfer efficiency as determined in accordance with Section (F). Prior written approval from the APCO shall be obtained for each alternative method used.
- (i) In lieu of complying with Section (C)(7)(a) through (C)(7)(h), an Operator may control emissions from the Coating Application Equipment with a VOC emission control system that meets the requirements of Section (C)(6).

(8) Solvent Cleaning

- (a) An Operator shall not use Solvents for cleaning Operations that exceed the VOC content limits specified in Table 7 in accordance with the corresponding effective date.

Table 7

VOC Content Limits for Solvent Cleaning	
Type of Solvent Cleaning Operation	VOC Content Limit grams of VOC/liter of material (Lb/gal), effective on and after July 1, 2011
A. Product Cleaning During Manufacturing Process; or Surface Preparation for Coating, Ink, or Adhesive Application	25 (0.21)
B. Repair and Maintenance Cleaning	25 (0.21)
C. Cleaning of Coating or Adhesive Application Equipment	25 (0.21)
D. Cleaning of Ink Application Equipment	
1. General	25 (0.21)
2. Flexographic Printing	25 (0.21)
3. Specialty Flexographic Printing	100 (0.83)
4. Gravure Printing	
a. Publication	100 (0.83)
b. Packaging	25 (0.21)
5. Lithographic (Offset) or Letterpress Printing	
a. Roller Wash - Step 1	100 (0.83)
b. Roller Wash - Step 2; Roller Wash - not specified; Blanket Wash, and On-Press Components	100 (0.83)
c. Removable Press Components	25 (0.21)
6. Screen Printing	100 (0.83)
7. Ultraviolet Ink/Electron Beam Ink Application Equipment (except Screen Printing)	100 (0.83)

- (b) The following cleaning Operations may be performed outside of an APCO-approved VOC emission control system and using Solvent with VOC content greater than 25 g/L:
- (i) Wipe Cleaning;
 - (ii) Application of Solvent from hand-held spray bottles from which Solvents are dispensed without a Propellant induced force;

- (iii) Non-Atomized Solvent Flow method in which the cleaning Solvent is collected in a container or a collection system which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
 - (iv) Solvent Flushing method in which the cleaning Solvent is discharged into a container that is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged Solvent from the equipment must be collected into containers without atomizing into the open air. The Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- (c) Solvent shall not be atomized into the open air unless it is vented to a VOC emission control system that complies with Section (C)(6). This provision shall not apply to printing Operations where the roller or Blanket Wash is applied automatically and the cleaning of nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with spray bottles or containers described in Section (C)(8)(b)(ii).
- (d) An Operator shall not use VOC-containing materials to clean spray equipment used for the application of Coatings, Adhesives, or Ink, unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures, and it must be used according to the manufacturer's recommendations and must be closed when not in use.
- (e) In lieu of complying with the provisions of Sections (C)(8)(a) through (C)(8)(d), an Operator may control emissions from cleaning Operations with an APCO-approved VOC emission control system that meets the requirements of Section (C)(6).
- (9) An Operator shall store or dispose of fresh or spent Solvents, Waste Solvent Materials, Coatings, Adhesives, catalysts, Thinners, and Ink in Non-Absorbent, Non-Leaking Containers, which shall be kept closed except when adding or removing material, during cleaning Operations, or when the container is empty.
- (10) VOC material wastes (including but not limited to liquid wastes, rags, and packaging) shall be disposed of in a manner consistent with Federal, State, and local hazardous waste regulations.
- (11) The manufacturer of any Ink, Coating, or Adhesive, except Thin Film UV Ink, which is sold, offered for sale, or supplied for use in Packaging Gravure, Publication Gravure, or Flexographic Printing Operations in the District shall

include the following information on the product container or Material Safety Data Sheet (MSDS) supplied with the product:

- (a) Material name, manufacturer identification, specific mixing instructions, density, and VOC content, as applied.
- (b) The VOC content of Inks (except Thin Film UV Ink), Coatings, and Adhesives expressed as defined in Subsection (B)(39).

(12) Work Practices

- (a) An Operator shall properly use and properly operate all graphic arts printing technologies as directed and/or specified by the manufacturer of the printer or graphic arts material.
- (b) Solvent containers and mixing tanks must be kept closed or covered except when filling, draining, or conducting cleaning operations.
- (c) Used shop towels, rags and wipes shall be kept in closed containers.
- (d) Spray guns shall be cleaned in an enclosed system.
- (e) Recycled solvents shall be used for cleaning if available and practical.
- (f) Cleaning materials shall be conveyed from one location to another in closed containers or pipes.

(D) Exemptions

- (1) The requirements of this rule, except for the recordkeeping requirements of Section (E)(6), shall not apply to the following Operations except for Paper, Film, Foil, or Fabric Coating Operations:
 - (a) Effective through July 31, 2010, any Graphic Arts Printing Operation which emits less than 400 pounds of VOC per calendar month.
 - (b) On or after August 1, 2010, any Graphic Arts Printing Operation that emits less than 200 pounds of VOC per 12 rolling consecutive calendar months.
- (2) The requirements of this rule shall not apply to:
 - (a) Proof Presses;
 - (b) The application of Coatings and use of cleaning Solvents in creating Fine Art Paintings;
 - (c) Stripping of Cured Coatings, Cured Adhesives, and Cured Inks, except the Stripping of such materials from spray Application Equipment;

- (d) Cleaning Operations in printing pre-press or graphic arts pre-press areas, including the cleaning of film processors, color scanners, plate processors, films, and plates.
 - (e) Blanket Repair Materials used in containers of four (4) fluid ounces or less.
 - (f) Digital Printers and Digital Printing Operations except for recordkeeping requirements in Section (E)(5).
 - (g) Screen Printing of Waterslide Decals.
- (3) The provisions of Section (C) shall not apply to the application of Adhesives and Coatings via Aerosol Products.
 - (4) This rule shall not apply to laboratory tests or analyses, Bench Scale, or Research and Development Projects.
 - (5) This rule shall not limit the VOC content of Thin Film UV Inks.
 - (6) Cleaning materials with a VOC composite vapor pressure less than 8 mm Hg at 20° C are exempt from Section (C)(8)(a) of this rule.

(E) Monitoring and Records

Unless otherwise noted, all VOC content and density values recorded pursuant to the requirements of this rule shall be for the material as applied. Graphic Arts and Paper, Film, Foil and Fabric Coating Operations subject to this rule shall maintain the following records and information:

- (1) For each Ink, Coating, and Adhesive, Fountain Solution, Wash Primer, and Solvent in use and in storage:
 - (a) A Material Safety Data Sheet (MSDS) or product data sheet giving material name, manufacturer identification, specific mixing instructions, and density; and
 - (b) VOC content as applied.
- (2) Compliant Materials Records

If only Inks, Coatings, and Adhesives meeting the specification found in Subsection (C) are used:

- (a) Records on a daily basis showing the amount of Ink used. Ink use records shall be maintained using one of the following options:
 - (i) Group the quantity of all Inks used and identify the maximum VOC content figure and use the minimum density of 1,010 gm/liter (8.44 lb/gal) ;
 - (ii) Itemize Process Inks and Pantone Inks separately and use the specific VOC content and density value for each Process Ink, and the highest VOC content and the maximum density of 1,010 gm/liter (8.44 lb/gal) for Pantone Inks;
 - (iii) Report Process Inks and Pantone Inks separately and use the maximum VOC content and minimum density value for both process and Pantone Inks, or use the density of 1,010 gm/liter (8.44 lb/gal) for Pantone Inks; or
 - (iv) Itemize each Ink and Pantone Ink and use the specific VOC content and density value for each.
- (b) Records on a daily basis showing the amount of Coating, Adhesive, Wash Primer, and Solvent (including cleaning Solvent) used. Itemize each Coating, Adhesive, Wash Primer, and Solvent and use the specific VOC content and density value for each.
- (c) Record, on a daily basis, the type, amount, and percent VOC by volume of Fountain Solution used.
- (3) Non-Compliant Materials Records

If Inks, Coatings, Adhesives, Fountain Solutions, Wash Primers, and Solvents (including non-compliant cleaning Solvent) which do not meet the specifications found in Subsection (C) are used and compliance is achieved through the use of add-on emission control equipment pursuant to (C)(6):

- (a) Records on a daily basis showing the type and amount of Inks, Coatings, Adhesives, Fountain Solutions, Wash Primers, and Solvents (including non-compliant cleaning Solvent) used and itemized using the specific VOC content and density value for each.
- (b) Daily records of Key System Operating Parameters which will demonstrate continuous Operation and compliance of the emission Control Device during periods of emission producing activities. Key System Operating Parameters are those necessary to ensure compliance with VOC capture and control requirements pursuant to (C)(6) (including but not limited to temperatures, pressures, and flow rates). Such records shall be kept in the form and manner as prescribed by the APCO.

(4) Records for Flexographic Specialty Inks

If flexographic Specialty Inks are used pursuant to Section (C)(2), record, on a daily basis, the type and amount of each Specialty Ink used.

(5) Digital Printing Records

(a) On or after August 1, 2010, Digital Printing Operations shall keep records in accordance with (E)(5)(b) for each Digital Printer that:

- (i) Uses Solvent-based Inks and has a print capacity of 1,000 ft²/hr or more; or
- (ii) Uses water-based Inks, or UV Inks and has a print capacity of 10,000 ft²/hr or more,

(b) Operators with printers Subject to Section (E)(5)(a) shall keep the following records:

- (i) A current file of Inks, Coatings, Adhesives, and Solvents in use and in storage. The file shall include a MSDS or product data sheet showing the material name, manufacturer's name, VOC content as applied, specific mixing instructions, and density.
- (ii) Monthly records of the type, and amount of each Ink, Coating, and/or Adhesive used.
- (iii) Monthly records of the type, and amount of Solvent used for thinning the Ink, Coating, or Adhesive, and for cleaning.

(6) If the facility is claiming exempt status pursuant to Subsection (D), the facility shall maintain adequate records on a monthly basis to demonstrate the exempt status. The Operator who becomes subject to the emission limits/standards of this rule through loss of exemption in Section (D) shall not operate the subject equipment, except as required for obtaining a new or modified Permit-to-Operate, until the Operator demonstrates that the Operation is in full compliance with the requirements of this rule.

(7) Any record required or produced pursuant to this rule shall be retained on site for a minimum of five years and shall be made available to the APCO, CARB, or USEPA upon request.

(8) Determination of VOC Emissions from Inks Used in a Lithographic Printing Operation

For the purposes of determining compliance with emissions limits, and determining eligibility for exemption under Section (D)(1) of this rule, the amount of VOC emitted from Heatset and Non-Heatset Inks used shall be discounted by

the following Substrate Retention Factors: 20 percent for Heatset Inks and 95 percent for Non-Heatset Inks. These Substrate Retention Factors shall not be used when determining compliance of Inks with applicable VOC content limits specified in this rule, and Heatset and Non-Heatset lithographic Inks shall meet the VOC content limits specified in Section (C)(1), Table 1.

(F) Test Methods

The VOC content of materials subject to the provisions of this rule and overall capture and control efficiency of VOC emission control systems shall be determined by the following test methods specified in Sections (F)(1) through (F)(7), or alternative test methods approved by the APCO, USEPA, and CARB.

- (1) Except for UV Inks, the VOC content of Inks, Adhesives, Fountain Solutions, Solvents and Coatings shall be determined by using EPA Method 24 or 24A as applicable. The VOC content of UV Inks, except for Thin Film UV Inks, shall be determined by using American Society of Testing and Materials (ASTM) D5403-93 (2007) (Test Methods for Volatile Content of Radiation Curable Materials).
- (2) Exempt Compound Content: Exempt compound content shall be determined by using ARB Method 432, "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings," September 12, 1989; ARB Method 422 "Determination of Volatile Organic Compounds in Emission from Stationary Sources," January 22, 1987; or, South Coast Air Quality Management District (SCAQMD) Method 303-91 "Determination of Exempt Compounds," August 1, 1996.
- (3) The content of silicon dioxide as a flattening agent in a Matte Finish Ink shall be determined by using the latest EPA approved revision of ASTM D717-86 (Standard Test Methods for Analysis of Magnesium Silicate Pigment).
- (4) The metal content of Metallic Inks shall be determined by SCAQMD Test Method 318, (Determination of Weight Percent Elemental Metal In Coatings by X-Ray Diffraction).
- (5) Determination of emissions of VOC from spray gun cleaning systems shall be made using SCAQMD method "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems," October 3, 1989.
- (6) The transfer efficiency of alternative Coating application methods shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.
- (7) Determination of Overall Capture and Control Efficiency of VOC Emission Control Systems

- (a) The Capture Efficiency of a VOC emission control system's collection device(s) shall be determined according to EPA's "Guidelines for Determining Capture Efficiency," January 9, 1995 and 40 CFR 51, Appendix M, Test Methods 204-204F, as applicable.
- (b) The control efficiency of a VOC emission control system's VOC Control Device(s) shall be determined using EPA Test Methods 2, 2A, or 2D for measuring flow rates and EPA Test Methods 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the Control Device(s). EPA Method 18 or ARB Method 422 shall be used to determine the emissions of Exempt Compounds.
- (c) For VOC emission control systems that consist of a single VOC emission collection device connected to a single VOC emission Control Device, the overall capture and control efficiency shall be calculated by using the following equation:

$$CE_{\text{Capture,Control}} = [CE_{\text{Capture}} \times CE_{\text{Control}}] / 100$$

Where:

- $CE_{\text{Capture,Control}}$ = Overall Capture and Control Efficiency, in percent
- CE_{Capture} = Capture Efficiency of the collection device, in percent, as determined in Section (F)(7)(a)
- CE_{Control} = Control Efficiency of the Control Device, in percent, as determined in Section (F)(7)(b).

- (d) The following equation shall be used to determine if the minimum required overall capture and control efficiency of an emission control system is at an equivalent or greater level of VOC reduction as would be achieved using compliant materials, equipment, or work practices, as stated in Section (C)(6)(g).

$$CE = \left[1 - \frac{VOC_{LWC}}{VOC_{LWn,Max}} \times \frac{1 - \left(\frac{VOC_{LWn,Max}}{D_{n,Max}} \right)}{1 - \left(\frac{VOC_{LWC}}{D_c} \right)} \right] \times 100$$

Where:

CE	=	Minimum Required Overall Capture and Control Efficiency, percent
VOC _{LWc}	=	VOC Limit, less water and less Exempt Compounds
VOC _{LWn,Max}	=	Maximum VOC content of noncompliant Ink (or Coating or Adhesive) used in conjunction with a Control Device, less water and less Exempt Compounds
D _{n,Max}	=	Density of Solvent, reducer, or Thinner contained in the noncompliant Ink (or Coating or Adhesive), containing the maximum VOC content of the multi-component Ink (or Coating, or Adhesive) printing Line
D _c	=	Density of corresponding Solvent, reducer, or Thinner used in the compliant Ink (or Coating, or Adhesive) system = 880 gm/liter.

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

[SIP: Submitted as amended mm/dd/yy on mm/dd/yy; Approved: 4/30/96, 61 FR 18962, 40 CFR 52.220(c)(198)(I)(E)(2)]

Rule 1118

Aerospace Assembly, Rework and Component Manufacturing Operations

(A) General

(1) Purpose

- (a) To reduce Volatile Organic Compounds (VOCs) from aerospace assembly, Rework and component manufacturing operations.

(2) Applicability.

- (a) This rule applies to any operation associated with manufacturing and assembling products for Aircraft and Space Vehicles. The affected industries include commercial, civil and military Aircraft, satellite, space shuttle and rocket manufacturers and their subcontractors.
- (b) This rule also applies to maskant applicators, Aircraft refinishers, Aircraft Fastener Manufacturers, Aircraft operators and Aircraft maintenance and service facilities.

(B) Definitions

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

- (1) “Ablative Coating” – A Coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.
- (2) “Adhesion Promoter Coating” – A Coating that is used to promote wetting and form a chemical bond with a subsequently applied Sealant or other elastomer.
- (3) “Adhesive” – Any substance that is used to bond one surface to another by attachment.
- (4) “Adhesive Bonding Primer” – A Primer applied in a thin film to Aerospace Components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment.
- (5) “Aerosol Coating Product” – A pressurized Coating product containing pigments or resins that is dispensed by means of a propellant, and is packaged in a disposable can for hand-held application.

- (6) “Aerospace Component” – The raw material, partial or completed fabricated part, assembly of parts, or completed unit of any Aircraft or Space Vehicle and includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons.
- (7) “Aerospace Material” – Any Coating, Primer, Adhesive, Sealant, maskant, lubricant, Stripper or Hand-Wipe Cleaning or clean-up solvent used during the manufacturing, assembly, refinishing, maintenance or service of an Aerospace Component.
- (8) “Air Brush Operations” – Application of Aerospace Material with equipment operating at air pressure between 25 psi and 116 psi and an air volume of 0.7 cfm and 1.75, respectively.
- (9) “Aircraft” – Any machine designed to travel through the air, without leaving the earth's atmosphere, whether heavier or lighter than air, including airplanes, balloons, dirigibles, helicopters, and missiles.
- (10) “Air Pollution Control Officer (APCO)” – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.
- (11) “Antichafe Coating” – A Coating applied to areas of moving Aerospace Components which may rub during normal operation.
- (12) “Antique Aerospace Vehicle or Component” – An Aircraft or component thereof that was built at least 30 years ago. An Antique Aerospace Vehicle would not routinely be in commercial or military service in the capacity for which it was designed.
- (13) “Anti-Wicking Wire Coating” – The outer Coating of a wire which prevents fluid wicking into insulation of the wire.
- (14) “Aqueous Cleaning Solvent” – A solvent in which water is at least 80 percent of the solvent as applied.
- (15) “Barrier Coating” – A Coating applied in a thin film to Fasteners to inhibit dissimilar metal corrosion and to prevent galling.
- (16) “Bearing Coating” – A Coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such bearing in order to facilitate bearing function or to protect the material from excessive wear. A material shall not be classified as a Bearing Coating if it can also be classified as a Dry Lubricative Material or a Solid-Film Lubricant.
- (17) “Bonding Maskant” – A temporary Coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

- (18) “Caulking and Smoothing Compound” – Semi-solid materials which are applied by Hand Application Methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a Caulking and Smoothing Compound if it can also be classified as a Sealant.
- (19) “Chemical Agent-Resistant Coating (CARC)” – An exterior Topcoat designed to withstand exposure to chemical and biological warfare agents or the decontaminants used on these agents.
- (20) “Chemical Milling” – The removal of metal by chemical action of acids or alkalis.
- (21) “Chemical Milling Maskant” – A Coating applied directly to aluminum components to protect surface areas when Chemical Milling the component with a Type I or Type II Etchant. Type I Chemical Milling Maskants are used with a Type I Etchant and Type II Chemical Milling Maskants are used with a Type II Etchant. This definition does not include Bonding Maskants, Critical Use and Line Sealant Maskants, and Seal Coat Maskants. Additionally, maskants that must be used with a combination of Type I or II Etchants and any of the above types of maskants (I.e., Bonding, Critical Use and Line Sealer, and Seal Coat) are not included. Maskants that are defined as Specialty Coatings are not included in this definition.
- (22) “Chemical Processing Maskant” – A Coating applied directly to an Aerospace Component to protect surface areas when anodizing, aging, bonding, plating, etching, and/or performing other chemical surface operations on the component.
- (23) “Clear Topcoat” – A Topcoat that contains no visible pigments and is uniformly transparent when applied.
- (24) “Coating” – A material that is applied to the surface of an aerospace vehicle or component to form a decorative, protective, or functional solid film, or the solid film itself.
- (25) “Coating Application Equipment” – Equipment used for applying Coating to a substrate. Coating Application Equipment includes Coating distribution lines, Coating hoses, pressure-pots, spray guns, and hand-application equipment, such as hand-rollers, brushes, daubers, spatulas, and trowels.
- (26) “Commercial Exterior Aerodynamic Structure Primer” – A Primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.
- (27) “Commercial Interior Adhesive” – Materials used in the bonding of passenger cabin interior components. These components must meet the FAA fireworthiness requirements.

- (28) “Compliance Assurance Monitoring” – The combined total equipment, mechanism(s), and/or technique(s) used to demonstrate and insure compliance with the control device efficiency requirements stipulated in subsection (D)(2) of this rule. Such monitoring is used to analyze and/or provide a permanent record of process parameters, such as temperatures, pressures, and flow rates.
- (29) “Compatible Substrate Primer” – Either compatible epoxy Primer or Adhesive Primer. Compatible epoxy Primer is Primer that is compatible with the filled elastomeric Coating and is epoxy based. The Compatible Substrate Primer is an epoxypolyamide Primer used to promote adhesion of elastomeric Coatings such as Impact-Resistant Coatings. Adhesive Primer is a Coating that (1) inhibits corrosion and serves as a Primer applied to bare metal surfaces or prior to Adhesive application, or (2) is applied to surfaces that can be expected to contain fuel. Fuel-Tank Coatings are excluded from this category.
- (30) “Conformal Coating” – A Coating applied to electrical conductors and circuit boards to protect them against electrical discharge damage and/or corrosion.
- (31) “Corrosion Prevention Compound System” – A Coating system that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.
- (32) “Critical Use and Line Sealer Maskant” – A temporary Coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, Chemical Milling and processing of magnesium, titanium, or high-strength steel, high-precision aluminum Chemical Milling of deep cuts, and aluminum Chemical Milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e. line sealer) are also included in this category.
- (33) “Cryogenic Flexible Primer” – A Primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent Coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (-275°F and below).
- (34) “Cryoprotective Coating” – A Coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.
- (35) “Cyanoacrylate Adhesive” – A fast-setting, single component Adhesive that cures at room temperature. Also known as “super glue.”
- (36) “District” – The Mojave Desert Air Pollution Control District (MDAQMD), the geographical area of which is described in District Rule 103 – *Description of the District Boundaries*.

- (37) “Dry Lubricative Material” – Coatings consisting of lauric acid, cetyl alcohol, waxes or other non-cross linked or resin bound materials which act as a dry lubricant or protective coat.
- (38) “Electric- or Radiation-Effect Coatings” – Any electrically conductive Coatings and radiation effect Coatings, and Coating systems the uses of which may include the prevention of radar detection.
- (39) “Electronic Wire Coating” – The outer electrical insulation Coating applied to tape insulation of a wire specifically formulated to smooth and fill edges.
- (40) “Electrostatic Discharge and Electromagnetic Interference (EMI) Coating” – A Coating applied to Space-Vehicles, missiles, Aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.
- (41) “Elevated-Temperature Skydrol-Resistant Commercial Primer” – Primer applied primarily to commercial Aircraft (or commercial Aircraft adapted for military use) that must withstand immersion in phosphate-ester (PE) hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150°F for 1,000 hours.
- (42) “Epoxy Polyamide Topcoat” – Coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.
- (43) “Exempt Compounds” – A compound identified as exempt in 40 CFR 51.100(s).
- (44) “Extreme Performance Interior Topcoat” – Any Topcoat used in interior spaces of Aircraft areas requiring a fluid, stain or nicotine barrier.
- (45) “Extreme Performance Coating” – Any Coating used on a metal surface where the coated surface is, in its intended use, exposed to any of the following:
- (a) Industrial-grade detergents, cleaners, or abrasive scouring agents;
 - (b) Frequent or chronic exposure to salt water, corrosives, caustics, acids, oxidizing agents, chemicals, chemical fumes, chemical mixtures or solution; or
 - (c) Other similar environmental conditions as determined in writing by the District's APCO.
- (46) “Facility” – Any permit unit, group of permit units, non-permitted equipment or any combination thereof which emits or may emit an Air Pollutant; and belongs to a single major industrial group in the Standard Industrial Classification manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.

- (47) “Fastener” – Any of various devices, including but not limited to, pins, collars, blots, nuts, and rivets for holding together two (2) or more objects or parts.
- (48) “Fastener Manufacturer” – A Facility that coats Aircraft Fasteners, such as pins, collars, bolts, nuts, and rivets, with Solid-Film Lubricants for distribution to other Facilities.
- (49) “Fastener Sealant” – A Sealant applied to a device used to join two (2) or more parts together.
- (50) “Fire-Resistant (Interior) Coating”
- (a) For civilian Aircraft, Fire-Resistant Interior Coatings are used on passenger cabin interior parts that are subject to FAA fireworthiness requirements.
 - (b) For military Aircraft, Fire-Resistant Interior Coatings are used on parts that are subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721.
 - (c) For space applications, Fire-Resistant Interior Coatings are used on parts that are subject to the flammability requirements of SE-R-0006 and SSP 30233.
- (51) “Flexible Primer” – A Primer that meets flexibility requirements such as those needed for Adhesive Bond Primed Fastener heads or on surfaces expected to contain fuel. The flexible Coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type Coatings as well as a flexible bridge between the Fasteners, skin, and skin-to-skin joints on outer Aircraft skins. This flexible bridge allows more Topcoat flexibility around Fasteners and decreases the chance of the Topcoat cracking around the Fasteners. The result is better corrosion resistance.
- (52) “Flight-Test Coating” – A Coating applied to an Aircraft prior to flight testing to protect the Aircraft from corrosion and to provide required marking during flight test evaluation.
- (53) “Flush Cleaning” – Removal of contaminants such as dirt, grease, oil, and Coatings from an aerospace vehicle or component or Coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item being cleaned and then drained, or assisted by air or hydraulic pressure, or by pumping. Hand-wipe Cleaning Operations where wiping, scrubbing, mopping, or other hand actions are used are not included.
- (54) “Fuel-Tank Adhesive” – An Adhesive used to bond components exposed to fuel that must be compatible with Fuel-Tank Coatings.
- (55) “Fuel-Tank Coating, General” – A Coating applied to a fuel tank of an Aircraft to protect it from corrosion and/or bacterial growth.

- (56) “Fuel-Tank Coating, Rapid Cure” – A Fuel-Tank Coating with shortened curing times and decreased sensitivity to low humidity during the curing process.
- (57) “General Coating Product” – Any Coating used on an Aerospace Vehicle which is not, as a category of products, specified in subsection (C)(1)(a) or (C)(1)(b) of this rule.
- (58) “Hand Application Method” – The application of Aerospace Materials by manually held, non-mechanically operated equipment. Such equipment includes, but is not limited to, paint brushes, hand-rollers, caulking guns, trowels, spatulas, syringe daubers, rags and sponges.
- (59) “Hand-Wipe Cleaning Operation” – Removing contaminants such as dirt, grease, oil, and Coatings from an aerospace vehicle or component by physically rubbing it with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.
- (60) “High Temperature Coating” – A Coating that must withstand temperatures of more than 350°F.
- (61) “High-Volume, Low-Pressure (HVL) Spray” – An Aerospace Materials Application system which is operated with air pressure between 0.1 and 10.0 pounds per square inch gauge (psig).
- (62) “Impact-Resistant Coating” – A flexible Coating that protects Aerospace Components, such as Aircraft landing gear, and landing gear compartments, and other surfaces subject to impact and abrasion from runway debris.
- (63) “Insulation Covering” – Material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.
- (64) “Intermediate Release Coating” – A thin Coating applied beneath Topcoats to assist in removing the Topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.
- (65) “Lacquer Coating” – A clear or pigmented Coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resolvable in their original solvent.
- (66) “Low-Solids Adhesive Coating, Primer or Sealant” – An Adhesive Coating, Primer or Sealant which has less than one (1) pound of solids per gallon of material. Such solids are the non-volatiles remaining after a sample is heated at 230°F (110°C) for one (1) hour.
- (67) “Low-Solids Corrosion Resistant Primer” – A corrosion resistant polyurethane compatible Primer with enhanced adhesion and rain erosion resistance which contains no more than 45 percent (45%) solids, by weight, as applied.

- (68) “Metallized Epoxy Coating” – A Coating that contains relatively large quantities of flake pigmentation for appearance and/or added protection.
- (69) “Mold Release Coating” – A Coating applied to the surface of a mold to prevent the molded component from sticking to the mold as it is removed.
- (70) “Non-Structural Adhesive” – An Adhesive that bonds non-load-carrying Aircraft components in non-critical applications and is not covered in any other specialty Adhesive categories.
- (71) “Optical Anti-Reflection Coating” – A Coating with a low reflectance in the infrared and visible wavelength range and is used for anti-reflection on or near optical and laser hardware.
- (72) “Part Marking Coating” – Coatings or inks used to make identifying markings on materials, components, and/or assemblies. These markings may be either permanent or temporary.
- (73) “Phosphate Ester Resistant Ink” – A Coating that is used for surface identification or marking which inhibits phosphate ester fluid corrosion.
- (74) “Photolithographic Maskant” – A Coating applied by Photoresist Operation(s) directly to printed circuit boards, and ceramic and similar substrates to protect surface areas from Chemical Milling or Chemical Processing.
- (75) “Photoresist Operation” – A process for the application or development of photoresist masking solution on a substrate, including preparation, soft bake, develop, hard bake, and stripping, and can be generally subdivided as follows:
 - (a) Negative Photoresist Operation is a process where the maskant hardens when exposed to light and the unhardened maskant is stripped, exposing the substrate surface for Chemical Milling or Chemical Processing.
 - (b) Positive Photoresist Operation is a process where the maskant softens when exposed to light and the softened maskant is stripped, exposing the substrate surface for Chemical Milling or Chemical Processing.
- (76) “Pre-Bonding Etchant” – An acid or basic substance that is used to increase the strength of an adhesive bond by chemically altering the substrate surface morphology to increase the bonding surface area of aerospace wire Coatings to the underlying insulation layer.
- (77) “Pretreatment Coating” – A Coating which contains no more than twelve percent (12 %) solids by weight, and at least 0.5 percent (0.5%) acid by weight, to provide surface etching and which is applied directly to surfaces to provide corrosion resistance, adhesion and ease of stripping.

- (78) “Primer” – A Coating applied directly to an Aerospace Component for purposes of corrosion prevention, protection from the environment, functional fluid resistance and/or adhesion of subsequent Coatings, Adhesives or Sealants.
- (79) “Primer Compatible with Rain Erosion-Resistant Coating” – A Primer to which rain erosion resistant Topcoat is applied.
- (80) “Rain Erosion-Resistant Coating” – A Coating that protects the leading edges, flaps, stabilizers, and engine inlet lips against erosion caused by rain impact during flight.
- (81) “Repair Coating” – A Coating used to recoat portions of a product which has sustained mechanical damage to the Coating following normal painting operations.
- (82) “Rework” – The inspection, repair, and reconditioning of Aerospace Components subject to this rule.
- (83) “Rocket Motor Bonding Adhesive” – Adhesive used in rocket motor bonding applications.
- (84) “Rocket Motor Nozzle Coating” – A catalyzed epoxy Coating system used in elevated temperature applications on rocket motor nozzles.
- (85) “Rollable, Brushable or Extrudable Sealant” – A single or multi-component polymeric material used to seal many types of joints, gaps, removable panels, and windows where moderate movement is expected. Such material may be applied by rolling brushing extruding or daubing.
- (86) “Rubber-based Adhesive” – A quick setting contact cement that provides a strong, yet flexible bond between two mating surfaces that may be of dissimilar materials.
- (87) “Scale Inhibitor Coating” – A Coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of tenacious scale.
- (88) “Screen Print Ink” – An ink used in screen printing processes during fabrication of decorative laminates and decals.
- (89) “Sealant” – Viscous semisolid materials that fill voids in order to seal out water, fuel and other and solids and in some cases, air movement.
- (90) “Seal Coat Maskant” – An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.
- (91) “Semiaqueous Cleaning Solvents” – A solution in which water is a primary ingredient (≥ 60 percent of the solvent solution as applied must be water).
- (92) “Silicone Insulation Material” – An insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or

engine exhaust. These materials differ from Ablative Coatings in that they are not “sacrificial.”

- (93) “Sealant Bonding Primer” – Any Coating applied in a very thin film to a part or product for the purpose of providing a Primer for a subsequent coat of silicone Sealant.
- (94) “Solid-Film Lubricant” – A very thin Coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.
- (95) “South Coast Air Quality Management District (SCAQMD)” – The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).
- (96) “Space Vehicle” – A vehicle designed to travel beyond earth's atmosphere.
- (97) “Specialized Function Coating” – A Coating that fulfills extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other Specialty Coating categories.
- (98) “Specialty Coating” – A Coating that, even though it meets the definition of a Primer, Topcoat, or self-priming Topcoat, has additional performance criteria beyond those of Primers, Topcoats, and self-priming Topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.
- (99) “Stencil Coating” – An ink or Coating that is rolled, sprayed with an airbrush or touch-up gun with a capacity of 8 ounces (236.4 ml) or less, or brushed while using a template to add identifying letters and or numbers to Aerospace Components.
- (100) “Stripper” – A volatile liquid applied to remove cured Aerospace Material or their residues.
- (101) “Structural Adhesive – Autoclavable” – An Adhesive used to bond load-carrying Aircraft components and is cured by heat and pressure in an autoclave.
- (102) “Structural Adhesive, High Temperature – Autoclavable” – An Adhesive used to bond load-carrying Aircraft components which is cured by heat and pressure in an autoclave, and can withstand service temperatures above 450°F (232°C).
- (103) “Structural Adhesive – Non-Autoclavable” – An Adhesive cured under ambient conditions and is used to bond load-carrying Aircraft components or other critical functions, such as nonstructural bonding in the proximity of engines.

- (104) “Temporary Protective Coating” – A Coating applied to an Aerospace Component to protect it from mechanical and environmental damage during manufacturing.
- (105) “Thermal Control Coating” – A Coating formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.
- (106) “Topcoat” – A Coating applied over a Primer or other Coating on an Aerospace Vehicle or Component for purposes such as appearance, identification, camouflage, or protection. Topcoats that are defined as Specialty Coatings are not included in this definition.
- (107) “Touch-Up Operation” – The application of Aerospace Materials by brush, air brush, or detail HVLP spray equipment outside of a permitted paint enclosure to repair minor surface damage and imperfections after the main Coating process.
- (108) “Transfer Efficiency” – The ratio of the weight or volume of Coating solids adhering to an object to the total weight or volume, respectively, of Coating solids used in the application process, expressed as a percentage.
- (109) “Type I Etchant” – A Chemical Milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.
- (110) “Type II Etchant” – A Chemical Milling etchant that is a strong sodium hydroxide solution containing amines.
- (111) “Unicoat” – A Coating which is applied directly to an Aerospace Component for purposes of corrosion protection, environmental protection and functional fluid resistance that is not subsequently Topcoated.
- (112) “United States Environmental Protection Agency (USEPA)” – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (113) “Volatile Organic Compound (VOC)” – Any compound containing the element carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and Exempt Compounds listed in 40 CFR 51.100(s).
- (114) “Wet Fastener Installation Coating” – A Primer or Sealant applied by dipping, brushing, or daubing to Fasteners that are installed before the Coating is cured.
- (115) “Wing Coating” – A corrosion-resistant Coating that is resilient enough to withstand the flexing of the aircraft wings.

(C) Requirements

(1) VOC Content of Coatings

- (a) A person shall not apply to Aerospace Components any Aerospace Materials, including any VOC-containing materials added to the original Aerospace Materials supplied by the manufacturer, which contain VOC in excess of the limits specified below:

SPECIALTY COATING VOC LIMITS	
Grams Per Liter of Coating Less Water and Less Exempt Compounds	
Aerospace Materials	VOC Limit
PRIMERS	--
General	350
Adhesive Bonding Primers	--
Commercial Aircraft	250
Military Aircraft	805
Commercial Exterior Aerodynamic Structure Primer	650
Compatible Substrate Primer	780
Cryogenic Flexible Primer	645
Elevated-Temperature Skydrol-Resistant Commercial Primer	740
Flexible Primer	640
Low-Solids Corrosion Resistant Primer	350
Primer Compatible with Rain Erosion-Resistant Coating	850
Sealant Bonding Primer	720
COATINGS	--
General	350
Ablative Coating	600
Adhesion Promoter Coating	850
Antichafe Coating	420
Bearing Coating	620
Chemical Agent-Resistant Coating (CARC)	500
Conformal Coating	750
Cryoprotective Coating	600
Electric- or Radiation-Effect Coating	800
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	800
Extreme Performance Coating	420
Fire-Resistant (Interior) Coating	--
Civilian	650
Military	800
Space	800
Flight-Test Coating	--
Used on Missiles or Single Use Target Aircraft	420
All Other	840
Fuel-Tank Coating	--
General	420
Rapid Cure	720
High-Temperature Coating	720
Impact-Resistant Coating	420
Intermediate Release Coating	750
Lacquer Coating	830

SPECIALTY COATING VOC LIMITS	
Grams Per Liter of Coating Less Water and Less Exempt Compounds	
Metallized Epoxy Coating	700
Mold Release Coating	780
Optical Anti-Reflection Coating	700
Part Marking Coating	850
Pretreatment Coating	780
Rain Erosion-Resistant Coating	600
Rocket Motor Nozzle Coating	660
Scale Inhibitor Coating	880
Space-Vehicle Coatings, Other: Does not include Electric Discharge and EMI Protection Coating or Fire-Resistant (Interior) Coating	1000
Specialized Function Coating	890
Temporary Protective Coating	250
Thermal Control Coating	800
Topcoat	
Clear Topcoat	420
Epoxy Polyamide Topcoat	660
Other Topcoat	340
Extreme Performance Interior Topcoat	420
Unicoat	420
Wet Fastener Installation Coating	675
Wing Coating	750
Wire Coatings	--
Anti-Wicking	420
Electronic Wire Coating	420
Pre-Bonding Etchant	420
Phosphate Ester Resistant Ink	925
ADHESIVES	--
Commercial Interior Adhesive	760
Cyanoacrylate Adhesive	1020
Fuel-Tank Adhesive	620
Non-Structural Adhesive	250
Rocket Motor Bonding Adhesive	890
Rubber-based Adhesive	850
Space Vehicle Adhesive	800
Structural Adhesive	--
Autoclavable	50
High Temperature – Autoclavable	650
Non-Autoclavable	700
SEALANTS	
Rollable, Brushable or Extrudable Sealant	280
Fastener Sealant	675
Other	600
MASKANTS	--
Bonding Maskant	1230
Critical Use and Line Sealant Maskant	750
Chemical Milling Maskant	
For use with Type I Etchant	250
For use with Type II Etchant	160

SPECIALTY COATING VOC LIMITS	
Grams Per Liter of Coating Less Water and Less Exempt Compounds	
For Chemical Processing *Less water, Exempt Compounds and perchloroethylene (PERC)	250*
Photolithographic Maskant	850
Seal Coat Maskant	1230
LUBRICANTS	
Fastener Installation Lubricant (applied at time of Aircraft/component assembly)	--
Solid-Film Lubricant	880
Dry Lubricative Material	675
Fastener Lubricative Coating (applied at time of Fastener manufacture)	--
Solid-Film Lubricant	250
Dry Lubricative Material	120
Barrier Coating	420
Non-Fastener Lubricative Coatings (applied at time of non-Fastener manufacture)	--
Solid-Film Lubricant	880
Dry Lubricative Materials	675
OTHER	
Caulking and Smoothing Compound	850
Corrosion Prevention Compound System	710
Insulation Covering	740
Screen Print Ink	840
Silicone Insulation Material	850

- (b) Documents shall be provided to the APCO demonstrating that the Unicoat is being used in lieu of the application of a Primer and Topcoat, and the applicant must receive written approval for the use of the Unicoat specifying the conditions of application from the APCO.
 - (c) For Low-Solids Adhesives, Coatings, Primers or Sealants, the appropriate limits in subparagraph (C)(1)(a) shall be expressed in grams of VOC per liter of material.
- (2) Solvent Use, Clean Up, and Stripping
- (a) A person shall not use VOC-containing materials for cleaning or clean-up, excluding Coating stripping and equipment cleaning, unless:
 - (i) The VOC composite partial pressure is 45 mm Hg or less at a temperature of 20°C (68°F), or
 - (ii) The material contains 200 grams or less of VOC per liter of material, as applied.
 - (b) A person shall not use Stripper on Aerospace Components unless:
 - (i) The Stripper contains less than 300 grams per liter (2.5 lbs per gal) of VOC content; or

- (ii) The VOC composite partial pressure of 9.5 mm Hg (0.18 psia) or less at 20°C (68°F).
- (c) Cleaning solvents used in Hand-Wipe Cleaning Operations shall:
 - (i) Meet the definition of Aqueous Cleaning Solvent; or
 - (ii) Have a VOC composite pressure less than or equal to 45 mm Hg at 20°C (68° F).
- (d) For cleaning solvents used in the Flush Cleaning of aerospace parts, assemblies, and Coating unit components, the used cleaning solvent must be emptied into an enclosed container or collection system that is kept closed when not in use or captured on wipers and disposed of in accordance with subsection (C)(3)(a). Aqueous and Semiaqueous Cleaning Solvents are excluded from these requirements.
- (e) Spray guns must be cleaned by one or more of the following methods:
 - (i) Enclosed spray gun cleaning system that is kept closed when not in use.
 - a. Leaks from enclosed spray gun cleaners are repaired within 14 days from when the leak is first discovered. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;
 - (ii) Unatomized discharge of cleaning solvent into a waste container that is kept closed when not in use;
 - (iii) Disassembled spray gun that is cleaned in a vat and kept closed when not in use; or
 - (iv) Atomized spray into a waste container that is fitted with a device designed to capture atomized cleaning solvent emissions.
- (f) A person shall not atomize any solvent into open air.
- (3) Storage of VOC-Containing Materials
 - (a) All VOC containing material, used or unused, including but not limited to surface Coatings, thinners, cleanup solvents, or surface preparation materials, and all solvent laden cloth and paper, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times except during extraction or introduction of material for mixing, use or storage.
 - (b) Handling and transfer procedures must be implemented to minimize spills during filling and transferring cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or used cleaning solvents.

- (c) The provisions of Subsections (C)(3)(a) and (b) shall not apply to:
 - (i) Cotton tipped swabs used for very small cleaning operations.
 - (ii) Aqueous Cleaning Solvents.
- (4) Transfer Efficiency
 - (a) No person or Facility shall apply Aerospace Material unless it is applied with properly operated equipment or controlled, according to operating procedure specified by the equipment manufacturer or the APCO, and by the use of one of the following methods:
 - (i) Electrostatic application;
 - (ii) Flow/curtain coater application;
 - (iii) Roll coater;
 - (iv) Dip coater;
 - (v) High-Volume, Low-Pressure (HVLP) Spray;
 - (vi) Electrodeposition;
 - (vii) Cotton tipped swab application;
 - (viii) Hand Application Methods, or
 - (ix) Such other alternative application methods as are demonstrated to the APCO, using District-approved procedures, to be capable of achieving a Transfer Efficiency at least equivalent to method (C)(4)(a)(v). Such alternative application techniques shall be approved in writing prior to use by the APCO.
 - (x) Approved air pollution control equipment under subsection (C)(5).
- (5) Control Equipment
 - (a) Owners and/or operators may comply with provisions of paragraphs (C)(1), (C)(2), and (C)(4) by using approved air pollution control equipment provided that the VOC emissions from such operations and/or materials are reduced in accordance with the following:
 - (i) The control device shall reduce emissions from an emission collection system by at least 95 percent (95%), by weight, or by reducing the output of the air pollution control device to less than 50 ppm calculated for carbon with no dilution.
 - (ii) The owner/operator demonstrates that the system collects at least 90 percent (90%), by weight, of the emissions generated by the sources of emissions.
- (6) Prohibition of Solicitation of Violations
 - (a) A person shall not solicit or require any other person to use, in the District, any Aerospace Material or combination of Aerospace Materials to be applied to any Aircraft Component subject to the provisions of this rule that does not meet the limits and requirements of this rule.

- (b) The requirements of this paragraph shall apply to all written or oral agreements executed or entered into after October 26, 2015.

(D) Monitoring, Recordkeeping and Reporting

(1) Recordkeeping

Persons subject to this rule shall maintain the following records:

- (a) Materials List Record – Maintain a current listing of all VOC-containing materials in use at Facility. This listing shall include:
 - (i) Material name and manufacturer identification;
 - (ii) Application method;
 - (iii) Material category and specific use instructions;
 - (iv) Specific mixing ratio; and
 - (v) Maximum VOC content as applied (including thinning solvents).
- (b) Technical Information Records – Current Coating manufacturer specification sheets, Material Safety Data Sheets (MSDS) or current air quality data sheets, which list the VOC content of each material in use at Facility, shall be available for review on site.
- (c) Purchase Records – Maintain purchase records identifying the type or name and the volume of material purchased for each VOC-containing material.
- (d) Materials Usage Records
 - (i) Maintain on a daily basis a record of the volume, VOC content, and resulting VOC emissions of each VOC-containing material used. These records shall be summarized cumulatively on a monthly basis and for each calendar year.
 - (ii) If the Facility uses, exclusively, Coatings formulations compliant with Section (C), records may be maintained on a monthly basis.
- (e) Cleaning Solvent Recordkeeping
 - (i) For Aqueous and Semiaqueous Cleaning Solvents, maintain a list of materials used with corresponding water contents.
 - (ii) For vapor pressure compliant Hand-Wipe cleaning solvents:
 - a. Maintain a current list of cleaning solvents in use with their respective vapor pressures or, for blended solvents, VOC composite vapor pressure.
 - b. Record cleaning solvent usage on a monthly basis.
 - (iii) For cleaning solvents with a vapor pressure greater than 45 mm Hg used in exempt Hand-Wipe Cleaning Operations:
 - a. Maintain a list of exempt Hand-Wipe Cleaning Operations.
 - b. Record cleaning solvent usage on a monthly basis.

- (2) Add-on Emissions Control Equipment Records – Operators of Facilities that use non-compliant Coating materials with compliance achieved through the operation of add-on emission control equipment shall:
 - (a) Maintain daily records of key operating and maintenance procedures.
 - (b) Utilize Compliance Assurance Monitoring, as approved by the APCO, to meet administrative and equipment operational requirements.
 - (c) If a control device is used, each owner/operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in subsection (C)(5). For carbon adsorption systems, the initial performance test shall be used to establish the appropriate rolling average material balance period for determining compliance.
- (3) Except for Specialty Coatings, any source that complies with the recordkeeping requirements of the Aerospace NESHAP, 40 CFR 63.752, is deemed to be in compliance with the requirements of (D)(1).
- (4) Records Availability and Retention – All records required by this rule shall be retained for the previous five (5) year period and be available for inspection upon request by the APCO or their designated representative.
- (5) Any person or Facility claiming to be exempt from Section (C) of this rule must comply with applicable Recordkeeping requirements to provide documentation for the claimed exempt status.
- (6) Any person or Facility claiming exempt status must make, in writing, a certified Statement of Compliance to the District at the same time as the annual permit review/renewal or by March 1 of each calendar year for facilities not required to have permits to operate by the District.

(E) Compliance Procedures and Test Methods

- (1) Calculations
 - (a) For the purpose of determining compliance with VOC content limits specified in Section (C), grams of VOC per liter of Aerospace Material shall be determined by using the following formulas as applicable:
 - (i) For Aerospace Materials not containing reactive diluents, grams of VOC per liter of Coating, less water and less Exempt Compounds shall be determined as follows:

$$\begin{array}{l} \text{Grams of VOC per Liter of} \\ \text{Coating, Less Water and Less} \\ \text{Exempt Compounds} \end{array} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

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.

- (ii) For Aerospace Materials that contain reactive diluents, grams of VOC per liter of Coating, less water and less Exempt Compounds shall be determined as follows:

$$\begin{array}{l} \text{Grams of VOC per Liter of} \\ \text{Coating, Less Water and Less} \\ \text{Exempt Compounds} \end{array} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:

W_s	=	Weight of volatile compounds evolved during curing and analysis, in grams.
W_w	=	Weight of water evolved during curing and analysis, in grams.
W_{es}	=	Weight of Exempt Compounds evolved during curing and analysis, in grams.
V_m	=	Volume of material prior to reaction, in liters.
V_w	=	Volume of water evolved during curing and analysis, in liters.
V_{es}	=	Volume of Exempt Compounds evolved during curing and analysis, in liters.

- (b) Total grams of VOC per liter of Aerospace Material shall be determined using the following formula:

$$\begin{array}{l} \text{Grams of VOC per Liter of} \\ \text{Coating} \end{array} = \frac{W_s - W_w - W_{es}}{V_m}$$

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.

- (c) The VOC composite partial pressure shall be determined as follows:

$$PP_c = \frac{\sum_{i=1}^n \frac{W_i}{MW_i} \times VP_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- W_i = Weight of the “i”th VOC compound, in grams.
- W_w = Weight of water, in grams.
- W_e = Weight of Exempt Compound, in grams
- MW_i = Molecular weight of the “i”th VOC compound, in grams per gram-mole.
- MW_e = Molecular weight of Exempt Compound, in grams per gram-mole.
- PP_c = VOC composite partial pressure at 20°C, in mm Hg.
- VP_i = Vapor pressure of the “i”th VOC compound at 20°C, in mm Hg.

(2) VOC Content of Aerospace Materials

- (a) To determine the physical properties of an Aerospace Material in order to perform the calculations in subsection (E)(1) , the following reference methods shall be used:
- (i) EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A).
 - a. Analysis done according to EPA Method 24 shall utilize ASTM Method D-2369-95 (Standard Test Method for Volatile Content of Coatings), referenced in EPA Method 24.
 - b. The exempt solvent content shall be determined using SCAQMD Test Methods 302-91 (Distillation of Solvents from Paints, Coatings and Inks, February 1993) and 303-91 (Determination of Exempt Compounds, August 1996) (SCAQMD “Laboratory Methods of Analysis for Enforcement Samples” manual) or;
 - (ii) SCAQMD Test Methods 302-91, 303-91, and 304-91 (Determination of Volatile Organic Compounds (VOC) in Various Materials, February 1996) (SCAQMD “Laboratory Methods of Analysis for Enforcement Samples” manual).

- (b) The following classes of compounds listed below will be analyzed as Exempt Compounds for compliance with Section (C), only at such time as manufacturers specify which individual compounds are used in the Coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each Exempt Compound.
 - (i) Cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- (3) Test Methods
 - (a) Efficiency of the control device shall be determined according to EPA Method 25 (Determination of Total Gaseous Nonmethane Organic Emissions as Carbon), 25A (Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer), or SCAQMD Test Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon, February 1991) or SCAQMD Test Method 25.3 (Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Lean Fueled Combustion Sources, March 2000). Emissions determined to exceed any limits established by this rule through the use of either of the above-referenced test methods shall constitute a violation of this rule.
 - (b) The capture efficiency of the emissions collection system shall be determined by the EPA Method 204A (Volatile Organic Compounds in Liquid Input Steam), EPA Method 204B (Volatile Organic Compounds Emissions in Captured Steam), EPA Method 204C (Volatile Organic Compounds Emissions in Captured Steam (Dilution Technique)), EPA Method 204D (Volatile Organic Compounds Emissions in Uncaptured Stream from Temporary Enclosure), EPA Method 204E (Volatile Organic Compounds Emissions in Uncaptured Stream from Building Enclosure), and EPA Method 204F (Volatile Organic Compounds Content in Liquid Input Stream (Distillation Approach)) and the most recent version of USEPA's *Guidelines for Determining Capture Efficiency* or any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD.
 - (c) The Transfer Efficiency of alternative Coating application methods shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

- (d) The identity and quantity of components in solvents shall be determined in accordance with SCAQMD Test Method 308-91 (Quantitation of Compounds by Gas Chromatography) contained in the SCAQMD “Laboratory Methods of Analysis for Enforcement Samples” manual. The VOC composite partial pressure is calculated using the equation in subsection (E)(1)(c).
- (e) Multiple Test Methods
 - (i) When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.
- (f) Any applicable alternative test method may be used so long as such method has been approved by USEPA, CARB and the APCO.

(F) Administrative Requirements

(1) Rule 442 Applicability

- (a) Any Aerospace Material or Facility which is exempt from all or a portion of this rule, shall comply with the provisions of Rule 442 – *Usage of Solvents*.

(G) Exemptions

- (1) The provisions of Section (C)(1) shall not apply to Aerospace Materials with separate formulations that are used in volumes of less than 20 gallons in any calendar year, provided that the total volume of non-complying Coatings used at a stationary source does not exceed 200 gallons annually.
- (2) The provisions of Section (C) of this rule shall not apply to a Facility which uses a total of less than three (3) gallons of VOC-containing Aerospace Materials on each and every day of operation.
- (3) The provisions of subsections (C)(1) and (C)(4) of this rule shall not apply to incidental corrosion maintenance Repair Coating operations at military Facilities, provided that the Coating use at any maintenance repair location within the Facility does not exceed 1.5 gallons per day, and the total Coating usage for such operations at the Facility does not exceed five (5) gallons per day.
- (4) The provisions of subsection (C)(2)(a) shall not apply to Space Vehicle manufacturing.
- (5) The provisions of subsection (C)(1) shall not apply to clear or translucent Coatings applied on clear or transparent substrates.

- (6) The provisions of subsection (C)(4) shall not apply to Touch-up Operations and Stencil Coatings provided that the Touch-up Operations and Stencil Coatings do not exceed 25 sq. ft. per Aircraft.
- (7) The provisions of subsection (C)(1) shall not apply to the recoating of assembled Aircraft at Rework facilities if the original Coatings formulations are used.
- (8) The provisions of this rule shall not apply to Rework operations performed on Antique Aerospace Vehicles or Components.
- (9) The provisions of paragraph (C)(1) shall not apply to Adhesives with separate formulations that are used in volumes of less than ten (10) gallons per year.
- (10) The provisions of Section (C) shall not apply to laboratories which apply Aerospace Materials to test specimens for the purpose of research, development, quality control, and testing of production-related operations.
- (11) The provisions of subsection (C)(2) do not apply to the surface cleaning of solar cells, fluid systems, avionic equipment, and laser optics.
- (12) The following Hand-Wipe Cleaning Operations are exempt from the requirements of subsection (C)(2)(c):
 - (a) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;
 - (b) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (i.e., nitrogen tetroxide, liquid oxygen, hydrazine);
 - (c) Cleaning and surface activation prior to adhesive bonding;
 - (d) Cleaning of electronics parts and assemblies containing electronics;
 - (e) Cleaning of Aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;
 - (f) Cleaning of fuel cells, fuel tanks, and confined spaces;
 - (g) Surface cleaning of coated optics, and thermal control surfaces;
 - (h) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the Aircraft;
 - (i) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the

completed cores used in the manufacture of aerospace vehicles or components;

- (j) Cleaning of Aircraft transparencies, polycarbonate, or glass substrates;
 - (k) Cleaning and solvent usage associated with research and development, quality control, or laboratory testing;
 - (l) Cleaning operations, using nonflammable liquids, conducted within 5 feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled Aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and,
 - (m) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR § 82.4.
- (13) The provisions of subdivision (D)(1) and (C)(4) shall not be applied to the application of materials that contain less than 20 g per L of VOC per liter of material.
- (14) The provisions of (C)(4) shall not apply to the use of materials dispensed from airbrush application methods provided that the paint reservoir on the air brush is eight (8) ounces or less and that the total amount of Coating used for Air Brush Operations at the Facility does not exceed five (5) gallons per year.
- (15) The provisions of this rule shall not apply to Aerosol Coating Products.

[SIP: See SIP Table at

<http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>]

RULE 1157

Boilers and Process Heaters

(A) General

(1) Purpose:

- (a) To limit Oxides of Nitrogen (NO_x) and Carbon Monoxide (CO) emissions from industrial, institutional, and commercial Boilers, Steam Generators, and Process Heaters.

(2) Applicability:

- (a) This rule applies to new and existing Boilers, Steam Generators, and Process Heaters located within the Federal Ozone Non-Attainment Area with Rated Heat Inputs of greater than or equal to 5 million Btu per hour (MMBtu/hr) which are used in all industrial, institutional, and commercial operations, including permit units used by Independent Power Producer or a Cogeneration Facility.
 - (b) This rule does not apply to permit units whose sole purpose is the production of steam for electrical power generating equipment when the permit unit is located at a facility directly regulated by a Public Utilities Commission.
- (3) Compliance with this rule does not exempt a person from complying with any other applicable State, federal or local law, statute, code, ordinance, rule, or regulation.

(B) Definitions

- (1) The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:
 - (a) "Annual Heat Input" - The total heat input of fuels, in Btu, burned by a permit unit in a calendar year, as determined from the higher heating value and cumulative annual usage of each fuel.
 - (b) "Cogeneration Facility" – A facility which produces:
 - (i) electric energy; and
 - (ii) steam or forms of useful energy (such as heat) which are used for industrial or commercial heating or cooling purposes.

- (c) "Gas Curtailment" - A period of time during which the supply of gaseous fuel to an permit unit is restricted or halted for reasons beyond the control of the facility. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.
- (d) "Emissions Control Plan" - A document which outlines how an existing facility will comply with the requirements of this rule. The plan shall contain the following:
 - (i) a list of all permit units with their Rated Heat Inputs and estimated Annual Heat Inputs; and
 - (ii) for permit units subject to subsection (C)(3)(a) or (C)(4)(a), for each permit unit listed, the selected method of achieving the applicable standard or standards of subsection (C)(3)(a) or (C)(4)(a); and
 - (iii) for permit units subject to subsection (C)(3)(b) or (C)(4)(b), for each permit unit listed, a selection of one of the four options specified in subsection (C)(3)(b) or (C)(4)(b) to achieve compliance with this rule.
- (e) "Gaseous Fuel" - Natural gas, digester gas, landfill gas, methane, ethane, propane, butane, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.
- (f) "High Annual Heat Input Permit Unit" - A permit unit with an annual heat input greater than or equal to 50,000 million Btu (MMBtu).
- (g) "Independent Power Producer" - A power plant which is not directly regulated by a Public Utilities Commission, which provides power to an electric utility rather than directly to rate-payers, and which is a Qualifying Small Power Production Facility per Public Utility Regulatory Policies Act regulations (18 CFR Ch.1, Subpart B).
- (h) "Liquid Fuel" - Any fuel which is a liquid at standard conditions including but not limited to distillate oils, kerosene and jet fuel. Liquefied Gaseous Fuels are not Liquid Fuels.
- (i) "Low Annual Heat Input Permit Unit" - A permit unit with an annual heat input less than 50,000 million Btu (MMBtu).
- (j) "NO_x Emissions" (NO_x) - The sum of any oxides of nitrogen which can be measured in the flue gas.

- (k) "Process Heater" - Any combustion equipment fired with any fuel, which transfers heat from combustion gases to water or process streams. Process Heaters do not include any dryers in which the material being dried is in direct contact with the products of combustion, such as: cement or lime kilns, glass melting furnaces, or smelters.
- (l) "Solar Power Production Facility" - An independent power producer which is a Solar Thermal Powerplant in which 75 percent (75%) or more of the total energy output is from solar energy and the use of backup fuels, such as oil, natural gas, and coal, does not, in the aggregate, exceed 25 percent (25%) of the total energy input of the facility during any calendar year period per Public Resources Code §25140.

(C) Requirements

- (1) RACT standards shall apply to all permit units, unless BARCT standards are applicable to the particular existing permit unit. BARCT standards shall apply to any existing permit units currently permitted to emit more than five tons per day or more than 250 tons per year of NO_x.
- (2) An Owner/Operator of any permit unit(s) subject to subsection (C)(3)(a) or (C)(4)(a) below shall have the option of complying with either the ppmv or pounds per million Btu (lbs/MMBtu) NO_x emission limits.
- (3) RACT Standards:
 - (a) High Annual Heat Input permit units, shall not emit:
 - (i) carbon monoxide in excess of 400 ppmv; and
 - (ii) NO_x in excess of 30 ppmv, and/or 0.036 lbs/MMBtu of heat input, when operated on Gaseous Fuel; and
 - (iii) NO_x in excess of 40 ppmv, and/or 0.052 lbs/MMBtu of heat input, when operated on Liquid Fuels; and
 - (iv) NO_x in excess of the heat-input weighted average of the limits specified in (C)(3)(a)(ii) and (C)(3)(a)(iii), above, when operated on combinations of Gaseous and/or Liquid Fuels.

Sample calculation:

$$Emission\ Limit = \frac{(30\ ppmv * x) + (40\ ppmv * y)}{x + y}$$

Where:

x	=	Annual Heat Input from Gaseous Fuel
y	=	Annual Heat Input from Liquid Fuel

- (b) Low Annual Heat Input permit units shall:
- (i) be operated in a manner that maintains stack-gas oxygen (O₂) concentrations at less than or equal to 3.0 percent by volume on a dry basis; or
 - (ii) be operated with a stack-gas oxygen trim system set at 3.00±0.15 percent oxygen by volume on a dry basis; or
 - (iii) be tuned at least annually in accordance with the procedure described in Section (I), a modification of the tuning procedure described in Section (I) as approved by the APCO, CARB and USEPA, or the permit unit manufacturer's specified tune-up procedure; or
 - (iv) be operated in compliance with the applicable emission levels specified in subsection (C)(3)(a).

(4) BARCT Standards:

- (a) High Annual Heat Input permit units, as defined in Section (B), shall not emit:
- (i) carbon monoxide in excess of 400 ppmv; and
 - (ii) NO_x in excess of 30 ppmv, and/or 0.036 lbs/MMBtu of heat input, when operated on Gaseous Fuel; and
 - (iii) NO_x in excess of 40 ppmv, and/or 0.052 lbs/MMBtu of heat input, when operated on Liquid fuels ; and
 - (iv) NO_x in excess of the heat-input weighted average of the limits specified in (C)(4)(a)(ii) and (C)(4)(a)(iii), above, when operated on combinations of Gaseous and/or Liquid fuels.

Sample calculation:

$$Emission\ Limit = \frac{(30\ ppmv * x) + (40ppmv * y)}{x + y}$$

Where:

x	=	Annual Heat Input from Gaseous Fuel
y	=	Annual Heat Input from Liquid Fuel

- (b) Low Annual Heat Input permit units, as defined in Section (B), shall:
- (i) be operated in a manner that maintains stack-gas oxygen concentration at less than or equal to 3.0 percent by volume on a dry basis; or
 - (ii) be operated with a stack-gas oxygen trim system set at 3.00±0.15 percent oxygen by volume on a dry basis; or

- (iii) be tuned at least annually in accordance with the procedure described in Section (I), a modification of the tuning procedure described in Section (I) as approved by the APCO, CARB and USEPA, or the permit unit manufacturer's specified tune-up procedure; or
- (iv) be operated in compliance with the applicable emission levels specified in subsection (C)(4)(a).

(5) General Equipment Requirements:

- (a) Owner/Operators of permit units which simultaneously fire combinations of different fuels, and are subject to the requirements of subsection (C)(3)(a) or (C)(4)(a), shall:
 - (i) install mass flow rate meters in each fuel line; or
 - (ii) install volumetric flow rate meters in conjunction with temperature and pressure probes in each fuel line; or
 - (iii) maintain a fuel log.
- (b) Owner/Operators of permit units which employ flue-gas NO_x reduction technology, and are subject to the requirements of subsection (C)(3)(a) or (C)(4)(a), shall:
 - (i) install meters as applicable to allow instantaneous monitoring of the operational characteristics of the NO_x reduction equipment; or
 - (ii) maintain a log of NO_x reduction equipment operational characteristics.
- (c) Owner/Operators of permit units which are subject to (C)(3)(b) or (C)(4)(b) and choose to comply with (C)(3)(b)(ii) or (C)(4)(b)(ii), respectively, shall install a stack-gas oxygen trim system.

(D) Exemptions

- (1) During periods of unexpected gas curtailment of normal Gaseous Fuels, permit units subject to the requirements of subsection (C)(3)(a) or (C)(4)(a) which normally burn only Gaseous Fuel shall comply with a NO_x emission limit of either 150 ppmv or 0.215 pound per million Btu of heat input when burning Liquid Fuel. (This exemption shall not exceed the period of natural gas curtailment, and specifically includes equipment and emission testing time not exceeding 48 hours per calendar year).
- (2) Permit units which are located at Solar Power Production Facilities and are subject to the requirements of subsection (C)(3)(a) shall comply with the following NO_x emission limits in lieu of complying with subsection (C)(3)(a):
 - (a) 125 ppmv, when the permit unit is located at SEGS VI or SEGS VII in Kramer Junction and is operating at 40% or less of Rated Heat Input; and

- (b) 70 ppmv, when the permit unit is located at SEGS VI or SEGS VII in Kramer Junction and is operating at more than 40% of Rated Heat Input, or when the permit unit is located at SEGS III, IV, V in Kramer Junction or SEGS VIII or IX in Harper Lake under all operating conditions; and,
 - (c) those limits specified in (C)(3)(a), for all other such permit units and operating conditions.
- (3) The provisions of Section (C) of this rule shall not apply to permit units which have no Annual Heat Input (Annual Heat Input equals zero). The Owner/Operator of any permit unit who wishes to claim an exemption pursuant to this subsection shall meet the record keeping requirements of this rule so as to be able to prove the exemption status.
 - (4) Units which are subject to District Rules 1158 or 1161 are exempt from this rule.
 - (5) Units located outside of the Federal Ozone Non-Attainment Area (FONA) are exempt from this rule.

(E) Monitoring and Records

- (1) Emissions Compliance Testing:
 - (a) Frequency: All permit units covered under subsections (C)(3) and (C)(4) shall demonstrate compliance through emission compliance testing not less than once every 12 months, except that permit units complying with subsection (C)(3)(b)(iii) or (C)(4)(b)(iii) shall be tested not less than once every 12 months, and permit units claiming an exemption pursuant to subsection (D)(1) which burn a secondary fuel for less than 720 cumulative hours in the twelve month consecutive period prior to testing shall not be required to perform compliance testing for that fuel.
 - (b) Procedures:
 - (i) Compliance testing required by this rule shall follow the administrative procedures outlined in the District's Compliance Test Procedural Manual. All emission determinations shall be made as stipulated in the test protocol accepted by the District.
 - (ii) Emission determinations shall include, at a minimum, one emission compliance test conducted at 90% of the maximum firing rate allowed by the District permit or at normal operating conditions.
 - (iii) All ppmv emission limits specified in subsections (C)(3)(a), (C)(4)(a) and (D)(1) are referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen.
 - (iv) All lbs/MMBtu NO_x emission rates shall be calculated as pounds of nitrogen dioxide per MMBtu of heat input.
 - (v) All emission concentrations and emission rates shall be based on hourly averages.

(2) Records and Reporting

- (a) For all permit units subject to this rule, the Owner/Operators shall monitor and record for each permit unit the High Heat Value and cumulative annual usage of each fuel. The cumulative annual usage of each fuel shall be monitored from utility service meters, purchase or tank fill records. A statement of the heat input for the previous calendar year shall be submitted to the District by March 1 each year.
- (b) For permit units exempt from subsection (C)(3)(a) or (C)(4)(a) in accordance with subsection (D)(1), the Owner/Operators shall monitor and record for each permit unit the cumulative annual hours of operation on each Liquid Fuel.
- (c) All data shall be kept current and on site for a minimum of five years, and provided to District or state personnel on request.
- (d) The Owner/Operators of permit units subject to this rule shall submit all required compliance test reports to the District.
- (e) For each permit unit complying with subsection (C)(3)(b)(iii) or (C)(4)(b)(iii), records verifying that the tune-up has been performed for each fuel burned shall be maintained on site for five years. If a different tune-up procedure from that described in Section (I) is used, then a copy of this procedure shall be kept on site for five years. Such records shall be provided on request by the APCO.
- (f) Test reports shall include the operational characteristics of all flue-gas NO_x reduction equipment.

(F) Test Methods

- (1) Compliance with the NO_x, carbon monoxide and oxygen requirements of Section C shall be determined using the following test methods:
 - (a) Oxides of Nitrogen - EPA Method 7E or ARB Method 100
 - (b) Carbon Monoxide - EPA Method 10 or ARB Method 100
 - (c) Stack Gas Oxygen - EPA Method 3 or 3A or ARB Method 100 (d) NO_x Emission Rate (Heat Input Basis) - EPA Method 19
- (2) HHV determination shall be by one of the following test methods:
 - (a) ASTM D 240-87 or ASTM D 2382-88 for liquid hydrocarbon fuels; or
 - (b) ASTM D 1826-03, or ASTM D 1945-03 (2010) or D 1945-14 in conjunction with ASTM D 3588-98 (2003) for Gaseous Fuels.

(G) Compliance Schedule

- (1) The Owner/Operator of a permit unit which becomes subject to the requirements of subsection (C)(3)(a) or (C)(4)(a) by exceeding the Annual Heat Input thresholds in subsection (B)(1)(h) for a calendar year, or by operating the permit unit so that an exemption pursuant to (D)(3) no longer applies, shall fulfill the following increments of progress:
 - (a) On or before December 31 of the calendar year immediately following the year that the Annual Heat Input threshold was exceeded or the permit unit commenced operation, submit an Emissions Control Plan containing the information outlined in subsection (B)(1)(e).
 - (b) No later than three calendar years following the submission of the Emissions Control Plan, demonstrate final compliance with all applicable standards and requirements of the rule.
- (2) Failure to perform interim measures as set forth in a submitted Emissions Control Plan shall constitute a violation of this rule.

(H) Severability of Portions of this Rule

If any portion of this rule is found to be invalid or unenforceable, such finding shall have no effect on the validity and enforceability of the remaining portions of the rule, which are severable and shall continue to be in full force and effect.

(I) Tuning Procedure

- (1) Nothing in these Tuning Procedures shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.
- (2) Tuning Procedure for Forced-Draft Permit units¹
 - (a) Operate the permit unit at the firing rate most typical of normal operation. If the permit unit experiences significant load variations, operate it at its average firing rate.

¹ This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for the USEPA.

- (b) At this firing rate, record stack gas temperature, oxygen concentration, and CO concentration (for Gaseous Fuels) or smoke-spot number² (for Liquid Fuels), and observe flame conditions after permit unit operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values,³ and if the CO emissions are low and there is no smoke, the permit unit is probably operating at near optimum efficiency - at this particular firing rate. However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical.
- (c) Increase combustion air flow to the furnace until stack gas oxygen levels increase by one to two percent over the level measured in subsection (I)(2)(b). As in (I)(2)(b), record the stack gas temperature, CO concentration (for Gaseous Fuels), or smoke-spot number (for Liquid Fuels), and observe flame conditions for these higher oxygen levels after Boiler operation stabilizes.
- (d) Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in (I)(2)(b). From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, CO concentration (for Gaseous Fuels) and smoke-spot number (for Liquid Fuels). Also, observe the flame and record any changes in its condition.
- (e) Continue to reduce combustion air flow stepwise, until one of these limits is reached:
 - (i) Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.
 - (ii) Stack gas CO concentrations greater than 400 ppmv.
 - (iii) Smoking at the stack.
 - (iv) Equipment-related limitations - such as low windbox/furnace pressure differential, built in air-flow limits, etc.
- (f) Develop an O₂/CO curve (for Gaseous Fuels) or O₂/smoke curve (for Liquid Fuels) using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.

² The smoke-spot number can be determined with ASTM test method D-2156-80 or with the Bacharach method.

³ Typical minimum oxygen levels for boilers at high firing rates are: For natural gas: 0.5 -3%; 2. For Liquid Fuels: 2 - 4%

- (g) From the curves prepared in (I)(2)(f), find the stack gas oxygen levels where the CO emissions or smoke-spot number equal the following values:

Fuel	Measurement	Value
Gaseous	CO Emissions	400 ppmv
#1 and #2 oils	smoke-spot number	number 1
# 4 Oil	smoke-spot number	number 2
# 5 Oil	smoke-spot number	number 3
Other oils	smoke-spot number	number 4

The above conditions are referred to as the CO or smoke thresholds, or as the minimum excess oxygen levels.

Compare this minimum value of excess oxygen to the expected value provided by the combustion permit unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion permit unit manufacturer, burner adjustments can probably be made to improve fuel and air mix, thereby allowing operations with less air.

- (h) Add 0.5 to 2.0 percent to the minimum excess oxygen level found in (I)(2)(g) and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or play in automatic controls.
- (i) If the load of the combustion permit unit varies significantly during normal operation, repeat (I)(2)(a) through (h) for firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give the best performance over the range of firing rates. If one firing rate predominates, setting should optimize conditions at the rate.
- (j) Verify that the new settings can accommodate the sudden load changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in (I)(2)(e) result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.

- (k) When the above checks and adjustments have been made, record data and attach combustion analysis to permit unit records. Indicate the name and title of the person performing the tune-up, the date the tune-up was performed, and sign the record.
- (3) Equipment Tuning Procedure for Natural Draft Fired Permit units
- (a) Preliminary Analysis
 - (i) CHECK THE OPERATING PRESSURE OR TEMPERATURE. Operate the permit unit at the lowest acceptable pressure or radiation losses. Determine the pressure or temperature that will be used as a basis for comparative combustion analysis before and after tune-up.
 - (ii) COMBUSTION ANALYSIS. Perform an "as is" combustion analysis (CO₂, O₂, etc.) with a warmed up permit unit at high and low fire, if possible. In addition to data obtained from combustion analysis, also record the following:
 - a. Inlet fuel pressure at burner (at high & low fire); and
 - b. Draft above draft hood or barometric damper (at high, medium, and low settings); and
 - c. Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the permit unit.
 - d. Permit unit rate if meter is available.
 - (b) Adjustments: while taking combustion readings with a warmed up permit unit operated at the Rated Heat Input, perform checks and adjustments as follows:
 - (i) Adjust permit unit to fire at rate; record fuel manifold pressure.
 - (ii) Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at high, medium and low firing rates. The CO value should always be below 400 ppmv at 3% O₂. If CO is high make necessary adjustments.
 - (iii) Check to ensure permit unit light offs are smooth and safe. A reduced fuel pressure test at both high and low fire should be conducted in accordance with the manufacturer's instructions and maintenance manuals.
 - (iv) Check and adjust operations of modulation controller. Ensure proper, efficient and clean combustion through the range of firing rates.
 - (v) When above adjustments and corrections have been made, record all data.
 - (c) Final Test: Perform a final combustion analysis with a warmed up permit unit at high, medium and low firing rates, whenever possible. In addition to data from combustion analysis, also check and record:

- (i) fuel pressure at burner (at high, medium and low settings); and
- (ii) draft above draft hood or barometric damper (at high, medium, and low settings); and
- (iii) steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the permit unit; and
- (iv) permit unit rate if meter is available.

When the above checks and adjustments have been made, record data and attach combustion analysis to permit unit records. Indicate the name and title of the person performing the tune-up, the date the tune-up was performed, and sign the record.

See SIP Table at <http://www.mdaqmd.ca.gov/>

3-10-98

3/10/98

(Adopted: 2/22/1995; Amended: 8/25/1997)

Rule 1158

Electric Power Generating Facilities

(A) General

(1) Purpose:

- (a) The purpose of this rule is to limit NO_x emissions from Electric Power Generating Facilities.

(2) Applicability:

- (a) This rule applies to all existing electrical generating steam boilers, including any auxiliary boiler used in conjunction with an electrical generating steam boiler, combined-cycle turbine units and to replacement units that are located within the Federal Ozone Non-attainment Area.

(B) Definitions

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

- (1) "Aggregated (Facility-wide) Limit" - means the annual emissions limit applicable to any Electric Power Generating Facilities (facility). The aggregated emissions cap is expressed in pounds of NO_x; expressed as total annual NO_x emissions in pounds from each permit unit and then aggregated (summed) for all boilers and combined-cycle turbine units at the facility.
- (2) "Annual Capacity Factor (ACF)": The ACF determines which level of emissions limits of subsection (C)(1) will apply to the boiler permit unit. The ACF shall be determined for peaking units, cycling units or baseload units, respectively, by the following calculation:

$$ACF_{pu} = \frac{(\text{actual megawatt hours})}{(8760 \text{ hrs/yr.}) \times (\text{rated capacity in megawatts})}$$

$$ACF_{cu} = \frac{(\text{actual megawatt hours})}{(8760 \text{ hrs/yr.}) \times (\text{rated capacity in megawatts})}$$

$$ACF_{bu} = \frac{(\text{actual megawatt hours})}{(8760 \text{ hrs/yr.}) \times (\text{rated capacity in megawatts})}$$

- (3) "Annual Heat Input": the total heat input of fuels, in Btu, burned by a permit unit in a calendar year, as determined from the higher heating value and cumulative annual usage of each fuel.
- (4) "Boiler or Steam Generator": any combustion equipment (fired with any fuel) used to produce steam. Boiler or steam generator does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine.
- (5) "Cogeneration Facility": a facility which produces:
 - (a) electric energy; and
 - (b) steam or forms of useful energy (such as heat) which are used for industrial or commercial heating or cooling purposes.
- (6) "Combined-cycle Turbine Unit" - Any stationary gas turbine operated both for the production of electrical energy from shaft work and the useful energy produced from heat recovered from its exhaust gases.
- (7) "Electric Utility": a power plant which is directly regulated by the Public Utilities Commission, which provides power directly to rate-payers, and which is not a Qualifying Small Power Production Facility per Public Utility Regulatory Policies Act regulations (18 CFR Ch.1, Subpart B).
- (8) "Electric Power Generation Facility": any electrical generating steam boilers, including auxiliary boilers, or combined-cycle turbine units used in conjunction with an electrical generating steam boiler.
- (9) "Emissions Aggregating": means the sum of the emissions for the facility. Aggregated annual emissions are expressed as the accumulated pounds of NOx per (specified time period).

$$EM_1 + EM_2 + EM_3 + EM_4 = EM_{cap}$$

EM_1 = lbs NOx/time (boiler 1) EM_2 = lbs NOx/time (boiler 2)
 EM_3 = lbs NOx/time (unit 3) EM_4 = lbs NOx/time (unit 4)

EM_{cap} = the emissions cap per time

- (10) "Emissions Control Plan": a document prepared by the facility which outlines how an existing facility will comply with the requirements of this rule. The plan shall contain the following:
- (a) a list of all permit units with their rated heat inputs and estimated annual capacity factors; and
 - (b) for each permit unit subject to the emissions limits of subsection (C)(2) or (C)(3), a statement as to the selected method of achieving the applicable standard; and
 - (c) for permit units for which installation of NO_x reduction technology by May 31, 1995 is not practicable, a demonstration of why such installation cannot be achieved by that date, and a schedule of clearly defined compliance milestones that represent the most expeditious schedule practicable toward final compliance.
 - (d) and shall be reviewed by the District at least once every three years or at such time as applications are received by the District for new or revised Authority(ies) to Construct or Permit(s) to Operate.
- (11) "Emission Control System Operating Parameters" - Any operating parameter(s) that the District deems necessary for the determination of compliance.
- (12) "Federal Ozone Non-attainment Area": That portion of San Bernardino County that lies within the lines which begin at: (a) the San Bernardino - Riverside County boundary, running north along the range line common to Range 3 East and Range 2 East; (b) then west along the township line common to Township 2 North and Township 3 North; (c) then north along the San Bernardino - Los Angeles County Boundary and the San Bernardino - Kern County Boundary; (d) then east along latitude 35 degrees, 10 minutes north; (e) then south along longitude 115 degrees, 45 minutes west, and west along the San Bernardino - Riverside County Boundary.
- (13) "Heat Input": the chemical heat released due to fuel combustion in a permit unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.

- (14) "Heat-input Weighted Average (Combined fuels)" When a permit unit is operated on combinations of gaseous and liquid fuels, the emissions limits for the applicable annual capacity factor class shall be calculated for each boiler by the following formula:

Sample calculation:

$$\text{Emission limit} = \frac{(\text{gas ppmv} * x) + (\text{liquid ppmv} * y)}{x + y}$$

where x = actual heat input from gaseous fuel

y = actual heat input from liquid and/or solid fuel

- (15) "Higher Heating Value, (HHV)": the total heat liberated per mass of fuel burned (Btu per pound), when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to standard conditions.
- (16) "Independent Power Producer": a power plant which is not directly regulated by a Public Utilities Commission, which provides power to an Electric Utility rather than directly to rate-payers, and which is a Qualifying Small Power Production Facility per Public Utility Regulatory Policies Act regulations (18 CFR Ch.1, Subpart B).
- (17) "NO_x Emissions, (NO_x)": the sum of any oxides of nitrogen which can be measured in the flue gas, expressed as nitrogen dioxide (NO₂).
- (18) "Parts per Million (by Volume), (ppmv)": the number of gas molecules of a given species, or group, in one million total gas molecules.
- (19) "Permit Unit": any boiler or steam generator and/or combined-cycle turbine unit required to have a Permit to Operate pursuant to District Rule 203.
- (20) "Process Heater": any combustion equipment fired with any fuel, which transfers heat from combustion gases to water or process streams. Process heater does not include any dryers in which the material being dried is in direct contact with the products of combustion, such as: cement or lime kilns, glass melting furnaces, or smelters.

- (21) "Rated Heat Input": the heat input capacity (in MMBtu/hr) specified on the nameplate of the permit unit, unless:
- (a) the permit unit is limited by permit condition to a lesser heat input than specified on the nameplate, in which case the limiting condition shall be used as the rated heat input; or
 - (b) the permit unit is operated above the heat input capacity specified on the nameplate, in which case the maximum operated rate shall be used as the rated heat input.
- (22) "Reasonably Available Control Technology (RACT)": the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility .
- (23) "Shut-down Period": the one hour time period immediately preceding a continuous period in which fuel flow to the permit unit is zero, or shut off for 30 minutes or longer.
- (24) "Solar Power Production Facility": an independent power producer which is a Solar Thermal Power plant per Public Resources Code §25140.
- (25) "Start-up Period": the one hour time period immediately following a continuous period in which fuel flow to the permit unit is zero, or shut off for 30 minutes or longer.
- (26) "Thermal Stabilization Period" - The start up or shut down time necessary to bring the heat recovery steam generator to the proper operating temperature, not to exceed two hours.

(C) Requirements

(1) NO_x RACT Emissions Limits for Boilers:

- (a) All boilers shall not emit oxides of nitrogen in excess of the following:

<u>Permit Unit Classification</u>	<u>NO_x Limit</u>
For Baseline units (ACF _{bu} = 60% and greater)	70 ppmv on gaseous fuels 115 ppmv on liquid fuels
For Cycling units (ACF _{cu} = 31 to 59%)	100 ppmv on gaseous fuels 115 ppmv on liquid fuels
For Peaking units (ACF _{pu} = less than 30%)	125 ppmv on gaseous fuels 225 ppmv on liquid fuels

- (b) All ppmv emission limits for boilers are referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen as an hourly average.
- (c) If the ACF of a permitted unit becomes greater than that prescribed for its permit unit classification, then such unit shall thereafter be classified as belonging to the next greater permit unit classification.

(2) NO_x RACT Emissions Limits for Combined-cycle Turbines:

- (a) All Combined-Cycle Turbine Units shall not emit NO_x in excess of the following:

NO_x Limit

42 ppmv on gaseous fuels
65 ppmv on liquid fuels

- (b) All ppmv emission limits for combined-cycle turbine unit is referenced at dry stack-gas conditions and 15.0 percent by volume stack-gas oxygen as an hourly average.

(3) Aggregated Annual NO_x Emissions Cap:

- (a) The Electric Power Generation Facility of Southern California Edison, or its successor, located at Coolwater Facility in Daguerre, California, shall not operate the facility with facility-wide NO_x emissions in excess of the following aggregated annual limits:

<u>Year</u>	<u>Aggregated Annual Cap (Tons/year)</u>
Ending December 31, 1996	1,516
Ending December 31, 1997	1,484
Ending December 31, 1998	1,453
Ending December 31, 1999	1,421
Ending December 31, 2000	1,387
Ending December 31, 2001	1,353
Ending December 31, 2002	1,319
After December 31, 2002	1,319

(4) General Equipment Requirements:

- (a) The owner/operator of any permit units which are subject to the requirements of Subsections (C)(1-3) above, shall:
- (i) install volumetric flow rate meters in each liquid fuel line; or
 - (ii) install volumetric flow rate meters in conjunction with temperature and pressure probes in each gaseous fuel line; or
 - (iii) maintain a fuel log in the form and manner prescribed and approved by the APCO.

- (b) The owner/operator of any permit units which are subject to the requirements of Subsections (C)(1-3) shall have CEMS equipment installed, certified and operating on all emissions points. The CEMS equipment shall be certified in accordance with 40 CFR 75, Appendix A, Section 6.
- (c) The owner/operator of any permit unit subject to the requirements of section (C)(1-3) above shall submit an Emissions Control Plan for District approval.
- (d) When any exemption pursuant to subsection (D)(3) is no longer applicable, the facility shall submit an Emissions Control Plan to the District within 90 days following such termination of exempt status.
- (e) When the annual capacity factor (ACF) threshold for the permit unit classification is exceeded, the permit unit is thereafter to be permitted as belonging to the next higher classification.

(D) Exemptions

- (1) During periods of unexpected curtailment of gaseous fuels, boiler permit units subject to the requirements of subsection (C)(1) which normally burn only gaseous fuel shall:
 - (a) comply with a NO_x emission limit of 225 ppmv NO_x when burning liquid fuel.
 - (b) This exemption shall not exceed the period of natural gas curtailment.
 - (c) This exemption shall apply when equipment is undergoing compliance testing. For the purpose of this exemption, the applicable compliance testing time period shall not exceed 48 hours per calendar year).
- (2) The following classes of facilities, which are subject to District Rules 1157 or 1159, are exempt from this rule:
 - (a) Cogeneration Facility
 - (b) Process Heaters

- (c) Independent Power Producers
- (d) Solar Power Production Facilities
- (3) The provisions of Section (C)(1) of this rule shall not apply to permit units which have no annual heat input (annual heat input equals zero).
 - (a) The owner/operator of any permit unit who wishes to claim an exemption pursuant to this subsection shall meet the record keeping requirements of this rule so as to be able to prove the exemption status.
- (4) Electric Power Generation Facility located outside of the Federal Ozone Non-attainment Area are exempt from requirements of this rule.

(E) Monitoring and Records

(1) CEMS Quality Assurance Testing:

- (a) An initial CEMS Certification Test shall be conducted on or before May 31, 1995, and the report shall be submitted to the District within 90 days of the completion of the testing.
- (b) Following the initial certification of the installed CEMS, the company shall follow the Quality Assurance Procedures as outlined in 40 CFR 75, Appendix B. The Quality Assurance Program includes, but is not limited to: a daily Calibration Error determination; a quarterly Linearity Error Test; and an annual Relative Accuracy Test Audit.

(2) Testing Procedures:

- (a) All testing required by this rule shall be in accordance with the applicable procedures outlined in 40 CFR 60, and/or 40 CFR 75. All testing shall be approved by the District pursuant to the District's Compliance Test Procedural Manual.
- (b) Relative Accuracy Test Audits shall be conducted in accordance with provisions of 40 CFR 75, Appendix A, Section, Part 6.5.
- (c) Compliance determinations shall not be established based on data obtained from testing, including integrated sampling methods, during a

start-up period or shut-down period of boilers nor during the thermal stabilization period for combined-cycle turbine units.

- (d) All pounds of NO_x per day shall be determined as the sum of the hourly mass emissions.

(3) Additional Procedures - Boilers:

- (a) All concentration emission limits specified in subsections (C)(1) and (D)(1) for boilers are referenced at dry stack-gas conditions and 3.0 percent by volume stack-gas oxygen as an hourly average.

(4) Additional Procedures - Combined-cycle Turbine Units

- (a) All concentration emission limits specified in subsection (C)(2) for combined-cycle turbine units are referenced at dry stack-gas conditions and 15.0 percent by volume stack-gas oxygen as an hourly average.

(5) Records and Reporting

- (a) The owner/operator of a permit unit subject to this rule shall monitor and record for each unit:
 - (i) The cumulative annual usage of each fuel. (The cumulative annual usage of each fuel shall be monitored from service meters, purchase or tank fill records, or by any other acceptable methods, as approved by the Air Pollution Control Officer.)
 - (ii) The HHV for liquid fuels burned shall be determined from daily samples and reported as a monthly average for each month.
- (b) Boiler and Turbine Operating Logs: On a daily basis for each permit unit, the owner/operator shall maintain an operating log that includes, as a minimum, the following information:
 - (i) the actual start-up and stop times;
 - (ii) the hours of operation per day;
 - (iii) the hourly averaged NO_x emission concentration for each permit unit;

- (iv) A monthly summary of the accumulative aggregated annual pounds of NO_x emissions for the facility; and
- (v) the type and quantity of fuel used.
- (c) The owner/operator of a permit unit exempt pursuant to subsection (D), shall monitor and record for each permit unit the hours of operation on liquid fuel, on a daily basis .
- (d) The owner/operator of any permit unit required to perform CEMS Quality Assurance Testing shall make the reports available to the MDAQMD upon request.
- (e) All data and records required to be kept pursuant to this rule shall:
 - (i) be kept current and on site for a minimum of three years, and
 - (ii) provided to District or state personnel on request.

(F) Test Methods

- (1) Certification and Quality Assurance Testing shall be subject to the protocols prescribed in the District's Compliance Procedural Manual as well as 40 CFR 60, Appendix A and 40 CFR 75 Appendix A and B.
- (2) Compliance Testing for Boilers shall be performed in accordance with the following methods.
 - (a) Oxides of Nitrogen - EPA Method 7E or ARB Method 100.
 - (b) Stack Gas Oxygen - EPA Method 3 or 3A or ARB Method 100
 - (c) NO_x Mass Emission Rate - EPA Method 19
 - (d) HHV determination shall be by one of the following test methods:
 - (i) for liquid hydrocarbon fuels - ASTM D 240-87 or ASTM D 2382-88; or

- (ii) for gaseous fuels - ASTM D 1826-88, or ASTM D 1945-81 in conjunction with ASTM D 3588-89 .
- (3) Compliance Testing for Combined-cycle Turbine Units shall be performed in accordance with the following methods.
 - (a) NO_x Concentrations/Mass Emissions NO_x Emissions shall be determined by EPA Test method 7E and 3A or by EPA Test Method 20.
 - (b) Heating Value The Higher Heating Value shall be determined:
 - (i) for liquid fuels - ASTM Test Method D 240-87
 - (ii) for distillate fuel - ASTM Test Method D 2382-88
 - (iii) for gaseous fuels - ASTM Test Method 3588-91; or ASTM Test Method D 1826-88; or ASTM Test Method D 1945-81.

(G) Compliance Schedule

- (1) The owner/operator of a permit unit subject requirements of section (C) shall submit to the District for approval an initial Emissions Control Plan for the facility on or before April 15, 1995.
- (2) The owner/operator of a permit unit subject requirements of section (C) shall demonstrate final compliance with all applicable standards and requirements of the rule:
 - (a) By May 31, 1995 for permit units with NO_x control technology in place or permit units subject to subsection (C)(2) and (C)(3); or
 - (b) Within six months of installation of NO_x reduction technology.
- (3) The owner/operator of a permit unit exempt pursuant to section (D) shall fulfill the following requirements, if and when such exemption no longer applies, shall:
 - (a) Submit a revised Emissions Control Plan within 90 days of the date of the change of status; and

- (b) When applicable, submit an application(s) for an Authority To Construct/Permit To Operate (ATC/PTO) to the District no later than six months after the date of the change of status.
- (c) No later than three calendar years following the submission of the Emissions Control Plan, demonstrate final compliance with all applicable standards and requirements of the rule.

(H) Severability of Portions of this Rule

- (1) If any portion of this rule is found to be invalid or unenforceable, such finding shall have no effect on the validity and enforceability of the remaining portions of the rule, which are severable and shall continue to be in full force and effect.

RULE 1159

Stationary Gas Turbines

(A) General

(1) Purpose:

- (a) The purpose of this rule is to limit the emission of oxides of nitrogen from commercial, industrial and institutional Stationary Gas Turbines.

(2) Applicability:

- (a) This rule applies to any new or existing non-utility, commercial, industrial or institutional Stationary Gas Turbine of 0.3 megawatt (MW) and larger unless the equipment is exempt from this rule pursuant to Section (D) of this rule.

(B) Definitions

- (1) “Air Pollution Control Officer (APCO)” – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.
- (2) “Continuous Emissions Monitoring System (CEMS)” – All of the equipment that may be required to meet the data acquisition and availability requirements of this rule, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.
- (3) “Dry Low NO_x Combustion Technology (DLN)” – Any turbine combustor design which uses multiple staging, air/fuel premixing or other modifications to achieve lower levels of NO_x emissions as compared to conventional combustors.
- (4) “Emission Control System Operating Parameters” – Any operating parameter(s) that the District deems necessary to analyze for the determination of compliance. Such parameters include, but are not limited to, the ammonia and gas flow rates, the exhaust temperature for the Selective Catalytic Reduction (SCR), humidity, water injection rate, exhaust gas flow rate and the temperature for water injection.
- (5) “Emergency Standby Unit” – Any Stationary Gas Turbine that operates as a mechanical or electrical power source for a facility only when the primary power source has been rendered inoperable due to failure beyond the reasonable control of the operator. A power interruption pursuant to a voluntary interruptible power supply agreement is not to be considered as an emergency loss of primary power. Electricity generated by such a unit cannot be sold.

- (6) “Emission Control Equipment” – Add-on technologies which control the turbine's emissions, including, but not limited to, Selective Catalytic Control (SCR), water injection, steam injection, but excluding DLN.
- (7) “Enhanced Emissions Monitoring Device” – Any automated data recording device or system having both data gathering and retrieval capabilities. Such equipment includes, but is not limited to, Continuous Emissions Monitoring Systems (CEMS) and Predictive Emissions Monitoring Systems (PEMS).
- (8) “Higher Heating Value (HHV)” – The Higher Heating Value of the fuel.
- (9) “Lower Heating Value (LHV)” – The Lower Heating Value of the fuel.
- (10) “Measured NO_x Emissions Concentration” – The concentration of oxides of nitrogen corrected to International Standards Organization (ISO) standard conditions:

$$\text{NO}_x = (\text{NO}_x \text{ obs})(\text{Pref}/\text{Pobs})^{0.5} (288 \text{ K}/\text{Tamb})^{1.53} (e^{19(\text{Hobs}-0.00633)})$$

Where:

- NO_x = emissions of NO_x at 15 percent oxygen and ISO standard conditions on a dry basis, ppm.
- NO_x obs = measured NO_x emissions corrected to 15 percent oxygen on a dry basis, ppm.
- Pref = standard reference pressure, (14.696 psia).
- Pobs = measured site ambient absolute pressure, psia.
- Hobs = measured humidity of ambient air, pounds water per pound dry air.
- e = transcendental constant (2.718)
- Tamb = measured temperature of ambient air, degrees K.

or an alternate calculation that corrects to ISO standard conditions and is approved by the APCO.

- (11) “Power Augmentation” – An increase in the gas turbine shaft output and/or the decrease in gas turbine fuel consumption by the addition of energy recovered from exhaust heat.
- (12) “Predictive Emissions Monitoring System (PEMS)” – All of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.
- (13) “Public Service Unit” – A Stationary Gas Turbine used to generate electricity for sale or for use in serving the public.

- (14) “Reasonably Available Control Technology (RACT)” – The lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.
- (15) “Rating” – The continuous megawatt (MW) Rating or mechanical equivalent by a manufacturer for gas turbine(s) without Power Augmentation.
- (16) “Selective Catalytic Reduction (SCR)” – A noncombustion control technology that destroys NO_x by injecting a reducing agent (e.g., ammonia) into the flue gas that, in the presence of a catalyst (e.g., vanadium, titanium, or zeolite), converts NO_x into molecular nitrogen and water.
- (17) “Shutdown Period” – The period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off.
- (18) “Startup Period” – The period of time during which a unit is brought from a Shutdown status to its operating temperature and pressure, including the time required by the unit’s emission control system to reach full operation.
- (19) “Stationary Gas Turbine or Unit” – Any gas turbine system that is gas and/or liquid fueled with or without Power Augmentation. This unit is either attached to a foundation at a facility or is portable equipment operated at a specific facility for more than 90 days in any 12-month period. Two or more gas turbines powering one shaft shall be treated as one unit.
- (20) “Thermal Stabilization Period” – The Startup or Shutdown Period necessary to bring the heat recovery steam generator to the proper operating temperature, not to exceed two hours.
- (21) “Volatile Organic Compound (VOC)” – Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and those compounds listed in 40 CFR 51.100(s)(1).

(C) Standards

- (1) The owner or operator of any affected Stationary Gas Turbine Unit shall not operate such unit under load conditions, excluding the Thermal Stabilization Period and Startup and Shutdown Periods which results in the Measured NO_x Emissions Concentration exceeding the emissions limits set forth below:
 - (a) For Stationary Gas Turbines which are not subject to the alternative federal NO_x RACT limits of Subsection (C)(1)(b) and (c), the federal NO_x and Carbon Monoxide (CO) RACT limits in Table 1 apply:

Table 1
NO_x and CO Compliance Limits

Control	Operating hours per year	Rating	NO _x Compliance Limit, ppmv at 15% Oxygen		CO Compliance Limit, ppmv at 15% Oxygen
			Gas Fuel	Liquid Fuel	
SCR + DLN	> 877	> 10 MW	5	25	200
DLN	> 877	2 – 10 MW	25	65	200
SCR	> 877	2 – 10 MW (no DLN available)	35	65	200
DLN	> 877	< 2 MW	42	50	250
SCR or DLN	< 877	> 10 MW	25	42	200

- (b) For the Southern California Gas Company Turbine Model LM 1500, the following alternative federal NO_x RACT limit shall apply:
 - (i) 90 ppmv NO_x when fired with gaseous fuel.
- (c) For the Southern California Gas Company Turbine General Electric Model Frame 3, the following alternative federal NO_x RACT limit shall apply:
 - (i) 225 ppmv NO_x when fired with gaseous fuel, achieved through good combustion practices.
- (d) For the Westend Model PQ 5191, the following alternative federal NO_x RACT limit shall apply:
 - (i) 42 ppmv NO_x achieved with an SCR when fired with gaseous fuel.
- (e) For the purposes of these emissions limits the following conventions are applicable:
 - (i) Gas includes natural, digester and landfill gases.
 - (ii) Oil includes kerosene, jet fuel, and distillate. The sulfur content of the oil shall be less than 0.05%.
 - (iii) NO_x = emissions of NO_x, in ppmv, corrected to 15 percent oxygen and ISO standard conditions on a dry basis, averaged over any consecutive 15 minute period.
- (2) The owner or operator of any Stationary Gas Turbine subject to (C)(1)(a) shall submit to the APCO for approval, an Emission Control Plan (ECP) for the purpose of establishing compliance with provisions of this rule.
- (3) The owner or operator of any Stationary Gas Turbine subject to (C)(1) shall minimize emissions insofar as technologically feasible during Thermal Stabilization Periods.

(D) Exemptions

- (1) The provisions of Section (C) of this rule shall not apply to the operation of:
 - (a) Laboratory units used in research and testing for the advancement of gas turbine technology.
 - (b) Units operated exclusively for fire fighting and/or flood control.
 - (c) Stationary Gas Turbines operating as an electric utility which are subject to Rule 1158.
- (2) The provisions of this rule, with the exception of Section (F)(2), shall not apply to the operation of Stationary Gas Turbines used under the following conditions:
 - (a) Emergency Standby Units demonstrated to operate less than 200 hours per calendar year.
 - (b) Portable, turntable, or track mounted turbines whose operation generates intermittent, high velocity air flow for live fire sustainability, lethality, aerodynamic, cookoff, or remote control operation testing only.
- (3) The provisions of section (F)(1) and (H) shall not apply to the Southern California Gas Company Turbine General Electric Model Frame 3.

(E) Administrative Requirements

- (1) The Emission Control Plan (ECP) required pursuant to section (C)(2) shall, at a minimum, include the following information if such information is applicable:
 - (a) A list of all Stationary Gas Turbines required to be controlled pursuant to this rule.
 - (b) For each Stationary Gas Turbine listed:
 - (i) District identification number, and District Permit to Operate number;
 - (ii) Name of the gas turbine manufacturer;
 - (iii) Equipment model number;
 - (iv) Manufacturer's rated shaft power output (MW);
 - (v) Type of liquid fuel and/or type of gaseous fuel;
 - (vi) HHV for each fuel;
 - (vii) Heat rate ((Btu/kW-hr), corrected to the HHV) for each type of fuel (gas or liquid) for each turbine;
 - (viii) Monthly fuel consumption for the previous twelve-month period (cubic feet for gas; gallons for liquid);
 - (ix) Monthly hours of operation in the previous twelve-month period;

- (x) The type of NO_x Emission Control Equipment, including any auxiliary equipment related to the control of emissions, to be applied;
- (xi) Documentation showing the current (existing) concentration and mass rate of emissions of oxides of nitrogen from the unit;
- (xii) A schedule with specified increments of progress dates for construction of Emission Control Equipment, operational milestones for implementation of emissions control and/or installation of monitoring equipment; and
- (xiii) A final compliance date.

(F) Monitoring and Recordkeeping Requirements

- (1) The owner or operator of any Stationary Gas Turbine required to install Emissions Control Equipment for compliance with this rule shall:
 - (a) Install, operate, and maintain in calibration, the following monitoring equipment, as approved by the APCO:
 - (i) Continuous measurement and recording of Emissions Control System Operating Parameters;
 - (ii) Continuous measurement and recording of elapsed time of operation; and
 - (iii) An Enhanced Emissions Monitoring Device.
 - (b) Notify the APCO, in writing, before issuance of the Permit To Operate, such information which correlates the Emission Control System Operating Parameters, and PEMS if present, to the associated measured NO_x emissions output. This information will be used to determine compliance with applicable provisions of this rule for non-CEMS-equipped turbines and CEMS-equipped units when the CEMS is not operating properly.
 - (c) Provide, on an annual basis, compliance testing data and information regarding NO_x emissions. The data shall be corrected to ISO conditions and at 15 percent oxygen on a dry basis; and the percent efficiency (EFF) of each turbine unit.
- (2) The owner/operator of any Stationary Gas Turbine shall:
 - (a) On a daily basis, maintain a turbine operating log that includes, as a minimum, the following information:
 - (i) The total hours of operation per day;
 - (ii) The accumulated hours of operation per calendar month;
 - (iii) The type and quantity of fuel used; and
 - (iv) The nature of operation of the unit (exempt or non-exempt).

- (b) The operating log required to be kept pursuant to this rule shall be kept current and on site for a minimum of two years; and provided to District or state personnel on request.

(G) Notification Requirements for Exempt and Emergency Standby Units

- (1) Any Stationary Gas Turbine unit which is exempt or claimed to be exempt pursuant to subsection (D)(2) shall:
 - (a) Notify the APCO within seven (7) days if the hour-per-year threshold is exceeded.
 - (i) If the hour-per-year threshold is exceeded, the exemption pursuant to subsection (D)(2) shall be permanently withdrawn.
 - (ii) If the hour-per-year threshold is exceeded the owner/operator shall, within 30 days of the notification, submit an application for a Permit to Operate to the District. Such application shall including a plan detailing actions and a schedule of progress to meet the applicable RACT limits and provisions of this rule within 18 months after the date of the notification; an Emission Control Plan conforming to the requirements of Section (E) for the emissions control equipment.
- (2) Notwithstanding the provisions of Sections (F)(2) and (G)(1) above, A Public Service Unit shall not be subject to the hour-per-year threshold when:
 - (a) Such unit is operating during a state of emergency declared by a proclamation of the Governor of the State of California; and
 - (b) Such unit is located within the specific geographic location identified in the state of emergency proclamation.

(H) Test Methods

- (1) Compliance testing shall be subject to the protocols prescribed in the District's Compliance Procedural Manual.
- (2) The following test methods shall be used to determine compliance with the provisions of this rule.
 - (a) NO_x emissions shall be determined by EPA Test Method 20.
 - (b) The Higher Heating Value (HHV) and the Lower Heating Value (LHV) shall be determined by the appropriate method for the fuel type listed below:

- (i) For liquid fuels:
 - a. ASTM Test Method D 240-87 (Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter).
- (ii) For distillate fuel:
 - a. ASTM Test Method D 2382-88 (Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter - High Precision Method); or,
- (iii) For gaseous fuels:
 - a. ASTM Test Method D 3588-91 (Standard Practice for Calculation Heat Value, Compressibility Factor, and Relative Density (Specific Gravity) of Gaseous Fuels); or
 - b. ASTM Test Method D 1826-88 (Standard test Method for Caloric (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter); or
 - c. ASTM Test Method D 1945-81 (Standard Method for Analysis of Natural Gas by Gas Chromatography).

(I) Compliance Schedule

- (1) The owner/operator of any existing Stationary Gas Turbine subject to the provisions of Section (C)(1)(a) above shall comply with the following increments of progress:
 - (a) An Emissions Control Plan shall be submitted to the District within 90 days of rule adoption. The District shall approve the Plan within 30 days of submission.
 - (b) Any affected turbine shall be in full compliance with all applicable provisions of the rule within 12 months of rule adoption.
 - (c) Demonstrate final compliance with all applicable standards and requirements of the rule within six months of the installation of the NOX reduction technology.
- (2) The owner/operator of any new Stationary Gas Turbine subject to the provisions of Section (C) shall comply as of the date of adoption of this rule.

[SIP: Submitted as amended mm/dd/yy on mm/dd/yy; Approved 4/9/96, 61 FR 15719, 40 CFR 52.220(c)(216)(I)(A)(3)]

RULE 1160

Internal Combustion Engines

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit the emissions of Oxides of Nitrogen (NO_x), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC) from Internal Combustion Engines that are not subject to District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*.

(2) Applicability

- (a) This rule applies to any stationary Internal Combustion Engine rated at 50 or more brake horsepower (bhp), when located within the Federal Ozone Non-attainment Area, that does not meet the following:
 - (i) Any Internal Combustion Engine rated at less than 50 brake horsepower.
 - (ii) Any Internal Combustion Engine operated less than 100 hours in any rolling twelve (12) month period.
 - (iii) Any Internal Combustion Engine subject to the *Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines rated at 50 Horsepower and Greater*, Title 17 CCR 93116, or otherwise classified as a Portable Internal Combustion Engine.
 - (iv) Any Internal Combustion Engine that is an Emergency Internal Combustion Engine provided that the Internal Combustion Engine does not operate more than 100 hours for non-emergency use in any rolling twelve (12) month period.
 - (v) Any Internal Combustion Engine operated on an engine test stand.
 - (vi) Any Internal Combustion Engine subject to District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*.
 - (vii) Any Internal Combustion Engine located outside the Federal Ozone Non-attainment Area.
 - (viii) Any Internal Combustion Engine registered with a Statewide Portable Equipment Registration (PERP), provided that the Internal Combustion Engine is operating in compliance with the *Regulation to Establish a Statewide Portable Equipment Registration Program*, Title 13 CCR 2450, and for which the Internal Combustion Engine does not require a local District Permit.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) “Baseline Emission Rate” – Emissions under normal operating conditions, prior to Emission Control Equipment being installed, determined by an emissions compliance test conducted in accordance with the requirements specified in Section (F). The Baseline Emission Rate shall be adjusted to reflect any operational limit or Emission Control Equipment installed prior to January 1, 1991.
- (2) “Emergency Internal Combustion Engines” – Any Internal Combustion Engines which meets any of the following criteria:
 - (a) An Internal Combustion Engine driving a generator used at facilities normally serviced with commercial power, where the generators are used exclusively as emergency units during loss of commercial power.
 - (b) An Internal Combustion Engine driving a generator used at facilities normally serviced with an alternative energy supply including, but not limited to, photovoltaic power, where the generators are used exclusively as emergency units during loss of such alternative energy source but no more than 200 hours total per year.
 - (c) An Internal Combustion Engine driving a fire pump or deluge pump that is used exclusively during fire emergency or testing.
 - (d) An Internal Combustion Engine driving an air compressor that is used exclusively during emergency shutdowns and/or to start-up black start engines.
- (3) “Emissions Compliance Test” – An emissions compliance test conducted in accordance with a District approved test protocol pursuant to the District's Compliance Test Procedural Manual.
- (4) “Emission Control Equipment” – Equipment technologies which control Internal Combustion Engine emissions, including, but not limited to, Selective Catalytic Reduction (SCR); Non-Selective Catalytic Reduction (NSCR); Oxidation Catalyst; and fuel, air, and exhaust modifications. This definition excludes diesel particulate filters or traps.
- (5) “Emission Control Plan” – A document which outlines how a Facility will comply with the requirements of this rule.
- (6) “Enhanced Emissions Monitoring Device” – Any automated data recording device or system having both data gathering and retrieval capabilities. Such equipment includes, but is not limited to, Continuous Emissions Monitoring Systems (CEMS) and Parametric or Predictive Emissions Monitoring Systems (PEMS).

- (7) “Internal Combustion Engine” – A spark- or compression-ignited reciprocating engine featuring intermittent combustion within one or more internal chambers to produce useful work by applying a varying force against a reciprocating piston.
- (8) “Lean-burn Engine” – Any Spark-Ignited Internal Combustion Engine that is operated with an exhaust stream oxygen concentration of four (4) percent by volume, or greater prior to any exhaust stream Emission Control Equipment.
- (9) “Portable Internal Combustion Engine” – Internal Combustion Engines which are not operated, nor intended to be operated, at one specific site for more than twelve (12) consecutive months, is not permanently affixed to only one location. Indications of Portable Internal Combustion Engines include, but are not limited to, those that are transportable and may be mounted on mobile sources, trailers, skids, or other platforms.
- (10) “Regulated Air Pollutant” – Any of the following Air Pollutants:
 - (a) Any Air Pollutant, and its Precursors, for which an Ambient Air Quality Standard has been promulgated.
 - (b) Any Air Pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.
 - (c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.
 - (d) Any Air Pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.
- (11) “Rich-Burn Engine” – Any Spark-Ignited Internal Combustion Engine that is operated with an exhaust stream oxygen concentration of less than four (4) percent by volume prior to any exhaust Emission Control Equipment.
- (12) “Spark-Ignited Internal Combustion Engine” – A liquid or Gaseous Fueled engine designed to ignite its air/fuel mixture by a spark across a spark plug.

(C) Requirements

(1) Emissions Limits

(a) NO_x Emissions

- (i) Internal Combustion Engines subject to this rule shall not exceed the following emission limits in Table 1, unless compliance is demonstrated using an Alternative Compliance Strategy pursuant to subsection (C)(2).

Table 1 NO _x Emission Limits for Internal Combustion Engines	
(ppmv limitations shall be referenced at 15 percent volume stack gas oxygen measured on a dry basis and averaged over 15 consecutive minutes)	
Engine Type	NO _x Limit
Spark-Ignited Internal Combustion Engine, Rich Burn	50 ppmv
Spark-Ignited Internal Combustion Engine, Lean Burn	125 ppmv
Compression-Ignited Internal Combustion Engine	80 ppmv

(b) VOC Emissions

- (i) Internal Combustion Engine(s) subject to this rule shall not exceed the following emission limits for VOC, as listed in Table 2, unless compliance is demonstrated using an Alternative Compliance Strategy pursuant to subsection (C)(2).
- (ii) Internal Combustion Engines located at the Facility of Southern California Gas, Newberry Springs shall not exceed the VOC limit of 255 ppmv, referenced at 15 percent, volume stack gas, oxygen measured on a dry basis and averaged over 15 consecutive minutes.

Table 2 VOC Emission Limits for Internal Combustion Engines	
(ppmv limitations shall be referenced at 15 percent, volume stack gas, oxygen measured on a dry basis and averaged over 15 consecutive minutes)	
Engine Type	VOC Limit
Spark-Ignited Internal Combustion Engine, Rich Burn	106 ppmv
Spark-Ignited Internal Combustion Engine, Lean Burn	106 ppmv
Compression-Ignited Internal Combustion Engine	106 ppmv

c) CO Emissions

- (i) Internal Combustion Engines subject to this rule shall not exceed the following emission limits in Table 3, unless compliance is demonstrated using an Alternative Compliance Strategy pursuant to subsection (C)(2).

Table 3 CO Emission Limits for Internal Combustion Engines	
(ppmv limitations shall be referenced at 15 percent volume stack gas oxygen measured on a dry basis and averaged over 15 consecutive minutes)	
Engine Type	CO Limit
Spark-Ignited Internal Combustion Engine, Rich Burn	4500 ppmv
Spark-Ignited Internal Combustion Engine, Lean Burn	4500 ppmv
Compression-Ignited Internal Combustion Engine	4500 ppmv

(2) Alternative Compliance Strategies

(a) Demonstrated Engine Efficiency Alternative

- (i) In lieu of complying with the emission standards specified in subsection (C)(1), a Facility may request an alternative compliance strategy by demonstrating an engine efficiency greater than 30 percent.
- a. Engine efficiency shall be calculated pursuant to subsections (C)(2)(a)(ii)a.
- b. A request for demonstrating the engine efficiency alternative shall be made in writing and is subject to District approval.
- (ii) For Internal Combustion Engines with a demonstrated efficiency greater than 30 percent, the following procedure may be used to determine the alternative emissions limits:

$$l_a = \frac{(l_x)(e_a)}{e_r}$$

Where:

- l_a = Alternative Emission Limit
 l_x = Applicable Emission Limit (from subsection (C)(1))
 e_a = Actual Engine Efficiency
 e_r = Referenced Engine Efficiency (30%)

- a. Engine efficiency (e_a) shall be determined by using one of the following two methods, whichever is lower:

$$\text{Method 1: } e_a = \frac{(3413 \text{ BTU/kW-hr})(100)}{(H_a) (\text{BTU/kW-hr})}$$

Where:

e_a = Actual Engine Efficiency
 H_a = Actual Heat Rate of Fuel at HHV, in BTU/kW-hr

When the demonstrated percent efficiency applies to the engine only (without consideration of any downstream energy recovery), the data and calculation shall be averaged over 15 consecutive minutes and measured within 30 days of the first emissions compliance test. The actual heat rate in Btu/kW-hr (which can be converted to Btu/hp-hr by dividing by 1.34, shall be measured at peak load for each applicable engine.

$$\text{Method 2: } e_a = \frac{(e_m)(\text{LHV})}{(\text{HHV})}$$

Where:

e_a = Actual Engine Efficiency
 e_m = Manufacture Rated Efficiency
LHV = Lower Heating Value of Fuel
HHV = Higher Heating Value of Fuel

(b) NO_x Emission Reduction Alternative

- (i) In lieu of complying with the NO_x emission limits specified in Table 1 of subsection (C)(1), a Facility may request for an alternative compliance strategy of NO_x emission reductions.
- a. A request for demonstrating the NO_x emission reductions alternative shall be made in writing and is subject to District approval.
- (ii) For NO_x emissions only, the NO_x emission reduction alternative compliance strategy is a specified minimum percent reduction in NO_x emissions from the Baseline Emissions Rate.
- (iii) The VOC and CO emission standards listed in subsection (C)(1) continue to apply when the NO_x emission reduction alternative compliance strategy is used to demonstrate compliance with this rule.
- (iv) Internal Combustion Engines opting for the NO_x emission reduction alternative compliance strategy, shall achieve at least the following minimum reductions, listed in Table 4:

<p style="text-align: center;">Table 4 NO_x Emission Reduction Alternative (percent reductions of NO_x from the Baseline Emission Rate)</p>	
Engine Type	NO _x Reduction
Spark-Ignited Internal Combustion Engine, Rich Burn	90 percent
Spark-Ignited Internal Combustion Engine, Lean Burn	80 percent
Compression-Ignited Internal Combustion Engine	90 percent

- (v) The percent reduction as measured across the Emission Control Equipment or relative to the Baseline Emission Rate of each Emissions Unit shall be determined on an emission rate basis.
 - a. A Facility may use Aggregate Emissions to comply with the NO_x Emission Reduction Alternative, upon District approval.
 - b. A Facility using Aggregate Emissions to comply with the NO_x Emission Reduction Alternative must demonstrate an environmental benefit by increasing the amount of emissions reductions generated by at least ten (10) percent.
 - 1. The environmental benefit must be in addition to the emission reductions required to comply directly with this rule.
 - 2. Violations of any aggregate provision shall be considered a violation for every emissions unit included in the aggregate.
- (c) All alternative compliance strategies shall be made on a case-by-case basis by the District in consultation with the Facility.
- (d) A Baseline Emission Rate shall be determined for each Internal Combustion Engine opting for an alternative compliance strategy.
- (e) Internal Combustion Engines that are utilizing an alternative compliance strategy shall contain specific enforceable operating conditions which will ensure compliance with the selected alternative compliance strategy and subsequent emission limit(s) on the corresponding Internal Combustion Engine's Authority to Construct/Permit to Operate (ATC/PTO) permit.
- (f) An Emission Control Plan, pursuant to subsection (C)(3), is required for Facilities utilizing an alternative control strategy.
- (3) Emission Control Plan
 - (a) An Emission Control Plan shall be required for those Facilities that:
 - (i) Have an Internal Combustion Engine that utilizes an alternative compliance strategy, as listed under subsection (C)(2), to demonstrate compliance with this rule;

- (b) All affected Internal Combustion Engines within the Facility shall be addressed within the Emission Control Plan. Each Internal Combustion Engine shall be identified as to which option for emissions compliance applies, i.e. the per Internal Combustion Engine ppmv limit, the per Internal Combustion Engine adjusted ppmv limit, or the per Internal Combustion Engine percent NO_x reduction limit. The specific emission designation shall be recorded onto the corresponding Authority to Construct/Permit to Operate (ATC/PTO permit along with any specific operating limits or emissions limits pertaining to the specific Internal Combustion Engine, as enforceable permit conditions.
- (c) The Emission Control Plan shall be approved by the Air Pollution Control Officer (APCO) in writing.
- (d) For new Internal Combustion Engines and modifications to existing Internal Combustion Engines, the Emission Control Plan shall be submitted to and approved by the District prior to issuance of the Authority to Construct/Permit to Operate (ATC/PTO) permit.
- (e) The owner/operator may petition in writing for a change to the Emission Control Plan at any time.
- (f) The Emission Control Plan shall include the following (if applicable):
 - (i) An explanation of why installation of Emission Control Equipment cannot be achieved by the compliance date; and a schedule that demonstrates compliance with subsections (C)(1) or (C)(2) by the earliest practicable date.
 - (ii) The manufacturer, model number, unit identification (e.g. serial) number, rated horsepower, fuel-type, and combustion method (i.e., Rich Burn or Lean Burn or Compression-Ignited) of each Internal Combustion Engine;
 - (iii) A description of the Emission Control Equipment installed on the Internal Combustion Engine (if any), including unit identification (e.g. serial) number, type (e.g., nonselective catalyst, "clean-burn" combustion, etc.) and manufacturer, as well as a description of any ancillary equipment related to the control of emissions (e.g., automatic air/fuel ratio controller, fuel valves, etc.).
 - a. The operator shall notify the District of any replacement of such Emission Control Equipment and the new serial or identification numbers.
 - (iv) The Facility, company, Authority to Construct/Permit to Operate numbers and the location of the engine by a schematic of the affected Facilities.

- (v) A specific emission inspection procedure for each Internal Combustion Engine to ensure that the engine is operated in strict accordance with the manufacturer's specifications and in continual compliance with the provisions of this rule.
 - a. The procedure shall include an operator's inspection schedule.

(D) Exemptions

- (1) The provisions of this rule shall not apply to:
 - (a) Any Internal Combustion Engine rated at less than 50 brake horsepower.
 - (b) Any Internal Combustion Engine operated less than 100 hours in any rolling twelve (12) month period.
 - (c) Any Internal Combustion Engine subject to the *Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines rated at 50 Horsepower and Greater*, Title 17 CCR 93116, or otherwise classified as a Portable Internal Combustion Engine.
 - (d) Any Internal Combustion Engine that is an Emergency Internal Combustion Engine provided that the Internal Combustion Engine does not operate more than 100 hours for non-emergency use in any rolling twelve (12) month period.
 - (e) Any Internal Combustion Engine operated on an engine test stand.
 - (f) Any Internal Combustion Engine subject to District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*.
 - (g) Any Internal Combustion Engine located outside the Federal Ozone Non-attainment Area.
 - (h) Any Internal Combustion Engine registered with a Statewide Portable Equipment Registration (PERP), provided that the Internal Combustion Engine is operating in compliance with the *Regulation to Establish a Statewide Portable Equipment Registration Program*, Title 13 CCR 2450, and for which the Internal Combustion Engine does not require a local District Permit.
- (2) Any Facility claiming any of the above exemptions shall maintain the following records and documentation for compliance determination. These records and documentation must be readily available, and be made available to the District upon request:
 - (a) Documentation from the manufacturer that documents the rated brake horsepower of the Internal Combustion Engine, such as:
 - (i) Manufacturer specification documents; and/or,

- (ii) Manufacturer nameplate that is affixed to the engine.
- (b) Records of the monthly operation in terms of hours.
 - (i) The hours of operation must be documented from a non-resettable, four-digit (9,999), hour timer that is installed and maintained on the Internal Combustion Engine to indicate elapsed engine operating time.
 - (ii) The monthly operation records must be retained for a period of at least five (5) years.
- (c) Documentation that demonstrates that the Internal Combustion Engine is subject to the *Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines rated at 50 Horsepower and Greater*, Title 17 CCR 93116.; or, that the Internal Combustion Engine is otherwise classified as a Portable Internal Combustion Engine, as follows:
 - (i) A District permit for the Internal Combustion Engine that designates the requirements of the above regulation; and/or, designates the Internal Combustion Engine as a Portable Internal Combustion Engine.
- (d) Documentation that demonstrates that the Internal Combustion Engine is an Emergency Internal Combustion Engine, as follows:
 - (i) A District permit for the Internal Combustion Engine that designates the requirements of emergency use; and, designates the Internal Combustion Engine is an Emergency Internal Combustion Engine.
- (e) Documentation that demonstrates that the Internal Combustion Engine operates on an engine test stand as follows:
 - (i) A District permit for the Internal Combustion Engine that designates the requirements of an engine test stand, and designates the Internal Combustion Engine is an Internal Combustion Engine operating on a test stand.
- (f) Documentation that demonstrates that the Internal Combustion Engine is subject to District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*, as follows:
 - (i) A District permit for the Internal Combustion Engine that designates the requirements of District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*; or,
 - (ii) A District agricultural engine registration for the Internal Combustion Engine that designates the requirements of District Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*.

- (g) Documentation that demonstrates the Internal Combustion Engine is located outside the Federal Ozone Non-attainment Area; as follows:
 - (i) A District permit for the Internal Combustion Engine that designates the address of operation.
- (h) Documentation that the Internal Combustion Engine has a Statewide Portable Equipment Registration (PERP), as follows:
 - (i) A copy of the valid PERP registration; and,
 - (ii) A valid PERP registration sticker affixed to the Internal Combustion Engine.

(E) Monitoring and Recordkeeping Requirements

(1) Monitoring

- (a) The owner or operator of any Internal Combustion Engine subject to this rule must:
 - (i) Conduct inspections, whichever is the more frequent of, at least once every calendar quarter; or, after every 2,000 hours of engine operation.
 - a. An inspection includes any testing, maintenance, and/or other procedures that ensure the Internal Combustion Engine is operated in strict accordance with the manufacturer's specifications and in continual compliance with the provisions of this rule. Each inspection must include the following:
 1. Date.
 2. Records of testing, as applicable.
 3. Records of maintenance.
- (b) The owner or operator of any Internal Combustion Engine equipped with existing Emission Control Equipment or required to install Emissions Control Equipment to achieve compliance with this rule shall:
 - (i) Install, operate, and maintain in calibration, the following monitoring equipment, as approved by the APCO:
 - a. Continuous measurement and recording of Emissions Control System Operating Parameters;
 - b. Continuous measurement and recording of elapsed time of operation; and,
 - c. An Enhanced Emissions Monitoring Device.
 - (ii) Compliance shall be verified at least once in every twelve (12) month period by an emissions compliance test.

- a. Testing frequency may be reduced per the following provisions:
 - 1. If a compliance test demonstrates compliance with the provisions of this rule, the frequency of the compliance test may be extended to once every twenty (24) months.
 - 2. Failure of a compliance test or failure to complete the compliance test within the required frequency resets the compliance test frequency to at least once in every twelve (12) month period.
 - b. At a minimum, emissions compliance testing shall be conducted for NO_x, VOC, CO and oxygen (O₂) levels in compliance with the provisions of the District's Compliance Test Procedural Manual.
- (c) The owner or operator of any Internal Combustion Engine that is in compliance with this rule, without Emission Control Equipment shall:
 - (i) Demonstrate compliance through an emission compliance test. At a minimum, emissions compliance testing shall be conducted for NO_x, VOC, CO and oxygen (O₂) levels in compliance with the provisions of the District's Compliance Test Procedural Manual; or,
 - (ii) Demonstrate compliance through certified manufacturer emission rates.
- (d) Compliance verification, as specified in subsections (E)(1)(b) and/or (E)(1)(c) shall be satisfied:
 - (i) Within 180 days of the date of rule adoption, or
 - (ii) Within 180 days of the installation of an Emission Control Equipment; or,
 - (iii) Within 180 days of an Internal Combustion Engine becoming subject to this rule, whichever is later.
- (2) Recordkeeping Requirements
 - (a) The owner/operator of any engine subject to the provisions of Section (C) of this rule shall maintain a log for each Internal Combustion Engine containing, at a minimum, the following data:
 - (i) District Authority to Construct/Permit to Operate (ATC/PTO) number, unit identification number and Emissions Control Equipment identification number, when applicable.
 - (ii) Quarterly fuel use and quarterly hours of operation, on a calendar quarter basis.
 - (iii) The date and a summary of any emissions corrective maintenance taken.
 - (iv) The Facility's District-approved Emission Control Plan, if applicable.
 - (b) The owner/operator shall maintain the records, on site, for a period of five (5) years, and shall be readily available, to the District upon request.

(F) Test Methods

Compliance with the requirements of section (C) shall be determined, as required, in accordance with the following test procedures or any other method approved by USEPA and the APCO:

- (1) Oxides of nitrogen - EPA Method 7E, or ARB Method 100.
- (2) Carbon monoxide - EPA Method 10, or ARB Method 100.
- (3) Stack gas oxygen - EPA Method 3 or 3A, or ARB Method 100.
- (4) Volatile organic compounds - EPA Method 18, 25A or 25B, or ARB Method 100.
- (5) Determination of the exempt compounds, shall be performed in accordance with ASTM Test Method D 4457-85 (Solvents and Coatings) and be consistent with the provisions set forth in the Federal Register (FR, Vol. 56, No. 52, March 18, 1991). Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies a specific compound or compounds from the broad classes of perfluorocarbons listed in 40 CFR 51.100(s)(1) as being present in the product or process. When such compounds are identified, the facility shall provide the test method to determine the amount(s) of the specific compound(s).

(G) Compliance Schedule

- (1) Any Facility and/or owner/operator with Internal Combustion Engines subject to this rule must comply with this rule no later than twelve (12) months from the most recent amendment date of this rule.

See SIP Table at <http://www.mdaqmd.ca.gov>

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RULE 1161

Portland Cement Kilns

(A) General

- (1) Purpose:
 - (a) The purpose of this Rule is to limit Emissions of Oxides of Nitrogen (NO_x) resulting from the Operation of existing Portland Cement Kilns.
- (2) Applicability:
 - (a) The provisions of this Rule shall apply to all existing Portland Cement Kilns Operated within the Federal Ozone Non-Attainment Area of the Mojave Desert Air Quality Management District.
- (3) Applicability of Other District Rules:
 - (a) Compliance with this Rule does not exempt a Person from complying with any other applicable State, Federal or local law, statute, code, ordinance, Rule or Regulation.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) “Aggregate Emissions Limit” – A Facility-wide sum of NO_x Emission limits (expressed in lb/ton of Clinker) from all of a Facility's Portland Cement Kilns.
- (2) “Clinker” – The product of a cement Kiln from which finished cement is manufactured by milling and grinding.
- (3) “Combustion Control(s)” – A process, equipment or device used to achieve changes in the combustion process that results in a reduction of Oxides of Nitrogen Emissions; emphasis is on reducing the formation of NO_x.
- (4) “Emissions” – The quantitative rate of releases of air contaminants to the Atmosphere from an emission point, as measured by the Continuous Emission Monitoring System, source tests, or as calculated by the methods specified in an applicable Rule, Regulation or Permit to Operate.
- (5) “Low-Carbon Fuels” – Natural gas and carbon-neutral fuels such as but not limited to biomass. Coal is not a Low-Carbon Fuel.

- (6) “Normal Production Level” – The average Clinker production rate in tons per hour for the immediately preceding completed calendar quarter. Calendar days when the Kiln did not operate for the full twenty-four hours shall be excluded from this determination.
- (7) “Operation” – Any combustion of fuel and/or introduction of feedstock into a Kiln.
- (8) “Portland Cement” – A hydraulic cement produced by pulverizing Clinker consisting essentially of hydraulic calcium silicates, usually containing one or more of the forms of calcium sulfate as an interground addition.
- (9) “Portland Cement Kiln” (Kiln) – A system, including any solid, gaseous or liquid fuel combustion Equipment, used to calcine and fuse raw materials, including limestone and clay, to produce Portland Cement Clinker. For the purposes of this Rule a “Preheater-Precalciner Kiln” is a high-production, large diameter, short Kiln where much of the feed to the Kiln system is preheated in cyclone chambers prior to the final fusion which constitutes the formation of Clinker.
- (10) “Start-up” – Period of Operation during which a cement Kiln is being heated and before Clinker production reaches at least sixty-five percent (65%) of Normal Production Level.
- (11) “Shut-down” – Period of Operation when Clinker production is below sixty-five percent (65%) of Normal Production Level and cement Kiln is cooling in preparation for a period of non-Operation.
- (12) “Waste Heat” – Excess heat generated as a result of a combustion process within a Kiln.

(C) Requirements

- (1) NO_x Reduction Technologies
 - (a) Each Owner or Operator of a Kiln subject to this Rule shall Operate such Equipment with NO_x RACT. RACT shall be specific to the type of Kiln being Operated, and can include - but is not limited to - any one, or a combination of, the following:
 - (i) Combustion Controls
 - (ii) Low NO_x burners
 - (iii) Staged combustion
 - (iv) NO_x-reducing fuels or substances (includes tire-derived fuels).
- (2) NO_x RACT Emission Limits – All periods except Start-up and Shut-down
 - (a) Any Owner or Operator of a Kiln subject to this Rule shall not exceed the following NO_x Emission limits, calculated pursuant to Section (E)(1)(b), during periods of Operation other than Start-up and Shut-down:

- (i) For Preheater-Precalciner Kilns: 2.8 lb/ton of Clinker produced when averaged over any 30 consecutive day period; or,
 - (ii) For a Portland Cement Kiln operating with over fifteen (15) percent of Heat Input from any combination of Low-Carbon Fuels: 3.4 lb/ton of Clinker produced when averaged over any 30 consecutive day period.
- (3) NO_x RACT Emission Limits –Start-up and Shut-down Periods
 - (a) Any Owner or Operator of a Kiln subject to this Rule shall not exceed the following limits during Start-up and Shut-down periods:
 - (i) For Preheater-Precalciner Kilns manufactured by Allis Chalmers whose construction was completed in 1982: 17,616 lb NO_x/day
 - (ii) For Preheater-Precalciner Kilns manufactured by Humboldt-Wedag whose construction was completed in 1984: 28,160 lb NO_x/day
 - (iii) For all other Kiln types: maximum heat input of 4,500 MMBtu/day/Kiln
- (4) Additional Start-up and Shut-down Requirements
 - (a) The frequency and duration of Operation in Start-up or Shut-down mode will be minimized to the maximum extent practicable, and in no case shall the duration of the Start-up or Shut-down period exceed 36 hours;
 - (b) All possible steps will be taken to minimize the impact of Emissions during Start-up and Shut-down on ambient air quality;
 - (c) The Facility must be Operated in a manner consistent with good practice for minimizing Emissions, and the source must have used best efforts regarding planning, design and operating procedures to meet the applicable Emission limitation; and
 - (d) The Owner or Operator's actions during Start-up and Shut-down periods must be documented by contemporaneous operating logs signed by the Operator on duty at the time of Start-up or Shut-down or other relevant evidence.

(D) Alternative Compliance Strategy

- (1) As an alternative to complying with the limits specified in Section (C)(2) on a Permit Unit basis, the Owner or Operator of a Kiln subject to this Rule may be allowed to aggregate NO_x Emissions from all cement Kilns at a single Facility, subject to the following conditions:
 - (a) The Owner or Operator must request, in writing, to Aggregate Emissions pursuant to the Compliance Schedule set forth in Section (I).

- (b) Aggregating of Emissions must be approved in writing by the District.
- (c) Aggregating of Emissions shall be allowed only between Kiln types with the same Emission limits, as set forth in Section (C)(2)(a).
- (d) The Aggregated Emissions Limit for NO_x shall be less than or equal to ninety percent (90%) of the sum of the total NO_x Emissions from all Kilns at a Facility, as allowed pursuant to Section (C)(2).
- (e) The Aggregate Emissions per ton of Clinker shall be calculated as the Aggregate Emissions divided by the Facility Clinker production sum for the same period. When this option is approved, the aggregated NO_x Emissions per Clinker ton will be used to comply with the NO_x RACT Emission Limit.
- (f) Regardless of method of compliance employed (Permit Unit limit or Aggregate Emission Limit), and prior to implementation, the applicable Emission limits and method of compliance shall be incorporated into the District Permit to Operate (PTO) for each Kiln.

(E) Compliance Determination

- (1) Any Owner or Operator of a Kiln subject to this Rule shall make the following determinations, as set forth herein:
 - (a) Compliance determinations shall not be established from data obtained during the periods specified in Section (G).
 - (b) Emission Calculation Method
 - (i) Emissions shall be calculated by dividing the sum of all hourly lb of NO_x for the current operating day and the preceding 29 operating days by the tons of Clinker produced over the same period of time. Such calculations shall exclude any Emissions and Clinker produced during those time periods specified in Section (G) and during Start-up and Shut-down.
 - (c) Any Owner or Operator of a Kiln subject to this Rule shall convert observed NO_x concentrations to a mass emission rate using the following formula (for purposes of this calculation, standard conditions are @ 68 °F and 29.92 inches Hg):

$$\text{lb/hr} = 7.1497 \times 10^{-6} (\text{ppmv})(\text{dscfm})$$
 - (d) For the purposes of this Rule, Oxides of Nitrogen shall be calculated as NO₂ on a dry basis.

(F) Monitoring and Recordkeeping

(1) Continuous Emissions Monitoring

- (a) Any Owner or Operator of a Kiln subject to this Rule shall not operate such Equipment unless it is equipped with one of the following:
 - (i) A CEMS monitoring system which meets the requirements of 40 CFR Part 60, Subpart A, and Appendix B, and complies with the quality assurance procedures specified in 40 CFR Part 60, Appendix F. The CEMS shall be used to demonstrate compliance with the applicable Emission limit, specified pursuant to Section (C)(2), or the Aggregate Emission Limit, as set forth in Section (D), by measuring NO_x Emissions; or
 - (ii) If an Owner or Operator can demonstrate, by preponderance of the evidence, that installation of a CEMS conforming to the requirements of Section (F)(1)(a)(i) above is technologically and economically unfeasible, the Owner or Operator may provide an alternate calculation and recordkeeping procedure based upon Actual Emission testing and correlations with operating parameters (such as Kiln loading, fuel-type, percent excess oxygen, etc.). The installation, implementation and use of such an alternate calculation and recordkeeping procedure must be approved by the District, CARB and USEPA, in writing, prior to implementation.
- (b) The CEMS or approved alternate recordkeeping procedure shall be operated and maintained in strict accordance with the manufacturer's/supplier's specifications and in continual compliance with the provisions of this Rule.

(2) Recordkeeping Requirements

- (a) Any Owner or Operator of a Kiln subject to this Rule shall produce and maintain CEMS records, or alternate records pursuant to Section (F)(1)(a)(ii) above, for each affected Kiln on a daily basis. Such records shall include, but are not limited to:
 - (i) The Emissions, in pounds, of NO_x from each cement Kiln if complying with the limit specified in (C)(2) on a Permit Unit basis; or
 - (ii) The Aggregate Emissions, in pounds, of NO_x from all cement Kilns at a Facility, if complying with the limit specified in (C)(2) on an aggregate basis, as approved by the District.
 - (iii) The date, time and duration of any Start-up, Shut-down or malfunction in the Operation of any of the Kiln systems or the Emissions Monitoring Equipment;
 - (iv) The results of performance testing, evaluation, calibration checks, adjustments and maintenance of the CEMS or approved alternate

recordkeeping procedure employed, pursuant to the requirements of Section (F)(1)(a)(ii).

- (b) Any Owner or Operator of a Kiln subject to this Rule shall produce and maintain daily records of NO_x Emission concentrations and NO_x mass Emission rate, as required by Section (E)(1)(c).
 - (c) Any Owner or Operator of a Kiln subject to this Rule shall produce and maintain daily Clinker production records.
 - (d) Any Owner or Operator of a Kiln subject to this Rule shall produce and maintain daily records of the type and quantity of fuel used.
 - (e) All records required to be produced or maintained shall be retained on site for a minimum of five (5) years and be made available to the APCO or his designee upon request.
- (3) Emission Reporting
- (a) Daily NO_x Emission data for the calendar quarter compiled pursuant to Section (F)(2)(a)(i) or (ii) shall be submitted to the District. All quarterly reports must be received within 30 days after the end of each quarter.

(G) Exemptions

- (1) The requirements of Sections (C) and (D) shall not apply to periods during which any gaseous/liquid fuel is used (except Start-up and Shut-down), and the applicable Emission limit is consequently exceeded. This exemption shall be subject to the following conditions:
 - (a) The total allowable exceedance period shall be limited to an aggregate total of 14 calendar days per calendar year; and
 - (b) Operating pursuant to this exemption shall not relieve the Owner or Operator from the requirements of District Regulations II, XII or XIII; and
 - (c) This exemption shall only apply to periods when there is an interruption in the supply of solid fuel which is beyond the control of the Facility; and
 - (d) The frequency and duration of Operation under this exemption will be minimized to the maximum extent practicable; and
 - (e) All possible steps will be taken to minimize the impact of Emissions on ambient air quality during gaseous or liquid fuel use;
 - (f) The Facility must be Operated in a manner consistent with good practice for minimizing Emissions, and the source must have used best efforts regarding planning, design and operating procedures to meet the applicable Emission limitation; and

- (g) The Owner or Operator's actions under this exemption must be documented by properly signed, contemporaneous operating logs, or other relevant evidence.

(H) Test Methods

- (1) The following tests shall be used in conducting compliance testing, Relative Accuracy Test Audits (RATA) and other testing required for compliance with this Rule:
 - (a) Compliance testing shall be subject to the protocols prescribed in the District's Compliance Test Procedural Manual.
 - (b) Certification Testing shall be subject to the protocols prescribed in the District's Compliance Test Procedural Manual and 40 CFR 60, Appendix B.
 - (c) Quality Assurance Testing shall be subject to the protocols prescribed in the District's Compliance Test Procedural Manual and 40 CFR Part 60, Appendix F.
 - (d) Oxides of Nitrogen stack testing for purposes of this Rule shall be conducted pursuant to EPA Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)" or CARB Method 100, "Procedures for Continuous Gaseous Emission Stack Sampling (Stack Gas NO_x)."
 - (e) Stack gas flow rate testing shall be conducted pursuant to EPA Method 2, "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pilot Tube)."
 - (f) Oxygen concentration stack testing shall be conducted pursuant to EPA Method 3A, "Determination of O₂ and CO₂ Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)" or CARB Method 100.

(I) Compliance Schedule

- (1) Any Owner or Operator of a Permit Unit subject to this Rule shall comply with all applicable requirements immediately upon adoption, except:
 - (a) Those Owners or Operators following the alternative compliance strategy pursuant to subsection (D)(1) shall comply with an Aggregated Emissions Limit for NO_x less than or equal to ninety percent (90%) of the sum of the total allowable NO_x Emissions from all Kilns at the Facility by April 22, 2002. Prior to that date, such Owners or Operators shall at a minimum comply with an Aggregated Emission Limit for NO_x less than or equal to

the sum of the total allowable NO_x Emissions from all Kilns at the Facility.

(J) Violations

- (1) The occurrence of any of the following shall constitute a violation of this Rule:
 - (a) Exceedance of the applicable Emission limit specified pursuant to Section (C)(2), unless the Facility has an approved Aggregate Emissions Limit, as set forth in Section (D);
 - (b) Exceedance of the applicable Emission limit specified pursuant to subsection (C)(3);
 - (c) For facilities which have been approved to Aggregate Emissions, exceedance of the sum of the total NO_x Emissions from all Kilns at a Facility, as set forth in Section (D)(1)(d), shall constitute a violation of this Rule for every permitted unit operating during the exceedance period in the averaging group;
 - (i) A violation of the aggregate limit shall also be considered a violation of the 30-day average for the Facility. Such exceedances shall be determined by using the emission calculation method set forth in Section (E)(1)(b)(i), and considered on a daily basis.
 - (d) Failure to comply with any limits contained in this Rule, as determined by any one of the test methods in Section (H), or by any other previously-approved test method, as set forth in a valid PTO pursuant to Regulation II or Regulation XII;
 - (e) Exceedance of the 14 day exemption period for gaseous/liquid fuel use, as set forth in Section (G)(1)(a);
 - (f) Lack of data collection and/or reporting, pursuant to the requirements of Section (F)(2) and (F)(3);
 - (g) Failure to comply with any provision of this Rule shall constitute a violation of the Rule.

See SIP Table at <http://www.mdaqmd.ca.gov/>

Rule 1162

Polyester Resin Operations

(A) Purpose

(1) Purpose

- (a) The purpose of this Rule is to limit the emissions of Volatile Organic Compounds (VOCs) from Polyester Resin Operations, Fiberglass Boat Manufacturing Operations, organic Solvent cleaning, and the storage and disposal of Solvents and waste Solvent materials associated with such operations.

(2) Applicability

- (a) This Rule is applicable to the manufacture of products from, or the use of, Polyester Resin Material, including Repair, rework, or Touch-Up activities for commercial, military, or industrial use.
- (b) This Rule is applicable to organic Solvent cleaning, and the storage and disposal of all Solvents and waste Solvent materials associated with Polyester Resin Operations and Fiberglass Boat Manufacturing Operations.
- (c) This Rule is applicable to all new and existing operations.

(3) Exemptions

- (a) The provisions of this Rule, other than the record keeping requirements of subsection (D)(1), shall not apply to any Polyester Resin Operation where the volume of Polyester Resin Materials used is less than 20 gallons per month per Facility.
- (b) The requirements of subsections (C)(1) and (C)(2) shall not apply to Pin-Stripping provided that the total amount of the Gel Coat materials sprayed does not exceed one (1) gallon per day per Facility.
- (c) For Fiberglass Boat Manufacturing Operations, Production Resins (including Skin Coats) that must meet the specifications for use in military vessels or must be approved by the United States Coast Guard for use in the construction of lifeboats, rescue Boats, and other life-saving appliances approved under Title 46, Chapter 1, Subchapter Q of the CFR (commencing with §159), or to the construction of small passenger vessels regulated by Title 46, Chapter 1, Subchapter T of the CFR (commencing with §175) are exempt from the requirements of subsection (C)(3)(b).

Production Resins that meet these criteria shall be applied with Non-Atomizing Resin Application Equipment.

- (d) The Solvent cleaning provisions of subsection (C)(6) shall not apply to the following cleaning applications: solar cells, laser hardware, scientific instruments, high precision optics, laboratory tests and analyses, or bench scale or research and development projects.

(B) Definitions

The definitions contained in District Rule 102 – *Definition of Terms* shall apply unless the term is otherwise defined herein:

- (1) Application Equipment – A device, including, but not limited to, a spray gun, brush, and roller, used to apply Adhesives, Coatings, or Inks.
- (2) Assembly Adhesive – A chemical used in joining fiberglass, metal, foam, or wood parts to another to form a temporary or permanently bonded assembly. Assembly Adhesives include, but are not limited to, methacrylate Adhesives and Putties made from Polyester or Vinylester Resin mixed with inert Filler or fibers.
- (3) Atomized Resin Application – A Resin application technology in which the Resin leaves the Application Equipment and breaks into droplets or an aerosol as it travels from the Application Equipment to the surface of the part. Atomized Resin Application includes, but is not limited to, Resin spray guns and Resin chopper spray guns.
- (4) Boat – Any type of vessel, other than a seaplane, that can be used for transportation on the water.
- (5) Catalyst – A substance that is added to Resin to initiate or promote polymerization.
- (6) Clear Gel Coat – A Gel Coat that is clear or translucent so that underlying colors are visible. Clear Gel Coat is used to manufacture parts for sale. Clear Gel Coat does not include Tooling Gel used to build or Repair Molds.
- (7) Closed Molding – A method of fabricating composite parts by placing composite materials in a confining Mold cavity and applying pressure and/or heat. The pressure may be clamping pressure, fluid pressure, atmospheric pressure, or vacuum pressure used either alone or in combination. The Mold surfaces may be rigid or flexible. Closed Molding includes, but is not limited to, compression molding with sheet molding compound, infusion molding, Resin Injection Molding (RIM), Vacuum-Assisted Resin Transfer Molding (VARTM), Resin Transfer Molding (RTM), and vacuum-assisted compression molding. Processes in which a Closed Mold is used only to compact saturated fabric or remove air or excess Resin from the fabric (such as in vacuum bagging) are not considered Closed Molding. Open Molding steps, such as application of Gel Coat or Skin

Coat layer by conventional Open Molding prior to a Closed Molding process are not Closed Molding.

- (8) Conductive Gel Coat – A Gel Coat which uses graphite (black) in a Clear Gel Coat to provide conductivity when utilizing an Electrostatic topcoat Application.
- (9) Corrosion-Resistant Materials – Polyester Resin Materials used to make products for corrosion resistant applications such as tooling, fuel or chemical tanks, Boat hulls, pools and outdoor spas.
- (10) Cure – To transform or polymerize material from a liquid state to a solid or semi-solid state in which the desired physical properties, including hardness, are achieved.
- (11) Fiber Reinforced Plastic or Composite (FRP/C) Materials – A mixture of Polyester Resin and Fiber Reinforcement Materials.
- (12) Fiber Reinforcement Materials – Multifilament of glass or other fibrous materials such as, carbon, boron, metal and amid Polymers, which are used to reinforce plastic.
- (13) Fiberglass Boat – A vessel in which either the hull or deck is built from a composite material consisting of a Thermosetting Polyester Resin matrix reinforced with fibers of glass, carbon, aramid, or other material.
- (14) Fiberglass Boat Manufacturing Operations – Facilities that manufacture hulls or decks of Boats from fiberglass, or build Molds to make Fiberglass Boat hulls or decks. Facilities that manufacture solely parts of Boats (such as hatches, seats, or lockers), or Boat trailers, but do not manufacture Boat hulls or decks from fiberglass or build Molds to make Fiberglass Boats or hulls are not considered Fiberglass Boat Manufacturing. A Facility that manufactures hulls or decks, or Molds for hulls or decks, and other Fiberglass Boat parts, including small parts such as hatches, seats, and lockers, is considered Fiberglass Boat Manufacturing. Fiberglass Boat Manufacturing Operations include Open Molding and Closed Molding Resin and Gel Coat Operations (these include Pigmented Gel Coat, Clear Gel Coat, Production Resin, Tooling Gel Coat, and Tooling Resin), Resin and Gel Coat mixing operations, and Resin and Gel Coat Application Equipment cleaning operations.
- (15) Filament Application – A method of applying Resin to an Open Mold that involves feeding reinforcement fibers through a Resin bath and winding the Resin-impregnated fibers on a rotating mandrel.
- (16) Filled Polyester Resin Material – A material formulated by adding compatible Filler(s) to Polyester Resin Material(s) to change viscosity, density, shrinkage, or other physical properties.
- (17) Filler – A finely divided inert (non-VOC) material, which may be added to the Resin to enhance its mechanical properties and extend its volume. Resin Fillers

include, but are not limited to, silica, carbon black, talc, mica and calcium carbonate.

- (18) Fire Retardant Materials – Polyester Resin Materials used to make products that are resistant to flame or fire.
- (19) Flowcoater – A Non-Atomizing application technique of applying Resins and Gel Coats to an Open Mold with a fluid nozzle in a fan pattern with no air supplied to the nozzle.
- (20) Fluid Impingement Technology – A spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.
- (21) Gel Coat – A Thermosetting Polyester Resin surface coating containing styrene or methyl methacrylate, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements. Gel Coat layers do not contain any reinforcing fibers and Gel Coats are applied directly to Mold surfaces or to a finished laminate.
- (22) General Purpose Polyester Resins – Resin materials that are not Corrosion-Resistant, Fire Retardant, High-Strength, or Gel Coats.
- (23) Hand Lay-Up – Hand application technique of composite materials using a bucket and a paint brush or a paint roller, or other hand held method of application.
- (24) High-Strength Materials – Polyester Resins which have casting tensile strength of 10,000 psi or more and which are used for manufacturing of high performance products, including Boats and skis.
- (25) Lamination Resins – Orthophthalate, isophthalate and dicyclopentadiene (DCPD) Resins which are used in composite system made of layers of reinforcement fibers and Resins, such as in Boat fabrication.
- (26) Manual Application – The application of Resin to an Open Mold using a Hand Lay-Up technique. Components of successive plies of Resin-impregnated reinforcement fibers are applied using hand tools such as brushes and rollers. The use of Pressure-Fed Rollers and Flowcoaters to apply Resin to glass reinforcements that are then applied by hand to the Mold is not considered Manual Resin Application.
- (27) Marble or Cultured Resins – Orthophthalate and modified acrylic isophthalate Resins, which are designed for the fabrication of cast products, such as vanities.
- (28) Mold – The cavity or surface into or on which Gel Coat, Resin, and fibers are placed and from which finished fiberglass parts take their form.
- (29) Monomer – A VOC that partially combines with itself, or other similar compounds, by a cross-linking reaction to become a part of the Cured Resin. Monomers include, but are not limited to, styrene and methyl methacrylate.

- (30) Monomer Percent by Weight of a Filled Resin as Applied – The weight of the Monomer, divided by the weight of the Polymer and Filler(s).
- (31) Monomer Percent by Weight of a Resin – The weight of the Monomer, divided by the weight of the Polymer.
- (32) Non-Atomizing Spray Application – Any application technique in which Resin flows from the applicator, in a steady and observable coherent flow, without droplets, for a minimum distance of three (3) inches from the applicator orifices. Non-Atomized Resin Application technology includes, but is not limited to, Flowcoaters, chopper Flowcoaters, Pressure-fed Resin Rollers, Resin Impregnators, Fluid Impingement Technology applicators. Non-Atomizing application of Resin to glass reinforcements that are then applied by hand to the Mold are considered to be Non-Atomizing Resin application.
- (33) Open Molding – A process for fabricating composites in a way that Polyester Resin Materials are exposed to the Atmosphere. Open Molding includes processes such as manual Resin application, mechanical Resin application, Filament Application, and Gel Coat application. Open Molding also includes application of Resins and Gel Coats to parts that have been removed from the Open Mold.
- (34) Open Molding Resin and Gel Coat Process – A process in which the reinforcing fibers and Resin are placed in the Mold and are open to the surrounding air while the reinforcing fibers are saturated with Resin. For the purpose of this Rule, Open Molding includes operations in which a vacuum bag or similar cover is used to compress the uncured laminate to remove bubbles or excess Resin, or to achieve a bond between core material and a laminate.
- (35) Pigmented Gel Coat – Opaque Gel Coat that does not contain ten percent (10%) or more titanium dioxide by weight used to manufacture parts for sale. Pigmented Gel Coat does not include Tooling Gel used to build or Repair Molds.
- (36) Pin-Striping – A spray application technique used to apply one or more narrow bands, marks, or streaks of Gel Coat onto the surface of an Open Mold of a composite product.
- (37) Polyester – A Polymer of ester molecules, which are formulated by the reaction of an acid and an alcohol and linked together by the ester linkages.
- (38) Polyester Resin Materials – Polyester Resins, such as isophthalic, orthophthalic, halogenated, bisphenol A, vinyl ester, or furan Resins; cross-linking agents; Catalysts; Gel Coats; inhibitors; accelerators; promoters; and any other material containing VOC used in Polyester Resin Operations.
- (39) Polyester Resin Operations – Fabricate, rework, Repair, or Touch-Up products for commercial, military, or industrial use by mixing, pouring, Hand Lay-Up, impregnating, injecting, forming, winding, spraying, and/or curing with fiberglass, Fillers, Polyester Resin Materials, or any other reinforcement materials, and associated cleanup.

- (40) Polymer – A chemical compound, such as polystyrene, comprised of a large number of chemical units (Monomer) composed of identical crosslinking groups, such as styrene.
- (41) Polyputties – Polyester Resin Putties used for assembling fiberglass parts.
- (42) Pressure-Fed Roller – A fabric roller that is fed with continuous supply of catalyzed Resins from a mechanical fluid pump.
- (43) Primer Gel Coat – Gel Coat that is used to coat the surface of composite parts, prior to top-coat painting, for automotive, aerospace, marine and home building industries.
- (44) Production Resin – A General Purpose Polyester Resin or Gel Coat Material that is not especially Corrosion-Resistant, Fire Retardant, or High-Strength.
- (45) Pultrusion – A process where continuous roving strands are moved through a strand-tensioning device into a Resin bath for impregnation and then passed through a heated die for curing. There are several types of Pultrusion Equipment such as open bath, Resin injection, and direct die injection Equipment.
- (46) Putty(ies) – A thickened mixture of Polyester Resin made by adding Fillers, thixotrophs and reinforcing fibers used in the joining of one fiberglass, metal, foam or wood part to another to form a temporary or permanently bonded assembly.
- (47) Repair – Application of Resin or Gel Coat to a part to correct a defect or mend damage, where the Resin or Gel Coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area. For purposes of this definition, rerouting a part back through the normal production line, or part of the normal production line, is not considered Repair.
- (48) Resin – Any Thermosetting Polyester Resin, which is used to encapsulate and bind together reinforcement fibers and/or Fillers in the formulation of composite materials.
- (49) Resin and Gel Coat Operation – An operation in which Resin or Gel Coat, including the mixing of Putties or Polyputties, is combined with additives that include, but are not limited to, Fillers, promoters, or Catalysts.
- (50) Resin Impregnator – A mechanical Non-Atomizing composite materials application technique in which fiber reinforcement is saturated with Resins in a controlled ratio for each specific composite product.
- (51) Skin Coat – A layer of Resin and fibers applied over Gel Coat to protect the Gel Coat from being deformed by the next laminate layers.

- (52) Small Job – Minor Resin or Gel Coat application project which requires very limited amount of materials. Total material use for all Small Jobs at a facility shall not exceed two (2) gallons per day.
- (53) Solid Surface Resins – Resins, which are used without Gel Coats to fabricate homogenous solid surface products.
- (54) Specialty Gel Coats – Gel Coats which are used in conjunction with Fire Retardant, Corrosion-Resistant or High-Strength Materials.
- (55) Specialty Resin – A halogenated, furan, bisphenol A, vinyl-ester, or isophthalic Resin used to make products for exposure to one or more of the following extreme environmental conditions: acute or chronic exposure to corrosive agents, caustic agents, acidic agents, or flame.
- (56) Thermosetting Polyester Resin – A Resin material that undergoes a chemical reaction during curing and cannot be reshaped.
- (57) Tooling Gel Coat – The Gel Coat used to build or Repair Molds (also known as tools) or prototypes (also known as plugs) from which Molds will be made.
- (58) Tooling Resin – The Resins used to build or Repair Molds (also known as tools) or prototypes (also known as plugs) from which the Molds will be made.
- (59) Tub/Shower Resins – Dicyclopentadiene (DCPD) Resins, along with orthophthalate and isophthalate Resins, which are used to fabricate bathware products.
- (60) Vapor Suppressant – A wax substance added to Resin for the purpose of forming a layer on the surface of the Resin while it is curing and minimize the outward diffusion of Monomer vapor into the Atmosphere.
- (61) Vapor Suppressed Resin – A Polyester Resin or Gel Coat material which contains additives to reduce VOC evaporation loss to less than fifty (50) grams per square meter of surface area as determined and certified by Resin and Gel Coat manufacturers.
- (62) Vinylester Resin – A Thermosetting Polyester Resin containing esters of acrylic or methacrylic acids having a double-bond and ester linkage sites at the end of the Resin molecules.
- (63) White and Off-White Gel Coat – A Gel Coat that contains ten percent (10%) or more titanium dioxide by weight.

(C) Requirements

- (1) An Operator of a Polyester Resin Operation shall comply with one of the process or control requirements in subsections (C)(1)(a) through (C)(1)(c), in addition to subsections (C)(1)(d) and (C)(1)(e):

- (a) Use materials in an Open Molding Process that comply with the limits in Table 1. In addition to complying with Table 1 limits, the non-Monomer VOC content of each Resin and Gel Coat shall not contain more than five percent (5%) by weight of the Resin or Gel Coat.

Table 1* Monomer Content for Open Molding Resin and Gel Coat Process	
Material	Weight Average Monomer VOC content (weight percent) limit
General Purpose Polyester Resin	
Marble Resin	10 % (32% as supplied, no Fillers)
Solid Surface Resin	17%
Tub/Shower Resin	24% (35% as supplied, no Fillers)
Lamination Resin	31% (35% as supplied, no Fillers)
Tooling Resin	
Atomized (spray)	30%
Non-Atomized	39%
Specialty Resin	
Fire Retardant	38%
High-Strength*	
Mechanical (Non-Atomizing)	46.2%
Filament Application	42%
Manual Application	40%
Corrosion-Resistant	48%
All other Resin	35%
Tooling Gel Coat	40%
Pigmented Gel Coat	
White and Off -White	30%
Non-White	37%
Primer	28%
Clear Gel Coat for use with Marble Resin	40%
Clear Gel Coat for use with Other Resin	44%
Specialty Gel Coat	48%
Conductive Gel Coat	42%

*Facilities that apply High-Strength Resins using Non-Atomized mechanical Application may use the same Resin for Manual Application during product assembly and/or reinforcement tie-ins, provided that the High-Strength Resin used for both application methods does not exceed the 46.2% Monomer content limit.

- (i) In addition to complying with Table 1 limits, all Tub/Shower Resin material applied in an Open Mold Process shall be Vapor Suppressed Resin;

- (b) Use a Closed-Mold system.
 - (c) Install and operate a VOC control system which meets all of the requirements of subsections (C)(1)(c)(i), (C)(1)(c)(ii), and (C)(1)(c)(iii) during periods of emission producing activities.
 - (i) The VOC emission control system shall be approved, in writing, by the APCO.
 - (ii) The VOC emission control system shall have an Overall Control Efficiency of at least 90 percent by weight, demonstrated using the applicable test method(s) in Section (E).
 - (iii) The VOC emission control system shall reduce VOC emissions, at all times, to a level not greater than the emissions that would have been achieved through the use of compliant materials, compliant Equipment, or compliant work practices, as applicable.
 - (d) Resins and Gel Coats used for Touch-Up, Repair, or Small Jobs, may have a Monomer content limit up to ten percent (10%) more than the applicable limit in Table 1. Such Resins or Gel Coats shall only be applied by a hand-held Atomized spray gun which has a container no larger than one (1) quart for the Resin or Gel Coat as part of the gun. Resins or Gel Coats applied by another method shall comply with the applicable limit in Table 1. Total material use for all Small Jobs at a Facility shall not exceed two (2) gallons per day.
 - (e) Complying formulations shall not be thinned or diluted with any VOC containing material or changed in any manner that may increase VOC emissions after testing, but prior to or during application.
- (2) Application Technique
- (a) Except for Gel Coats, a Person shall not apply any Resin materials to an open Mold surface subject to the provisions of this Rule unless one of the following Non-Atomizing application techniques is used and operated according to the manufacturer's specifications:
 - (i) Non-Atomizing Spray Application technique;
 - (ii) Flowcoaters;
 - (iii) Pressure-Fed Rollers;
 - (iv) Resin Impregnators;
 - (v) Hand Lay-Up applications; or
 - (vi) Other Non-Atomizing application techniques which have emission reduction efficiencies at least equal to one of the above methods, and which are used in a manner that the parameters under which they were tested are permanent features of the method. Prior to their use, such application shall be approved in writing by the APCO, CARB, and the USEPA.

- (b) An Operator shall not apply Gel Coat materials to any open Mold surface subject to the provisions of this Rule unless one of the following application techniques is used and operated according to the manufacturer's specifications:
 - (i) Any Non-Atomizing application technique listed in subsection (C)(2)(a);
 - (ii) Airless;
 - (iii) Air-Assisted Airless Spray;
 - (iv) Electrostatic Attraction; or
 - (v) High-Volume, Low-Pressure (HVLP).
 - a. HVLP spray Equipment shall be operated in accordance with the manufacturer's recommendations.
 - b. HVLP spray guns shall have the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Rule 102 – *Definitions of Terms* indicated on the spray gun.
- (c) In lieu of complying with the applicable requirements of subsection (C)(2), an Operator may install and maintain a VOC emission control system that meets the requirements of subsection (C)(1)(c) around the Coating Application Equipment.

(3) Fiberglass Boat Manufacturing Operation

An Operator of a Fiberglass Boat Manufacturing Operation shall comply with one of the following process or control requirements:

- (a) Requirements for Closed Molding Process
 - (i) An Operator of a Fiberglass Boat Manufacturing Facility which uses a Closed Molding process shall comply with the applicable requirements of subsections (C)(1), (C)(4), (C)(5), (C)(6), (C)(7), and Sections (D), (E) and (F).
- (b) Requirement for Compliant Materials
 - (i) An Operator subject to (C)(3) shall not use any materials in an Open Molding Process that exceed the limits in Table 2. In addition to complying with Table 2 limits, the non-Monomer VOC content of each Resin and Gel Coat shall not contain more than five percent (5%) by weight of the Resin or Gel Coat.

Table 2 Monomer VOC Limits for Open Molding Resin and Gel Coat Process for Fiberglass Boat Manufacturing Operations		
Material	Application Method	Weight Average Monomer VOC content (weight percent) limit
Production Resin	Atomized (spray)	28%
Production Resin	Non-Atomized	35%
Pigmented Gel Coat	Any method	33%
Clear Gel Coat	Any method	48%
Tooling Resin	Atomized (spray)	30%
Tooling Resin	Non-Atomized	39%
Tooling Gel Coat	Any method	40%

- (ii) Table 2 materials used for part or Mold Repair and Touch-Up are exempt from Monomer VOC limits so long as they don't exceed one percent (1%) by weight of all Resin and Gel Coat used at a Facility on a 12-month rolling-average basis
- (iii) Table 2 Monomer and non-Monomer VOC limits shall not be applied to pure, 100-percent Vinylester Resin used for Skin Coats.
 - a. Pure, 100-percent Vinylester Resin used for Skin Coats shall be applied with Non-Atomizing Resin Application Equipment.
 - b. The total amount of pure, 100-percent Vinylester Resin used for Skin Coats shall not exceed five percent (5%) by weight of all Resin used at a Facility on a 12-month rolling average.
- (c) Requirements for Add-on VOC Control System
 - (i) In lieu of complying with limits of Table 2, an Operator may install and operate a VOC control system which is equivalent to the emission reductions achieved by meeting the Monomer contents in Table 2 during periods of emission producing activities as determined using the equation in subsection (E)(1)(g). However, instead of using the mass of each material used over the past twelve months in the equation in subsection (E)(1)(g), the operator shall use the mass of each material used during control device performance source testing in subsection (E)(1)(g) to determine the emission limit (in kilograms of Monomer VOC) that is applicable during source testing. If the measured emissions at the outlet of the control device (in kilograms of Monomer VOC) are less than the emission limit, then the control device shall be considered to have achieved the emission limit, and provided the control device also meets the requirements of subsections (C)(3)(c)(ii) through (iv). All Resins and Gel Coats used in these

- controlled operations would also need to meet the recommended non-Monomer VOC content limit of five percent (5%).
- (ii) The VOC emission control system shall be approved, in writing, by the APCO.
 - (iii) The VOC emission control system shall have an Overall Control Efficiency of at least 90 percent by weight, demonstrated using the applicable test method in Section (E).
 - (iv) The VOC emission control system shall reduce VOC emissions, at all times, to a level that is not greater than the emissions that would have been achieved through the use of compliant materials, compliant equipment, or compliant work practices, as applicable, and determined by the equation in subsection (E)(1)(g).

(d) Requirements for Filled Resins

- (i) An operator who uses Resins to which Fillers are added shall use the equation in (E)(1)(h) to adjust the emission rate for Filled Resins under the options specified in (C)(3)(b) or (C)(3)(c). If an Operator uses a filled Production Resin or Filled Tooling Resin, the Operator shall calculate the emission rate for Filled material on an as-applied basis using the calculation in (E)(1)(h).
- (ii) All Filled Resins shall not exceed five percent (5%) by weight non-Monomer VOC content limit.
- (iii) If the Filled Resin is used as a Production Resin, the value of PV_F calculated in (E)(1)(h) shall not exceed 46 kilograms of Monomer VOC per megagram of Filled Resin applied.
- (iv) If the Filled Resin is used as a Tooling Resin, the value of PV_F calculated in (E)(1)(h) shall not exceed 54 kilograms of Monomer VOC per megagram of Filled Resin.

(4) Process Requirements

- (a) A Person shall not operate a Closed Molding system, unless the weight loss of Polyester Resin Materials during polymerization is less than four percent (4%).
- (b) A Person shall not perform a Pultrusion operation, unless Resin baths are covered except for 18 inches from the exit of the bath to the die. The weight loss of Polyester Resin Materials during polymerization shall be no less than three percent (3%) in a Pultrusion operation.

(5) Work Practice Standards

- (a) Any Person processing Polyester Resin Materials and any other VOC containing materials, including Putties and Polyputties, shall keep these materials in closed containers with tightly fitting lids, except when manually filling or emptying the container, or when mixing or pumping Equipment is being placed in or removed from a container.

(6) Organic Solvent Cleaning Requirements

- (a) An Operator shall not use Organic Solvents for cleaning operations that exceed the VOC content limits specified below:
 - (i) For non-Fiberglass Boat Manufacturing Polyester Resin Operations, have a composite vapor pressure of 45 mm Hg or less at a temperature of 68 °F (20 °C), or
 - (ii) For Fiberglass Boat Manufacturing Operations, have a composite vapor pressure of 0.50 mm Hg or less at a temperature of 68 F; or
 - (iii) The material contains 25 grams or less of VOC Per Liter of Material (0.21 pounds per gallon), as applied.
 - (iv) In lieu of complying with the VOC content limits in (C)(6)(a), an Operator may control VOC emissions from cleaning operations with an approved VOC emission control system that meets the requirements of subsections (C)(1)(c) for the Solvent cleaning operations.
- (b) Fiberglass Boat Manufacturing Operations shall not use VOC-containing solvent materials to remove Cured Resin or Gel Coat.
- (c) The provisions of subsections (C)(6)(a) do not apply to Mold sealing and release agents, or Mold stripping and cleaning Solvents.

(7) Solvent Disposal and Storage

- (a) The Operator shall store or dispose of fresh or spent Solvents, waste Solvent cleaning materials such as cloth, paper, Coating, Adhesive, Catalyst, and thinners in closed, Non-Absorbant and non-leaking Containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty.

(8) Prohibition of Specification

- (a) No Person shall solicit or require for use or specify the application of a Polyester Resin Material, or part or component thereof, if such use or application results in a violation of the provision of this Rule. The prohibition of this subsection shall apply to all written or oral contracts under the terms of which any Polyester Resin Material, or any part or component, subject to the provisions of this Rule is applied at any physical location within the District.

(9) Prohibition of Sale

- (a) A Person shall not offer for sale or sell within the District any Polyester Resin Material that does not meet the VOC content limits as set forth in Table 1 or 2 of this Rule. The prohibition of this section shall apply to the sale of any Polyester Resin Material which will be applied at any physical location within the District, except those materials specifically exempted

as an Exempt Compound as defined in Rule 102 – *Definition of Terms* and Section (C) of this Rule.

(10) Compliance Statement Requirement

- (a) The manufacture of materials subject to this Rule shall include a designation of VOC as supplied on data sheets; including material components, expressed in grams per liter or pounds per gallon, excluding water and Exempt Compounds.

(D) Monitoring and Records

(1) Material Records

- (a) A Person subject to the provisions of this Rule (or, a Person subject to Section (C) or claiming exemption under subsection (A)(3)) shall maintain daily records. Alternately, records may be kept on a monthly basis provided the Polyester Resin process or Equipment is not subject to a daily production limit or daily VOC limit in any applicable district Rule(s) or permit(s). The records shall contain the following information, if applicable:
 - (i) The type of Non-Atomizing, or other in the case of Gel Coat, application technique(s) used, manufacturer's name, and records of the fluid tip pressure calibration as specified by the manufacturer;
 - (ii) A current list of Polyester Resin Materials in use which provides the material data necessary to evaluate compliance, including the following information, if applicable:
 - a. The manufacturer's name;
 - b. The type and amount of each of the Polyester Resin Materials used;
 - c. The weight (in percent) of Monomer for all Polyester Resin Materials and Filler(s);
 - d. If VOC-containing materials are added to the Polyester Resin Materials, the amount of VOC-containing materials, in liters, and the VOC content in grams per liter, of VOC-containing materials.
 - (iii) Certifications of analysis from the Polyester Resin manufacturer(s) to verify that all applied Tub/Shower Resin Materials are Vapor Suppressed as applicable.
 - (iv) For Closed Molding and Pultrusion systems, the weight loss (in percent) of Polyester Resin Materials for each application.
- (b) Records for Solvents used in cleanup and preparation
 - (i) Type and quantity of all cleaning materials;
 - (ii) VOC content of all cleaning material used and stored.

(2) Compliance Assurance Monitoring

- (a) Each Coating Application Operation subject to Section (C) which is using air pollution abatement Equipment to meet the control requirement shall:
 - (i) Utilize Compliance Assurance Monitoring, as approved by the APCO. Each monitoring device(s), mechanism and/or technique shall be calibrated/maintained as recommended by the manufacturer; and
 - (ii) Maintain and produce daily records of key system operating parameters and maintenance procedures which will demonstrate continuous operation and compliance of the air pollution abatement Equipment during periods of emissions-producing activities. Key system operating parameters are those necessary to ensure compliance with VOC content of coating requirements, such as temperatures, pressures and flow rates.
- (b) Compliance with Section (C) shall be determined by compliance testing as prescribed in Section (E) and/or by evaluating Compliance Assurance Monitoring data.
- (3) All records for the previous five (5) year period maintained and produced pursuant to this Section shall be retained and available for inspection by the APCO upon request.

(E) Compliance Procedures and Test Methods

(1) Calculation Methods

The following test methods and procedures shall be used to determine compliance with this Rule. Other applicable test methods may be used if they are determined to be equivalent and approved in writing by the APCO, CARB and the USEPA.

- (a) Grams of VOC Per Liter of Material shall be determined by the following equation:

$$G_v = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:

G_v	=	Grams of VOC per Liter of Material Less Water and Less Exempt Compounds
W_s	=	Weight of volatile compounds in grams
W_w	=	Weight of water in grams
W_{es}		Weight of Exempt Compounds in grams
V_m	=	Volume of material in liters

- (b) Overall Control Efficiency shall be determined by the following equations

$$CE = \frac{(W_c - W_a)}{W_e} \times 100$$

$$CE = \frac{(CaptureEfficiency) \times (ControlDeviceEfficiency)}{100}$$

Where:

W_c	=	Weight of VOC entering Control Equipment
W_a	=	Weight of VOC discharged from the Control Equipment
W_e	=	Weight of VOC emitted from the source operations, determined by the appropriate USEPA calculation in 40 CFR 63, Subpart VVVV, or 40 CFR 63, Subpart WWWW, or any other method approved by the APCO, CARB, and the USEPA

- (c) Determination of VOC and Monomer VOC content of VOC-containing materials

- (i) United States Environmental Protection Agency (USEPA) Reference Method 24 – *Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings* (40 CFR 60, Appendix A) for VOC content and ASTM D4457-08 - *Determination of Dichloromethane and 1,1,1-Trichloromethane in Paints and Coatings by Direct Injection into a Gas Chromatograph* (1991), or CARB Method 432 – *Determination of Dichloromethane and 1,1,1-Trichloromethane in Paints and Coatings* (1989) for determination of Exempt Compounds. The Exempt Compound content shall be determined by SCAQMD Method 303 - *Determination of Exempt Compounds*

- contained in the SCAQMD “Laboratory Methods of Analysis for Enforcement Samples” manual;
- (ii) SCAQMD Method 302 – *Distillation of Solvents from Paints, Coatings and Inks* and 303 – *Determination of Exempt Compounds*;
 - (iii) SCAQMD Method 304 – *Determination of Volatile Organic Compounds (VOCs) in Various Materials*, or any other applicable method approved by the SCAQMD, CARB, and the USEPA;
 - (iv) SCAQMD Method 309 – *Determination of the Weight Loss of Polyester Resin Materials*;
 - (v) SCAQMD Method 312 – *Determination of Monomer Content of Polyester Resins (Revised April 1996)*;
 - a. Manufacturer’s formulation data may be accepted as an alternative to this method.
 - (vi) SCAQMD Method 313 – *Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry*.
- (d) Determination of Efficiency of Emission Control System
- (i) The capture efficiency is assumed to be 100 percent if it meets the design and operation requirements for a permanent total enclosure (PTE) specified in EPA Method 204, *Criteria for and Verification of a Permanent or Temporary Total Enclosure*, of appendix M to 40 CFR part 51. If a PTE does not exist, then a temporary total enclosure must be constructed and verified using EPA Method 204, and capture efficiency testing must be determined using EPA’s *Guidelines for Determining Capture Efficiency*, January 9, 1995, and EPA Methods 204B through E of appendix M to 40 CFR part 51.
 - (ii) The efficiency of the Control Equipment of the emission control system as specified in subsections (C)(1)(c) and (C)(3)(c) and the VOC content in the Control Equipment exhaust gases, measured and calculated as carbon, shall be determined by using:
 - a. EPA Test Methods 25 – *Determination of Total Gaseous Nonmethane Organic Emissions as Carbon*;
 - b. EPA Method 25A – *Determination of Total Gaseous Organic Concentration Using a Flame Ion Analyzer*;
 - c. SCAQMD Method 25.1 – *Determination of Total Gaseous Non-Methane Organic Emissions as Carbon February 1991*);
 - d. SCAQMD Test Method 25.3 – *Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources (March 2000)*;
 - e. EPA Test Method 18 – *Volatile Organic Compounds by Gas Chromatography*; or
 - f. ARB Method 422 – *Determination of Volatile Organic Compounds in Emissions from Stationary Sources*.

- (e) Determination of Exempt Compounds - Exempt Compound content shall be determined by using:
- (i) EPA Test Method 18 – *Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*;
 - (ii) ARB Method 422 “*Determination of Volatile Organic Compounds in Emissions from Stationary Sources*” (January 22, 1987) shall be used to determine emissions of Exempt Compounds.
 - a) It is only approved for the compounds listed in Method 422, section 2, that have been exempted from USEPAs definition of VOC; and
 - b) If aqueous impingers are used, the solution also shall be analyzed for the target VOCs; or
 - (iii) SCAQMD Method 303-91, “*Determination of Exempt Compounds*” (February 1993).
- (f) The emission rate per square meter of exposed surface during polymerization of Polyester Resins is to be determined using SCAQMD Method 309 - *Static Method for Determination of Volatile Emissions from Polyester and Vinyl Resins Operations*, Attachment A, 01/08/1991.
- (g) Determination of Monomer VOC Limit:

$$\text{Monomer VOC Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

Where:

Monomer VOC Limit	=	Total allowable Monomer VOC that can be emitted from Open Molding operations included in the average, kilograms per 12-month period.
M_R	=	Mass of Production Resin used in the past 12 months, excluding any materials that are exempt, in megagrams.
M_{PG}	=	Mass of Pigmented Gel Coat used in the past 12 months, excluding any materials that are exempt, in megagrams.
M_{CG}	=	Mass of Clear Gel Coat used in the past 12 months, excluding any materials that are exempt, in megagrams.
M_{TR}	=	Mass of Tooling Resin used in the past 12 months, excluding any materials that are exempt, in megagrams.
M_{TG}	=	Mass of Tooling Gel Coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

(h) Determination of Filled Resin Content

$$PV_F = PV_u \times \left[\frac{(100 - \% \text{Filler})}{100} \right]$$

Where:

PV _F	=	The as-applied Monomer VOC emission rate for the Filled Production Resin or Tooling Resin, in kilograms Monomer VOC per megagram of Filled material.
PV _U	=	The Monomer VOC emission rate for the neat (unfilled) Resin, before Filler is added, as calculated using the formulas in Table 3.
%Filler	=	The weight percent of Filler in the as-applied Filled Resin system.

Table 3 Monomer VOC Emission Rate Formulas for Open Molding for Fiberglass Boat Manufacturing Operations		
Material	Application Method	Formula to calculate Monomer VOC emission rate*
Production Resin, Tooling Resin	Atomized	$0.014 \times (\text{Resin VOC}\%)^{2.425}$
	Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC}\%)^{2.425}$
	Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC}\%)^{2.425}$
	Non-Atomized	$0.014 \times (\text{Resin VOC}\%)^{2.275}$
	Non-Atomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC}\%)^{2.275}$
	Non-Atomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC}\%)^{2.275}$
Pigmented Gel Coat, Clear Gel Coat, Tooling Gel Coat	All methods	$0.445 \times (\text{Gel Coat VOC}\%)^{1.675}$

*The formulas in Table 3 calculate Monomer VOC emissions in kilograms of Monomer per megagram of Resin or Gel Coat applied. The formulas for vacuum bagging with roll-out are applicable when a Facility rolls out the applied Resin and fabric prior to applying the vacuum bagging materials. The formulas for vacuum bagging without roll-out are applicable when a Facility applies the vacuum bagging materials immediately after Resin application without rolling the Resin and fabric. VOC% = Monomer VOC content as supplied, expressed as a weight-percent value between 0 and 100%.

- (2) All test methods referenced in this section shall be the most recently USEPA approved version.
- (3) Alternative Test Methods
 - (a) Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with any provisions of this Rule may also be used after review and approval in writing by the APCO, CARB and the USEPA.
- (4) Alternative Compliance Methods
 - (a) Alternative application processes and materials other than those listed in Section (C) may be used, provided they result in equivalent VOC emissions, and are approved in writing by the APCO, CARB and the USEPA.

(F) Violations

- (1) Failure to comply with any provision of this Rule shall constitute a violation of the Rule.
- (2) A violation of the limits contained in this Rule as determined by any one of these test methods shall constitute a violation of this Rule.
- (3) When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this Rule established by any one of the specified test methods or set of test methods shall constitute a violation of the Rule.

[SIP: See SIP Table at <http://www.mdaqmd.ca.gov>]

Rule 1165

Glass Melting Furnaces

(A) General

(1) Purpose

- (a) The purpose of this rule is to limit the emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and oxides of sulfur (SO_x) from glass melting furnaces.

(2) Applicability

- (a) This rule shall apply to any glass melting furnace.

(3) Exemptions

The provisions of this rule shall not apply to:

- (a) Except for section (D)(2)(a), the provisions of this rule shall not apply to electric glass melting furnaces where all the heat is supplied by an electric current from electrodes submerged in the molten glass, except that other fuels for startup may supply heat when the furnace contains no molten glass.
- (b) Except for section (D)(2)(a), the provisions of this rule shall not apply to any glass melting furnace that is designed to produce less than 4.55 Mg (5 tons) of glass per day.
- (c) The provisions of this rule shall not apply to hand glass melting furnaces.
- (d) The emission limits in Section (C)(1) Table 1 shall not apply during periods of startup, shutdown, or idling, provided the owner/operator complies with the applicable requirements of Section (C)(3), (C)(4), (C)(5), and (E)(3).

(B) Definitions

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

- (1) Air-Fuel Firing – Operation of a glass melting furnace where greater than 50 percent of the oxidant for the fuel comes from ambient air. 100 percent air-fuel fired means operation of a glass melting furnace where the oxidant is exclusively ambient air.

- (2) Block 24-hour Average – The arithmetic average of the hourly NO_x emission rates of a furnace as measured over 24 one-hour periods, daily, from 12:00 a.m. to 11:59 p.m., excluding periods of system calibration.
- (3) California Air Resources Board (CARB) – The California Air Resources Board, the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).
- (4) Container Glass – Any glass manufactured by pressing, blowing in molds, drawing, rolling, or casting which is used as a container as listed in Standard Industrial Classification 3221 (SIC 3221).
- (5) Fiberglass – Material consisting of fine filaments of glass that are combined in yarn and woven or spun into fabrics, or that are used as reinforcement in other materials or in masses as thermal or acoustical insulating products for the construction industry.
- (6) Flat Glass – Any continuous flat glass sheets produced by the float, sheet, rolled, or plate glass process, which is used in windows, windshields, tabletops, or similar products listed in SIC 3211.
- (7) Furnace Rebuild – A cold repair that is commenced after the end of a furnace campaign period or expected life cycle of a furnace.
- (8) Glass Melting Furnace – A unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass. The unit includes foundations, superstructures and retaining walls, raw material charger systems, heat exchangers, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. The forming apparatuses, including the float bath used in flat glass manufacturing and flow channels in fiberglass manufacturing, are not considered part of the glass melting furnace.
- (9) Hand Glass Melting Furnace – A glass melting furnace where the molten glass is removed from the furnace by a glassworker using a blowpipe or a pontil.
- (10) Idling – The operation of a furnace at less than 25 percent of the permitted glass production capacity or fuel use capacity as stated on the District permit.
- (11) Liquefied Petroleum Gas (LPG) – A general term for any of the following gasses: commercial propane, commercial butane, propane-butane (PB) mixtures, and special duty propane.
- (12) Oxygen-Assisted Combustion – Operation of a glass melting furnace where the oxidant is greater than the oxygen content in the ambient air or greater than 20.9 percent oxygen.

- (13) Oxy-Fuel Fired – Operation of a glass melting furnace where greater than 50 percent of the oxidant for the fuel is provided from enriched oxygen streams.
- (14) Permitted Glass Production Capacity – The maximum pull rate as stated in the District permit.
- (15) Primary Furnace Combustion System – The burners in a furnace that are used during the production of glass.
- (16) PUC-Quality Natural Gas – A gaseous fuel that meets the requirements specified in California Public Utilities Commission (PUC) General Order 58-A. PUC-quality natural gas also means that the sulfur content is no more than one-fourth grain of hydrogen sulfide per 100 standard cubic feet and no more than five grains total sulfur per 100 standard cubic feet.
- (17) Pull Rate – The amount of glass coming out of a glass melting furnace, expressed in short tons per day.
- (18) Rolling 30-day Average – The arithmetic average of the daily emission rates of a furnace over a contiguous 30-day period, excluding periods of system calibration.
- (19) Shutdown – The period of time during which a glass melting furnace is taken from operational to non-operational status by allowing it to cool down from its operating temperature to a cold or ambient temperature as the fuel supply is turned off.
- (20) Startup – The period of time, after initial construction or a furnace rebuild, during which a glass melting furnace is heated to operating temperature by the primary furnace combustion system, and systems and instrumentation are brought to stabilization.
- (21) United States Environmental Protection Agency (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (22) Volatile Organic Compound (VOC) – Any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and those compounds listed in 40 CFR 51.100(s)(1).

(C) Requirements

- (1) Except as specified in section (A)(3)(d), the owner/operator of any glass melting furnace shall not operate a furnace in such a manner that results in NO_x, CO, or VOC emissions exceeding the limits in Table 1.

Table 1
NO_x, CO, and VOC Emission Limits

Type of Furnace	Combustion Type	NO _x	CO	VOC
Container Glass or Fiberglass	100% Air-Fuel Fired	4.0 lb/ton of glass pulled on a block 24-hour average	300 ppmv	20 ppmv
	Oxygen Assisted Combustion	4.0 lb/ton of glass pulled on a block 24-hour average	1.0 lb/ton of glass pulled	0.25 lb/ton of glass pulled
Flat Glass	100% Air-Fuel Fired	9.2 lb/ton of glass pulled on a block 24 hour average <i>and</i> 7.0 lb/ton of glass pulled on a rolling 30-day average	300 ppmv	20 ppmv
	Oxygen Assisted Combustion	9.2 lb/ton of glass pulled on a block 24 hour average <i>and</i> 7.0 lb/ton of glass pulled on a rolling 30-day average	0.9 lb/ton of glass pulled	0.1 lb/ton of glass pulled

- (2) All glass melting furnaces subject to Table 1 emission limits shall limit SO_x by:
- (a) Firing PUC-quality natural gas, propane, or LPG.
 - (b) Liquid fuel may be used as a backup fuel or standby fuel provided the liquid fuel contains no more than 15 ppm sulfur and the furnace exhaust is controlled by a SO_x emission control system with a control efficiency of 50 percent or greater.
- (3) Startup Requirements
- (a) The owner/operator shall submit a request for a startup exemption to the APCO, CARB, and the USEPA in conjunction with or in advance of an application for Authority to Construct (ATC) associated with a furnace rebuild.
 - (b) The owner/operator shall submit to the APCO, CARB, and the USEPA any information deemed necessary by the APCO, CARB, or the USEPA to determine the appropriate length of startup exemption. This information shall include, but is not limited to:

- (i) A detailed list of activities to be performed during startup, and a reasonable explanation for the length of time needed to complete each activity; and
 - (ii) A description of the material process flow rates, system operating parameters, etc., that the owner/operator plans to evaluate during the process of optimization; and
 - (iii) Clearly identified control technologies or strategies to be employed; and
 - (iv) Explicit description of what physical conditions prevail during startup periods that prevent the controls from being effective; and
 - (v) Reasonably precise estimate as to when physical conditions will have reached a state that allows for the effective control of emissions.
- (c) Startup exemptions shall begin upon activation of the primary combustion system.
- (d) The actual length of the startup exemption shall be determined by the APCO, CARB and USEPA at the time of the Authority to Construct (ATC) issuance, but in any case, it shall not exceed the amount of time specified in Table 2. The approval for the startup exemption shall be in writing from each agency.

Table 2
Maximum Startup Time

Type of Furnace	Column I	Column II
	Maximum Startup NO _x control system that meets section (C)(3)(d)(i) provisions	Maximum Startup NO _x control system that does not meet section (C)(3)(d)(i) provisions
Container glass	100 days	70 days
Fiber glass	105 days	40 days
Flat glass	208 days	104 days

- (i) Maximum startup time for Table 2, Column I, must have a NO_x control system that meets one or more of the following conditions:
- a. Is innovative,
 - b. Is not in common use,
 - c. Is not readily available from a commercial supplier,
 - d. Is funded as original research by a public agency.

- (ii) Maximum startup time for those furnaces with NO_x controls that do not meet any of the conditions in section (C)(3)(d)(i) shall comply with startup times in Table 2, Column II.
- (e) During the startup period, the stoichiometric ratio of the primary furnace combustion system shall not exceed five percent excess oxygen, as calculated from the actual fuel and oxidant flow measurements for combustion in the glass melting furnace.
- (f) The emission control system shall be in operation as soon as technologically feasible during startup to minimize emissions.
- (g) Notifications shall be performed and records shall be kept in accordance with section (D)(2).
- (4) Shutdown Requirements
 - (a) The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold as specified in section (B)(10) to when all emissions from the furnace cease, shall not exceed 20 days.
 - (i) The emission control system shall be in operation whenever technologically feasible during shutdown to minimize emissions.
 - (ii) Notifications shall be performed and records kept in accordance with section (D)(2).
- (5) Idling Requirements
 - (a) The emission control system shall be in operation whenever technologically feasible during idling to minimize emissions.
 - (b) The NO_x, CO, and VOC emission during idling shall not exceed the amount calculated by multiplying the applicable emission limit of NO_x, VOC, or CO in pounds per ton of glass produced by the furnace permitted production capacity in tons of glass produced per day.
 - (c) Notifications shall be performed and records kept in accordance with section (D)(2).
- (6) Compliance Determination
 - (a) The emissions measured for compliance with NO_x, CO, and VOC limits shall be averaged over a three hour period in accordance with the applicable test methods in section (E)(1), or, if a Continuous Emission Monitoring System (CEMS) or an alternate emission monitoring method is used, the applicable requirements of sections (E)(2)(a) or (E)(2)(b), respectively.

- (b) Any source testing result, CEMS, or alternate emission monitoring method averaged value exceeding the applicable emission limits in section (C)(1) shall constitute a violation of the rule. Any rolling 30-day averaged value from CEMS or alternate emission monitoring method that exceeds the applicable emission limit in (C)(1) shall constitute a violation of the rule for each day of the averaged period.
- (7) The owner/operator of any glass melting furnace shall implement a NO_x CEMS or a NO_x alternative emissions monitoring method on each furnace, that is approved in writing by the APCO, CARB, and USEPA, and that meets the requirements of section (E)(2).

(D) Monitoring and Records

(1) Administrative Requirements

(a) Permitted Glass Production Capacity and Fuel Use Capacity

Each permit to operate for a glass melting furnace shall specify a maximum daily glass production limit (units of tons of glass pulled per day) and maximum furnace heat input limit (MMBtu/hr) consistent with compliance with this rule.

(2) Operations Records

(a) The owner/operator of any glass melting furnace subject to section (C) or claiming exemption under section (A)(3) of this rule shall maintain an operating log for each furnace that includes, on a daily basis:

- (i) Total hours of operation;
- (ii) Type of fuel used in each furnace;
- (iii) Quantity of fuel used by each furnace, and the quantity of glass pulled by each furnace;
- (iv) NO_x emission rate in lb/ton of glass pulled.

- (3) The Owner/Operator shall maintain records of source tests and operating parameters established during initial source test, maintenance, repair, and malfunction.
- (4) The Owner/Operator shall maintain all records required by this rule for five-years, and shall produce those records for inspection by the APCO or his designee upon request.
- (5) Compliance Source Testing
 - (a) Each glass melting furnace shall be source tested at least once every calendar year, but not more than once every 18 months and not sooner than every six months to demonstrate compliance with the applicable requirements of section (C).

- (b) Source test conditions shall be representative of normal operations, but not less than 60 percent of either the maximum glass production capacity or the furnace's maximum fuel use capacity for each furnace, whichever limit is stated in the PTO.
- (c) For source testing performed in accordance with section (D)(5)(a), the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the three runs individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the furnace, even if the averaged emissions of all three test runs is less than the applicable limit.

(E) Compliance Procedures and Test methods

(1) Test Methods

- (a) Oxides of Nitrogen – EPA Method 7E, EPA Method 19, or CARB Method 100.
- (b) Carbon monoxide (ppmv) – EPA Method 10, or CARB Method 100
- (c) Volatile Organic Compound (ppmv) – EPA Method 25A expressed in terms of carbon. EPA Test Method 18 or CARB Method 422 shall be used to determine emissions of exempt compounds.
- (d) Stack gas oxygen, carbon dioxide, excess air, and dry molecular weight – EPA Method 3 or 3A, or CARB Method 100.
- (e) Stack gas velocity and volumetric flow rate – EPA Method 2.
- (f) The SO_x emission control system efficiency shall be determined using the following:
 - (i) EPA Method 2 for measuring flow rates; and
 - (ii) EPA Method 6C or EPA Method 8 for measuring total SO_x (expressed as SO₂) concentrations at the inlet and outlet of the control device.
- (g) Alternative Test Methods
 - (i) Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with any provisions of this rule may also be used after review and approval in writing by the District, CARB and USEPA.

(2) Emissions Monitoring Systems

- (a) An approved CEMS shall comply with the most recently adopted version of all of the following requirements:

- (i) 40 CFR Part 51;
 - (ii) 40 CFR Part 60.7;
 - (iii) 40 CFR Part 60.13;
 - (iv) 40 CFR Part 60 Appendix B (Performance specifications);
 - (v) 40 CFR Part 60 Appendix F (Quality Assurance Procedures; and
- (b) Any approved alternate emission monitoring method pursuant to the provisions of (E)(2)(a) above shall be capable of determining the furnace emissions on an hourly basis and shall comply with the following requirements:
 - (i) 40 CFR 64 (Compliance Assurance Monitoring); and
 - (ii) 40 CFR 60.13 (Monitoring Requirements).
- (3) Notifications and Records for Startup, Shutdown, and Idling
 - (a) The owner/operator of any glass melting furnace claiming an exemption under section (A)(3)(c) shall notify the APCO by telephone at least 24 hours before initiating idling, shutdown, or startup. This notification shall include:
 - (i) Date and time of the start of the exempt operation; and
 - (ii) Reason for performing the operation; and
 - (iii) An estimated completion date.
 - (b) The owner/operator shall notify the APCO by telephone within 24 hours after completion of the idling, shutdown, or startup.
 - (c) The owner/operator claiming exemption under section (A)(3)(d) shall maintain all operating records and support documentation necessary to support claim of exemption, and shall meet the following requirements:
 - (i) The records and support documentation shall be retained on-site for five years; and
 - (ii) The records and support documentation shall be made available to the APCO, CARB, or USEPA during normal business hours; and
 - (iii) The records and support documentation shall be submitted to the APCO, CARB, or USEPA upon request.
- (4) Records for Exempt Furnaces
 - (a) An owner/operator claiming exemption under section (A)(3)(a) or section (A)(3)(b) shall maintain records and documentation necessary to support claim of exemption.
 - (b) Records and support documentation specified in section (E)(4)(a) shall meet the following requirements:
 - (i) The records and support documentation shall be retained on-site for five years; and

- (ii) The records and support documentation shall be made available to the APCO, CARB, or USEPA during normal business hours; and
- (iii) The records and support documentation shall be submitted to the APCO, CARB, or USEPA upon request.

(5) Calculation Methods

- (a) The pollutant emission rate in ppmv shall be converted to lb/hr by using the appropriate conversion equations in ARB Method 100, EPA Method 19, or an equivalent conversion method approved, in writing, by the APCO, CARB, and the USEPA. The mass emission rate in lb/hr shall be converted to lb/ton of glass pulled according to the following equation:

$$\text{lbs of pollutant/ton of glass pulled} = \frac{\text{lb/hr of pollutant}}{\text{pull rate in tons/hr}}$$

- (b) 100 percent air-fuel fired furnaces that have concentration limits in ppmv values shall be subject to the CO and VOC emission limits specified in section (C)(1). These limits are referenced at dry stack gas conditions and 8.0 percent by volume of stack oxygen. The CO and VOC emission concentrations shall be corrected to 8.0 percent oxygen by using the equation below, or an equivalent correction method that is approved, in writing, by the APCO, CARB, and the USEPA.

$$(\text{ppmv CO})_{\text{corrected}} = \frac{12.9\%}{20.9\% - (\%O_2)_{\text{measured}}} \times (\text{ppmv CO})_{\text{measured}}$$

$$(\text{ppmv VOC})_{\text{corrected}} = \frac{12.9\%}{20.9\% - (\%O_2)_{\text{measured}}} \times (\text{ppmv VOC})_{\text{measured}}$$

- (c) The owner/operator of a oxy-fuel fired furnace, oxygen-assisted combustion furnace, or a furnace utilizing any fuel oxidants other than 100 percent ambient air, shall submit to the APCO, CARB, and USEPA for approval any methodologies and data that will be used to calculate emission rates for NO_x, CO, and VOC if the methods are different than specified in section (E)(5)(a) or (E)(5)(b). Unless the owner/operator received prior written approval from the APCO, CARB, and USEPA of all the calculation methods to be used that are different than specified in (E)(5)(a) or (E)(5)(b), compliance with the emission limits cannot be fully demonstrated, and it shall be deemed to be a violation of this rule.

(F) Violations

- (1) Failure to comply with any provision of this rule shall constitute a violation of the rule.
- (2) A violation of the limits contained in this rule as determined by any one of these test methods shall constitute a violation of this rule.

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

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Rule 1300

New Source Review General

(A) Purpose

- (1) The purpose of this Regulation is to:
 - (a) Set forth the requirements for the preconstruction review of all new or modified Facilities.
 - (b) Ensure that the Construction or Modification of Facilities subject to this Regulation does not interfere with the attainment and maintenance of Ambient Air Quality Standards.
 - (c) Ensure that there is no net increase in the emissions of any Nonattainment Air Pollutants from new or modified Major Facilities which emit or have the Potential to Emit any Nonattainment Air Pollutant in an amount greater than or equal to the amounts set forth in District Rule 1303(B)(1).
 - (d) Ensure that the Construction or Modification of Facilities subject to this Regulation comply with the preconstruction review requirements for Toxic Air Contaminants set forth in District Rule 1320.
 - (e) Ensure that the Construction or Modification of Facilities subject to this Regulation or District Regulation XVI – *Prevention of Significant Deterioration* comply with the preconstruction review requirements set forth in District Rule 1600.

(B) Applicability

- (1) The provisions of this Regulation shall apply to any new or modified Facility or Emissions Unit which is subject to the provisions of District Rules 201 or 203.

(C) Exemption

- (1) Change of Ownership
 - (a) Any Facility which is a continuing operation, shall be exempt from the provisions of this Regulation when:
 - (i) A new permit to operate is required solely because of permit renewal or change in ownership; and
 - (ii) There is no Modification or change in operating conditions for the Facility.

(D) Interaction with Other Federal, State and District Requirements

(1) Interaction with Other District Rules

- (a) Nothing in this Regulation shall be construed to exempt a Facility or an Emissions Unit from any other applicable provision of District Rules and Regulations.
- (b) ATC(s) and PTO(s) issued pursuant to this Regulation shall also comply with the applicable provisions of District Regulation II.

(2) Prevention of Significant Deterioration (PSD)

- (a) Nothing in this Regulation shall be construed to exempt a Facility or an Emissions Unit located in an area designated by USEPA as attainment or unclassified for a Regulated Air Pollutant from complying with the applicable provisions of Title I, Part C of the Federal Clean Air Act (42 U.S.C. §§7470-7492, Prevention of Significant Deterioration of Air Quality), the regulations promulgated thereunder and District Rule 1600.

(3) Other Federal Requirements

- (a) Nothing in this Regulation shall be construed to exempt a Facility or an Emissions Unit from complying with all other applicable Federal Requirements including, but not limited to, the following:
 - (i) Any standard or other requirement contained in the applicable implementation plan for the District, and any amendments thereto, approved or promulgated pursuant to the provisions of Title I of the Federal Clean Air Act (42 U.S.C. §§7401-7515).
 - (ii) Any standard or other requirement under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111); 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.
 - (iii) Any standard or other requirement under Title IV of the Federal Clean Air Act (42 U.S.C. §§7651-7651o, Acid Rain) or the regulations promulgated thereunder.
 - (iv) Any standard or other requirement under Title V of the Federal Clean Air Act (42 U.S.C. §§7661a - 7661f, Permits), the regulations promulgated or the District program approved thereunder.
 - (v) Any standard or other requirement of the regulations promulgated under Title VI of the Federal Clean Air Act (42 U.S.C. §§7671-7671q, Stratospheric Ozone Protection) or the regulations promulgated thereunder.
 - (vi) Any national Ambient Air Quality Standard or increment or visibility requirement promulgated pursuant to part C of Title I of the Federal Clean Air Act (42 U.S.C. §7401-7515).

(E) Violations

- (1) Failure to comply with the provisions of this Regulation shall result in enforcement action under applicable provisions of Division 26, Part 4, Chapter 4 of the California Health and Safety Code (commencing with §42300) and or applicable provisions of the Federal Clean Air Act (42 U.S.C. §§ 7401 et.seq.)

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

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Rule 1301

New Source Review Definitions

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

- (A) Actual Emissions - The actual rate of emissions of a Regulated Air Pollutant which accurately represent the emissions from Emissions Unit(s). Such emissions shall be calculated using the verified actual operating hours; production rates; and types of materials processed, stored or combusted as applicable.
- (B) Affected State - Any State or local air pollution control agency whose air quality may be affected by the granting of a permit to a Facility or Emissions Unit(s) and which is contiguous to the District; or any State which is located within 50 miles of the Facility.
- (C) Air Pollutant - Any air pollution agent or combination of such agents, including any physical, chemical, biological, or radioactive (including source material, special nuclear material and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air.
- (D) Air Pollution Control Officer (APCO) - The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.
- (E) Air Quality Attainment Plan (AQAP) - A planning document submitted and periodically revised by the District pursuant to the provisions of the California Health & Safety Code §§40910 et seq. and approved by CARB.
- (F) Ambient Air Quality Standards - Any National Ambient Air Quality Standard promulgated pursuant to the provisions of 42 U.S.C. §7409 (Federal Clean Air Act §109) or any State Ambient Air Quality Standard promulgated to California Health & Safety Code §39606 unless the particular Ambient Air Quality Standard (either National or State) is specified.
- (G) Application for Certification (AFC) - A document submitted to the CEC requesting certification of an EEGF pursuant to the provisions of Division 15 of the California Public Resources Code (commencing with section 25000).
- (H) Authority to Construct Permit (ATC) - A District permit required pursuant to the provisions of District Rule 201 which must be obtained prior to the building, erecting, installation, alteration or replacement of any Permit Unit. Such permit may act as a temporary PTO pursuant to the provisions of District Rule 202.
- (I) Begin Actual Construction - The general initiation of physical on-site construction activities on Emissions Unit(s) which are of a permanent nature. Actual construction activities include, but are not limited to, the following:
 - (1) Installation of building supports and foundations;

- (2) Laying of underground pipe work;
 - (3) Construction of permanent storage structures; and
 - (4) With respect to a change in operating method, those on-site activities, other than preparatory activities, which mark the initiation of the change.
- (J) Best Available Control Technology (BACT) - For any Permit Unit at Facilities as indicated below:
- (1) For a new or Modified Major Facility as defined in District Rule 1301(II) the most stringent of:
 - (a) The most stringent emission limit or control technique which has been achieved in practice, for such Permit Unit class or category of source; or
 - (b) Any other emission limitation or control technique, and/or different fuel demonstrated in practice to be technologically feasible and cost-effective by the APCO or by CARB.
 - (2) For a new or Modified non-major Facility:
 - (a) The most stringent emission limit or control technique which has been achieved in practice for such category or class of source. Economic and technical feasibility may be considered in establishing the class or category of source; or
 - (b) Any other emission limitation or control technique found by the APCO to be technologically feasible and cost effective for such class or category of source.
 - (3) Under no circumstances shall BACT be determined to be less stringent than the emission limitation or control technique contained in any State Implementation Plan as approved by USEPA, unless the applicant demonstrates to the satisfaction of the APCO that such limitations are not achievable.
 - (4) In no event shall the application of BACT result in the emissions of any Regulated Air Pollutant which exceeds the emissions allowed by any applicable standard or other requirement under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.
- (K) California Air Resources Board (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).
- (L) California Energy Commission (CEC) - The California Energy Commission the powers and duties of which are described in Division 15 of the California Public Resources Code (commencing with section 25000).

- (M) Cargo Carriers - Cargo carriers are trains, trucks and off-road vehicles dedicated to, or an integral part of, a specific Facility. For the purposes of this regulation, trucks and off-road vehicles are those used exclusively at the Facility.
- (N) Class I Area – means any area listed as Class I in 40 CFR 81.403 – Arizona, 40 CFR 81.405 – California, and 40 CFR 81.418 – Nevada or an area otherwise specified as Class I in the legislation that creates a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, or a national lakeshore or seashore.
- (O) Commence Construction - When the owner or operator of a Facility or of a Facility undergoing a Major Modification has obtained all necessary preconstruction approvals and/or permits pursuant to the provisions of this Regulation and District Rule 1600, if applicable, and has either:
- (1) Begun, or caused to begin, a continuous program of actual on-site construction to be completed within a reasonable time; or
 - (2) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the Facility or Emissions Unit(s) to be completed within a reasonable time.
- (P) Comprehensive Emission Inventory - A plan and report prepared pursuant to the most recently published District “*Comprehensive Emissions Inventory Guidelines*” which consists of numerical representations of the existing and proposed emissions from a Facility and the methods utilized to determine such data.
- (Q) Construction - Any physical change or change in the method of operation in a Facility (including fabrication, erection, installation, demolition, or modification of an Emissions Unit(s)) which would result in a change in Actual Emissions. [*Consistency*]
- (R) Contiguous Property - Two or more parcels of land with a common boundary or separated solely by a public or private roadway, or other public or private right-of-way.
- (S) Dispersion Technique –For purposes of determining whether a stack height exceeds good engineering practices, the definition contained in 40 CFR 51.100(hh) in effect on March 22, 2021 shall apply, and is incorporated herein by this reference.
- (T) District - The Mojave Desert Air Quality Management District the geographical area of which is described in District Rule 103.
- (U) Electrical Energy Generating Facility (EEGF) - Any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto.
- (1) Exploratory, development, and production wells, resource transmission lines and other related facilities used in connection with a geothermal exploratory project or a geothermal field development project are not appurtenant facilities for the purposes of this Regulation.

- (2) EEGF does not include any wind, hydroelectric or solar photovoltaic electrical generating facility.
- (V) Emissions Limitation - One or a combination of Federally Enforceable permit conditions specific to a Permit Unit which restricts its maximum daily emissions, in pounds per day or other appropriate unit of measure, at or below the emissions associated with the maximum design capacity.
- (W) Emissions Reduction Credit (ERC) - A credit for an amount and type of Regulated Air Pollutant granted by the District pursuant to the provisions of District Regulation XIV which is evidenced by recordation in the Registry of emissions reductions and by an ERC Certificate.
- (X) Emissions Unit - any article, machine, equipment, other contrivance or combination thereof which emits or has the Potential to Emit any Regulated Air Pollutant, including any associated air pollution control equipment.
- (Y) Enforceable – Verifiable, legally binding, and practically enforceable.
- (Z) Excessive Concentration – For purposes of determining whether a stack height exceeds good engineering practices, the definition contained in 40 CFR 51.100(kk) in effect on March 22, 2021 shall apply, and is incorporated herein by this reference.
- (AA) Facility - Any building, structure, Emissions Unit, combination of Emissions Units, or installation which emits or may emit a Regulated Air Pollutant and which are:
- (1) Located on one or more Contiguous or adjacent properties within the District;
 - (2) Under the control of the same person (or by persons under common control); and
 - (3) Belong to the same industrial grouping, as determined by being within the same two-digit Standard Industrial Classification Code (SIC).
 - (4) For the purpose of this regulation, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.
- (BB) Federal Class I Area – Any Federal land that is classified or reclassified as a Class I Area.
- (CC) Federal Land Manager - with respect to any lands in the United States, the Secretary of the department with authority over such lands and their designee.
- (DD) Federally Enforceable - any limitation and/or condition which is set forth in permit conditions or in Rules or Regulations which are legally and practically enforceable by USEPA, citizens, and the District; including, but not limited to:
- (1) Requirements developed pursuant to 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or 42 U.S.C. §7412,

Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder;

- (2) Requirements within any applicable state implementation plan;
 - (3) Permit requirements established pursuant to 40 CFR 52.21; 51.160-166; or under regulations approved pursuant to 40 CFR 51, subpart I, including operating permits issued under a USEPA approved program that is incorporated into the State Implementation Plan and expressly requires adherence to any permit issued under such program.
- (EE) Fugitive Emissions - Those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
- (FF) Good Engineering Practice – For purposes of determining whether a stack height exceeds good engineering practices, the definition contained in 40 CFR 51.100(ii) in effect on March 22, 2021 shall apply, and is incorporated herein by reference.
- (GG) Halocarbons - For the purpose of this rule, halocarbons are 1,1,1-trichloroethane, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), chlorodifluoromethane (CFC-22), trifluoromethane (CFC-23), methylene chloride, trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115).
- (HH) Historic Actual Emissions (HAE) - The Actual Emissions of an existing Emissions Unit or combination of Emissions Units, including Fugitive Emissions directly related to the Emissions Unit(s), if the Facility belongs to one of the Facility categories as listed in 40 CFR 51.165(a)(1)(iv)(C), calculated in pounds per year and determined pursuant to the provisions of District Rule 1304(D)(2).
- (II) Major Facility - Any Facility which emits or has the Potential to Emit any Regulated Air Pollutant or its Precursors in an amount greater than or equal to the amounts set forth in District Rule 1303(B)(1).
- (1) Any physical change at a Facility which, by itself, would emit or have the Potential to Emit any Regulated Air Pollutant or its Precursors in an amount greater than or equal to the amounts listed in District Rule 1303(B), shall also constitute a Major Facility.
 - (2) The Fugitive Emissions of a Facility shall not be included in the determination of whether a Facility is a Major Facility unless the Facility belongs to one of the categories of Facilities as listed in 40 CFR 51.165(a)(1)(iv)(C).
- (JJ) Major Modification - Any Modification in a Facility that would result in a Significant Net Emissions Increase of any Regulated Air Pollutant as set forth in section (NNN) below.
- (KK) Mandatory Class I Federal Area or Mandatory Federal Class I Area – Any area identified in 40 CFR 81, Subpart D (commencing with 81.400) specifically 40 CFR 81.402 – Arizona, 40 CFR 81.405 – California, and 40 CFR 81.418 – Nevada.

- (LL) Mobile Source - A device by which any person or property may be propelled, moved, or drawn upon the surface, waterways, or through the atmosphere, and which emits air contaminants. For the purpose of this Regulation, mobile source includes registered Motor Vehicles which are licensed, or driven on the public roadways of the state of California.
- (MM) Modeling - An air quality simulation model based on specific assumptions and data; which comply with the most current version of 40 CFR Appendix W or an alternative method approved by USEPA after an opportunity for public notice and comment; and which have been approved in advance and in writing by the APCO.
- (NN) Modification (Modified) - Any physical or operational change to a Facility or Emissions Unit(s) to replace equipment, expand capacity, revise methods of operation, or modernize processes by making any physical alteration or change, change in method of operation, addition to an existing Permit Unit and/or change in hours of operation which results in a Net Emissions Increase of any Regulated Air Pollutant or which results in the emission of any Regulated Air Pollutant not previously emitted:
- (1) A physical or operational change shall not include:
- (a) Routine maintenance, repair and/or replacement; or
 - (b) A change in ownership of an existing Facility with valid PTO(s); or
 - (c) The replacement or alteration of an Emissions Unit(s) where the following requirements are met:
 - (i) The replacement unit is functionally identical as the original Emissions Unit(s) being replaced; and
 - (ii) The maximum rating of the replacement unit Emissions Unit(s) will not be greater than that of the original Emissions Unit(s) being replaced; and
 - (iii) The Potential to Emit for any Regulated Air Pollutant will not be greater from the replacement Emissions Unit(s) than from the original Emissions Unit(s) being replaced when the replacement Emissions Unit(s) is operated at the same permitted conditions as the original Emissions Unit(s) and as if current BACT had been applied to the original Emissions Unit(s); and
 - (iv) The replacement does not occur at a Major Facility and is not a Major Modification.
 - (v) An Emissions Unit(s) shall not be considered a functionally identical replacement if USEPA objects to such determination on a case-by-case basis.
 - (d) The relocation of an existing Facility, utilizing existing equipment where the following requirements are met:
 - (i) The relocation does not result in an increase in emissions from the Facility; and

- (ii) The relocation is to a site within ten (10) miles of the original Facility location; and
 - (iii) The relocation is to a site within a federal designation which is less than or equal to the designation or classification of the original site; and
 - (iv) The relocation occurs within one (1) year of the Facility ceasing operations at its original location; and
 - (v) The relocation does not occur at a Major Facility and is not a Major Modification; and
 - (vi) Any new or replacement equipment associated with the relocation complies with the applicable provisions of this Rule.
- (OO) Motor Vehicle - For the purpose of this regulation, "Motor Vehicle" includes registered Motor Vehicles which are licensed, or driven on the public roadways of the state of California.
- (PP) Nearby – For purposes of determining whether a stack height exceeds good engineering practices, the definition contained in 40 CFR 51.100(jj) in effect on March 22, 2021 shall apply, and is incorporated herein by this reference.
- (QQ) Net Emissions Increase - An emission change as calculated pursuant to District Rule 1304(B)(2) which exceeds zero.
- (RR) New Source Review Document (NSR Document) - A document issued by the APCO pursuant to the procedures of District Rule 1302 for a Facility subject to the provisions of District Rule 1303(B) which includes, but is not limited to, all analysis relating to the project, Offsets required for the project, and proposed conditions for any required ATC(s) or PTO(s).
- (SS) Nonattainment Air Pollutant - Any Regulated Air Pollutant for which the District, or a portion thereof, has been designated "nonattainment" as codified in 40 CFR 81.305 or which has been designated "nonattainment" by the CARB pursuant to California Health and Safety Code §39607. A pollutant designated nonattainment by USEPA shall be referred to in this regulation as a "Federal Nonattainment Air Pollutant" while a pollutant designated nonattainment by CARB shall be referred to as a "State Nonattainment Air Pollutant."
- (TT) Nonattainment Area – any area within the jurisdiction of the District which has been designated "nonattainment" by USEPA as exceeding a National Ambient Air Quality Standard as codified in 40 CFR 81.305 or which has been designated "nonattainment" by CARB as exceeding a State Ambient Air Quality Standard pursuant to California Health & Safety Code §39607. An area designated nonattainment by USEPA shall be referred to in this regulation as a "Federal Nonattainment Area" while an area designated nonattainment by CARB shall be referred to as a "State Nonattainment Area."
- (UU) Nonpermitted Exempt Unit - An Emissions Unit or group of Emissions Units which are exempt from the requirement to have a permit pursuant to the provisions of District Rule 219 or the provisions of California Health & Safety Code §42310.

- (VV) Notice of Intention (NOI) - A notice regarding an EEGF produced pursuant to the provisions of Division 15 of the California Public Resources Code (commencing with section 25000).
- (WW) Off-road Vehicle - Any vehicle which is not licensed for use on the public roadways in the State of California and is used exclusively at the Facility.
- (XX) Offset Emission Reductions (Offsets) - Emission Reduction Credits (ERCs) or Simultaneous Emissions Reductions (SERs) when used to offset emission increases of Regulated Air Pollutants on a pollutant category specific basis. ERCs shall be calculated and comply with the provisions of District Regulation XIV. SERs shall be calculated and comply with the provisions of District Rule 1304(C). ERCs and SERs shall be adjusted, if necessary, pursuant to the applicable provisions of District Rule 1305.
- (YY) Permit to Operate (PTO) - A District permit required pursuant to the provisions of District Rule 203 which must be obtained prior to operation of a Permit Unit. An ATC may function as a temporary PTO pursuant to the provisions of District Rule 202.
- (ZZ) Permanent – Continuing or enduring without fundamental marked change. As used for the purposes of Offset Emissions Reductions a reduction that is federally enforceable via changes in permits or other means for the life of the corresponding increase in emissions.
- (AAA) Permit Unit - Any Emissions Unit which is required to have a PTO pursuant to the provisions of District Rule 203.
- (BBB) PM₁₀ - Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
- (1) On or after January 1, 2011, PM₁₀ shall include gaseous emissions from a Facility or Emissions Unit(s) which condense to form particulate matter at ambient temperatures.
- (CCC) PM_{2.5} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
- (1) On or after January 1, 2011, PM_{2.5} shall include gaseous emissions from a Facility or Emissions Unit(s) which condense to form particulate matter at ambient temperatures.
- (DDD) Potential to Emit (PTE) - The maximum capacity of a Facility or Emissions Unit(s) to emit any Regulated Air Pollutant under its physical and operational design.
- (1) Any physical or operational limitation on the capacity of the Facility or Emissions Unit(s) to emit an Air Pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processes, shall be treated as part of its design only if the limitation or the effect it would have on emissions is Federally Enforceable.
- (2) Fugitive Emissions of Hazardous Air Pollutants shall be included in the calculation of a Facility's or Emission Unit(s)' Potential to Emit.

- (3) Fugitive Emissions of other Air Pollutants shall not be included in the calculations of a Facility's or Emissions Unit(s)' Potential to Emit unless the Facility belongs to one of the categories listed in 40 CFR 51.165(a)(1)(iv)(C).
- (4) Secondary Emissions shall not be included in the calculations of a Facility's or Emissions Unit(s)' Potential to Emit.
- (EEE) Precursor - A substance which, when released to the atmosphere, forms or causes to be formed or contributes to the formation of a Regulated Air Pollutant. These include, but are not limited to the following:

<u>Precursors</u>	<u>Secondary Pollutants</u>
Ammonia	a) PM _{2.5}
Hydrocarbons and substituted hydrocarbons (Volatile Organic Compounds)	a) Photochemical oxidant (ozone) b) The organic fraction of PM ₁₀ c) PM _{2.5}
Nitrogen dioxide (NO ₂)	a) PM _{2.5}
Nitrogen oxides (NO _x)	a) Nitrogen dioxide (NO ₂) b) The nitrate fraction of PM ₁₀ c) Photochemical oxidant (ozone)
Sulfur dioxide (SO ₂)	a) PM _{2.5}
Sulfur oxides (SO _x)	a) Sulfur dioxide (SO ₂) b) Sulfates (SO ₄) c) The sulfate fraction of PM ₁₀

- (FFF) Proposed Emissions (PE) - The Potential to Emit for a new or post-modification - Emissions Unit(s) or a new or post-modification Facility as constructed or modified, including Fugitive Emissions directly related to the Emissions Unit(s) if the Facility belongs one of the Facility categories as listed in 40 CFR 51.165(a)(1)(iv)(C) calculated in pounds per year and determined pursuant to the provisions of District Rule 1304(D)(3).
- (GGG) Quantifiable – Capable of being determined. As used for the purposes of Offset Emissions Reductions a reliable, replicable and accurate basis for calculating the amount, rate, nature and characteristic of an emissions reduction by adhering to a protocol that is established considering USEPA, CARB and District policies and procedures. The same method of calculating emissions should generally be used to quantify the emission levels before and after the reduction.
- (HHH) Real - Actually occurring, implemented, and not artificially devised.
- (III) Reasonably Available Control Technology (RACT) - Any device, system, process modification, apparatus, technique or combination of the above which results in the lowest emissions rate and which is reasonably available considering technological and economic feasibility.
- (JJJ) Reduced Sulfur Compounds - Hydrogen sulfide, carbon disulfide and carbonyl sulfide.

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

- (1) Any Air Pollutant, and its Precursors, for which an Ambient Air Quality Standard has been promulgated.
- (2) Any Air Pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.
- (3) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.
- (4) Any Air Pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112) or the regulations promulgated thereunder.

(LLL) Seasonal Source - Any Facility or Emissions Unit(s) with more than seventy-five percent (75%) of its annual emissions within a consecutive 120-day period. [*Capitalization correction.*]

(MMM) Secondary Emissions - Emissions which would occur as a result of the Construction or operation of a Facility or Major Modification to a Facility but which do not come from the Facility or the Major Modification itself.

- (1) These emissions must be specific, well defined, quantifiable, and impact the same general area as the Facility or the Major Modification which causes the Secondary Emissions.
- (2) Secondary Emissions shall include emissions from any offsite support Facility which would not be constructed or increase its emissions except as the result of the construction or operation of the Facility or Major Modification.
- (3) Secondary Emissions shall not include any emissions which come directly from a Mobile Source.

(NNN) Significant - A Net Emissions Increase from a Major Modification which would be greater than or equal to the following emissions rates for those Nonattainment Air Pollutants and their Precursors dependent upon Facility location.

<u>POLLUTANT</u>		<u>EMISSION RATE</u> (Within a Severe ozone Federal Nonattainment area)	<u>EMISSION RATE</u> (Within a moderate PM10 Federal Nonattainment area)
Oxides of Nitrogen (NO _x)		25 tpy	40 tpy
PM10		N/A	15 tpy

<u>POLLUTANT</u>		<u>EMISSION RATE</u> (Within a Severe ozone Federal Nonattainment area)	<u>EMISSION RATE</u> (Within a moderate PM10 Federal Nonattainment area)
Volatile Organic Compounds (VOC)		25 tpy	40 tpy
Sulfur Dioxide (SO2)		N/A	40 tpy

- (1) If a Facility is located in more than one Federal Nonattainment area then the lower emission rate as listed above shall apply on a pollutant category specific basis.
- (OOO) Simultaneous Emission Reduction (SER) - A Federally Enforceable reduction in the emissions of an existing Emissions Unit(s), calculated pursuant to the provisions of District Rule 1304(C), which occurs in the same permitting action as when such SERs are used pursuant to this Regulation and is a reduction in the Historic Actual Emissions of the Emissions Unit(s).
- (PPP) Stack – Any point in a Facility or Emission Unit designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares. *[USEPA Ltr 12/19/2019 Comment 1.1.3.a. Provision derived from 40 CFR 51.100(ff)]*
- (QQQ) Stack in Existence - For purposes of determining whether a stack height exceeds good engineering practices, the definition contained in 40 CFR 51.100(gg) in effect March 22, 2021 shall apply, and is incorporated herein by this reference.
- (RRR) Surplus – That which is not otherwise required. As used for the purposes of Offset Emissions Reductions the amount of emissions reductions that are, at the time of generation and use, not otherwise required by Federal, State, or District law, rule, order, permit or regulation; not required by any legal settlement or consent decree; and not relied upon to meet any requirement related to the California State Implementation Plan (SIP).
- (SSS) "Total Organic Compounds" (TOC) - Compounds of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.
- (TTT) "United States Environmental Protection Agency" (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and their authorized representative.
- (UUU) "Volatile Organic Compounds" (VOC) - Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and those compounds listed in 40 CFR 51.100(s)(1).

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

Rule 1302

New Source Review Procedure

(A) Applicability

- (1) This Rule shall apply to all new or modified Facilities
 - (a) EEGFs as defined in District Rule 1301(U) shall also be subject to the provisions of District Rule 1306.

(B) Applications

- (1) Any application for an ATC or modification to a PTO, submitted pursuant to the procedures of District Regulation II, shall be analyzed to determine if such application is complete. An application shall be deemed complete when it contains the following, as applicable:
 - (a) General Application Requirements
 - (i) Enough information regarding the location, design, construction and operation of the new or modified Facility or Emissions Unit(s) to allow all the applicable analysis and calculations required under this Regulation to be made, including but not limited to, identification of all new or modified Emissions Unit(s); the amount of potential emissions from such new or modified Emissions Unit(s); information sufficient to determine all rules, regulations or other requirements applicable to such Emissions Unit(s); a determination of whether stack height exceeds Good Engineering Practice; any necessary air quality modeling protocol consistent with the most recent USEPA guidance, including but not limited to the requirements contained in 40 CFR 51 Appendix W; and the results of such modeling.
 - (ii) A Comprehensive Emissions Inventory. If a Facility has a current, approved Comprehensive Emissions Inventory on file with the District such Facility may, upon written request and approval of the APCO, update the Comprehensive Emission Inventory to reflect the addition, deletion or modification of all Emissions Unit(s) affected by the application.
 - (iii) A District Rule 1600 applicability analysis sufficient to determine whether the Facility or Modification is or is not a Major PSD Facility or a Major PSD Modification as defined in District Rule 1600(B), using the applicability procedures in District Rule 1600.
 - (iv) Any other information specifically requested by the District.

- (b) Application Requirements for Facilities Requiring Offsets
 - (i) For all new and modified Facilities requiring offsets pursuant to District Rule 1303(B):
 - a. An alternative siting analysis including an analysis of alternative sites, sizes and production processes pursuant to 42 U.S.C. §7503(a)(5) (Federal Clean Air Act §173(a)(5)). Such analysis shall be functionally equivalent to that required pursuant to Division 13 of the California Public Resources Code (commencing with section 21000).
 - b. A statewide compliance certification stating that all Facilities which are under the control of the same person (or persons under common control) in the State of California are in compliance with all applicable emissions limitations and standards under the Federal Clean Air Act and the applicable implementation plan for the air district in which the other Facilities are located.
- (c) Mandatory Federal Class I Area Visibility Protection Application Requirements
 - (i) An application for a new or modified Major Facility or a Facility with a Major Modification which may have an impact upon visibility in any Mandatory Federal Class I Area, shall include in its application an analysis of any anticipated impacts on visibility within that Mandatory Federal Class I Area. Such analysis shall include, but is not limited to, an analysis of the factors found in 40 CFR 51.307(c).
- (d) Prevention of Significant Deterioration (PSD) Application Requirements
 - (i) For a Facility which is a Major PSD Facility or Major PSD Modification as defined in District Rule 1600(B):
 - a. A modeling protocol consistent with the most recent USEPA guidance including but not limited to the requirements contained in 40 CFR 51 Appendix W, as approved by the APCO. Such protocol shall also be submitted to USEPA and, if applicable, the Federal Land Manager(s) of any potentially impacted area; and
 - b. A control technology review pursuant to 40 CFR 52.21(j); and
 - c. A source impact analysis, including but not limited to analysis pursuant to 40 CFR 52.21(k) and a per-application analysis pursuant to 40 CFR 52.21(m)(1); and
 - d. Information required pursuant to 40 CFR 52.21(n) if not provided elsewhere in the application; and
 - e. An additional impact analysis including but not limited to analysis of direct and indirect impacts of the proposed

- emissions increase on soils, vegetation and visibility, pursuant to 40 CFR 52.21(o); and
- f. An analysis of anticipated impacts on a Federal Class I Area if the Facility is located within 63 miles (100 kilometers) of such area pursuant to 40 CFR 52.21(p); and

(e) Determination of Application Completeness

- (i) The APCO shall determine whether the application is complete not later than thirty (30) calendar days after receipt of the application, or after such longer time as both the applicant and the APCO may agree in writing.

(2) Notifications Regarding Applications

- (a) After the determination of completeness has been made, the APCO shall transmit a written determination of completeness or incompleteness within 10 working days to the applicant at the address indicated on the application.
 - (i) If the application is determined to be incomplete, the determination shall specify which parts of the application are incomplete and how they can be made complete.
 - a. Upon receipt by the APCO of information required to render an application complete or upon resubmittal of the entire application, a new thirty (30) day period in which the APCO must determine completeness, shall begin.
 - (ii) When an application subject to the provisions of District Rule 1600 is determined to be complete the APCO shall transmit a copy of the written completeness determination to USEPA and, upon request, provide USEPA with a copy of the application.
 - (iii) If the application contains an analysis of anticipated visibility impacts on a Federal Class I Area., the APCO shall, within thirty (30) calendar days after receipt of the application, notify USEPA and the Federal Land Manager of the affected Federal Class I Area.
 - a. The APCO shall include in such notification a copy of the application and all information relevant thereto.
- (b) When the application has been determined to be complete the APCO shall then commence the analysis process detailed in section (C) below.
- (c) In the alternative, the APCO may complete the issuance of the ATC(s) within the thirty (30) calendar days after receipt of the application so long as all applicable analysis required pursuant to section (C) have been performed and the provisions of subsection (C)(7)(e) applies.

(3) Effect of Complete Application

- (a) After an application is determined to be complete, the APCO shall not subsequently request of an applicant any new or additional information which was not required pursuant to subsection (B)(1) or by a determination of incompleteness pursuant to subsection (B)(2)(a).
- (b) Notwithstanding the above, the APCO may, during the processing of the application, require an applicant to clarify, amplify, correct or otherwise supplement the information required at the time the complete application was received.
- (c) A request by the APCO for clarification pursuant to subsection (B)(3)(b) above does not waive, extend, or delay the time limits in this Rule for final action on the completed application, except as the applicant and the APCO may both agree in writing.

(4) Fees

- (a) The APCO shall not perform any analysis as set forth in section (C) below unless all applicable fees, including but not limited to Project Evaluation Fees for Complex Sources as set forth in District Rule 301, have been paid.

(C) Analysis

(1) Determination of Emissions

- (a) The APCO shall analyze the application to determine the specific pollutants, amount, and change (if any) in emissions pursuant to the provisions of District Rules 1304 and 1600.

(2) Determination of Nonattainment NSR Requirements

- (a) After determining the emissions change (if any), the APCO shall determine if any of the provisions of District Rule 1303 apply to the new or modified Facility.
- (b) If none of the provisions of District Rule 1303 apply to the new or modified Facility, then the APCO shall continue the analysis at subsection (C)(4) below.
- (c) If paragraph (A) is the only provision of District Rule 1303 applicable to the new or modified Facility the APCO shall:
 - (i) Develop and include conditions on any proposed ATC or PTO to implement BACT on all new or modified Emissions Unit(s) subject to the provisions of District Rule 1303(A) at the Facility; and
 - (ii) Continue the analysis at subsection (C)(4) below.

(d) If paragraph (B) of District Rule 1303 applies to the new or modified Facility, then the APCO shall:

- (i) Commence a Facility engineering analysis; and
- (ii) Develop and include conditions to implement BACT on any proposed ATC or PTO required for each new or Modified Emission Unit(s) subject to the provisions of District Rule 1303(A); and
- (iii) Continue the analysis at subsection (C)(3) below.

(3) Determination of Offsets

(a) If the provisions of District Rule 1303(B) apply to the new or modified Facility, then the APCO shall calculate the amount of Offsets required on a pollutant by pollutant basis pursuant to the provisions of District Rules 1304(B)(2) and 1305.

- (i) The APCO shall thereafter notify the applicant in writing of the specific amount of Offsets required on a pollutant by pollutant basis.

(b) Upon receipt of the notification, the applicant shall provide to the APCO a proposed Offset package which contains evidence of a sufficient quantity of Offsets eligible for use pursuant to the provisions of District Rule 1305.

(i) The APCO shall analyze the proposed Offset package to determine if an adjustment in the value of such Offsets is required and apply the applicable offset ratio (if any) pursuant to the provisions of District Rule 1305(D).

- a. If the Offset package includes Mobile, Area, or Indirect source ERCs pursuant to District Rule 1305(C)(3) or proposes the use of interpollutant Offsets pursuant to District Rule 1305(C)(6) the APCO shall notify USEPA by sending a copy of the application, the proposed Offset package and all information relevant information thereto

(ii) The APCO shall disallow the use of any Offsets which were created by the shutdown, modification or limitation of existing Emissions Unit(s) when such Offsets:

- a. are not in compliance with the applicable provisions of District Rule 1305 or 40 CFR 51.165(a)(3)(ii)(C); or
- b. USEPA has disapproved the applicable implementation plan for the District, or USEPA has made a finding of a failure to submit for the District of all or a portion of an applicable implementation plan.

(iii) After determining that the Offsets are Real, Enforceable, Surplus, Permanent and Quantifiable, that a sufficient quantity have been provided, and after any permit modifications required pursuant to

District Rule 1305 or Regulation XIV have been made, the APCO shall approve the use of the Offsets.

- a. For a new or Modified Major Facility or a Major Modification which is located in a Federal Nonattainment Area, the APCO's approval shall be subject to review and comment by CARB and USEPA pursuant to subsection (D)(2) below.
- (iv) The Offsets must be obtained prior to the time the new or Modified Facility Begins Actual Construction.
- (v) The Offsets must be Enforceable and in effect by the time the new or Modified Facility commences operation.
- (c) After determination of the amount of pollutant specific offsets required and approval of the Offset package the APCO shall continue the analysis at subsection (C)(4) below.

(4) Stack Height Analysis

- (a) If the application contains a determination showing that the stack height exceeds Good Engineering Practice the APCO shall:
 - (i) Provide that the degree of emission limitation required of the new or modified Facility or Emission Unit(s) is not affected by so much of the stack height that exceeds Good Engineering Practice or by any other Dispersion Technique; and
 - (ii) Notify the public of the availability of the demonstration study and provide opportunity for a public hearing pursuant to the provisions of subsection (C)(7)(b)(ii) before an ATC is issued; and
 - (iii) Ensure any field study or fluid model used to demonstrate GEP stack height and any determination concerning excessive concentration is approved by the EPA and the Control Officer prior to any emission limit being established.
- (b) The provisions of this subsection do not restrict, in any manner, the actual stack height of any Facility.
- (c) The APCO shall continue the analysis at subsection (C)(5) below.

(5) Determination of Requirements for Toxic Air Contaminants

- (a) The APCO shall determine if any of the provisions of District Rule 1320 apply to the new or modified Facility.
- (b) If any of the provisions of District Rule 1320 apply to the new or modified Facility the APCO shall:

- (i) Require the Facility to comply with the applicable provisions of that Rule prior to proceeding with any further analysis or processing of an application pursuant to this Regulation; and
 - (ii) Add any conditions to the applicable permits required to implement any provisions of Rule 1320; and
- (c) After determining which, if any, requirements of District Rule 1302 apply and any necessary actions taken the APCO shall continue the analysis at subsection (C)(6) below.
- (d) This subsection is not submitted to USEPA and is not intended to be included as part of the California State Implementation Plan (SIP).
- (6) Determination of Requirements for Prevention of Significant Deterioration (PSD)
 - (a) The APCO shall review the PSD applicability analysis submitted pursuant to subsection (B)(1)(a)(iii) to determine if the proposed new or modified Facility is or is not a Major PSD Facility or a Major PSD Modification as defined in District Rule 1600.
 - (b) If the APCO determines that proposed new or modified Facility is a Major PSD Facility or a Major PSD Modification then the APCO shall:
 - (i) perform the analysis required pursuant to the provisions of District Rule 1600(D)(2); and
 - (ii) either complete the PSD permit issuance pursuant to the provisions of District Rule 1600(D) or combine the appropriate analysis adding any necessary conditions in conjunction with those required pursuant to this Regulation; and
 - (iii) Continue the analysis at subsection (C)(7) below.
 - (c) If none of the provisions of District Rule 1600 apply, the APCO shall continue the analysis at subsection (C)(7) below
- (7) Determination of Notice Requirements
 - (a) The APCO shall determine the type of notice required for the proposed new or modified Facility.
 - (b) Major NSR Notice: If the new or Modified Facility is subject to any of the following , then the APCO shall implement the applicable provisions of section (D) prior to the issuance of the ATC(s) or modification of the PTO(s).
 - (i) The provisions of District Rule 1303(B); or
 - (ii) The provisions of subsection (C)(4) regarding stack height greater than good engineering practice; or
 - (iii) The provisions of District Rule 1600; or.

- (iii) The provisions of District Regulation XII – *Federal Operating Permits* and the action involves the issuance, renewal or Significant Modification of the Federal Operating Permit
- (c) Toxic NSR Notice: If any proposed new or modified Emissions Units at the new or modified Facility require public notification pursuant to the provisions of District Rule 1320(E)(3)(e) or (F)(2)(b) then the APCO shall:
 - (i) Provide the notice specified by the applicable provision(s) of District Rule 1320 in addition to any other required notice; or
 - (ii) Provide notice pursuant to the provisions of subsection (D)(3)(a) ensuring that such notice contains any additional information required pursuant to the applicable provision(s) of District Rule 1320.
 - (iii) This subsection is not submitted to USEPA and is not intended to be included as part of the California State Implementation Plan (SIP).
- (d) Minor NSR Notice: If the new or modified Facility is not subject to any of the provisions listed in subsections (7)(b) or (c) above, but is subject to any of the following, then the APCO shall commence the issuance of the ATC(s) or modification of the PTO(s) pursuant to the provisions of District Regulation II and provide notice pursuant to the provisions of subsection (D)(3)(a)(ii):
 - (i) The emissions change for any Regulated Air Pollutant as calculated under subsection (C)(1) is greater than any of the following:
 - a. 20 tpy or more of VOC, 20 tpy or more of NO_x, 12 tpy or more of PM₁₀, or 80% of the Major Facility Threshold for any other Nonattainment Air Pollutant as set forth in District Rule 1303(B); or
 - b. 8 tpy or more of any Hazardous Air Pollutant or 20 tpy of any combination of Hazardous Air Pollutants or 80% of a lesser quantity of a Hazardous Air Pollutant as the USEPA may establish by rule; or
 - c. The Federal Significance Level for a Regulated Air Pollutant as defined in 40 CFR 52.21(b)(23).
- (e) Permit Issuance: If the new or modified Facility is not subject to any of the provisions listed in subsection (7)(b), (c) or (d) above, then the APCO shall commence the issuance of the ATC(s) or modification of the PTO(s) pursuant to the provisions of District Regulation II.

(D) Permit Issuance Procedure

(1) Preliminary Decision

- (a) After all required analyses have been completed, the APCO shall issue a preliminary decision as to whether the NSR Document should be approved, conditionally approved, or disapproved and whether ATC(s) should be issued to the new or modified Facility.
- (b) The preliminary decision shall include:
 - (i) A succinct written analysis of the proposed approval, conditional approval or disapproval; and
 - (ii) If approved or conditionally approved, proposed permit conditions for the ATC(s) or modified PTO(s) and the reasons for imposing such permit conditions; and
 - (iii) A Draft Permit.
- (c) The preliminary decision and draft NSR Document, may also be combined with the draft PSD Document, if any, and any document(s) produced pursuant to District Regulation XII. In such case the preliminary decision, draft NSR Document and draft PSD Document shall conform to the applicable provisions of District Regulation XII and 40 CFR 70.6(a-g), 70.7(a-b) and 70.8 and will serve as the draft Statement of Legal and Factual Basis and draft Federal Operating Permit.

(2) CARB, USEPA, FLM and Affected State Review

- (a) If notice is required pursuant to the provisions of subsection (C)(7)(b-d) the APCO shall, concurrently with the publication required pursuant to subsection (D)(3) below, send a copy of the preliminary decision, the draft permit and any underlying analysis to CARB, USEPA and any Affected State.
- (b) CARB, USEPA and any Affected State shall have thirty (30) days from the date of publication of the notice pursuant to subsection (D)(3) below to submit comments and recommendations regarding the preliminary decision.
 - (i) If the permitting action involves the issuance, renewal or Significant Modification of the Federal Operating Permit and is being performed concurrently with actions pursuant to this Regulation then CARB, USEPA and any Affected state shall have forty-five (45) days from the date of publication of the notice to submit comments.

- (c) Upon receipt of any comments and/or recommendations from CARB, USEPA and/or any Affected State, the APCO shall either:
 - (i) Accept such comments and/or recommendations and modify the preliminary decision accordingly; or
 - (ii) Reject such comments and/or recommendations, notify CARB, USEPA, and/or the Affected State of the rejection and the reasons for such rejection.
 - (d) For applications containing an analysis of anticipated visibility impacts on a Federal Class I Area, pursuant to subsection (B)(1)(c) or (B)(1)(d)(i)e.-f. above, the APCO, upon receipt of any comments from USEPA or the Federal Land Manager of the affected Federal Class I Area, shall:
 - (i) Accept such comments and/or recommendations and modify the preliminary decision accordingly; or
 - (ii) Reject such comments and/or recommendations; notify CARB USEPA, and/or the Federal Land Manager of the affected Federal Class I Area of the rejection and the reasons for such rejection.
 - (e) For applications containing an Offset package submitted pursuant to subsection (C)(3)(b) where the Offset package includes Mobile, Area, or Indirect source ERCs pursuant to District Rule 1305(C)(3) or proposes the use of Interpollutant Offsets pursuant to District Rule 1305(C)(6), the APCO, upon receipt of comments from USEPA, shall:
 - (i) Accept such comments and/or recommendations and modify the preliminary decision accordingly; and
 - (ii) Require adjustment of the Offset package by the applicant if such becomes necessary.
- (3) Public Review and Comment
- (a) Public Notice
 - (i) Major NSR Notice and Toxic NSR Notice: If notice is required pursuant to the provisions of subsections (C)(7)(b), (C)(7)(c) or (D)(4)(d) then, within ten (10) days of the issuance of the preliminary determination, the APCO shall:
 - a. Produce a notice containing all the information set forth in subsection (D)(3)(b)(i); and
 - b. Publish a notice by posting the notice and draft permit on the District's website for, at a minimum, the duration of the public comment period; and
 - c. Send a copy of the notice containing the information set forth in subsection (D)(3)(b)(i) to the applicant; CARB; USEPA; Affected State(s); City and County where the proposed Facility or Modification is located; any State or Federal Land Manager or Indian governing body who's

lands might be affected by emissions from the proposed Facility or Modification; and all persons who have requested such notice and/or on a list of persons requesting notice of actions pursuant to this regulation generally on file with the District; and

- d. Provide notice by other reasonable means if necessary.
- (ii) Minor NSR Notice: If notice of permit issuance is required pursuant to the provisions of subsection (C)(7)(d) then, within ten (10) days of the issuance of the engineering analysis the APCO shall:
 - a. Produce a notice containing the information set forth in subsection (D)(3)(b)(ii) below; and
 - b. Publish the notice and the draft permit by posting on the District's website for, at a minimum, the duration of the comment period; and
 - c. Send a copy of the notice to the applicant; CARB; USEPA; Affected State(s); and all persons who have requested such notice and/or on a list of persons requesting notice of actions pursuant to this regulation generally on file with the District.
- (iii) Permit Issuance: If the provisions of subsection (C)(7)(e) apply then the APCO shall issue the permit pursuant to the provisions of District Regulation II and post the final permit on the District's website.

(b) Notice Content Requirements

- (i) Major NSR Notice Contents: The notice required pursuant to subsection (D)(3)(a)(i) shall include:
 - a. The name and location of the Facility, including the name and address of the applicant if different.
 - b. A statement indicating the availability, conclusions of the preliminary decision and a location where the public may obtain or inspect the preliminary decision and supporting documentation; and
 - c. A statement providing at least thirty (30) days from the date of publication of the notice for the public to submit written comments on the preliminary decision; and
 - d. A brief description of the specific comment procedures and deadlines; and
 - e. Information regarding obtaining review of the permit issuance decision by the District Hearing Board pursuant to the provisions of Health & Safety Code §42302.1.
 - f. If the APCO has determined that the Stack Height exceeds Good Engineering Practice then the notice shall also contain notice of the opportunity to request a public hearing on the proposed demonstration produced pursuant to subsection (C)(4)(a)(i). *[USEPA Ltr 12/19/2019 Comment 1.1.3a. Derived from (C)(4)(a)(ii)]*

- g. If the provisions of District Rule 1600(C) apply then the notice shall also contain the degree of increment consumption; and Notice of the opportunity to request a public hearing regarding the air quality impact, control technology or other appropriate considerations of the preliminary determination for the Major PSD Facility or Major PSD Modification.
 - h. If the provisions of District Regulation XII apply, and the action involves the issuance, renewal or Significant Modification of the Federal Operating Permit, and the Federal Operating Permit is being issued concurrently then the notice shall also contain notice of the opportunity to request a public hearing on the proposed Federal Operating Permit pursuant to District Rule 1207(A)(1)(d).
 - i. If the APCO has rejected comments regarding anticipated visibility impacts on a Federal Class I Area, the notice shall also contain a notation of the availability of the reasons for such rejection.
- (ii) Minor NSR Notice Contents: The notification required pursuant to subsection (D)(3)(a)(ii) shall include:
- a. Identification of the Facility; including the name, address and Facility number; and
 - b. Identification of the permit(s) involved including permit number, and a brief description of the action taken; and
 - c. Where a copy of the application and preliminary decision may be obtained; and
 - d. Provide at least thirty (30) days from the date of publication of the notice for the public to submit written comments on the preliminary decision; and
 - e. A brief description of the specific comment procedures and deadlines; and
 - f. Information regarding obtaining review of the permit issuance decision by the District Hearing Board pursuant to the provisions of Health & Safety Code §42302.1.

(c) Availability of Documents

- (i) At the time of publication of any notice required above the APCO shall make available for public inspection at the offices of the District or in another prominent place the:
application and any other information submitted by the applicant;
The NSR document, the preliminary decision to grant or deny the ATC including any proposed permit conditions and the reasons therefore; and The supporting analysis for the preliminary decision.
- (ii) Notwithstanding the above, the APCO is not required to release confidential information. Information shall be considered confidential when:

- a. The information is a trade secret or otherwise confidential pursuant to California Government Code 6254.7(d); or
 - b. The information is entitled to confidentiality pursuant to 18 U.S.C. §1905; and
 - c. Such information is clearly marked or otherwise identified by the applicant as confidential.
- (d) The APCO shall accept and consider all relevant comment(s) submitted to the District in writing during the thirty (30) day public comment period provided pursuant to subsection (D)(3)(b)(i) or (ii).
- (e) The APCO shall, if requested pursuant to the provisions provided for in the published notice, hold a public hearing regarding the proposed preliminary determination as provided pursuant to subsection (D)(3)(b)(i) f.-h..
 - (i) Such hearing shall be scheduled no less than thirty (30) days after the publication of a notice of public hearing is published pursuant to the provisions set forth in subsection (D)(3)(a).
- (f) The APCO shall provide a summary of any oral comments and written comments received during the public comment period or at any public hearing, and shall retain copies of such comments and the District's written responses to such comments in the District files for the particular Facility.
- (g) If any substantive changes are made to the preliminary decision as a result of comments received from the public, CARB, USEPA or any Affected State the APCO shall send a copy of the proposed changes to CARB and USEPA for review.
- (h) Nothing in this subsection shall be interpreted to limit the availability of documents pursuant to the California Public Records Act (Government Code §§6250 et. seq.) as effective upon the date of the request for documents.
- (4) Final Action
 - (a) After the conclusion of the comment period and consideration of the comments, the APCO shall produce a final NSR Document.
 - (b) Thereafter, the APCO shall take final action to issue, issue with conditions, or to deny issuance of the ATCs or PTOs pursuant to subsection (D)(6) based on the NSR Document.
 - (i) Such final action shall take place no later than 180 days after the application has been determined to be complete.
 - (ii) The APCO shall not take final action to issue the NSR Document if either of the following occurs:
 - a. USEPA objects to such issuance in writing; or

- b. USEPA has determined, as evidenced by a notice published in the Federal Register, that the applicable implementation plan is not being adequately implemented in the Federal Nonattainment Area in which the new or modified Facility is located.
 - (c) The APCO shall provide written notice of the final action to the applicant, USEPA and CARB.
 - (d) If substantive changes have been made to the Preliminary Decision or other NSR Document after the opening of the public notice period, the APCO shall publish a notice of final action pursuant to the provisions of subsection (D)(3)(a) above.
 - (e) If substantive changes are made to the preliminary decision or PSD Document which are substantial enough to require changes to the underlying requirements or which result in a less stringent BACT determination, then the APCO shall reissue and renote the preliminary decision and draft PSD document pursuant to the provisions of section (D).
 - (f) The final NSR Documents and all supporting documentation shall remain available for public inspection at the offices of the District for a minimum period of five (5) years.
 - (g) The final NSR Document may be combined with a final PSD Document produced pursuant to District Rule 1600(D).
- (5) Issuance of ATC(s)
- (a) In conjunction with final action on the NSR Document the APCO shall issue ATC(s) for the new or modified Facility pursuant to the provisions of District Regulation II. Such ATC(s) shall contain, at a minimum, the following conditions:
 - (i) All conditions regarding construction, operation and other matters as set forth in the NSR Document; and
 - (ii) If a new or modified Facility is a replacement, in whole or in part, for an existing Facility or Emissions Unit on the same or contiguous property, a condition allowing a maximum of one hundred eighty (180) days start up period for simultaneous operation of the new or modified Facility and the existing Facility or Emissions Unit; and
 - (iii) A condition requiring the Facility to be operated in accordance with the conditions contained on the ATC(s); and
 - (iv) A condition requiring that the offsets must be obtained prior to the commencement of construction on the new or modified Facility and Enforceable and in effect by the time the new or modified Facility commences operation.

- (b) The APCO shall not issue ATC(s) to a new or Modified Facility pursuant to this regulation unless:
 - (i) The new Facility or Modification to an existing Facility is constructed using BACT for each Nonattainment Air Pollutant when the provisions of Rule 1303(A) apply.
 - (ii) Any increase in emissions for each Nonattainment Air Pollutant has been properly offset pursuant to the provisions of District Rule 1305 or District Regulation XIV – *Emission Reduction Credit Banking* when the provisions of Rule 1303(B) apply.
 - a. Such offsetting emissions reductions are Real, Enforceable, Quantifiable, Surplus and Permanent; and
 - b. The permits(s) of any Facility or Emissions Unit(s) which provided offsetting emissions reductions have been properly modified and/or other actions have been performed pursuant to the provisions of District Rule 1305 or District Regulation XIV.
 - (iii) The new or modified Facility complies with all applicable Rules and Regulations of the District.
 - (iv) The new or modified Facility will not interfere with the attainment or maintenance of any National Ambient Air Quality Standard.
- (6) Issuance of PTO(s)
 - (a) After the final action on the NSR Document pursuant to this Regulation and/or the issuance of ATC(s) pursuant to the provisions of District Regulation II, the APCO shall deny the subsequent issuance of PTO(s) unless the APCO determines that:
 - (i) The owner or operator of the new or modified Facility has submitted a completed application for ATC(s) or modification of a PTO.
 - a. An initial application for PTO(s) may be considered an application for a ATC(s) if the application and the applicant comply with all the provisions of this Regulation.
 - (ii) The new or modified Facility has been Constructed and is operating in a manner consistent with the conditions as set forth in the NSR document and the ATC(s); and
 - (iii) That the permit(s) of any Facility or Emissions Unit(s) which provided Offsets to the new or modified Facility have been properly modified and/or valid contracts have been obtained pursuant to the provisions of District Rule 1305 or Regulation XIV.
 - (iv) That the Offsets, if required pursuant to District Rule 1303(B), were Real, Enforceable, Quantifiable, Surplus and Permanent, prior to the Commencement of Construction of the Facility.

- (v) That all conditions contained in the ATC(s) requiring performance of particular acts or events by a date specified have occurred on or before such dates.
- (vi) If the actual emissions are greater than those calculated when the ATC was issued:
 - a. That the owner/operator has provided additional offsets to cover the difference between the amount of offsets originally provided and the amount of offsets required when calculated pursuant to District Rule 1305 as based upon the actual emissions of the facility; and
 - b. That such additional offsets were provided within ninety (90) days of the owner/operator being notified by the APCO that such additional offsets are required.

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

Rule 1303

New Source Review Requirements

(A) Best Available Control Technology

- (1) Any new Permit Unit which emits, or has the Potential to Emit, 25 pounds per day or more of any Nonattainment Air Pollutant shall be equipped with BACT.
- (2) Any Modified Permit Unit which emits, or has the Potential to Emit, 25 pounds per day or more of any Nonattainment Air Pollutant shall be equipped with BACT.
- (3) Any new or Modified Permit unit at a Facility which emits, will emit, or has the Potential to Emit, any Nonattainment Air Pollutant in an amount greater than or equal to the amount listed in subsection (B)(1) below shall be equipped with BACT.
- (4) For purposes of determining applicability of this Section, Potential to Emit is calculated pursuant to the provisions of 1304(D)(3), any Emissions Change is calculated pursuant to the provisions of District Rule 1304(B)(1) and SERs shall not be used in such calculations.

(B) Offsets Required

- (1) Any new or modified Facility which emits or has the Potential to Emit a Regulated Air Pollutant in an amount greater than or equal to the following offset threshold amounts of Nonattainment Air Pollutants and their Precursors, as calculated pursuant to District Rule 1304, shall obtain Offsets.

OFFSET THRESHOLD AMOUNTS

POLLUTANT	OFFSET THRESHOLD
Hydrogen Sulfide (H ₂ S)	10 tpy
PM ₁₀	15 tpy
Oxides of Nitrogen (NO _x)	25 tpy
Oxides of Sulfur (SO _x)	25 tpy
Volatile Organic Compounds (VOC)	25 tpy

- (2) Any Facility which is not a Major Facility but where the Modification is itself a Major Modification shall obtain Offsets.

- (3) Any Facility or modification which emits or has the Potential to Emit a Regulated Air Pollutant in an amount greater than the threshold amounts listed in subsection (B)(1) due to a relaxation in any enforcement limitation established after August 7, 1980 on the capacity of the Facility or modification to emit a pollutant (such as a restriction on hours of operation) shall obtain Offsets and be equipped with BACT pursuant to subsection (A)(3) above as if the Facility had not yet Commenced Construction.
- (4) The amount and eligibility of such offsets shall be determined on a pollutant by pollutant basis pursuant to the provisions of District Rules 1304, 1305 and District Regulation XIV.

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

Rule 1304

New Source Review Emissions Calculations

(A) General

(1) Purpose

- (a) This rule provides the procedures and formulas to calculate increases and decreases in emissions of Regulated Air Pollutants for new or modified Facilities. The results of such calculations shall be used to:
 - (i) Determine the applicability of the provisions of District Rule 1303.
 - (ii) Calculate SERs generated within the same Facility
 - (iii) Determine the Potential to Emit (PTE) for new or modified Facilities and Emissions Unit(s).
 - (iv) Calculate certain terms used in District Rule 1305.

(B) Calculations

(1) General Emissions Change Calculations

- (a) The emissions change for new or modified Emissions Unit(s) shall be calculated, in pounds per day, by subtracting Historic Actual Emissions (HAE) from Proposed Emissions (PE).

$$\text{Emissions Change} = (\text{PE}) - (\text{HAE})$$

- (b) The emissions change for a project at new or modified Facility is the sum of all the positive Emissions Changes for each Emissions Unit(s) which occur at the Facility at same time or in connection with the same permitting action.

(2) Net Emissions Increase Calculations

- (a) The Net Emissions Increase for a new or modified Emissions Unit(s) shall be calculated, in pounds per day, by subtracting Historic Actual Emissions (HAE) from Proposed Emissions (PE).

$$\text{Net Emissions Increase} = (\text{PE}) - (\text{HAE})$$

- (b) The Net Emissions Increase a new Facility is the sum of all the Potential Emissions from each Emissions Unit(s) at the Facility.
- (c) The Net Emissions Increase for a project at a modified Facility is the sum of all the Net Emissions Increases for Each Emissions Unit(s) minus any SERs as calculated and verified pursuant to Section (C) below which occur at the Facility at the same time or in connection with the same permitting action.

(C) Calculating Simultaneous Emissions Reductions.

- (1) SERs as defined in District Rule 1301(OOO) may result from the Modification or shut down of Existing Emission Unit(s) so long as the resulting reductions are Federally Enforceable, Real, Surplus, Permanent, Quantifiable and Surplus and are Actual Emissions Reductions of the Emissions Unit(s).
- (2) SERs resulting from the Modification or shut down of existing Emission Unit(s) within the same Facility shall be calculated as follows:
 - (a) For the shutdown of Emissions Unit(s);
$$\text{SER} = \text{HAE}$$
 - (b) For Modifications or limitations on operations of Emission Unit(s);
$$\text{SER} = (\text{HAE}) - (\text{PE})$$
 - (c) For shutdown, Modifications or limitations on mobile, area or indirect sources of emissions;
 - (i) Any calculation formula and protocol as approved by the District, CARB and USEPA; and
 - (ii) The SERs also comply with the applicable provisions of District Rule 1305(C)(3).
 - (d) In the case of a Modified Major Facility, the HAE for a specific Emission Unit(s) may be equal to the Potential to Emit for that Emission Unit(s), the particular Emissions Unit have been previously offset in a documented prior permitting action so long as:
 - (i) The PTE for the specific Emissions Unit is specified in a Federally Enforceable Emissions Limitation; and
 - (ii) The resulting Emissions Change from a calculation using this provision is a decrease in emissions from the Emissions Unit(s) and
 - (iii) Any excess SERs generated from a calculation using this provision are not eligible for banking pursuant to the provision of District Regulation XIV.
- (3) SERs calculated pursuant to subsection (C)(2) above shall thereafter be adjusted to reflect emissions reductions which are otherwise required by Federal, State or District law, rule, order, permit or regulation as follows:
 - (a) SERs shall be adjusted to reflect only the excess reductions beyond those already achieved by, or achievable by, the Emissions Unit(s) using RACT.
 - (b) SERs shall be adjusted to reflect only the excess reductions beyond those required by applicable District Rules and Regulations.

- (c) SERs shall be adjusted to reflect only the excess reductions beyond those required by any applicable proposed District Rules and Regulations which have been taken to public workshop.
 - (d) SERs shall be adjusted to reflect the excess reductions beyond those required by any control measures identified in the District's Air Quality Attainment Plan or contained in the State Implementation Plan of the District and which have not yet been implemented in the form of District Rules and/or Regulations.
- (4) SERs calculated pursuant to subsection (C)(2) above shall be considered Enforceable when the owner and/or operator of the Emissions Units involved has obtained appropriate permits and/or submitted other enforceable documents as follows:
- (a) If the SERs are the result of a Modification or limitation on the use of existing equipment the owner and/or operated has been issued revised ATCs or PTOs containing Federally Enforceable conditions reflecting the Modification and/or limitations.
 - (b) If the SERs are the result of a shutdown of a Permit Unit(s) the owner and/or operator has surrendered the relevant permits and those permits have been voided.
 - (i) The specific Permit Units for which the permits were surrendered shall not be repermited within the District unless the emissions thereof are completely Offset pursuant to the provisions of this regulation.
 - (c) If the SERs are the result of a Modification of Emissions Units(s) which did not have a District permit, the owner and/or operator has obtained a valid District permit or provided a contract, enforceable by the District which contains enforceable limitations on the Emissions Unit(s).
 - (d) If the SERs are the result of the application of a more efficient control technology to Emissions Unit(s) the owner and/or operator has or obtains a valid District PTO for both the underlying Emissions Unit and the new control technology.
- (5) SERs as calculated above may only be used for purposes of calculating Net Emissions Increases pursuant to subsection (B)(2) or as Offsets pursuant to District Rule 1305(C)(2).
- (6) Prior to use, SERs must be approved by the APCO.

(D) Calculation of Terms Used in Rule 1304

(1) Proposed Emissions

- (a) For a new or Modified Facility or Emissions Unit(s), the Proposed Emissions shall be equal to the Potential to Emit as defined in District Rule 1301(DDD) after modification or construction for that Facility or Emissions Unit(s) and as calculated pursuant to subsection (D)(3) below.

(2) Historic Actual Emissions (HAE)

- (a) HAE equal the Actual Emissions of Emissions Unit(s), including Fugitive Emissions directly related to the Emissions Unit(s) if the Facility belongs to one of the Facility categories as listed in 40 CFR 51.165(a)(1)(iv)(C), calculated in pounds per year, as follows:
 - (i) The verified Actual Emissions of an Emissions Unit(s), , averaged from the two-year period which immediately proceeds the date of application and which is representative of Facility operations; or
 - (ii) The verified Actual Emissions of Emissions Unit(s), averaged for any two years of the five-year period which immediately precedes the date of application which the APCO has determined is more representative of Facility operations than subsection (1) above.
 - (iii) If the Emissions Unit(s) have been in operation for less than one year, the HAE shall be equal to zero.

(3) Potential To Emit

- (a) The Potential to Emit for a Facility, for the purpose of this Rule, shall be calculated as follows:
 - (i) The sum of the Potentials to Emit for all existing Emission Unit(s) as defined pursuant to District Rule 1301(X); and
 - (ii) Any emissions increases from proposed new or modified Emission Unit(s) as calculated pursuant to subsection (B) above; and
 - (iii) Any Fugitive Emissions if the Facility belongs to one of the Facility categories as listed in 40 CFR 51.165(a)(1)(iv)(C).

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

Rule 1305

New Source Review Emissions Offsets

(A) General

(1) Purpose

- (a) This Rule provides the procedures to calculate the amount necessary, determine the eligibility of and determine the use of Offsets required pursuant to the provisions of District Rule 1303(B).

(B) Determination of Base Amount of Offsets

- (1) The base amount of Offsets shall be calculated based upon the nature of the Facility or Modification.

- (2) The APCO shall first determine the particular Facility or Modification and calculate the base quantity of Offsets required as follows:

- (a) For a new Major Facility the base quantity of Offsets shall be equal to the total Proposed Emissions, calculated pursuant to District Rule 1304 (D)(1) , for the Facility on a pollutant category specific basis for each Nonattainment Air Pollutant.
- (b) For a Major Modification to a previously existing non-major Facility **located in a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant the base quantity of Offsets shall be equal to the total Proposed Emissions, calculated pursuant to District Rule 1304(D)(1), for the Facility on a pollutant category specific basis for each Nonattainment Air pollutant.
- (c) For a Major Modification to a previously existing non-major Facility **located outside a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant the base quantity of Offsets shall be equal to the amount of the Facility's Proposed Emissions, which exceeds the threshold amounts as set forth in District Rule 1303(B) on a pollutant category specific basis for each Nonattainment Air pollutant.
- (d) For a Modification to a previously existing non-major Facility which subsequently results in the Facility becoming a Major Facility **located in a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant, the base quantity of Offsets shall be equal to the Facility's Proposed emissions, calculated pursuant to District Rule 1304(D)(1), for the Facility on a pollutant category specific basis for each Nonattainment Air pollutant.

- (e) For a Modification to a previously existing non-major Facility which subsequently results in the Facility becoming a Major Facility **located outside a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant the base quantity of Offsets shall be equal to the Facility's Proposed Emissions which exceeds the threshold amounts as set forth in District Rule 1303(B) on a pollutant category specific basis for each Nonattainment Air pollutant.
- (f) For a non-major Facility which becomes a Major Facility due to the relaxation of a Federal requirement or a Federally Enforceable requirement **located in a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant, the base quantity of Offsets shall be equal to The Facility's Proposed Emissions, calculated pursuant to District Rule 1304(D)(1), for the Facility on a pollutant category specific basis for each Nonattainment Air pollutant.
- (g) For a non-major Facility which becomes a Major Facility due to the relaxation of a Federal requirement or a Federally Enforceable requirement **located outside a Federal Nonattainment Area** for the specific Nonattainment Air Pollutant the base quantity of Offsets shall be equal to the amount of the Facility's Proposed Emissions, which exceeds the threshold amounts as set forth in District Rule 1303(B) on a pollutant category specific basis for each Nonattainment Air pollutant.
- (h) For a Modification to an existing Major Facility the base quantity of Offsets shall be the amount equal to the difference between the Facility's Proposed Emissions and the HAE.
- (i) Additional Offset Requirements for Seasonal Sources
 - (i) The base quantity of Offsets for new or Modified Seasonal Sources shall be determined on a quarterly basis.
 - (ii) Seasonal emissions used for Offsets shall generally occur during the same consecutive monthly period as the new or Modified Seasonal Source operates.
- (3) After determining the base quantity of Offsets, the APCO shall apply the appropriate Offset ratio and any adjustments as set forth in section (D) below, dependent upon the location of the Offsets and the location of the proposed new or modified Facility or Emissions Unit(s) to determine the final amount of Offsets necessary.
- (4) If eligible interpollutant Offsets are being used the APCO shall apply the appropriate interpollutant ratio to determine the final amount of Offsets necessary.

(C) Eligibility of Offsets

(1) ERCs are eligible for use as Offsets when:

- (a) Such ERCs are Real, Surplus, Permanent, Quantifiable, and Enforceable and; have been calculated and issued by the District pursuant to the provisions in Regulation XIV; and are obtained from a Facility (or combination of Facilities) which are:
 - (i) Located within the same Federal Nonattainment, attainment or unclassified area as that were the Offsets are to be used; or
 - (ii) Located in an area with a Federal designation (in the case of attainment or unclassified areas) or classification (in the case of nonattainment areas) which is greater than or equal to the designation or classification of the area where the Offsets are to be used so long as the emissions from that area cause or contribute to a violation of the National Ambient Air Quality Standards in the area in which the offsets are to be used.
- (b) Such ERCs have been calculated and issued in another air district under a program developed pursuant to Health & Safety Code §§40700-40713 so long as the source of such credits is contained within the same air basin as the District and the use of the ERCs comply with the provisions of subsection (C)(4) below.
- (c) Such ERCs have been calculated and issued in another air district under a program developed pursuant to Health & Safety Code §§40709-40713 and the transfer of such credits complies with the requirements of Health & Safety Code §40709.6 and the use of the ERCs comply with the provisions of subsection (C)(5) below.

(2) Simultaneous Emissions Reductions are eligible for use as Offsets when:

- (a) They have been calculated, adjusted and meet all the requirements of District Rule 1304(C); and
- (b) In no case shall any excess SERs be eligible for banking pursuant to the provisions of District Regulation XIV.

(3) Mobile Area and Indirect Source Emissions Reductions

- (a) Mobile, Area and Indirect Source ERCs are eligible for use as Offsets on a case-by case basis when:
 - (i) Such Mobile, Area or Indirect Source ERCs have been calculated and banked pursuant to the provisions of District Regulation XIV; and
 - (ii) The applicant demonstrates sufficient control over the Mobile, Area or Indirect Sources to ensure the claimed reductions are Real, Surplus, Permanent, Quantifiable, and Enforceable; and

- (iii) For Mobile ERCs, such Mobile Source ERCs are consistent with Mobile Source emissions reduction as guidelines issued by CARB; and
- (iv) The specific Mobile, Area or Indirect Source ERCs are approved for use prior to the issuance of the New Source Review document and the issuance of any ATCs by the APCO in concurrence with CARB; and
- (v) For a new or Modified Major Facility or a Major Modification which is located in a Federal Nonattainment Area the specific Mobile, Area or Indirect Source ERCs are calculated and adjusted pursuant to a SIP approved calculation method and represent Actual Emissions Reductions from a USEPA approved emissions inventory; and
- (vi) Such Mobile Source, Area or Indirect Source ERCs also comply with the applicable provisions of section (C)(1) above.

(4) ERCs Obtained from Other Air Districts and Within the Air Basin

- (a) ERCs occurring within the air basin but outside the District are eligible for use as Offsets upon approval of the APCO as follows:
 - (i) For a new or Modified Major Facility or a Major Modification which is located in a Federal nonattainment area, the APCO's approval shall be made in consultation with CARB and the USEPA, on a case-by-case basis.
 - (ii) For all other Facilities or Modifications subject to this provision the APCO's approval shall be made in consultation with CARB on a case-by-case basis.
 - (iii) The ERCs are obtained in a nonattainment area which has a greater or equal nonattainment classification than the area where the Offsets are to be used; and
 - (iv) The emissions from the other nonattainment area contribute to a violation of the Ambient Air Quality Standards in the area where the Offsets are to be used.
- (b) Such emissions reductions shall comply with the requirements of subsection (C)(1) above.

(5) Offsets from Other Air Districts and Outside the Air Basin

- (a) ERCs from outside the air basin are eligible to be used as Offsets upon approval of the APCO as follows:
 - (i) For a new or Modified Major Facility or a Major Modification which is located in a Federal nonattainment area, the APCO's approval shall be made in consultation with CARB and USEPA, on a case-by-case basis.

- (ii) For all other Facilities or Modifications subject to this provision the APCO's approval shall be made in consultation with CARB on a case-by-case basis.
 - (iii) The ERCs are obtained in a nonattainment area which has a greater or equal nonattainment classification than the area where the Offsets are to be used; and
 - (iv) The emissions from the other nonattainment area contribute to a violation of the Ambient Air Quality Standards in the area where the Offsets are to be used.
- (c) Such emissions reductions shall comply with the requirements of subsection (C)(1)(c) above.
- (6) Interpollutant Offsets¹
 - (a) Emissions reductions of one type of Air Pollutant may be used as Offsets for another type of Air Pollutant upon approval of the APCO.
 - (i) For a new or Modified Major Facility which is located in a Federal nonattainment area, the APCO's approval shall be made in consultation with CARB and with the approval of USEPA pursuant to the provisions of Rule 1302(D)(2) on a case-by-case basis as long as the provisions of subsection (B)(6)(b) below are met.
 - (ii) For all other Facilities or Modifications subject to this provision the APCO's approval shall be made in consultation with CARB on a case-by-case basis.
 - (b) In approving the use of interpollutant offsets the APCO shall determine that:
 - (i) The trade is technically justified; and
 - (ii) The applicant has demonstrated, to the satisfaction of the APCO, that the combined effect of the Offsets and emissions increases from the new or modified Facility will not cause or contribute to a violation of an Ambient Air Quality Standard.
 - (c) The APCO shall, based upon an air quality analysis, determine the amount of Offsets necessary, as appropriate.
 - (d) Interpollutant trades between PM₁₀ and PM₁₀ precursors may be allowed on a case by case basis. PM₁₀ emissions shall not be allowed to Offset nitrogen oxide or reactive organic compounds emissions within any ozone nonattainment area.
 - (e) Such ERCs comply with the applicable provisions of section (C)(1) above.

¹ Use of this section subject to the ruling in *Sierra Club v. USEPA* (D.C. Cir. Case #15-1465, 1/29/2021), Document #1882662 and subsequent guidance by USEPA.

(D) Offset Ratio and Adjustments

- (1) Offsets for Net Emissions Increases of Nonattainment Air Pollutants shall be provided on a pollutant category specific basis, calculated as provided in section (B) above and multiplied by the appropriate Offset ratio listed in the following table:

TABLE OF OFFSET RATIOS

POLLUTANT	OFFSET RATIO (Within a Federal Ozone Attainment or Unclassified Area)	OFFSET RATIO (Within a Federal Ozone Nonattainment Area)	OFFSET RATIO (Within a Federal PM ₁₀ Nonattainment Area)
Hydrogen Sulfide (H ₂ S)	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0
PM ₁₀	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0
Oxides of Nitrogen (NO _x)	1.0 to 1.0	1.3 to 1.0	1.0 to 1.0
Oxides of Sulfur (SO _x)	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0
Volatile Organic Compounds (VOC)	1.0 to 1.0	1.3 to 1.0	1.0 to 1.0

- (2) If a Facility is located within more than one Federal nonattainment area, the largest applicable Offset ratio for each Nonattainment Air Pollutant shall apply.
- (3) The ratio for Offsets obtained from outside the District for any Nonattainment Air Pollutant shall be equal to the offset ratio which would have applied had such Offsets been obtained within the District.
- (4) The APCO shall adjust any Offsets proposed to be used to reflect any emissions reductions in excess of RACT in effect at the time such Offsets are used if such reductions have not already been reflected in the calculations required pursuant to District Rules 1304(C)(2) or 1404(A)(3).

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

Rule 1306

New Source Review for Electric Energy Generating Facilities

(A) General

- (1) This Rule shall apply to all EEGF proposed to be constructed in the District and for which an NOI or AFC has been accepted by the CEC, as such terms are defined in District Rule 1301(U), (VV), (G) and (L) respectively.
- (2) If any provision of this Rule conflicts with any other provision of this Regulation, the provisions contained in this Rule shall control.

(B) Intent to Participate

- (1) Notification of Intent to Participate (NOI)
 - (a) Within fourteen (14) days of receipt of an NOI, the APCO shall notify CARB and the CEC of the District's intent to participate in the NOI proceeding.
- (2) Preliminary Report
 - (a) If the District chooses to participate in the NOI proceeding, the APCO shall prepare and submit a preliminary report to CARB and the CEC prior to the conclusion of the nonadjudicatory hearings specified in Section 25509.5 of the Public Resources Code.
 - (b) The Preliminary Report shall include, at a minimum:
 - (i) A preliminary specific definition or description of BACT for the proposed Facility; and
 - (ii) A preliminary discussion of whether there is a substantial likelihood that the requirements of this Regulation and all other District Rules can be satisfied by the proposed Facility; and
 - (iii) A preliminary list of conditions which the proposed Facility must meet in order to comply with this Regulation and any other applicable District Rules.
 - (c) The preliminary determination shall be as specific as practicable within the constraints of the information contained in the NOI.

(C) Applications

(1) Application for New Source Review

- (a) The APCO shall consider the AFC to be equivalent to an application pursuant to District Rule 1302(B) during the Determination of Compliance review, and shall apply all applicable provisions of District Rule 1302 to the application.
- (b) If the information contained in the AFC does not meet the requirements which would otherwise comprise a complete application pursuant to District Rule 1302(B), the APCO shall, within twenty (20) calendar days of receipt of the AFC, specify the information needed to render the application complete and so inform the CEC.

(2) Requests for Additional Information

- (a) The APCO may request from the applicant any information necessary for the completion of the Determination of Compliance review.
- (b) If the APCO is unable to obtain the information, CARB or the APCO may petition the presiding committee of the CEC for an order directing the applicant to supply such information.

(D) Determination of Compliance Review

- (1) Upon receipt of an AFC for an EEGF, the APCO shall conduct a Determination of Compliance review. This Determination shall consist of a review identical to that required pursuant to District Rule 1302(C).

See SIP Table at: <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=45>

8/10/95

(Adopted: June 28, 1995)

Rule 1400 General

(A) Purpose

- (1) The purpose of this Regulation is to implement those provisions of Division 26, Part 3, Chapter 6 (commencing with §40700) of the California Health & Safety Code which require the establishment of a system by which all reductions in the emission of air contaminants (which are to be used to offset certain future increases in emissions) shall be banked prior to use to offset future increases in emissions.
- (2) This Regulation is not intended to recognize any preexisting right to emit air contaminants, but to provide a mechanism for the District to recognize the existence of reductions of air contaminants that can be used as Offsets, and to provide greater certainty that such Offsets shall be available for emitting industries.

(B) Applicability

- (1) This Regulation shall apply to the creation, banking and use of all Emission Reduction Credits (ERCs) within the District.
- (2) Any Person, including the District, may Bank, own, use, sell or otherwise transfer, either in whole or in part, ERCs which are created and owned pursuant to this regulation subject to the applicable requirements of Federal, State, or District law, rule, order, permit or regulation.

(C) Prohibitions

- (1) No reduction in the emission of air contaminants may be used to offset future increases in the emission of air contaminants, except as provided in subsection (1)(a) below, unless such reductions have been Banked pursuant to this Regulation.

- (a) Notwithstanding the above, emissions reductions proposed to offset simultaneous emissions increases within the same Facility are not required to be Banked prior to use as Offsets so long as such reductions satisfy all the criteria contained in District Rule 1401(A) and 1404(A)(3).

8/10/95

(Adopted: June 28, 1995)

Rule 1401 Definitions

For the purposes of Regulation XIV, the following Definitions shall apply:

- (A) "Actual Emissions Reductions" (AERs) - Emission reductions which result from modifications to or shutdowns of existing emissions unit(s) which may be banked pursuant to this regulation and subsequently used for offsets pursuant to regulation XIII. AERs shall be real, enforceable, quantifiable, surplus and permanent. AERs shall be calculated pursuant to the provisions of District Rule 1404.
- (B) "Adjustment" - The process by which the District modifies the amount of AERs so that the AERs reflect only the surplus reductions beyond those otherwise required by Federal, State, or District law, rule, order, permit or regulation.
- (C) "Air Pollutant" - Any air pollution agent or combination of such agents, including any physical, chemical, biological or radioactive (including source material, special nuclear material and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant.
- (D) "Air Pollution Control Officer" (APCO) - The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.
- (E) "Air Quality Attainment Plan" (AQAP) - A planning document submitted and periodically revised by the District pursuant to the provisions of California Health & Safety Code §§40910 et seq. and approved by the California Air Resources Board.
- (F) "Banked" - The end result of the procedure set forth in District Rule 1402(B) which results in the issuance of an ERC Certificate and the recordation of the ERC in the Registry.
- (G) "Control Efficiency" - The enforceable control efficiency of a proposed air pollution control equipment or procedure which will be incorporated into the process or onto the emissions unit(s). Such equipment or other modifications shall be recorded on the authority to construct/permit to operate as a federally enforceable permit condition.

Emission reductions attributed to reduced throughput rates or operating hours shall not be considered in determining control efficiency.

- (H) "District" - The Mojave Desert Air Quality Management District, the geographical area of which is described in District Rule 103.
- (I) "Emission Reduction Credits" (ERCs) - A credit for an amount and type of regulated air pollutant granted by the District pursuant to this regulation which is evidenced by recordation in the Registry and by an ERC Certificate.
- (J) "Emissions Unit" - Any article, machine, equipment, or other contrivance, or any combination thereof, which may cause the issuance or control the issuance of air pollutants.
- (K) "Enforceable" - Verifiable and legally binding. Enforceable, for the purposes of federal requirements, means all federally enforceable limitations and conditions enforceable by the USEPA Administrator, including: NSPS; NESHAP; requirements within any applicable State Implementation Plan; any permit requirement established pursuant to 40 CFR 52.21, 51.160-166; or federal operating permit requirements.
- (L) "ERC Certificate" - A certificate evidencing ownership of an ERC issued pursuant to the provisions of Rule 1402(A)(3) and (B).
- (M) "Facility" - Any emissions unit or combination of emissions units which emits or may emit an air pollutant; and belongs to a single major industrial group in the Standard Industrial Classification Manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.
- (N) "Historic Actual Emissions" (HAE) - The actual emissions of an emissions unit or combination of emissions units, including fugitive emissions directly related to the emissions unit(s), calculated in pounds per year and determined as follows:
 - (1) The verified actual emissions of an emissions unit, or combination of emissions units, averaged from the two year period which immediately precedes the date of application and which is representative of facility operations; or
 - (2) The verified actual emissions of an emissions unit, or combination of emissions units, averaged for any two years of the five year period which immediately precedes the date of application which the APCO has determined is more representative of facility operations than subsection (1) above; or

- (3) The verified actual emissions of an emissions unit, or combination of emissions units, averaged for the two year period immediately prior to a modification or other change provided that the emissions reductions from that modification or other change were not reflected in the District's 1990 Emissions Inventory.
- (4) If an emissions unit has been in operation for less than one year, the HAE shall be equal to zero.
- (O) "Military Base designated for closure or realignment" - A military base designated for closure or downward realignment pursuant to the Defense Base Closure and Realignment Act of 1988 (PL 100-526) or the Defense Base Closure and Realignment Act of 1990 (10 U.S.C. §§2687 et seq.).
- (P) "Offset(s)" - AERs which are used to mitigate emission increases of a regulated air pollutant on a pollutant category specific basis pursuant to the provisions of Regulation XIII--*New Source Review*.
- (Q) "Permanent" - Only permanent reductions in emissions can qualify for emission reduction credit. Permanence may generally be assured for sources subject to federal requirements by requiring federally enforceable changes in source permits, or applicable state regulations to reflect a reduced level of allowable emissions.
- (R) "Person" - Includes but is not limited to: any individual, firm, association, organization, partnership, business trust, corporation, limited liability company, company, proprietorship, trust, joint venture, government, political subdivision of a government, or other entity or group of entities.
- (S) "Potential to Emit" - The maximum capacity of an emissions unit to emit any air pollutant under its physical and operational design.
 - (1) Any physical or operational limitation on the capacity of an emission unit to emit an air pollutant, including air pollution control equipment; restrictions on hours of operation; or restrictions on the type and/or amount of material combusted, stored or processed, shall be treated as part of the operational design if such limitation is federally enforceable.
 - (2) Fugitive emissions directly related to the emissions unit shall be included in the calculation of the emissions unit's potential to emit.
- (T) "Proposed Emissions" - The potential of an emissions unit to emit any air pollutant after the proposed modification or other change has been implemented.

- (U) "Quantifiable" - Ability to estimate emission reductions in terms of both their amount and characteristics. The same method of calculating emissions should generally be used to quantify the emission levels before and after the reduction.
- (V) "Readjustment" - The process of revising the amount of AERs and ERCs issued, which can occur under the following circumstances:
 - (1) the original AERs were adjusted based upon a proposed Rule or Regulation, which was not identified in the District's Air Quality Attainment Plan or State Implementation Plan **and** the District has determined that the Rule or Regulation will not be adopted by the District; or
 - (2) the original AERs were adjusted based upon a control measure which was identified in the District's Air Quality Attainment Plan or State Implementation Plan **and** the control measure has subsequently been removed from either or both documents **and** no District Rule or Regulation has been adopted for the control measure.
- (W) "Real" - Actually occurring, implemented, and not artificially devised.
- (X) "Reasonably Available Control Technology" (RACT): the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. This includes any District, State or Federal requirement intended to satisfy Federal Clean Air Act §172(c)(1) or §182(b)(1)(A)(ii)(II).
- (Y) "Reclassification" - The process by which the District cancels Class "B" ERCs and reissues them as Class "A" ERCs.
- (Z) "Registry" - The document established by District Rule 1402(A)(2) which lists all ERCs, their amounts, owners and serves as evidence of ownership of an ERC.
- (AA) "Regulated Air Pollutant" - Any of the following air pollutants:
 - (1) Any air pollutant, and its precursors, for which a national and/or State ambient air quality standard has been promulgated.
 - (2) Any air pollutant that is subject to a standard under 42 U.S.C. §7411 (Federal Clean Air Act §111) or any regulation promulgated pursuant to that section.
 - (3) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or any regulation promulgated pursuant to that section.

- (4) Any air pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412 (Federal Clean Air Act §112).
- (BB) "Shutdown" - The earlier of either:
- (1) the permanent cessation of emissions from an emissions unit; or
 - (2) the surrender of that emissions unit's operating permit.
- (CC) "State Implementation Plan" (SIP) - A plan created by the District and approved by USEPA to satisfy requirements of the Federal Clean Air Act.
- (DD) "Surplus" - In excess of emission reductions which are otherwise required by Federal, State, or District law, rule, order, permit or regulation.
- (EE) "U.S. Environmental Protection Agency" (USEPA) - Refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

RULE 1402

Emission Reduction Credit Registry

(A) General

- (1) Emission Reduction Credit Registry:
 - (a) An Emission Reduction Credit Registry is hereby established for the District.
 - (i) This shall be known as the Mojave Desert Air Quality Management District Emission Reduction Credit Registry (MDAQMD ERC Registry).
 - (b) The MDAQMD ERC Registry shall consist of ERCs which have met all the following requirements:
 - (i) A timely and complete application for ERCs has been received pursuant to Section (B)(1);
 - (ii) The amount of ERCs have been calculated and approved by the APCO pursuant to District Rule 1404;
 - (iii) The amount and ownership of the ERCs has been entered into the Registry;
 - (iv) A Certificate evidencing the amount, type and class of ERCs has been properly issued; and
 - (v) The ERCs have not yet been used as Offsets.
 - (c) ERCs contained in the MDAQMD ERC Registry are permanent until used by the owner or by any person to whom the ERC has been transferred.
 - (d) Subsequent changes in District Rules or Regulations to require a type of emission reduction which has previously been banked shall not reduce or eliminate such ERC.

- (e) Emission reductions are eligible to become ERCs if:
 - (i) Such reductions are AERs and meet the requirements of [1401\(A\)](#) and [1404\(A\)\(3\)](#); or
 - (ii) Such reductions were:
 - a. previously recognized by the District in writing, pursuant to a formal internal tracking mechanism, as eligible for use as Offsets pursuant to [Regulation XIII--New Source Review](#); and
 - b. included in the emissions inventory after the shutdown or modification occurred.
- (2) Registration List:
 - (a) All ERCs contained in the MDAQMD ERC Registry shall be listed in the Registration List.
 - (b) The Registration List entry for each ERC shall contain the following information:
 - (i) The name, address, and telephone number of the owner(s) of the ERC;
 - (ii) The amount and type of approved ERC;
 - (iii) The Class of ERC (Class "A" ERC or Class "B" ERC);
 - (iv) Any information regarding liens, encumbrances and other changes of record.
 - (c) The Registration List shall contain an entry for each ERC until such ERC is used, or otherwise altered by operation of law.
- (3) ERC Certificate:
 - (a) All ERCs issued pursuant to this regulation shall be evidenced by a Certificate issued by the District and signed by the APCO.
 - (b) The Certificate shall contain the same information as is contained in the Registration List entry for the issued ERC.
 - (c) The APCO shall prescribe the form of the Certificate.

- (d) ERC Certificates shall not constitute instruments, securities or any other form of property.
- (4) Ownership of ERCs:
 - (a) Initial title to approved ERCs shall be held by the owner(s) of the emissions unit(s) which produced the reduction in emission of air contaminants, in the same manner as such owner(s) hold title to the facility in which the emissions unit is located.
 - (b) Title for any approved ERC which has been transferred, in whole or in part, by written conveyance or operation of law from one person to another shall be held by the owner(s) in the manner indicated in the written conveyance or as indicated by the operation of law.
 - (c) The owner(s) of an ERC as listed in the Registration List and on the ERC Certificate shall have the exclusive right to use such ERCs and/or to authorize such use.
- (5) Classes of ERCs:
 - (a) ERCs shall be classified as either Class "A" ERCs or as Class "B" ERCs.
 - (b) ERCs shall be classified as Class "A" ERCs if:
 - (i) The emissions reduction is the result of a modification or limitation of use of existing equipment such that after the reduction is made the equipment remains in service with an authority to construct or permit to operate pursuant to Regulation II - Permits or Regulation XII - Federal Operating Permits; or
 - (ii) The emission reduction is the result of a shutdown of emission unit(s) and there will likely be no resulting emission increase by a replacement emission unit(s). The APCO shall determine that there will likely be no resulting emission increase by a replacement emission unit(s) using the following factors:
 - a. The product manufactured by or the material processed through the emission unit(s) are products or materials which will not likely be replaced by new or existing emission unit(s) located within the District;
 - b. The emissions from any replacement emission unit(s) will not exceed the emission level of the shutdown unit;

- c. The emissions increase from any replacement emission unit(s) must be offset under the provisions of Regulation XIII--New Source Review.
- (c) ERCs shall be classified as Class "B" ERCs if the emission reduction meets all the other requirements for AERs as set forth in District Rules 1401(A) and 1404(A)(3) but does not qualify as a Class "A" ERC.

(B) Issuance of Emission Reduction Credits

(1) Applications for ERCs:

- (a) ERCs shall be applied for, in writing, by the owner or operator of the emissions unit from which the emission reduction has occurred or will occur, to the APCO.
- (b) Applications for ERCs shall be clearly identified as such and shall contain the following:
 - (i) The name, address, and telephone number of the owner(s) of the emissions unit and a contact person if necessary.
 - (ii) Information sufficient to identify the source and/or causation of the emission reductions.
 - (iii) Information sufficient to allow the calculations set forth in Rule 1404 to be performed.
- (c) No application for ERCs will be accepted until the applicable fees as specified in District Rule 313 have been paid.
- (d) Applications for ERCs shall be submitted in a timely manner determined as follows:
 - (i) For emissions reductions which occurred prior to June 28, 1995, an application for ERCs shall be submitted within one (1) year after June 28, 1995.
 - (ii) For emission reductions which occurred after June 28, 1995, an application for ERCs shall be submitted within six (6) months after any of the following:
 - a. District issuance of an Authority to Construct pursuant to District Regulation II - Permits; or

- b. District issuance of an Authority to Construct pursuant to Regulation XIII - New Source Review; or
 - c. District issuance of a modified permit pursuant to Regulation II - Permits; or
 - d. District issuance of a modified permit pursuant to Regulation XII - Federal Operating Permits; or
 - e. for emissions units not subject to permitting requirements, the completion of the modification or shutdown.
- (iii) Notwithstanding subsections (1)(c)(i) and (ii) above, a timely application for a Military Base subject to closure or realignment shall be determined pursuant to the provisions of Health & Safety Code §40709.7.
- (e) Applications for ERCs may be withdrawn at any time by the applicant.
- (i) An applicant who withdraws an application shall only be entitled to a partial refund of fees as set forth in District Rule 313(E).
 - (ii) A withdrawn application for ERCs does not preclude an applicant from later submitting an application for ERCs based upon the same emissions reductions as those contained in the withdrawn application as long as such resubmitted application is timely.
- (2) Determination of Completeness:
- (a) The APCO shall determine if the application is complete no later than thirty (30) days after the receipt of the application, or after such longer time as both the applicant and the APCO may agree upon in writing.
 - (i) An application is complete when it contains the information required by subsection (B)(1)(b) above.
 - (b) Upon making this determination, the APCO shall notify the applicant, in writing, that the application has been determined to be complete or incomplete.
 - (i) If the application is determined to be incomplete:
 - a. The notification shall specify which part of the application is incomplete and how it can be made complete; and

- b. The applicant for ERC shall have thirty (30) days to submit the additional information, unless another time period is specified by the APCO in writing.
- c. The applicant for an ERC may request, and the APCO may grant for good cause shown, extension(s) of time for submission of the additional information. Such request and any extension(s) granted shall be in writing.
- d. If the applicant does not submit the additional information within the time period specified or extended the application shall be deemed withdrawn by the applicant.

(3) Calculation of ERCs:

- (a) Calculation of ERCs shall be performed pursuant to the provisions of District [Rule 1404](#).

(4) Proposed ERCs:

- (a) Within thirty (30) days after the application for ERCs has been determined to be complete, or after such longer time as both the applicant and the APCO may agree upon in writing, the APCO shall determine, in compliance with the standards set forth in subsection (C) below, to issue or deny the ERCs.
 - (i) The APCO shall notify the applicant in writing of the determination.
 - a. If the determination is to issue ERCs then the notice shall include the amount type and class of the ERCs proposed to be issued; or
 - b. If the determination is to deny the ERCs then the notice shall include an explanation of the reason for the denial.
 - (ii) The information submitted by the applicant and the APCO's analysis shall be transmitted to the California Air Resources Board and the USEPA regional office no later than the date of publication of the notice of the preliminary determination pursuant to [1402\(B\)\(5\)\(a\)](#), if the amount of ERCs proposed to be granted are greater than any of the following amounts:

<u>Pollutant</u>	<u>ERC Threshold</u>
No _x	50,000 lbs/yr
So _x	50,000 lbs/yr
ROC	50,000 lbs/yr
PM ₁₀	30,000 lbs/yr
CO	200,000 lbs/yr
H ₂ S	20,000 lbs/yr
Pb	1,200 lbs/yr

(5) Public Notice and Comment:

- (a) After the APCO has determined to issue ERCs, the APCO shall publish a notice in at least one daily newspaper of general circulation within the District and shall send a copy of the notice to all persons who are included on a list of persons requesting notice, on file with the Clerk of the Board for the District.
- (b) The notice shall provide the following:
 - (i) The name and address of the applicant and the facility generating the emissions reductions, if different;
 - (ii) The amount, type and class of ERCs proposed to be issued;
 - (iii) The name, address and telephone number of a person from whom additional information may be obtained; and
 - (iv) At least a thirty day period in which interested persons may submit written comments to the District regarding the proposed issuance of the ERCs.
- (c) The APCO shall accept all germane and nonfrivolous comments which are received during the comment period. The APCO shall consider such comments prior to issuance of the ERCs.
- (d) The APCO shall include all accepted comments with the records regarding the issuance of the ERCs and shall retain such records for a period of at least five (5) years.

(6) Issuance of ERCs:

- (a) Upon the expiration of the public comment period; after review of comments accepted, if any; and upon payment of the appropriate analysis fee, if any, the APCO shall issue the ERCs by including the appropriate information in the Registration List and issuing a Certificate.
- (b) The APCO shall provide written notice of the final action to the applicant (and to USEPA and the California Air Resources Board, if the preliminary determination was sent to such agencies pursuant to [\(B\)\(4\)\(a\)\(ii\)](#)).

(C) Standards for Granting Emission Reduction Credits

- (1) ERCs shall be real, enforceable, permanent, quantifiable and surplus.
- (2) ERCs shall only be granted for emissions reductions which are not otherwise required by Federal, State or District law, rule, order, permit or requirement.
- (3) ERCs shall only be granted if the applicable changes to permits have occurred or other enforceable documents have been submitted as indicated.
 - (a) If the emission reduction is the result of a modification or limitation of use of existing equipment:
 - (i) A revised permit to operate containing federally enforceable conditions reflecting the modification and/or limitations has been issued.
 - (b) If the emission reduction is the result of a shutdown of permit unit(s):
 - (i) The relevant permits have been surrendered and voided.
 - (ii) The emissions unit(s) for which the permits were surrendered will not be re-permitted within the District, unless their emissions are completely offset pursuant to Regulation [XIII - New Source Review](#).
 - (c) If the emission reduction is the result of a shutdown of a emission unit(s) which did not have a District permit:
 - (i) A valid District permit has been obtained or a contract enforceable by the District has been executed by the applicant which contains enforceable limitations reflecting the reduced emissions.

- (d) If the emission reduction is the result of the application of a more efficient control technology to a previously unpermitted emission unit(s):
 - (i) A valid District permit has been obtained which contains enforceable limitations reflecting the reduced emissions.
- (4) If the emission reduction originates from a previously unpermitted emission unit, no ERCs may be granted unless the emissions are included in the District's Emissions Inventory.

(D) Transfer, Encumbrance, and Readjustment of Emission Reduction Credits

- (1) ERCs may be transferred in whole or in part by written conveyance or by operation of law from one person to another in accordance with the provisions contained in this rule.
- (2) A voluntary transfer of ownership in whole or in part shall be performed according to the following procedure:
 - (a) The owner(s) of the ERC may file a request for transfer of ownership with the APCO. Such request shall include:
 - (i) Information regarding the new owner of the ERC sufficient for entry in the registry.
 - (ii) An executed copy of the instrument transferring the ERC or a memorandum describing the transaction which transfers the ERC which is signed by all parties to the transaction.
 - (iii) The purchase price, if any, of the ERCs in terms of total cost by pollutant purchased.
 - (iv) The existing ERC Certificate(s) for the ERCs to be transferred.
 - (b) Upon payment of the appropriate transfer fee as set forth in District [Rule 313](#), the APCO shall cancel the existing ERC Certificate(s) and issue new certificate(s) in the name of the new owner and indicate the transfer in the Registration List.

- (3) An involuntary transfer of ERCs shall be performed pursuant to the following procedure:
 - (a) The transferee shall file with the District a certified copy of the document effecting the transfer. The transferee shall certify that the document represents a transfer which is final for all purposes.
 - (b) Upon payment of the appropriate transfer fee as set forth in District [Rule 313](#), the APCO shall demand the original ERC Certificate from the original owner. Upon the surrender of the existing ERC Certificate to the District or after 90 days (whichever comes first), the existing ERC Certificate shall be considered cancelled, and the APCO shall issue a new ERC Certificate and indicate the involuntary nature of the transfer in the registry.
 - (c) The APCO shall thereafter not allow the use or subsequent transfer of the ERC by the original owner.
- (4) Other encumbrances upon ERCs shall be placed as follows:
 - (a) The holder of the encumbrance shall file with the District a certified copy of the final document creating the encumbrance.
 - (b) Upon payment of the appropriate transfer fee as set forth in District [Rule 313](#), the APCO shall indicate the encumbrance in the Registration List.
 - (c) Thereafter the APCO shall not allow the use or subsequent transfer of the ERC by the owner without receipt of a certified copy of the satisfaction of the encumbrance or by the removal of the incumbrance by its holder of the encumbrance.
- (5) Readjustments of ERCs due to the readjustment of AERs pursuant to District [Rule 1404](#) shall be processed as follows:
 - (a) The owner of the ERC shall file an application to adjust the AER.
 - (b) The APCO shall determine if the adjustment of the AER is warranted and the amount of such adjustment pursuant to the provisions of District [Rule 1404](#).
 - (c) After the APCO has determined the amount of the adjustment, upon surrender of the prior ERC Certificate, the APCO shall issue an adjusted ERC Certificate to the owner.

- (6) Any transfer of an ERC shall not modify or otherwise alter the requirements contained in a permit or contract which render the ERC real, enforceable, permanent and quantifiable.
- (7) Notwithstanding any other provision of law, conflicting interests in ERCs shall rank in priority according to the time of filing with the District.

(E) Use of Emission Reduction Credits

- (1) Class "A" ERCs:
 - (a) Class "A" ERCs may be used as offsets in accordance with the provisions of Regulation XIII--New Source Review.
- (2) Class "B" ERCs:
 - (a) Class "B" ERCs may not be used as offsets unless and until they have been reclassified as Class "A" ERCs.
 - (b) Class "B" ERCs may be reclassified as Class "A" ERCs as follows:
 - (i) The owner of the Class "B" ERC applies to the APCO in writing for reclassification.
 - (ii) The APCO determines that the ERC now meets the requirements for Class "A" status. The APCO shall consider all relevant factors including:
 - a. The length of time the emission unit(s) have been out of service;
 - b. Whether other similar emission unit(s) have experienced increased activity caused by the shutdown;
 - c. Whether a permit application for a replacement emission unit has been filed within one year of the date of the shutdown.
 - (iii) The APCO notifies the owner of the Class "B" ERC of his/her determination in writing.

- (iv) If the APCO determines that reclassification is warranted then, upon receipt of the Class "B" ERC Certificate and payment of the appropriate fee as set forth in District [Rule 313](#), the APCO shall cancel the Class "B" ERC Certificate and issue a Class "A" Certificate to the owner.

(F) **Appeal of the Granting or Denial of Emission Reduction Credits**

- (1) An applicant for ERCs may, within 30 days after receipt of the notice of denial of ERCs, petition the District Hearing Board for a hearing on whether the application for ERCs was properly refused.
- (2) The procedural provisions applicable to such a hearing shall be the same as those used for hearings regarding the denial of a permit application pursuant to [Health & Safety Code §42302](#).

[SIP: Submitted as amended 5/19/97 on 8/1/97; Approved 1/22/97 effective 3/21/97, 62 FR 3216, 40 CFR 52.220(c)(224)(I)(C)]

8/10/95

Rule 1404

Emission Reduction Credit Calculations

(A) Calculations

- (1) ERCs shall be Actual Emission Reductions (AERs) as defined in District Rule 1401 and calculated below.

- (2) Initial calculation of AERs shall be as follows:

- (a) For the shutdown of an emissions unit;

$$\text{AER} = \text{Historic Actual Emissions}$$

- (b) For modifications of an emission unit, consisting solely of the application of control equipment or the implementation of a more efficient process;

$$\text{AER} = (\text{Historic Actual Emissions}) \times (\text{Control Efficiency})$$

- (c) For all other modifications or limitations on operations of an emission unit;

$$\text{AER} = (\text{Historic Actual Emissions}) - (\text{Proposed Emissions})$$

- (3) AERs shall thereafter be adjusted to reflect emissions reductions which are otherwise required by Federal, State or District law, rule, order, permit or regulation, as follows:

- (a) AERs shall be adjusted to reflect only the excess reductions beyond those already achieved by, or achievable by, the emissions unit using Reasonably Available Control Technology.

- (b) AERs shall be adjusted to reflect only the excess reductions beyond those required by applicable District Rules and Regulations.

- (c) AERs shall be adjusted to reflect only the excess reductions beyond those required by any applicable proposed District Rules and Regulations which have been taken to public workshop.

- (d) AERs shall be adjusted to reflect the excess reductions beyond those required by any control measures identified in the District's Air Quality Attainment Plan or contained in the State Implementation Plan for the District which have not yet been implemented in the form of District Rules and/or Regulations.

(4) Readjustment of AERs and ERCs

- (a) If an AER is eligible for readjustment the APCO shall calculate the readjustment and reissue the ERC pursuant to the provisions found in District Rule 1402(D)(5).

(B) Discounts of Emission Reduction Credits

- (1) ERCs which are calculated from emission reductions created by a military base designated for closure or downward realignment shall be discounted five percent (5%) to improve air quality.

(Adopted: October 26, 1994)

Rule 2002

General Federal Actions Conformity

(A) General

(1) Purpose.

- (a) The purpose of this rule is to implement section 176(c) of the Federal Clean Air Act (FCAA) § 176(c) (42 U.S.C. § 7506(c)) and regulations under 40 CFR 51, subpart W, with respect to the conformity of general Federal actions to the applicable implementation plan. This rule sets forth policy, criteria, and procedures for demonstrating and assuring conformity of such actions to the applicable implementation plan.

(2) Applicability

- (a) No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan.

(3) Federal Action Applicability

- (a) A Federal agency must make a conformity determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this rule before the action is taken for any of the following Federal actions:
 - (i) For Federal actions related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 et seq.) conformity determinations shall be made pursuant to the provisions of District Rule 2001.
 - (ii) For Federal actions where the total of direct and indirect emissions in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates listed below;
 - (A) For purposes of paragraph (2) of this section, the following rates apply in nonattainment areas (NAAs):

	<u>Tons/Year</u> (VOC or NO _x)
Ozone	
- Serious NAAs	50
- Severe NAAs	25
- Extreme NAAs	10
- Other ozone NAAs outside an ozone transport region	100
- Marginal and moderate NAAs inside an ozone transport region	
VOC	50
Nox	100
Carbon monoxide	
- All NAAs	100
SO₂ or NO₂	
- All NAAs	100
PM₁₀	
- Moderate NAAs	100
- Serious NAAs	70
Pb (Lead)	
- All NAAs	25

- (B) For purposes of paragraph (2) of this section, the following rates apply in maintenance areas:

	<u>Tons/Year</u>
Ozone (NO_x), SO₂ or NO₂)	
- All maintenance areas	100
Ozone (VOC)	
- Maintenance areas inside an ozone transport region	50
- Maintenance areas outside an ozone transport region	100
Carbon monoxide and PM₁₀	
- All maintenance areas	100
Pb (Lead)	
- All maintenance areas	25

- (iii) For Federal actions where the total of direct and indirect emissions of any pollutant from a Federal action does not equal or exceed the rates specified in section (A)(3)(ii), but represents ten percent (10%) or more of a nonattainment or maintenance area's total emissions of that pollutant, the action is defined as a regionally significant action and the requirements of (A) and (E) through (J) shall apply for the Federal action.

- (iv) For Federal actions which are presumed to be de minimis pursuant to section (D)(1) or otherwise presumed to conform pursuant to (D)(4) of this section is a regionally significant action or where an action otherwise presumed to conform pursuant to section (D)(4) this section does not in fact meet one of the criteria in section (D)(5)(a) of this section, that action shall not be considered de minimis or presumed to conform and the requirements of (A) and (E) through (J) shall apply for the Federal action.
 - (v) The provisions of this rule shall apply in all nonattainment and maintenance areas within the jurisdiction of the MDAQMD.
 - (vi) Any measures used to affect or determine applicability of this rule, as determined under this section, must result in projects that are in fact de minimis, must result in such de minimis levels prior to the time the applicability determination is made, and must be State or Federally enforceable. Any measures that are intended to reduce air quality impacts for this purpose must be identified (including the identification and quantification of all emission reductions claimed) and the process for implementation (including any necessary funding of such measures and tracking of such emission reductions) and enforcement of such measures must be described, including an implementation schedule containing explicit timelines for implementation. Prior to a determination of applicability, the Federal agency making the determination must obtain written commitments from the appropriate persons or agencies to implement any measures which are identified as conditions for making such determinations. Such written commitment shall describe such mitigation measures and the nature of the commitment, in a manner consistent with the previous sentence. After this implementation plan revision is approved by EPA, enforceability through the applicable implementation plan of any measures necessary for a determination of applicability will apply to all persons who agree to reduce direct and indirect emissions associated with a Federal action for a conformity applicability determination.
- (b) The conformity determinations required pursuant to section (A)(3)(a) above do not apply to the following Federal actions:
- (i) Federal actions which are Exempt, determined to be de minimis, or presumed to conform to section (D) of this rule.

- (ii) Federal actions where a National Environmental Policy Act (NEPA) analysis was completed as evidenced by a final environmental assessment (EA), environmental impact statement (EIS), or finding of no significant impact (FONSI) that was prepared prior to January 31, 1994, or
- (iii) Federal actions where all of the following has occurred;
 - (A) An EA was commenced or a contract was awarded to develop the specific environmental analysis prior to January 31, 1994.
 - (B) Sufficient environmental analysis is completed by March 15, 1994, so that the Federal agency may determine that the Federal action is in conformity with the specific requirements and the purposes of the applicable implementation plan pursuant to the agency's affirmative obligation under FCAA § 176(c) (42 U.S.C. § 7506(c)), and
 - (C) A written determination of conformity under FCAA § 176(c) (42 U.S.C. § 7506(c)) has been made by the Federal agency responsible for the Federal action by March 15, 1994.

(B) Definitions

- (1) For the purposes of this rule the following definitions shall apply. Terms used but not defined herein, shall have the meaning given them by the FCAA, titles 23 and 49 of the United States Code, other USEPA regulations, other DOT regulations, or other CARB or MDAQMD rules, in that order of priority.
 - (a) Affected Federal Land Manager - The Federal agency or the Federal official charged with direct responsibility for management of an area designated as Class I under the FCAA (42 U.S.C. §7472) that is located within 100 km of the proposed Federal action.
 - (b) Applicable Implementation Plan - Is defined in FCAA § 302(q) (42 U.S.C. §7602(q)) and means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under FCAA § 110 (42 U.S.C. §7601(d)), or promulgated under FCAA § 110(c) (42 U.S.C. §7510(c)), or promulgated or approved pursuant to regulations promulgated under FCAA § 301(d) (42 U.S.C. §7601(d)) and which implements the relevant requirements of the FCAA.
 - (c) Areawide Air Quality Modeling Analysis - An assessment on a scale that includes the entire nonattainment or maintenance area which uses an air quality dispersion model to determine the effects of emissions on air quality.

- (d) Cause or contribute to a new violation - A Federal action that:
- (i) causes a new violation of a national ambient air quality standard (NAAQS) at a location in a nonattainment or maintenance area which would otherwise not be in violation of the standard during the future period in question if the Federal action were not taken, or
 - (ii) contributes, in conjunction with other reasonably foreseeable actions, to a new violation of a NAAQS at a location in a nonattainment or maintenance area in a manner that would increase the frequency or severity of the new violation.
- (e) Caused by - As used in the terms "direct emissions" and "indirect emissions," means emissions that would not otherwise occur in the absence of the Federal action.
- (f) Criteria pollutant or standard - Any pollutant for which there is established a NAAQS at 40 CFR 50.
- (g) Direct emissions - Those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and occur at the same time and place as the action.
- (h) Emergency - A situation where extremely quick action on the part of the Federal agencies involved is needed and where the timing of such Federal activities makes it impractical to meet the requirements of this rule, such as natural disasters like hurricanes or earthquakes, civil disturbances such as terrorist acts, and military mobilizations.
- (i) Emissions budgets - Those portions of the applicable SIP's projected emissions inventories that describe the levels of emissions (mobile, stationary, area, etc.) that provide for meeting reasonable further progress milestones, attainment, and/or maintenance for any criteria pollutant or its precursors.
- (j) Emission offsets - For purposes of (H) of this rule, are emissions reductions which are quantifiable, consistent with the applicable implementation plan attainment and reasonable further progress demonstrations; surplus to reductions required by, and credited to, other applicable implementation plan provisions; enforceable under both State and Federal law; and permanent within the time frame specified by the program.
- (k) Emissions that a Federal agency has a continuing program responsibility for means emissions that are specifically caused by an agency carrying out its authorities, and does not include emissions that occur due to subsequent activities, unless such activities are required by the Federal agency. Where an agency, in performing its normal program responsibilities, takes actions itself

or imposes conditions that result in air pollutant emissions by a non-Federal entity taking subsequent actions, such emissions are covered by the meaning of a continuing program responsibility.

- (l) FCAA - The Federal Clean Air Act codified at 42 U.S.C. §§7401-7671(q) as well as any amendments thereto.
- (m) Federal action - Any activity engaged in by a department, agency, or instrumentality of the Federal government, or any activity that a department, agency or instrumentality of the Federal government supports in any way, provides financial assistance for, licenses, permits, or approves, other than activities related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 et seq.). Where the Federal action is a permit, license, or other approval for some aspect of a non-Federal undertaking, the relevant activity is the part, portion, or phase of the non-Federal undertaking that requires the Federal permit, license, or approval.
- (n) Federal agency - For purposes of this rule, a Federal department, agency, or other instrumentality of the Federal government.
- (o) Increase the frequency or severity of any existing violation of any standard in any area - To cause a nonattainment area to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented.
- (p) Indirect emissions - Those emissions of a criteria pollutant or its precursors that:
 - (i) are caused by the Federal action, but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable, and;
 - (ii) the Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency.
- (q) Local air quality modeling analysis - An assessment of localized impacts on a scale smaller than the entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals, which uses an air quality dispersion model to determine the effects of emissions on air quality.
- (r) Maintenance area - An area with a maintenance plan approved under FCAA § 175A.

- (s) Maintenance plan - A revision to the applicable implementation plan, meeting the requirements of FCAA § 175A.
- (t) Metropolitan planning organization (MPO) - That organization designated as being responsible, together with the State, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. §§ 134 and 49 U.S.C. §1607. The MPO for the MDAQMD is the Southern California Association of Governments (SCAG).
- (u) Milestone - The meaning given in FCAA §§ 182(g)(1) and 189(c)(1) of the CAA. A milestone consists of an emissions level and the date on which it is required to be achieved.
- (v) National ambient air quality standards (NAAQS) - Those standards established pursuant to FCAA § 109 (42 U.S.C. §7409) which include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone, particulate matter (PM₁₀), and sulfur dioxide (SO₂).
- (w) NEPA - The National Environmental Policy Act of 1969, as amended (42 U.S.C. §4321 et seq.).
- (x) Nonattainment area (NAA) - An area designated as nonattainment under FCAA § 107 and described in 40 CFR part 81.
- (y) Precursors of a criteria pollutant are:
 - (i) For ozone, nitrogen oxides (NO_x), unless an area is exempted from NO_x requirements under FCAA § 182(f) and volatile organic compounds (VOC); and
 - (ii) For PM₁₀, those pollutants described in the PM₁₀ nonattainment area applicable SIP as significant contributors to the PM₁₀ levels.
- (z) Reasonably foreseeable emissions - are projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency.
- (aa) Regionally significant action - A Federal action for which the direct and indirect emissions of any pollutant represent ten percent (10%) or more of a nonattainment or maintenance area's emissions inventory for that pollutant.
- (bb) Regional water or wastewater projects - Include construction, operation, and maintenance of water or wastewater conveyances, water or wastewater treatment facilities, and water storage reservoirs which affect a large portion of

a nonattainment or maintenance area.

- (cc) Total of direct and indirect emissions - The sum of direct and indirect emissions increases and decreases caused by the Federal action; i.e., the "net" emissions considering all direct and indirect emissions. The portion of emissions which are exempt or presumed to conform under (D)(1),(2),(3) or (4) are not included in the "total of direct and indirect emissions". The "total of direct and indirect emissions" includes emissions of criteria pollutants and emissions of precursors of criteria pollutants. *[40 CFR 51.852 - Total of direct and indirect emissions]*
- (dd) USEPA - The United States Environmental Protection Agency, the administrator or his/her designee. *[40 CFR 51.852 - EPA]*

(C) Requirements *[40 CFR 51.854]*

- (1) Any Federal department, agency, or instrumentality of the Federal government taking an action subject to the provisions of 40 CFR 51, subpart W and this rule must make its own conformity determination consistent with the requirements of this rule.
 - (a) In making its conformity determination, a Federal agency must consider comments from any interested parties.
 - (b) Where multiple Federal agencies have jurisdiction for various aspects of a project, a Federal agency may choose to adopt the analysis of another Federal agency (to the extent the proposed action and impacts analyzed are the same as the project for which a conformity determination is required) or develop its own analysis in order to make its conformity determination.
- (2) Notwithstanding any provision of this rule, a determination that an action is in conformity with the applicable implementation plan does not exempt the action from any other requirements of the applicable implementation plan, the NEPA, or the FCAA.

(D) Exemptions, De Minimis Activities and Activities Presumed to Conform

- (1) The requirements of this rule shall not apply to:
 - (a) Actions where the total of direct and indirect emissions are below the emissions levels specified in section (A)(3)(a)(ii).
 - (b) The following actions which would result in no emissions increase or an increase in emissions that is clearly de minimis:

- (i) Judicial and legislative proceedings.
- (ii) Continuing and recurring activities such as permit renewals where activities conducted will be similar in scope and operation to activities currently being conducted.
- (iii) Rulemaking and policy development and issuance.
- (iv) Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities.
- (v) Civil and criminal enforcement activities, such as investigations, audits, inspections, examinations, prosecutions, and the training of law enforcement personnel.
- (vi) Administrative actions such as personnel actions, organizational changes, debt management or collection, cash management, internal agency audits, program budget proposals, and matters relating to the administration and collection of taxes, duties and fees.
- (vii) The routine, recurring transportation of material and personnel.
- (viii) Routine movement of mobile assets, such as ships and aircraft, in home port reassignments and stations (when no new support facilities or personnel are required) to perform as operational groups or for repair or overhaul.
- (ix) Maintenance dredging and debris disposal where no new depths are required, applicable permits are secured, and disposal will be at an approved disposal site.
- (x) With respect to existing structures, properties, facilities and lands where future activities conducted will be similar in scope and operation to activities currently being conducted at the existing structures, properties, facilities, and lands, actions such as relocation of personnel, disposition of federally-owned existing structures, properties, facilities, and lands, rent subsidies, operation and maintenance cost subsidies, the exercise of receivership or conservatorship authority, assistance in purchasing structures, and the production of coins and currency.
- (xi) The granting of leases, licenses such as for exports and trade, permits, and easements where activities conducted will be similar in scope and operation to activities currently being conducted.

- (xii) Planning, studies, and provision of technical assistance.
- (xiii) Routine operation of facilities, mobile assets and equipment.
- (xiv) Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer.
- (xv) The designation of empowerment zones, enterprise communities, or viticultural areas.
- (xvi) Actions by any of the Federal banking agencies or the Federal Reserve Banks, including actions regarding charters, applications, notices, licenses, the supervision or examination of depository institutions or depository institution holding companies, access to the discount window, or the provision of financial services to banking organizations or to any department, agency or instrumentality of the United States.
- (xvii) Actions by the Board of Governors of the Federal Reserve System or any Federal Reserve Bank to effect monetary or exchange rate policy.
- (xviii) Actions that implement a foreign affairs function of the United States.
- (xix) Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and where the Federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties.
- (xx) Transfers of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity and assignments of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity for subsequent deeding to eligible applicants.
- (xxi) Actions by the Department of the Treasury to effect fiscal policy and to exercise the borrowing authority of the United States.

- (c) The following actions where the emissions are not reasonably foreseeable, such as the following:
 - (i) Initial Outer Continental Shelf lease sales which are made on a broad scale and are followed by exploration and development plans on a project level.
 - (ii) Electric power marketing activities that involve the acquisition, sale and transmission of electric energy.
 - (d) Individual actions which implement a decision to conduct or carry out a program that has been found to conform to the applicable implementation plan, such as prescribed burning actions which are consistent with a land management plan that has been found to conform to the applicable implementation plan.
- (2) Notwithstanding the other requirements of this rule, a conformity determination is not required for the following Federal actions (or portion thereof):
- (a) The portion of an action that includes major new or modified stationary sources that require a permit under the new source review (NSR) program or the prevention of significant deterioration (PSD) program.
 - (b) Actions in response to emergencies or natural disasters such as hurricanes, earthquakes, etc., which are commenced on the order of hours or days after the emergency or disaster and, if applicable, which meet the requirements of section (D)(3).
 - (c) Research, investigations, studies, demonstrations, or training [other than those exempted pursuant to section (D)(1)(b)], where no environmental detriment is incurred or the particular action furthers air quality research, as determined by the State agency primarily responsible for the applicable implementation plan.
 - (d) Alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations (e.g., hush houses for aircraft engines and scrubbers for air emissions).
 - (e) Direct emissions from remedial and removal actions carried out under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA.

- (3) Federal actions which are part of a continuing response to an emergency or disaster under section (D)(2)(b) and which are to be taken more than 6 months after the commencement of the response to the emergency or disaster under section (D)(2)(b) are exempt from the provisions of this rule only if:
- (a) The Federal agency taking the actions makes a written determination that, for a specified period not to exceed an additional 6 months, it is impractical to prepare the conformity analyses which would otherwise be required and the actions cannot be delayed due to overriding concerns for public health and welfare, national security interests and foreign policy commitments; or
 - (b) For actions which are to be taken after those actions covered by section (D)(3)(a) of this section, the Federal agency makes a new determination as provided in section (D)(3)(a) of this section.
- (4) Notwithstanding other requirements of this rule, individual actions or classes of actions specified by individual Federal agencies that have met the criteria set forth in either section (D)(5)(a) or (b) and the procedures set forth in section (D)(6) of this section are presumed to conform, except as provided in section (A)(3)(a)(iv) of this section.
- (5) The Federal agency must meet the criteria for establishing activities that are presumed to conform by fulfilling the requirements set forth in either paragraph (D)(5)(a) or (b) of this section:
- (a) The Federal agency must clearly demonstrate using methods consistent with this rule that the total of direct and indirect emissions from the type of activities which would be presumed to conform would not:
 - (i) Cause or contribute to any new violation of any standard in any area;
 - (ii) Interfere with provisions in the applicable implementation plan for maintenance of any standard;
 - (iii) Increase the frequency or severity of any existing violation of any standard in any area; or
 - (iv) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area including, where applicable, emission levels specified in the applicable implementation plan for purposes of:
 - 1. A demonstration of reasonable further progress;

2. A demonstration of attainment; or
 3. A maintenance plan; or
- (b) The Federal agency must provide documentation that the total of direct and indirect emissions from such future actions would be below the emission rates for a conformity determination that are established in paragraph (2) of this section, based, for example, on similar actions taken over recent years.
- (6) In addition to meeting the criteria for establishing exemptions set forth in paragraphs (D)(5)(a) or (b) of this section, the following procedures must also be complied with to presume that activities will conform:
- (a) The Federal agency must identify through publication in the Federal Register its list of proposed activities that are presumed to conform and the analysis, assumptions, emissions factors, and criteria used as the basis for the presumptions;
 - (b) The Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, the agency designated under section 174 of the Act and SCAG and provide at least 30 days for the public to comment on the list of proposed activities presumed to conform;
 - (c) The Federal agency must document its response to all the comments received and make the comments, response, and final list of activities available to the public upon request; and
 - (d) The Federal agency must publish the final list of such activities in the Federal Register.

(E) Reporting Requirements.

- (1) A Federal agency making a conformity determination shall provide to the USEPA Region IX, CARB and MDAQMD and, where applicable, affected Federal land managers, and the MPO a 30-day notice which describes the proposed action and the Federal agency's draft conformity determination on the action.
- (2) A Federal agency must notify the appropriate USEPA Region IX, CARB and the MDAQMD and, where applicable, affected Federal land managers, and the MPO within 30 days after making a final conformity determination.

(F) Public Participation and Consultation.

- (1) Upon request by any person regarding a specific Federal action, a Federal agency must make available for review its draft conformity determination under (H) with supporting materials which describe the analytical methods, assumptions, and conclusions relied upon in making the applicability analysis and draft conformity determination.
- (2) A Federal agency must make public its draft conformity determination by placing a notice by prominent advertisement in a daily newspaper of general circulation in the areas affected by the action and by providing 30 days for written public comment prior to taking any formal action on the draft determination. This comment period may be concurrent with any other public involvement, such as occurs in the NEPA process.
- (3) A Federal agency must document its response to all the comments received on its draft conformity determination and make the comments and responses available, upon request by any person regarding a specific Federal action, within 30 days of the final conformity determination.
- (4) A Federal agency must make public its final conformity determination for a Federal action by placing a notice by prominent advertisement in a daily newspaper of general circulation in the areas affected by the action within 30 days of the final conformity determination.

(G) Frequency of Conformity Determinations.

- (1) The conformity status of a Federal action automatically lapses 5 years from the date a final conformity determination is reported, unless the Federal action has been completed or a continuous program has been commenced to implement that Federal action within a reasonable time.
- (2) Ongoing Federal activities at a given site showing continuous progress are not new actions and do not require periodic redeterminations so long as the emissions associated with such activities are within the scope of the final conformity determination reported.
- (3) If, after the conformity determination is made, the Federal action is changed so that there is an increase in the total of direct and indirect emissions above the levels pursuant to section (A)(3), a new conformity determination is required.

(H) Criteria for Determining Conformity of General Federal Actions.

- (1) An action required to have a conformity determination pursuant to this rule for a specific pollutant, will be determined to conform to the applicable implementation plan if, for each pollutant that exceeds the rates in (A)(3), or otherwise requires a conformity determination due to the total of direct and indirect emissions from the action, the action meets the requirements of section (H)(3), and meets any of the following requirements:
 - (a) For any criteria pollutant, the total of direct and indirect emissions from the action are specifically identified and accounted for in the applicable implementation plan's attainment or maintenance demonstration;
 - (b) For ozone or nitrogen dioxide, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area through a revision to the applicable implementation plan or a measure similarly enforceable under State and Federal law that effects emission reductions so that there is no net increase in emissions of that pollutant;
 - (c) For any criteria pollutant, except ozone and nitrogen dioxide, the total of direct and indirect emissions from the action meet the requirements:
 - (i) specified in section (H)(2), based on areawide air quality modeling analysis and local air quality modeling analysis, or
 - (ii) specified in section (H)(1)(e) and, for local air quality modeling analysis, the requirement of section (H)(2);
 - (d) For CO or PM₁₀,
 - (i) Where the MDAQMD determines that an areawide air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in section (H)(2) of this section, based on local air quality modeling analysis, or
 - (ii) Where the MDAQMD determines that an areawide air quality modeling analysis is appropriate and that a local air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in section (H)(2), based on areawide modeling, or meet the requirements of section (H)(1)(e) of this section; or

- (e) For ozone or nitrogen dioxide, and for purposes of sections (H)(1)(c)(ii) and (H)(1)(d)(ii), each portion of the action or the action as a whole meets any of the following requirements:
 - (i) Where EPA has approved a revision to an area's attainment or maintenance demonstration after 1990 and the MDAQMD makes a determination as provided in subsection (A) below, or where the MDAQMD makes a commitment as provided in subsection (B).
 - (A). The total of direct and indirect emissions from the action (or portion thereof) is determined and documented by the MDAQMD to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable implementation plan.
 - (B). The total of direct and indirect emissions from the action (or portion thereof) is determined by the MDAQMD to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed an emissions budget specified in the applicable implementation plan and the MDAQMD, who makes a written commitment to USEPA which includes the following:
 - 1. A specific schedule for adoption and submittal of a revision to the applicable implementation plan which would achieve the needed emission reductions prior to the time emissions from the Federal action would occur;
 - 2. Identification of specific measures for incorporation into the applicable implementation plan which would result in a level of emissions which, together with all other emissions in the nonattainment or maintenance area, would not exceed any emissions budget specified in the applicable implementation plan;
 - 3. A demonstration that all existing applicable implementation plan requirements are being implemented in the area for the pollutants affected by the Federal action, and that local authority to implement additional requirements has been fully pursued;

4. A determination that the responsible Federal agencies have required all reasonable mitigation measures associated with their action; and
 5. Written documentation including all air quality analyses supporting the conformity determination.
- C. Where a Federal agency made a conformity determination based on a MDAQMD commitment under section (H)(1)(e)(i)(B) of this paragraph, such a MDAQMD commitment is automatically deemed a call for an implementation plan revision by USEPA under FCAA § 110(k)(5) (42 U.S.C. §7410(k)(5)), effective on the date of the Federal conformity determination and requiring response within eighteen (18) months or any shorter time within which the MDAQMD commits to revise the applicable implementation plan;
- (ii) The action (or portion thereof), as determined by the MPO, is specifically included in a current transportation plan and transportation improvement program which have been found to conform to the applicable implementation plan under District Rule 2001 or 40 CFR 93, subpart A;
 - (iii) The action (or portion thereof) fully offsets its emissions within the same nonattainment or maintenance area through a revision to the applicable implementation plan or an equally enforceable measure that effects emission reductions equal to or greater than the total of direct and indirect emissions from the action so that there is no net increase in emissions of that pollutant;
 - (iv) Where USEPA has not approved a revision to the relevant implementation plan attainment or maintenance demonstration since 1990, the total of direct and indirect emissions from the action for the future years do not increase emissions with respect to the baseline emissions, and:
 - (A). The baseline emissions reflect the historical activity levels that occurred in the geographic area affected by the proposed Federal action during:
 - (1). Calendar year 1990,
 - (2). The calendar year that is the basis for the classification (or, where the classification is based on multiple years, the year that is most

representative in terms of the level of activity), if a classification is promulgated in 40 CFR 81, or

- (3). The year of the baseline inventory in the PM_{10} applicable implementation plan;
 - (B). The baseline emissions are the total of direct and indirect emissions calculated for the future years using the historic activity levels and appropriate emission factors for the future years; or
 - (v) Where the action involves regional water or wastewater projects, such projects are sized to meet only the needs of population projections that are in the applicable implementation plan.
- (2) The areawide and local air quality modeling analyses must:
 - (a) Meet the requirements in (I) of this rule, and
 - (b) Show that the action does not:
 - (i) Cause or contribute to any new violation of any standard in any area; or
 - (ii) Increase the frequency or severity of any existing violation of any standard in any area.
- (3) Notwithstanding any other requirements of this section, an action subject to this rule may not be determined to conform to the applicable implementation plan unless the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones contained in the applicable implementation plan, such as elements identified as part of the reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice requirements, and such action is otherwise in compliance with all relevant requirements of the applicable implementation plan.
- (4) Any analyses required under this section must be completed, and any mitigation requirements necessary for a finding of conformity must be identified in compliance with (J) of this rule, before the determination of conformity is made.

(I) Procedures for Conformity Determinations of General Federal Actions.

- (1) The analyses required under this rule must be based on the latest planning assumptions.
 - (a) All planning assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO in consultation with MDAQMD. The conformity determination must also be based on the latest assumptions about current and future background concentrations and other Federal actions.
 - (b) Any revisions to these estimates used as part of the conformity determination, including projected shifts in geographic location or level of population, employment, travel, and congestion, must be approved by MDAQMD, the MPO or other agency authorized to make such estimates for the area.
- (2) The analyses required under this rule must be based on the latest and most accurate emission estimation techniques available as described below, unless such techniques are inappropriate. If such techniques are inappropriate and written approval of the EPA Regional Administrator is obtained for any modification or substitution, they may be modified or another technique substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program.
 - (a) For motor vehicle emissions, the most current version of the motor vehicle emissions model specified by EPA for use in the preparation or revision of implementation plans in the State or area must be used for the conformity analysis as specified below:
 - (i) The EPA must publish in the Federal Register a notice of availability of any new motor vehicle emissions model; and
 - (ii) A grace period of three months shall apply during which the motor vehicle emissions model previously specified by EPA as the most current version may be used. Conformity analyses for which the analysis was begun during the grace period or no more than 3 years before the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model specified by EPA, if a final determination as to conformity is made within 3 years of such analysis.

- (b) For non-motor vehicle sources, including stationary and area source emissions, the latest emission factors specified by USEPA in the "Compilation of Air Pollutant Emission Factors (AP-42)" must be used for the conformity analysis unless more accurate emission data are available, such as actual stack test data from stationary sources which are part of the conformity analysis.
- (3) The air quality modeling analyses required under this rule must be based on the applicable air quality models, data bases, and other requirements specified in the most recent version of the "Guideline on Air Quality Models (Revised)" (1986), including supplements (USEPA publication no. 450/2-78-027R), unless:
 - (a) The guideline techniques are inappropriate, in which case the model may be modified or another model substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program; and
 - (b) Written approval of the USEPA Regional Administrator is obtained for any modification or substitution.
- (4) The analyses required under this rule must be based on the total of direct and indirect emissions from the action and must reflect emission scenarios that are expected to occur under each of the following cases:
 - (a) The FCAA mandated attainment year or, if applicable, the farthest year for which emissions are projected in the maintenance plan;
 - (b) The year during which the total of direct and indirect emissions from the action for each pollutant analyzed is expected to be the greatest on an annual basis; and
 - (c) Any year for which the applicable implementation plan specifies an emissions budget.

(J) Mitigation of Air Quality Impacts.

- (1) Any measures that are intended to mitigate air quality impacts must be identified (including the identification and quantification of all emission reductions claimed) and the process for implementation (including any necessary funding of such measures and tracking of such emission reductions) and enforcement of such measures must be described, including an implementation schedule containing explicit timelines for implementation.
- (2) Prior to determining that a Federal action is in conformity, the Federal agency making the conformity determination must obtain written commitments from the appropriate persons or agencies to implement any mitigation measures

which are identified as conditions for making conformity determinations. Such written commitment shall describe such mitigation measures and the nature of the commitment, in a manner consistent with section (I)(1).

- (3) Persons or agencies voluntarily committing to mitigation measures to facilitate positive conformity determinations must comply with the obligations of such commitments.
- (4) In instances where the Federal agency is licensing, permitting or otherwise approving the action of another governmental or private entity, approval by the Federal agency must be conditioned on the other entity meeting the mitigation measures set forth in the conformity determination, as provided in section (I)(1).
- (5) When necessary because of changed circumstances, mitigation measures may be modified so long as the new mitigation measures continue to support the conformity determination in accordance with (H) and (I) and this section. Any proposed change in the mitigation measures is subject to the reporting requirements of (E) and the public participation requirements of (F).
- (6) Written commitments to mitigation measures must be obtained prior to a positive conformity determination and such commitments must be fulfilled.
- (7) After this implementation plan revision is approved by USEPA, any agreements, including mitigation measures, necessary for a conformity determination will be both State and federally enforceable. Enforceability through the applicable implementation plan will apply to all persons who agree to mitigate direct and indirect emissions associated with a Federal action for a conformity determination.

(K) Savings Provision.

- (1) The Federal conformity rules under 40 CFR 51, subpart W, in addition to any existing applicable State requirements, establish the conformity criteria and procedures necessary to meet the requirements of FCAA § 176(c) (42 U.S.C. §7506(c)) until such time as this conformity implementation plan revision is approved by USEPA. Following USEPA approval of this revision to the applicable implementation plan (or a portion thereof), the approved (or approved portion of the) State criteria and procedures would govern conformity determinations and the Federal conformity regulations contained in 40 CFR 93 would apply only for the portion, if any, of the State's conformity provisions that is not approved by USEPA. In addition, any previously applicable implementation plan requirements relating to conformity remain enforceable until the State revises its applicable implementation plan to specifically remove them and that revision is approved by USEPA.