

## REGULATION IV - PROHIBITIONS

**RULE 4.1 Prohibitions under State Law** The provisions of Article 3, Chapter 2, Division 20 of the State of California Health and Safety Code entitled Prohibitions.

~~**RULE 4.2 Ringelmann Chart** A person shall not discharge into the atmosphere from any single source of any emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:~~

- ~~a. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or~~
- ~~b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a) of the Rule.~~

**RULE 4.3 Exceptions** The provisions of Rule 4.2 do not apply to:

- ~~a. Smoke from fires set by or permitted by any public officer, if such fire is set or permission given in the performance of the official duty of such officer, and such fire in the opinion of such officer is necessary:
  - ~~1. For the purpose of the prevention of a fire or health hazard which cannot be abated by any other means, or~~
  - ~~2. The instruction of public employees in the methods of fighting fire.~~~~
- ~~b. Smoke from fires set pursuant to permit on property used for industrial purposes for the purpose of instruction of employees in methods of fighting fire.~~
- ~~c. Smoke from open burning for which a permit has been issued by the Air Pollution Control Officer.~~
- ~~d. Agricultural operations in the growing of crops or raising of fowls or animals.~~
- ~~e. The use of an orchard or citrus grove heater which does not produce unconsumed solid carbonaceous matter at a rate in excess of one (1) gram per minute.~~
- ~~f. The use of other equipment in agricultural operations in the growing of crops, or the raising of fowls or animals.~~

# KERN COUNTY AIR POLLUTION CONTROL DISTRICT

## REGULATION I - GENERAL PROVISIONS

**RULE 101 - Title** - Adopted 4/18/72, Amended 5/2/96

These Rules and Regulations shall be known as the Rules and Regulations of the Kern County Air Pollution Control District.

**RULE 102    Definitions** - Adopted 4/18/72, Amended 1972-75, 8/31/76, 3/7/96, 7/1/99, 3/11/2010, 1/13/2011

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

- A. Affected Pollutants: Any air contaminant and precursor to such contaminant regulated under the Clean Air Act which include: volatile organic compounds, nitrogen oxides, sulfur oxides, Particles with aerodynamic diameter of 10 micrometers or less (PM<sub>10</sub>), carbon monoxide, ethylene, lead, asbestos, beryllium, mercury, vinyl chloride, fluorides, sulfuric acid mist, hydrogen sulfide, total reduced sulfur, and reduced sulfur compounds, and those pollutants which the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), or District, after due process, has determined to have a significant adverse effect on the environment, public health, or public welfare excluding GHGs as defined in this rule.
- B. Agricultural Facility: Any operation occurring on a ranch or farm directly related to the growing of crops or raising animals on that ranch or farm, for the primary purpose of making a profit or for livelihood.
- C. Air Contaminants: Any discharge, release or other propagation into the atmosphere directly or indirectly, caused by man and including, but not limited to, smoke, charred paper, dust, soot, grime, carbon, noxious acids, fumes, gases, odors, or particulate matter, or any combination thereof, excluding GHGs as defined in this rule.
- D. Alteration: Any addition to, enlargement of, replacement of, or any modification or change of the design, capacity, process, or arrangement, or any increase in the connected loading of, equipment or control apparatus, which may affect the type or amount of air contaminants emitted.
- E. Ambient Air Quality Standards: State and National Ambient Air Quality Standards. (For inclusion of this Rule in the State Implementation Plan, all references to ambient air quality standards shall be implemented as National Ambient Air Quality Standards.)
- F. Atmosphere: The air that envelops or surrounds the earth. Air pollutants emitted into a building, not designed specifically as a piece of air pollution control equipment, shall be considered an emission into the atmosphere.
- G. Board: The Air Pollution Control Board of the Eastern Kern Air Pollution Control District.
- H. Carbon Dioxide Equivalent, CO<sub>2</sub> Equivalent, or CO<sub>2</sub>e: A measure for comparing carbon dioxide with other GHGs, based on the quantity of those gases multiplied by the appropriate global warming potential (GWP) factor as stated in 40 CFR Part 98 Subpart A Table A-1 (Global Warming Potentials).
- I. Confined Animal Facility (CAF): Facility where animals are corralled, penned, or otherwise caused to remain in restricted areas for commercial purposes and primarily fed by means other than grazing.

- J. Combustible Refuse: Any solid or liquid combustible waste material containing carbon in a free or combined state.
- K. Combustion Contaminants: Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.
- L. Control Officer: The Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- M. District: The Eastern Kern Air Pollution Control District.
- N. Dusts: Minute, solid particles released into the air by natural forces or by mechanical processes such as crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, sweeping, or other similar processes.
- O. Eastern Kern County Air Pollution Control District: That portion of Kern County which lies east of the line described as follows:
- Beginning at the Kern-Los Angeles County boundary and running north and east along the northwest boundary of the Rancho La Liebre Land Grant to the point of intersection with the township line common to T.9.N and T.10.N, San Bernardino Base and Meridian (SBB&M);
  - then west along the township line to the range line common to T.10.N, R.16.W and T.9.N, R.17.W, SBB&M;
  - then north along the range line common to R.16.W and R.17.W to the point of intersection with the Rancho El Tejon Land Grant boundary;
  - then southeast, northeast, and northwest along the boundary of the Rancho El Tejon Land Grant to the northwest corner of S.3, T.11.N, R.17.W, SBB&M;
  - then west 1.2 miles;
  - then north to the Rancho El Tejon Land Grant boundary;
  - then northwest along the Rancho El Tejon line to the southeast corner of S.34, T.32.S, R.30.E, Mount Diablo Base and Meridian (MDB&M);
  - then north to the northwest corner of S.35, T.31.S, R.30.E, MDB&M;
  - then northeast along the boundary of the Rancho El Tejon Land Grant to the southwest corner of S.18, T.31.S, R.31.E, MDB&M;
  - then east to the southeast corner of S.13, T.31.S, R.31.E, MDB&M;
  - then north along the range line common to R.31.E, and R.32.E, to the northwest corner of S.6, T.29.S, R.32.E, MDB&M;
  - then east to the southwest corner of S.31, T.28.S, R.32.E, MDB&M;
  - then north along the range line common to R.31.E and R.32.E, the northwest corner of S.6, T.28.S, R.32.E, MDB&M;
  - then west to the southeast corner of S.36, T.27.S, R.31.E, MDB&M;
  - then north along the range line common to R.31.E, and R.32.E, to the Kern - Tulare County boundary.
- P. Emission: The act of passing into the atmosphere an air contaminant or gas stream which contains an air contaminant, or the air contaminant so passed into the atmosphere.



Q. Emission Point: The place at which an emission enters the atmosphere.

R. Exempt Compounds:

1. The following compounds are excluded from the definition of Volatile Organic Compounds (VOC) because they have been determined to have negligible photochemical reactivity:

Acetone,  
Methane,  
Carbon monoxide,  
Carbon dioxide,  
Carbonic acid,  
Ethane,  
Metallic carbides or carbonates,  
Ammonium carbonates,  
Methylene chloride (dichloromethane),  
1,1,1-trichloroethane (Methyl chloroform),  
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113),  
trichlorofluoromethane (CFC-11),  
1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114),  
chloropentafluoroethane (CFC-115),  
dichlorodifluoromethane (HCFC-12),  
1,1,1-trifluoro 2,2-dichloroethane (HCFC-123),  
2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124),  
1,1-dichloro 1-fluoroethane (HCFC-141b),  
1-chloro 1,1-difluoroethane (HCFC-142b),  
chlorodifluoromethane (HCFC-22),  
trifluoromethane (HFC-23),  
pentafluoroethane (HFC-125),  
1,1,2,2-tetrafluoroethane (HFC-134),  
1,1,1,2-tetrafluoroethane (HFC-134a),  
1,1,1-trifluoroethane (HFC-143a),  
1,1-difluoroethane (HFC-152a),  
parachlorobenzotrifluoride (PCBTF),  
Cyclic, branched, or linear completely methylated siloxanes (VMS)  
perchloroethylene (tetrachloroethylene);  
3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)  
1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)  
1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee)  
Difluoromethane (HFC-32)  
Ethylfluoride (HFC-161)  
1,1,1,3,3,3-hexafluoropropane (HFC-236fa)  
1,1,2,2,3-pentafluoropropane (HFC-245ca)  
1,1,2,3,3-pentafluoropropane (HFC-245ea)  
1,1,1,2,3-pentafluoropropane (HFC-245eb)  
1,1,1,3,3-pentafluoropropane (HFC-245fa)  
1,1,1,2,3,3-hexafluoropropane (HFC-236ea)  
1,1,1,3,3-pentafluorobutane (HFC-365mfc)

Chlorofluoromethane (HCFC-31)  
 1-chloro-1-fluoroethane (HCFC-151a)  
 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)  
 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C4F9OCH3 or HFE-7100)  
 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2CFCF2OCH3)  
 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C4F9OC2H5 or HFE-7200)  
 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2CFCF2OC2H5)  
 Methyl Acetate  
 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C3F7OCH3 or HFE-7000)  
 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500)  
 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea)  
 Methyl Formate (HCOOCH3)  
 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300)  
 Dimethyl Carbonate  
 Propylene Carbonate

Perfluorocarbon compounds which fall into these classes:

- i. Cyclic, branched, or linear, completely fluorinated alkanes,
- ii. Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
- iii. Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and
- iv. Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

Perfluorocarbon and methylated siloxane 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 and methylated siloxane 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.

2. For purposes of determining compliance with emissions limits, VOC will be measured by the test methods in the approved State implementation plan (SIP) or 40 CFR Part 60, Appendix A, as applicable. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as VOC if the amount of such compounds is accurately quantified, and such exclusion is approved by the enforcement authority.
3. The following compound is a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOC and shall be uniquely identified in emission reports, but is not a VOC for purposes of VOC emissions limitations or VOC content requirements: Tertiary Butyl Acetate (t-butyl acetate) informally known as TBAC or TBAC.

S. Flue: Any duct or passage for air, gases, or the like, such as a stack or chimney.

T. Fugitive Dust: Any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of human activities.

- U. Fumes: Minute, solid particles generated by condensation of vapors from solid matter after volatilization from a molten state, or generated by sublimation, distillation, calcination, or chemical reaction, when these processes create air-borne particles.
- V. Gasoline: Any organic liquid, including petroleum distillates and alcohols with a true vapor pressure greater than 1.5 psia, which is commonly or commercially known or sold as gasoline.
- W. Greenhouse Gas, Greenhouse Gases, or GHG(s): Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Sulfur Hexafluoride (SF<sub>6</sub>), Hydrofluorocarbons (HFCs), and Perfluorocarbons (PFCs).
- X. Global Warming Potential or GWP: The capacity to heat the atmosphere, calculated as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram (kg) of a substance relative to that of 1 kg of CO<sub>2</sub>. GWP shall be calculated according to the factors for a 100-year time horizon, as stated in 40 CFR Part 98 Subpart A Table A-1 (Global Warming Potentials).
- Y. Hearing Board: The Hearing Board of the Eastern Kern Air Pollution Control District.
- Z. Installation: Placement, assemblage or construction of equipment or control apparatus at the premises where the equipment or control apparatus will be used, including all preparatory work at such premises.
- AA. Institutional Facility: Any hospital, boarding home, school, corporation yard, or like facility.
- BB. Kern County Air Pollution Control District: As of May 13, 2010 any District Rule that is applicable or makes reference to Kern County Air Pollution Control District (KCAPCD) shall mean Eastern Kern Air Pollution Control District (EKAPCD).
- CC. Loading Rack: Any aggregate or combination of organic liquid loading equipment from the connection at the inlet of the organic liquid pump to and including the hose and connector at the portable delivery tank.
- DD. Motor Vehicle: A motor vehicle is a “vehicle” (defined in this rule) that is self-propelled; and does not include self-propelled wheelchairs, motorized tricycles, or motorized quadricycles, if operated by a person who, by reason of physical disability, is otherwise unable to move about as a pedestrian.
- EE. Multiple-Chamber Incinerator: Any article, machine, equipment, contrivance, structure or any part of a structure used to dispose of combustible refuse by burning, consisting of three or more refractory-lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts, and employing adequate design parameters necessary for maximum combustion of the material to be burned. Refractories shall have a Pyrometric Cone equivalent of at least 17, tested according to the American Society for Testing Materials, Method C-24.

- FF. Open Outdoor Fire: Combustion of any combustible refuse or other material of any type outdoors in the open air, and not in any enclosure where the products of combustion are not directed through a flue.
- GG. 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.
- HH. Owner: Including but is not limited to, any person who leases, supervises or operates equipment, in addition to the normal meaning of ownership.
- II. Particulate Matter: Any material, except uncombined water, which exists in a finely-divided form as a liquid or solid at standard conditions.
- JJ. Person: Any person, 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 officer or employee thereof.
- KK. PPM: Parts per million by volume expressed on a gas basis.
- LL. Process Weight Per Hour: The total weight of all materials introduced into any specific source operation, which operation may cause any emission into the atmosphere. Solid fuels charged shall be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. "The Process Weight Per Hour" will be derived by dividing the total process weight by the number of hours in one cycle of operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.
- MM. Regulation: One of the major subdivisions of the Rules of the Eastern Kern Air Pollution Control District.
- NN. Residential Rubbish: Refuse originating from residential uses including wood, paper, cloth, cardboard, tree trimmings, leaves, lawn clippings, and dry plants.
- OO. Rule: A rule of the Eastern Kern Air Pollution Control District.
- PP. Section: A section of the California Health and Safety Code, unless some other statute is specifically mentioned.
- QQ. Source Operation: The last operation preceding the emission of an air contaminant, which operation: a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion of fuels; and b) is not an air pollution abatement operation.
- RR. Standard Conditions: A gas temperature of 68° Fahrenheit (20° Celsius) and an absolute pressure of 14.7 pounds per square inch (760-millimeters of mercury). Results of all analyses and tests shall be calculated or reported at this gas temperature and pressure.

- SS. Toxic Air Contaminant (TAC): Any air pollutant which may cause or contribute to an increase in mortality or in serious illness, or may pose a present or potential hazard to human health. Any substance listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Clean Air Act (42 U.S.C. Sec. 7412(b)), any substance on the candidate list of potential toxic air contaminants or list of designated toxic air contaminants prepared by the California Air Resources Board pursuant to Article 3 (commencing with Section 39660) of Chapter 3.5 of Part 2, including, but not limited to, all substances currently under review and scheduled or nominated for review, and any hazardous air pollutant identified and listed for which health effects information is limited.
- TT. Vehicle: A vehicle is a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power.
- UU. Volatile Organic Compounds (VOC): Any compound containing at least one atom of carbon except for exempt compounds as defined in this rule.

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RULE 103 Confidential Information All information, analyses, plans, or specifications that disclose the nature, extent, quantity, or degree of air contaminants or other pollution which any article, machine, equipment, or other contrivance will produce, which any air pollution control district or any other state or local agency or district requires any applicant to provide before such applicant builds, erects, alters, replaces, operates, sells, rents, or uses such article, machine, equipment, or other contrivance, are public records.

All air and other pollution monitoring data, including data compiled from stationary sources, are public records.

Trade secrets are not public records under this rule. Trade secrets may include, but are not limited to, any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article of trade or a service having commercial value and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.

All air pollution emission data, including those emission data which constitute trade secrets, as defined in the above paragraph, are public records. Data used to calculate emission data are not emission data for the purpose of this subdivision and data which constitute trade secrets and which are used to calculate emission data are not public records.

Any person furnishing any records may label as "trade secret" any part of those records which are entitled to confidentiality. Written justification for the "trade secret" designation shall be furnished with the records so designated and the designation shall be a public record. The justification shall be as detailed as possible without disclosing the trade secret; the person may submit additional information to support the justification, which information, upon request, will be kept confidential in the same manner as the record sought to be protected.

Upon the receipt of an Application for "Confidential" Classification of Source Data the Air Pollution Control Officer shall, within ten (10) working days, notify the applicant of his ruling. In cases of rejection, the Air Pollution Control Officer shall promptly notify the person making the justification, in writing, that the records in question shall, within twenty-one (21) days be subject to public inspection unless a justification is received and accepted.

~~RULE 103.1 Inspection of Public Records The Air Pollution Control Officer shall within ten (10) working days make available records requested. If, for good cause, the information cannot be made available within the ten (10) working days, the Air Pollution Control Officer shall notify the requesting person the reasons for the delay and when the information will be available.~~

~~Air Pollution Control Officer may require the requests for public records to be specific and in sufficient detail so that the information may be readily identified.~~

**RULE 103.1 Inspection of Public Records - Adopted 8/31/76, Amended 5/2/96**

The Air Pollution Control Officer shall within ten (10) working days make available records requested. If, for good cause, the information cannot be made available within the ten (10) working days, the Air Pollution Control Officer shall notify the requesting person the reasons for the delay and when the information will be available.

The Air Pollution Control Officer may require the requests for public records to be specific and in sufficient detail so that the information may be readily identified.

6/30/77

~~24242 or 24243 or any Rule or Regulation prohibiting or limiting the discharge of air contaminants into the air. The air pollution control board in holding hearings on the issuance of orders for abatement shall have all powers and duties conferred upon the hearing board by Division 20, Chapter 2 of the Health and Safety Code of the State of California. The hearing board in holding hearings on the issuance of orders for abatement shall have all powers and duties conferred upon it by Division 20, Chapter 2 of the Health and Safety Code of the State of California. Any person who intentionally or negligently violates any order of abatement issued by any type of air pollution control district pursuant to Section 24260.5 or by the State Air Resources Board shall be liable for a civil penalty not to exceed six thousand dollars (\$6,000) for each day in which such violation occurs.~~

RULE 106 Land Use As part of his responsibility to protect the public health and property from the damaging effects of air pollution it shall be the duty of the air pollution control officer to review and advise the appropriate planning authorities within the district on all new construction or changes in land use which the air pollution control officer believes could become a source of air pollution problems.

~~RULE 107 Inspections Inspections shall be made by the enforcement agency for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations, including authority to require recordkeeping and to make inspections and conduct tests of air pollution sources.~~

RULE 108 Source Monitoring Upon the request of the Control Officer and as directed by him, the owner of any source operation which emits or may emit air contaminants, for which emissions limits have been established, shall provide the following:

- a. Sampling ports
- b. Safe sampling platforms
- c. Safe access to sampling platforms
- d. Utilities for sampling equipment
- e. Information and records which will enable the Control Officer to determine when a representative sample can be taken.

In addition, when requested by the Control Officer, the owner shall provide, install, and operate continuous monitoring equipment on such operations as directed. The equipment shall be capable of monitoring emission levels within  $\pm 20\%$  with confidence levels of 95%. The owner shall maintain, calibrate, and repair the equipment and shall keep the equipment operating at design capabilities.

Records from the monitoring equipment shall be kept by the owner for a period of two years, during which time they shall be available to the Control Officer in such form as he directs.

In the event of a breakdown of monitoring equipment, the owner shall notify the Control Officer immediately and shall initiate repairs. The owner shall inform the Control Officer of the intent to shut down any monitoring equipment at least 24 hours prior to the event.

In the event a person finds that a request by the Control Officer to install and maintain monitoring facilities or equipment is unreasonable, he may appeal the request before the Air Pollution Control Board.



**RULE 108    Stack Monitoring** - Adopted 6/22/77, Amended 6/29/81, 7/24/3

**I.    Definitions**

Definitions used shall be those given in 40 CFR, Part 51, or equivalent ones established by mutual agreement of the District, California Air Resources Board, and U.S. Environmental Protection Agency.

**II.    Continuous Monitoring**

Upon the request of and as directed by the Control Officer, the owner shall provide, install, and operate continuous monitoring equipment on such operations as directed. The owner shall maintain, calibrate, and repair the equipment and shall keep the equipment operating at design capabilities.

**III.    Required Monitoring**

The owner or operator shall provide, properly install, and maintain in good working order and in operation, continuous monitoring systems to measure the following pollutants from the following sources:

- A.    Fossil fuel fired steam generators with heat input of 250 million British Thermal Units (63 million kilogram calories) or more per hour with a use factor of at least 30 percent per year:
  - 1.    Oxides of nitrogen, if emission standards apply,
  - 2.    Carbon dioxide or oxygen, if III.A.1. applies, and
  - 3.    SO<sub>2</sub>, if control equipment is used.
- B.    All sulfur recovery plants and sulfuric acid plants: SO<sub>2</sub>.
- C.    CO boilers or regenerators of fluid catalytic cracking units and CO boilers of fluid cokers if feed rate is greater than 10,000 barrels (1,590,000 liters) per day: SO<sub>2</sub>.

**IV.    Standards of Performance**

- A.    Systems shall be installed calibrated, maintained and operated in accordance with the following Sections of 40 CFR:
  - 1.    Fossil-Fuel Fired Steam Generators: Section 60.45,
  - 2.    Sulfuric Acid Plants: Section 60.84,

3. Petroleum Refineries: Section 60.105, and
  4. Equivalent standards may be used by mutual agreement of the District, California Air Resources Board and U.S. Environmental Protection Agency.
- B. Calibration gas mixtures shall meet specifications of 40 CFR, Part 51, Appendix P, Section 3.3, and Part 60, Appendix B, Performance Specification 2., Section 2.1, or shall meet equivalent specifications established by mutual agreement of the District, California Air Resources Board and U.S. Environmental Protection Agency.
  - C. Cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, California Air Resources Board and U.S. Environmental Protection Agency.
  - D. Continuous SO<sub>2</sub> and NO<sub>x</sub> monitors shall meet applicable performance specification requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, California Air Resources Board and U.S. Environmental Protection Agency.
  - E. Continuous CO<sub>2</sub> and O<sub>2</sub> monitoring system shall meet performance specification requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, California Air Resources Board, and U.S. Environmental Protection Agency.

**V. File of Records**

Owners or operators subject to provisions of this Rule shall maintain, for a period of at least two years, a record in permanent form suitable for inspection and shall make such record available, upon request, to the California Air Resources Board and the District.

The record shall include:

- A. Occurrence and duration of any startup, shutdown or malfunction in the operation of any affected facility,
- B. Performance testing, evaluations, calibrations, checks, adjustments and maintenance of any continuous emission monitors installed pursuant to this Rule, and
- C. Emission measurements data shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, Paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by joint decision of the District, California Air Resources Board and U.S. Environmental Protection Agency.

## **VI. Quarterly Report**

Owners or operators subject to provisions of this Rule shall submit a written report for each calendar quarter to the Control Officer. The report is due by the 30th day following the end of the calendar quarter and shall include:

- A. Time intervals, date and magnitude of excess emissions; nature and cause of the excess (if known), corrective actions taken and preventive measures adopted;
- B. Averaging period used for data reporting corresponding to averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant/source category in question;
- C. Time and date of each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of system repairs and adjustments; and
- D. A negative declaration when no excess emissions occurred.

## **VII. Violations**

A violation of emission standards of these Rules, as shown by the stack-monitoring system, shall be reported by such person to the Control Officer within 96 hours. The District shall, in turn, report the violation to the California Air Resources Board within five working days after receiving the report of the violation.

## **VIII. Breakdowns**

In the event of a breakdown of monitoring equipment, the owner shall notify the Control Officer in accordance with Rule 111 (Equipment Breakdown). The owner shall inform the Control Officer of the intent to shut down any monitoring equipment at least 24 hours prior to the event.

## **IX. Inspections**

The Air Pollution Control Officer shall inspect, as she/he determines to be necessary, monitoring devices required by this Rule to ensure that such devices are functioning properly.

## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 108.1 - Source Sampling** - Adopted 1972-75, Amended 5/6/91, 5/2/96

#### **I. Sampling Facilities**

Upon the request of the Control Officer and as directed by him the owner of any source operation which emits or may emit air contaminants, for which emission limits have been established, shall provide the following facilities, constructed in accordance with the general industry safety orders of the State of California:

- a) Sampling ports,
- b) Sampling platforms,
- c) Access to sampling platforms, and
- d) Utilities for sampling equipment

Sampling port locations must be determined according to criteria in the California Air Resources Board Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing.

#### **II. Collection of Samples**

The owner of such a source operation, when requested by the Control Officer, shall provide records or other information which will enable the Control Officer to determine when a representative sample can be taken.

In addition, upon the request of the Control Officer and as directed by him, the owner of such a source operation shall collect, have collected, or allow the Control Officer to collect, a source sample.

#### **III. Test Methods**

The applicable test method, if not specified in the rule, shall be conducted in accordance with Title 40 CFR, Subpart 60, Appendix A - Reference Methods, except particulate matter (PM<sub>10</sub>) for compliance with Rule 210.1 requirements shall be conducted in accordance with Title 40 CFR, Subpart 51, Appendix M, Method 201 or 201A. Where no test method exists in the preceding references for a source type source sampling shall be conducted in accordance with California Air Resources Board (CARB) approved methods.

#### **IV. Test Procedures**

For the purpose of determining compliance with an applicable standard or numerical limitation, the arithmetic mean of three test runs shall apply, unless two of the three results are above the applicable limit. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.

A scheduled source test may not be discontinued solely due to the failure of one or more runs failing to meet applicable standards.

In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions presenting a hazard to the sampling team, or other circumstances beyond the owner or operator's control, upon the Control Officer's approval, compliance may be determined using the arithmetic mean of the other two runs.

## V. **Administrative Requirements**

District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling.

Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel.

Source test reports must be submitted to the District within 60 days of completion of field testing. Source tests must be submitted for all District-authorized compliance source tests regardless of pass, fail or reschedule because of failure, status. A District-authorized compliance source test shall not be discontinued solely due to the failure of one or more runs failing to meet applicable standards.

**RULE 108.2 Emissions Statement Requirements** - Adopted 7/13/92, Amended 5/2/96, 8/4/22

**I. Applicability**

Requirements of this Rule shall apply to any person owning or operating any source operation with the potential to emit Oxides of Nitrogen (NO<sub>x</sub>) or Volatile Organic Compounds (VOCs).

**II. Requirements**

An owner or operator of any source operation emitting, or with the potential to emit NO<sub>x</sub> or VOCs shall provide the District with a written statement, in such form as prescribed, showing actual emissions of NO<sub>x</sub> and VOCs from such source. At a minimum the emission statement shall contain all information contained in the California Air Resources Board (CARB) Emission Inventory Turn Around Document as described in Instructions for the Emission Data System Review and Update Report. The emission statement shall contain emissions for the time period specified by the Control Officer. The emission statement shall also contain a certification signed and dated by a company's responsible official that the information contained within is accurate to the best knowledge of the individual certifying the emission statement. The first emission statement shall cover 1992 emissions and shall be submitted to the District by June 1993. An emission statement for prior calendar year emissions shall be submitted annually thereafter.

**III. Exemption**

The Control Officer may waive this requirement to any class or category of stationary sources emitting less than 25 tons per year (tpy) of NO<sub>x</sub> or VOCs if the District provides CARB with an emission inventory of sources emitting greater than 10 tpy of NO<sub>x</sub> or VOCs based on the use of emission factors acceptable to CARB and the EPA.

## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 112 - Circumvention** - Adopted 4/18/72, Amended 5/2/96

A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces, dilutes, or conceals an emission which would otherwise constitute a violation of Division 26 of the Health and Safety Code of the State of California, or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of Rule 419 of these Rules and Regulations. Violation of Rule 112 is a misdemeanor pursuant to the provisions of Section 41701 of the Health and Safety Code of the State of California.

## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 113 - Separation and Combination** - Adopted 1972-75, Amended 5/2/96

#### **I. Multiple Emission Points**

If air contaminants from a single source operation are emitted through two or more emission points, the total emitted quantity of any air contaminant, limited in these Regulations cannot exceed the quantity which would be the allowable emission through a single emission point; and the total emitted quantity of any such air contaminant shall be taken as the product of the highest concentration measured in any of the emission points and the exhaust gas volume through all emission points, unless the person responsible for the source operation establishes the correct total emitted quantity.

#### **II. Combination (Subject to Separation)**

If air contaminants from two or more source operations are combined prior to emission and there are adequate and reliable means reasonably susceptible to confirmation and use by the control officer for establishing a separation of the components of the combined emission to indicate the nature, extent, quantity and degree of emission arising from each such source operation, these Regulations shall apply to each such source operation separately.

#### **III. Combination (Not Subject to Separation)**

If air contaminants from two or more source operations are combined prior to emission, and the combined emission cannot be separated according to the requirements of Rule 113 II., these Regulations shall be applied to the combined emission as if it originated in a single source operation subject to the most stringent limitations and requirements placed by these Regulations on any of the source operations whose air contaminants are so combined.



## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 114 - Severability** - Adopted 1972-75, Amended 5/2/96

If any provision, clause, sentence, paragraph, section or part of these Regulations or application thereof to any person or circumstance shall for any reason be adjudged by a court of competent jurisdiction to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of this Regulation and the application of such provision to other persons or circumstances, but shall be confined in its operation to the provision, clause, sentence, paragraph, section or part thereof directly involved in the controversy in which such judgment shall have been rendered and to the person or circumstance involved, and it is hereby declared to be the intent of the Kern County Air Pollution Control Board that these Regulations would have been adopted in any case had such invalid provision or provisions not been included.

## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 115 - Applicability of Emission Limits - Adopted 4/15/72, Amended 5/2/96**

Whenever more than one rule of these Rules and Regulations applies to any article, machine, or equipment or other contrivance, the rule or combination of rules resulting in the smallest rate or smallest concentration of air contaminants released to the atmosphere shall apply unless otherwise specifically exempted or designated.

**RULE 201    Permits Required** - Adopted 4/18/72, Amended 3/19/74, 6/29/81, 4/25/83, 5/2/96

- I.    **Authority to Construct** - Any person building, altering or replacing any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall first obtain authorization for such construction from the Control Officer. An Authority to Construct shall remain in effect until the Permit to Operate the equipment for which the application was filed is granted, denied, or canceled.
  
- II.   **Permit to Operate** - Before any new or modified equipment described in Subsection I. or any existing equipment so described may be operated, a written permit shall be obtained from the Control Officer. No Permit to Operate shall be granted either by the Control Officer or the Hearing Board for any equipment described in Subsection I., constructed or installed without authorization as required by Subsection I., until the information required is presented to the Control Officer and such equipment is altered, if necessary, and made to conform to standards set forth in Rule 208 (Standards for Granting Application) and elsewhere in these Rules and Regulations.
  - A.   **New Equipment** - A person shall notify the Control Officer before operating or using equipment granted an Authority to Construct. Upon such notification, the Authority to Construct shall serve as a temporary Permit to Operate for the equipment until the Permit to Operate is granted or denied. The equipment shall not be operated contrary to conditions specified in the Authority to Construct and testing requirements shall be satisfied.
  - B.   **Modified Equipment** - An Authority to Construct granted to modify equipment having a valid Permit to Operate shall serve as a temporary Permit to Operate for the equipment until a new Permit to Operate is granted or denied. The modified equipment shall not be operated contrary to the conditions specified in the Authority to Construct and a person shall notify the Control Officer when construction of the modification has been completed.
  - C.   **Existing Equipment** - When an application for Permit to Operate is filed for existing equipment, the application shall serve as a temporary Permit to Operate for the equipment. If the equipment was previously operated under a Permit to Operate and has not been altered, it shall not be operated under a temporary Permit to Operate contrary to the conditions specified in the previous Permit to Operate.
  
- III. **Posting of Permit to Operate** - A person who has been granted under Subsection II. a Permit to Operate any equipment described in Subsection II., shall firmly affix such Permit to Operate, an approved facsimile, or other approved identification bearing the permit number upon the article, machine, equipment, or other contrivance, in such a manner as to be clearly visible and accessible. In the event the equipment is so constructed or

operated that the Permit to Operate cannot be so placed, the Permit to Operate shall be mounted so as to be clearly visible in an accessible place within 25 feet of the equipment or maintained readily available at all times on the operating premises.

- IV. **Altering of Permit** - A person shall not willfully deface, alter, forge, counterfeit, or falsify a Permit to Operate any equipment.

**RULE 202    Permit Exemptions** - Adopted 4/18/72, Amended 3/19/74, 12/17/74, 6/30/80, 12/15/80, 4/25/83, 11/18/85, 8/22/89, 4/30/90, 8/19/91, 5/2/96, 1/8/98, 3/13/03, 1/8/04, 1/13/2011

**I.    California Health and Safety Code (CH & SC) Exemptions**

An Authority to Construct (ATC) or a Permit to Operate (PTO) shall not be required for the following unless an ATC or PTO is required pursuant to Section III.A of this Rule:

- A. Any structure designed for and used exclusively as a dwelling for not more than four families and any incinerator used exclusively in connection with such structure (CH & SC, Sections 42310(a) (1) and (3));
- B. Any Vehicle as defined in Rule 102, but not including any source operation mounted on such vehicle that would otherwise require a permit under provisions of the District Rules and Regulations (CH & SC, Section 42310 (a)(1);
- C. Repairs or maintenance not involving structural changes to any source operation with a Permit to Operate (CH & SC, Section 42310(a) (5)); and
- D. Portable engines and/or equipment associated with such engines qualifying for and in compliance with CARB's statewide registration system (CH & SC, Section 41753).

**II.    Additional Exemptions**

An ATC or a PTO shall not be required for the following unless a written permit is specifically requested by the owner/operator or an ATC or PTO is required pursuant to Section III of this Rule:

- A. Combustion Equipment:
  - 1. Steam generators, steam superheaters, water boilers, water heaters, steam cleaners, and closed heat transfer systems with a total burner(s) maximum input heat rating of less than 5,000,000 Btu per hour (gross) and equipped to be fired exclusively with natural gas, liquefied petroleum gas, or any combination thereof, provided the fuel contains no more than 5 percent by weight hydrocarbons heavier than butane (as determined by test method ASTM E-260-73) and no more than 0.30 grains of total sulfur per 100 standard cubic feet of gas (as determined by test method ASTM D-1072-80);
  - 2. Piston-type internal combustion engines with a manufacturer's maximum continuous rating of 50 brake horsepower (bhp) or less; and
  - 3. Gas turbine engines with a maximum heat input rating of 3,000,000 Btu per hour or less at *Standard Conditions* as defined in Rule 102, Definitions ; and
  - 4. Natural gas or liquefied petroleum gas fired equipment used exclusively for space heating, except boilers.

- B. Locomotives, Airplanes, and Watercraft: Used to transport passengers or freight. This exemption is not intended to apply to equipment used for dredging of waterways or to equipment used in pile driving adjacent to or in waterways.
- C. Cooling Towers: Except as required by Rule 429.1, water cooling towers with a circulation rate of less than 1,000 gallons/minute and not used for cooling liquids containing volatile organic compounds such as process water, water from barometric jets, or water from barometric condensers.
- D. Printing and Reproduction Equipment: Printing, coating, or laminating facilities using less than 2 gallons per day of graphic arts materials. Graphic arts materials are any ink, coating, adhesive, fountain solution, thinner, retarder, or cleaning solution.
- E. Food Processing Equipment:
1. Mixers and blenders used in bakeries producing edible foodstuffs intended for human consumption;
  2. Ovens used in bakeries producing less than 1,000 pounds of product per operating day, if exempted by Subsection II.A.1.; or if electrically heated;
  3. Smokehouse used for preparing food with a maximum horizontal inside cross-sectional area not exceeding 20 square feet; and
  4. Non-chain driven commercial use BBQ grill 20 square feet or less.
- F. Plastic/Rubber Processing Equipment: Source operations used exclusively for extruding or compression molding of rubber products or plastics, if no plasticizer or blowing agent is present.
- G. Liquid Storage Vessels: Containers, reservoirs, or tanks used exclusively for:
1. Storage of JP-8, NATO F-34, NATO F-35, and JP-8+100 engine fuels as defined in military specification number MIL-DTL-83133;
  2. Storage of unheated organic material with a capacity of 250 gallons or less;
  3. Storage of unheated organic material not used as a fuel with an initial boiling point of 150° C (302° F) or greater as measured by test method ASTM D-86;
  4. Storage of organic liquids as measured by test method API 2547 or ASTM D-1298-80 that include:
    - a. Storage of petroleum distillates used as engine fuel with 0.8251 specific gravity or higher (40° API or lower) and with a capacity of 19,800 gallon (471 bbls) or less;
    - b. Storage of unrefined oil with specific gravity of 0.8762 or higher (30° API or lower) and with a capacity of 100 bbl or less;

- c. Storage of fuel oils or non-air-blown asphalt with 0.9042 specific gravity or higher (25° API or lower).
- 5. Storage of refined lubricating oils and greases;
- 6. Storage of liquefied gases in unvented (except for emergency relief) pressure vessels; and
- 7. Transporting of liquids on streets or highways.
- H. Loading Racks and Equipment: Loading racks (as defined in Rule 102) used exclusively for transfer of:
  - 1. Unheated organic materials not used as a fuel with an initial boiling point of 150° C (302° F) or greater as measured by test method ASTM D-86;
  - 2. Petroleum distillates with 0.8251 specific gravity or higher (40° API or lower) as measured by test method API 2547 or ASTM D-1298-80;
  - 3. Unrefined oil, asphalt, or residual oil from tanks not requiring permits in accordance with this Rule;
  - 4. Unrefined oil with 0.8762 specific gravity or higher (30° API or lower) as measured by test method API 2547 or ASTM D-1298-80;
  - 5. Unrefined oil, asphalt, or residual oil from a delivery vehicle if loading equipment is attached to such vehicle; and
  - 6. Refined lubricating oil.
- I. Surface Coating and Solvent Cleaning Operations:
  - 1. Equipment used for application of architectural surface coatings. Architectural surface coating is defined as any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs; and
  - 2. Unheated, nonconveyorized cleaning equipment (not including emission control enclosures):
    - a. with an open surface area of 10.0 ft<sup>2</sup> or less, and internal volume of 92.5 gallons or less;
    - b. using only organic solvents with an initial boiling point of 120° C (248° F) or greater as determined by ASTM 1078-78; and
    - c. located at a stationary source losing less than 25 gallons of solvent per year to the atmosphere from all such equipment at the stationary source. Solvent lost shall not include solvent recycled or disposed of properly. Any person claiming exemption pursuant to this subsection shall maintain adequate monthly records to document his exempt status.

J. Abrasive Blasting Equipment:

1. Blast cleaning cabinets in which a suspension of abrasive in water is used;
2. Any manually-operated abrasive blast cabinet, vented to a dust-filter, where the total internal volume of the blast section is 50 cubic feet or less;
3. Enclosed equipment used exclusively for shot blast removal of flashing from rubber and plastics at sub-zero temperatures;
4. Shot peening operations, provided no surface material is removed; and
5. Portable sand/water blaster equipment and associated piston type internal combustion engine, provided water in the mixture is maintained at 66% or more by volume during operation of such equipment. Piston type internal combustion engines must be exempt pursuant to Subsection II.A.2.

K. Agricultural Sources: An Agricultural Facility or Confined Animal Facility (CAF) (as defined in Rule 102, Definitions) that meets all of the following requirements:

1. Actual emissions are less than one-half the Major Source thresholds as defined in District Rule 201.1, Permits to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990, Section II.U; and
2. Houses quantities of each class of animal less than:
  - 1,000 milk-producing dairy cows;
  - 2,500 horses;
  - 3,000 swine;
  - 3,500 beef cattle;
  - 7,500 calves, heifers, or other cattle;
  - 15,000 sheep, lambs, or goats;
  - 30,000 rabbits or other animals not in this list;
  - 100,000 turkeys;
  - 650,000 chickens other than laying hens;
  - 650,000 laying hens;
  - 650,000 ducks.

L. Miscellaneous:

1. Brazing, soldering, or welding equipment. This exemption applies to conventional brazing, soldering, or welding operations only; any internal combustion engine or other equipment associated with these source operations that would otherwise require permits is not exempt;
2. Equipment used exclusively to compress or hold dry natural gas; any engine or other equipment associated with such source operation otherwise requiring permits is not exempt;
3. Unvented (except for emergency pressure relief) pressure vessels associated with a source operation exempt from permit; and



4. Comfort air conditioning or comfort ventilating systems not designed to remove air contaminants generated by or released from a source operation.
- M. Low Emitting Unit: A source operation that meets the emission limits specified in either Subsection 1 or 2 of this section and complies with Section IV, *Recordkeeping* of this rule.
1. A source operation with a potential to emit any uncontrolled affected pollutant at a rate of less than or equal to 2 pounds in any 24-hour period.
  2. A source operation with a potential to emit uncontrolled Oxides of Nitrogen (NO<sub>x</sub>) or Volatile Organic Compounds (VOCs) at a rate of less than or equal to 10 pounds in any 24-hour period and less than or equal to 180 pounds in any calendar year.
- N. Temporary Source Operation: Any source operation, as defined in Rule 102, Definitions that has not occurred in the previous 2 calendar years, will operate for less than 12 consecutive months, and expected to emit less than 500 pounds of affected pollutants during the operation period.

Any source seeking *Temporary Source Operation* exemption must comply with provisions 1 and 2 of this section.

1. An application and filing fee in accordance with District Rule 301 shall be submitted to the Control Officer to qualify for the exemption listed in this section. Additionally, application shall be subject to application processing and priority processing fees as stated in Rule 303. Such application shall include: identification of source operation, documentation of expected emissions, and proposed form and location of records to be used to verify qualification for exemption. Such requests shall be acted upon by the District within 30 days. Each request for reapplication shall be accompanied by filing fee in accordance with District Rule 301; and
2. Sufficient records verifying compliance with *Temporary Source Operation* limits shall be collected and maintained in accordance with Section IV.A (Recordkeeping) of this rule.

### **III. Provisions for Permitting Otherwise Exempt Source Operation**

Notwithstanding provisions of Sections I and II of this Rule, an Authority to Construct and a Permit to Operate may be required for the following source operations:

- A. Those subject to EPA 40 CFR, Part 60, New Source Performance Standards (NSPS), EPA 40 CFR, Parts 61 and 63, National Emission Standards for Hazardous Air Pollutants (NESHAPS and MACT); or any source specific prohibitory Rule;
- B. Those for which the Control Officer makes a determination a permit shall be required because such source operation may not operate in compliance with all District rules and regulations, or has the potential to emit hazardous air pollutants in such quantity as to pose a significant risk to public health; and

- C. Those proposed as part of soil or groundwater remediation projects.

#### IV. **Recordkeeping**

- A. Recordkeeping shall be required to verify or maintain any exemption if such exemption is based on a maximum emission limitation or is a provision of a specific section of this rule. Such records may include but are not limited to: number of days of source operation, type(s) of affected pollutant emitted in pounds per day, Material Safety Data Sheets, product data sheets, specification sheets, purchase records, VOC content data for coatings, emission factors used for calculations, and any other pertinent information.
- B. Source operation that qualifies as *Low Emitting Unit* in accordance with Section II.M.1 of this rule may satisfy the recordkeeping provision by maintaining records for the source operation sufficient to demonstrate uncontrolled emissions of any affected pollutant do not exceed 2 pounds for 24-hour period of maximum operation for the calendar year.
- C. Source operation that qualifies as *Low Emitting Unit* in accordance with Section II.M.2 of this rule may satisfy the recordkeeping provision by:
  - 1. Maintaining records for the source operation sufficient to demonstrate uncontrolled emissions of NO<sub>x</sub> and VOC do not exceed 10 pounds in any 24-hour period of maximum operation for the calendar year; and
  - 2. Maintaining records to demonstrate emissions of NO<sub>x</sub> and VOC do not exceed 180 pounds in the calendar year: and
  - 3. Maintaining records for the source operation sufficient to demonstrate uncontrolled emissions of any affected pollutant other than NO<sub>x</sub> and VOC do not exceed 2 pounds for 24-hour period of maximum operation for the calendar year.
- D. Such records shall be maintained on-site for at least 3 years (Title V sources must retain records for 5 years), and shall be submitted to District Staff upon District's request.

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**RULE 202.1 Experimental Research Operations - Adopted 12/15/80, Amended 5/2/96**

The Control Officer may exempt from experimental research operations requirements of Regulation II if the following requirements are met. Failure to satisfy any of these requirements will result in revocation of an exemption and require compliance with requirements of Regulation II.

- A. The purpose of the operation is to permit investigation, experimentation or research to advance the state of knowledge or the state of art of a particular control technology or industrial process;
- B. The Control Officer is notified, in writing, of the purpose, goals and objectives of the project, measures to be taken to minimize the emission of air contaminants, the proposed installation date, the planned startup date, the expected duration of the test and test schedules.
- C. The cumulative total days operation will not exceed 180. If the applicant intends to continue operation of the technology or process for more than 180 days, a compliance schedule for obtaining necessary permits under Regulation II shall be established by the Control Officer.
- D. Official test results (if the project involves air pollution control devices) are submitted to the District, in writing and in final form, no more than sixty (60) days after each test sequence is complete; and
- E. The Control Officer has granted prior written approval.

For purposes of this Rule, "experimental research operations" include any air pollution control device or technology or any industrial process or technology which is: a) innovative, b) not in common use for a particular process, or c) not readily available from a commercial supplier.

~~2. Brazing, soldering or welding equipment.~~

- ~~f. Steam generators, steam superheaters, water boilers, water heaters and closed heat transfer systems that have a maximum heat input rate of less than 250,000,000 British Thermal Units (BTU) per hour (gross), and are fired exclusively with one of the following:
 
  - ~~1. Natural gas.~~
  - ~~2. Liquefied petroleum gas.~~
  - ~~3. A combination of natural gas and liquefied petroleum gas.~~~~
- ~~g. Natural draft hoods, natural draft stacks or natural draft ventilators.~~
- ~~h. Self-propelled mobile construction equipment other than pavement burners.~~
- ~~i. Other sources of minor significance which may be specified by the air pollution control officer.~~
- ~~j. Agricultural implements used in agricultural operations.~~
- ~~k. Vacuum cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.~~
- ~~l. Repairs or maintenance not involving structural changes to any equipment for which a permit has been granted.~~
- ~~m. Identical replacements in whole or in part of any equipment where a permit to operate has previously been granted for such equipment.~~

RULE 203 Transfer A permit shall not be transferable, whether by operation of law or otherwise, either from one location to another from one piece of equipment to another, or from one person to another.

~~RULE 204 Applications Every application for a permit required under Rule 201 shall be filed in the manner and form prescribed by the air pollution control officer, and shall give all the information necessary to enable the air pollution control officer to make the determination required by Rule 202 hereof.~~

RULE 205 Cancellation of Applications

72-77  
 resolution

- ~~a. An authority to construct shall expire and the application shall be cancelled two years from the date of issuance of the authority to construct unless it is renewed.~~
- ~~b. An application for a permit to operate shall be cancelled two years from the date of filing of the application unless it is renewed.~~

**RULE 205   Permit Renewal** - Adopted 4/18/72, Amended 6/1/87, 4/6/95, 5/2/96

**I.   Permit to Operate**

- A.   Payment of Fees - A Permit to Operate issued pursuant to Rule 201, Subsection I. shall be renewed each year by the applicant by payment of the annual permit renewal fee in the amount and manner prescribed by Regulation III.
- B.   Non-Operating Equipment - A Permit to Operate non-operating equipment may be renewed provided such equipment is intact and operable.
- C.   Removed Equipment - A Permit to Operate removed equipment may be renewed if such equipment is portable and: 1) the Permit is current, 2) is to be returned intact within no more than one year, and 3) the owner/operator notifies the District, in writing, upon removal and prior to the equipment's return.

**II.   Authority to Construct**

An Authority to Construct shall expire two years from the date of issuance unless a Subsection below provides for renewal.

- A.   An Authority to Construct can be renewed upon application for one two year period provided the applicant has obtained all necessary zoning and preconstruction approvals or permits from other agencies and has:
  - 1.   Begun, or caused to begin, a continuous program of actual onsite construction of equipment authorized by the Authority to Construct; 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 equipment authorized by the Authority to Construct.
- B.   If all zoning and preconstruction permits from other agencies have not been obtained and construction has not commenced due to economic downturn, an Authority to Construct can be renewed for one two year period upon application provided applications for these permits have been filed prior to the expiration of the initial Authority to Construct.

"Economic Downturn" means it has not been economically feasible to proceed with construction due to current product value and there is a reasonable probability the project will be economically feasible within the foreseeable future.

KCAPCD   KERN COUNTY AIR  
205-1 (End)   POLLUTION CONTROL DISTRICT

**RULE 208     Standards for Granting Applications** - Adopted 4/18/72, Amended 6/1/87,  
5/2/96, 9/17/98

- I. The Control Officer shall deny an Authority to Construct for new or modified equipment, or a Permit to Operate existing equipment, unless:
  - A. The applicant shows in his application the use of any equipment which causes the issuance of air contaminants, or may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled or equipped to comply with all applicable Federal, State, and KCAPCD Rules and Regulations. If compliance can be insured by including appropriate conditions pursuant to Rule 209, an Authority to Construct (or Permit to Operate) with such conditions shall be issued, and
  - B. For issuance of an Authority to Construct, the applicant submits a signed "CEQA Indemnity Agreement", using KCAPCD's Board-approved form, in response to a request for such agreement by the Control Officer.
- II. In acting upon a Permit to Operate new or modified equipment, if the Control Officer finds such equipment has been constructed or is operating not in accordance with the Authority to Construct:
  - A. He shall deny the Permit to Operate, unless an application for modified Authority to Construct is submitted which details all changes to the original application and such proposed changes are found to comply with all applicable Federal, State, and KCAPCD Rules and Regulations, or
  - B. If compliance with all Federal, State, and KCAPCD Rules and Regulations can be insured by including appropriate conditions pursuant to Rule 209, a Permit to Operate with such conditions shall be issued.

6.30.12

RULE 202 Conditional Approval The air pollution control officer may issue an authority to construct or a permit to operate, subject to conditions which will bring the operation of any equipment within the standards of Rule 208, in which case the conditions shall be specified in writing. Commencing work under such an authority to construct or operation under such a permit to operate shall be deemed acceptance of all the conditions so specified. The air pollution control officer shall issue an authority to construct or a permit to operate with revised conditions upon receipt of a new application, if the applicant demonstrates that the equipment can operate within the standards of Rule 208 under revised conditions.

**RULE 209.1 Permit Conditions - Adopted 4/5/82, Amended 1/9/89, 5/2/96**

A person shall not operate any equipment contrary to conditions specified on the Permit to Operate issued in accordance with provisions of Rule 209 to insure compliance with standards of Rule 208 and 208.1.



RULE 210.1 Standard for Authority to Construct:

4-15-80

1. Definitions

- A. Best Available Control Technology (BACT) means for any stationary source or modification the technology which gives the maximum degree of reduction of each air contaminant emitted from or resulting from such class or category of source which the Control Officer determines is achievable for such source. The Control Officer shall make this determination on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs. The Control Officer shall consider production processes and available methods, systems, and techniques for control of each such air contaminant, including fuel cleaning or treatment or innovative fuel combustion techniques.

In no event shall the emission rate reflected by the control technique or limitation exceed the amount allowable under applicable new source performance standards.

- B. Lowest Achievable Emission Rate (LAER) means for any stationary source or modification the more stringent of:

1. The most effective emissions control technique which has been achieved in practice, for such class or category of source; or
2. The most effective emission limitation which the Federal Environmental Protection Agency certifies is contained in the implementation plan of any State approved under the Clean Air Act for such class or category of source, unless the owner or operator, of the proposed source demonstrates that such limitations are not achievable; or
3. The emission limitation specified for such class or category of source under applicable Federal new source performance standards pursuant to Section 111 of the Clean Air Act; or
4. Any other emissions control technique found, after public hearing, by the Control Officer or the Air Resources Board to be technologically feasible and cost effective for such class or category of sources or for a specific source.

- C. Modeling means using an air quality simulation model, based on specified assumptions and data which has been approved in writing by the Executive Officer of the Air Resources Board.

- D. Modification means any physical change in, change in method of operation of, or addition to an existing stationary source, except that routine maintenance or repair shall not be considered to be a physical change. A change in the method of operation, unless previously limited by an enforceable permit condition, shall not include:

1. An increase in the production rate, if such increase does not exceed the operating design capacity of the source.
2. An increase in the hours of operation.
3. Change in ownership of a source.
4. Any part or item of equipment used to replace an existing part or item of equipment, on the same property, which has failed, provided the applicant certifies in writing to the Control Officer that the replacement component is identical in all material respects to the component replaced and that the replacement will not result in an increase in emissions.

- E. Precursor means a directly emitted-air contaminant that, when released to the atmosphere, forms or causes to be formed or contributes to the formation of a secondary pollutant for which a national ambient air quality standard has been adopted or whose presence in the atmosphere will contribute to the violation of one or more national ambient air quality standard. The following precursor-secondary air contaminant relationships shall be used for the purposes of this rule.

<u>PRECURSOR</u>	<u>SECONDARY AIR CONTAMINANT</u>
Hydrocarbons and substituted hydrocarbons (Reactive organic gases)	a. Photochemical Oxidants (Ozone) b. The organic fraction of suspended particulate matter.
Nitrogen Oxides	a. Nitrogen dioxide b. The nitrate fraction of suspended particulate matter. c. Photochemical oxidant (ozone).
Sulfur Oxides	a. Sulfur dioxide b. Sulfates c. The sulfate fraction of suspended particulate matter.

- F. Seasonal Source means any stationary source with more than 75 percent of its annual operating hours within a consecutive 90-day period.

- G. Stationary Source includes any structure, building, facility, equipment, installation or operation (or aggregation thereof) which is owned, operated, or under shared entitlement to be used by the same person and which is located within the District on:

1. One property or on bordering properties; or
2. One or more properties wholly within either the Western Kern County Oil Fields or the Central Kern County Oil Fields and is used for the production of oil.

Items of air-contaminant-emitting equipment shall be considered aggregate into the same stationary source, and items of nonair-contaminant-emitting equipment shall be considered associated with air-contaminant emitting equipment only if:

1. The operation of each item of equipment is dependent upon, or affects the process of, the others; and
2. The operation of all such items of equipment involves a common raw material or product.

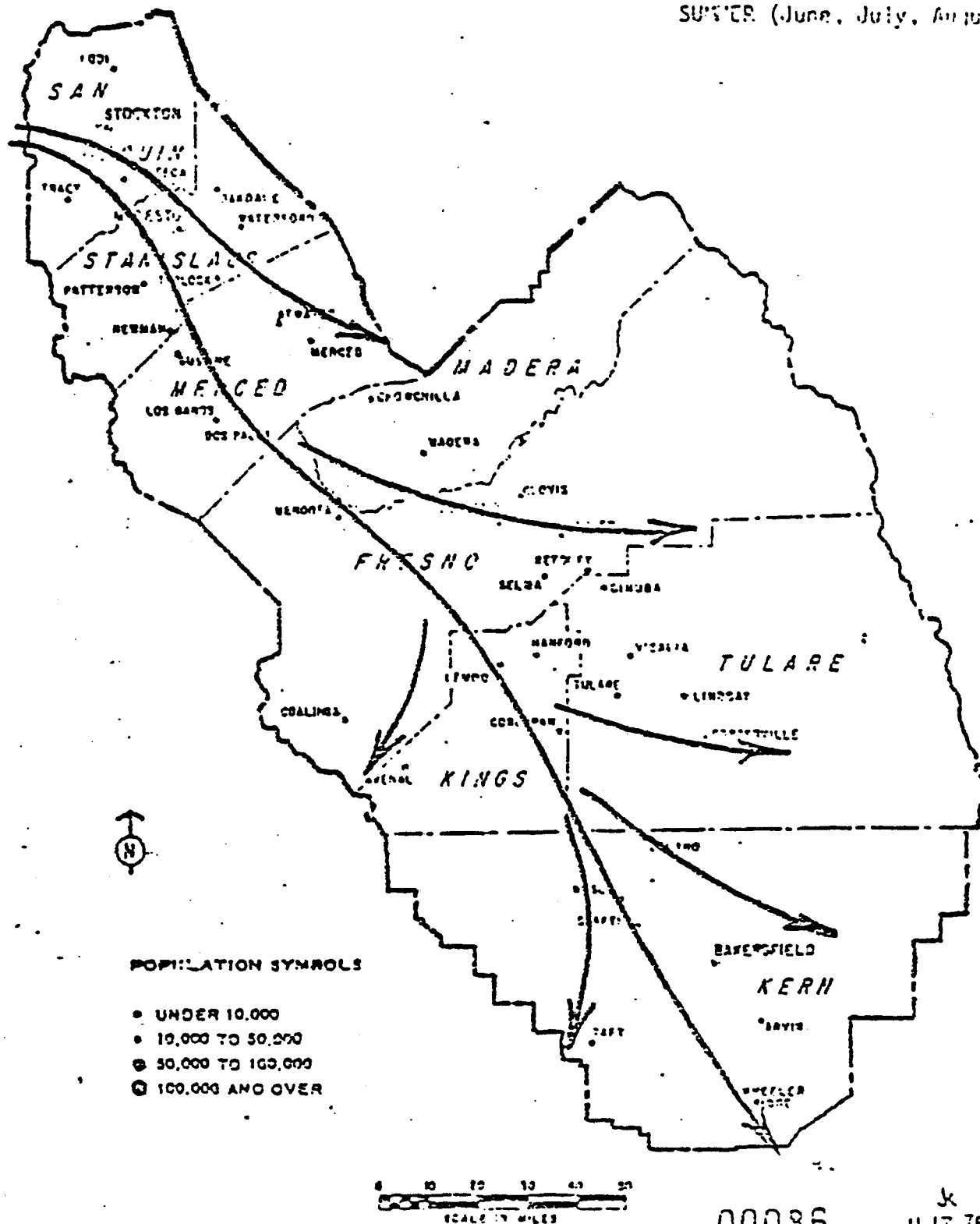
Emissions from all such aggregated items of air-contaminant-emitting equipment and all such associated items of nonair-contaminant-emitting equipment of a stationary source shall be considered emissions of the same stationary source.

- H. Upwind area shall be bounded by a line drawn perpendicular to the predominant wind flow line passing through or nearest to the site of the new source or modification and extending to the boundaries of the same or adjoining counties within the same air basin except where the Control Officer determines that for reasons of topography or meteorology such a definition is inappropriate. The predominant wind flow lines used in this rule shall be those contained in Figure I. For sites located between diverging and converging wind flow lines, an interpolated line shall be constructed which bisects the distance between the applicable flow lines shown in Figure I.
- I. Major Stationary Source is a stationary source which emits 200 pounds or more during any day of any air contaminant for which there is a national ambient air quality standard or any precursor of such contaminant.
- J. National Ambient Air Quality Standard: All references in Rule 210.1 and 210.2 to national ambient air quality standards shall be interpreted to include state ambient air quality standards. (This subsection shall not be submitted or is it intended to be a part of the State Implementation Plan.)
- K. Point of maximum ground level impact means that area where the actual or projected air contaminant concentrations resulting from the new or modified stationary source are at the maximum level after including the effect of any control technology and mitigation employed.
- L. Central Kern County Fields boundaries are described as:

Beginning at a point common to the northerly boundary line of Kern County and the line bearing in a southerly direction between Range 24E and Range 25E, MD37M; thence south along said line between Range 24E and Range 25E to a point on the line between Township 28S and Township 29S, MD37M; thence west along said line between Township 28S and Township 29S to a point on the line bearing in a southerly direction between Range 24E and Range 25E, MD37M; thence

# SAN JOAQUIN VALLEY AIR BASIN

Figure I  
PREDOMINANT WIND FLOW  
SUMMER (June, July, Aug)



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south along said line between Range 24E and Range 25E to a point on the line between Township 32S, MDB&M, and Township 12N; SBB&M; thence east along said line between Township 32S and Township 12N to a point on the line between Range 22W and Range 23W, SBB&M, thence south along said line to a point on the line between Township 10N and Township 11N, SBB&M; thence east along said line between Township 10N and Township 11N to a point on the line between Range 20W and Range 21W, SBB&M; thence south along said line between Range 20W and Range 21W to a point on the line bearing in an easterly direction between Township 10N and Township 11N, SBB&M; thence east on said line between Township 10N and Township 11N to a point on the line between Range 17W and Range 18W, SBB&M; thence north along said line between Range 17W and Range 18W to a point on the line between Township 32S, MDB&M, and Township 12, SBB&M; thence east along said line between Township 32S and Township 12N to a point on the line between Range 30E and Range 31E, MDB&M; thence north along said line between Range 30E and Range 31E to a point on the line between Township 28S and Township 29S, MDB&M; thence east along said line between Township 28S and Township 29S to a point on the line bearing in a northerly direction between Range 30E and Range 31E, MDB&M; thence north along said line between Range 30E and Range 31E to a point on the northerly boundary line of Kern County; thence west along said boundary to the point of beginning. (Figure 22)

M. Wester Kern County Fields boundaries are described as:

Beginning at a point common to the northerly boundary of Kern County and the line between Range 24E and 25E, MDB&M, and following the Kern County boundary in a westerly, then a southerly, and then easterly and southerly directions to a point common to the easterly County boundary and the line between Township 10N and Township 11N, SBB&M; thence easterly along said line between Township 10N and Township 11N to a point on the line between Range 22W and Range 23W, SBB&M; thence north along said line between Range 22W and Range 23W to a point on the line between Township 32S, MDB&M, and Township 12N, SBB&M; thence westerly along said line between Township 32S and Township 12N to a point on the line between Range 24E and Range 25E, MDB&M; thence north on said line between Range 24E and 25E to a point on the line between Township 28S and Township 29S, MDB&M; thence east along said line between Townships 28S and 29S to the point on the line bearing in a northerly direction between Range 24E and Range 25E, MDB&M; thence north along said line between Range 24E and 25E to the point of beginning.

N. Heavy oil means crude oil having an American Petroleum Institute gravity of 20 degrees or less.

2. General

A. The Control Officer shall deny an Authority to Construct for any new stationary source or modification, or any portion thereof, unless:

1. The new source or modification, or applicable portion thereof, complies with the provisions of this rule and all other applicable District rules and regulations; and

CENTRAL KERN COUNTY

SCALE IN MILES

JANUARY 1, 1973

SOURCE: CALIFORNIA DIVISION OF OIL AND GAS

T U L A R E

WEST JASPER

STEVE COCKE

PIED CRACK

CHARTER GAS

PO BOX

FRUIT

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

CHARTER GAS

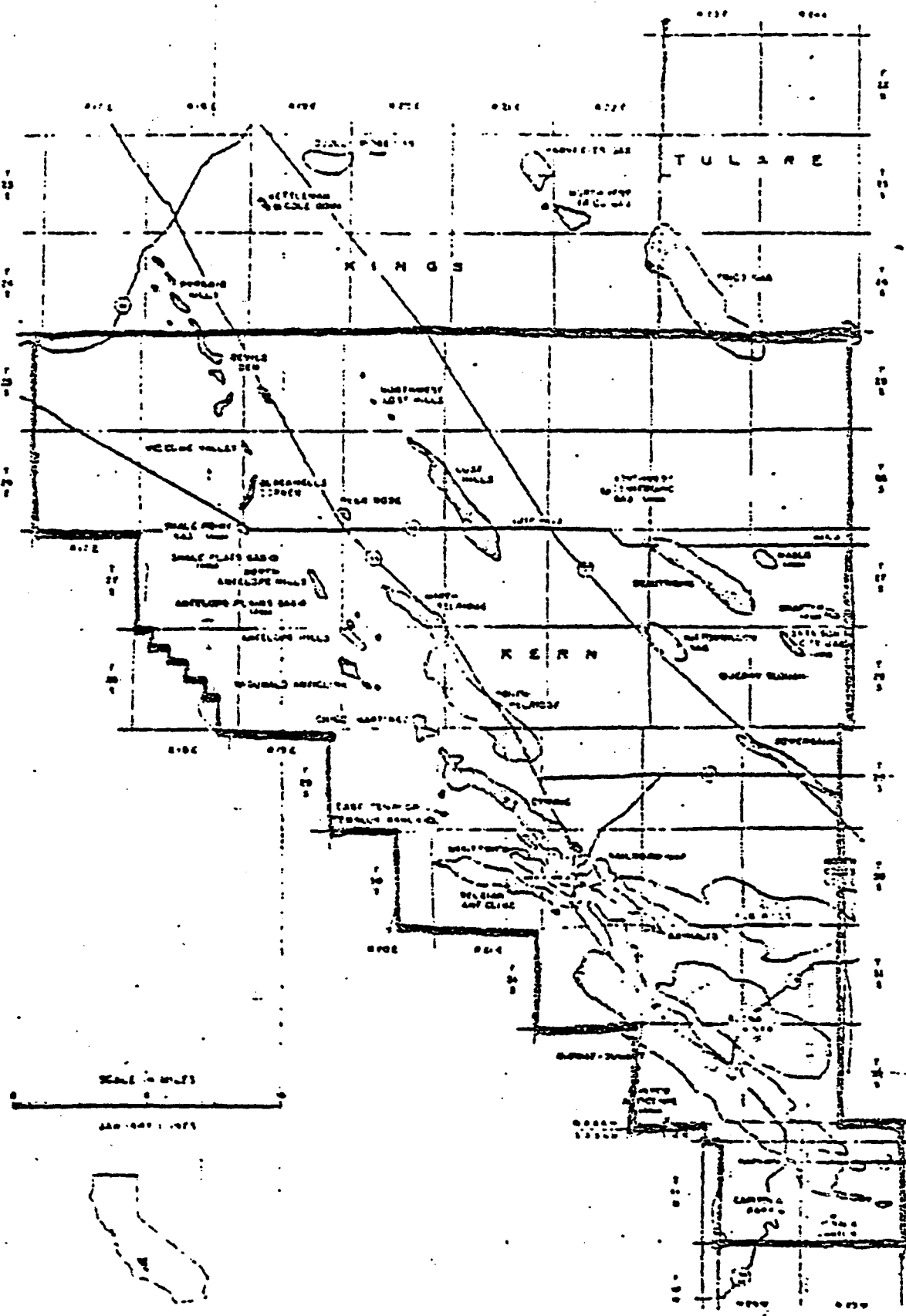
CHARTER GAS

CHARTER GAS

CHARTER GAS

K E R N

# WESTERN KERN COUNTY OIL FIELDS WITH UTM COORDINATES



2. For a major stationary source, the applicant certifies that all major stationary sources in the State that are owned or operated by the applicant are in compliance, or are on approved schedule for compliance, with all applicable emission limitations and standards under the Clean Air Act (42 USC 7401 et seq.) and all applicable emission limitations and standards which are part of the State Implementation Plan approved by the Environmental Protection Agency.

B. The Control Officer may issue an Authority to Construct for a new stationary source or modification which is subject to Section (5) only if all District regulations contained in the State Implementation Plan approved by the EPA are being carried out in accordance with that plan.

### 3. Applicability and Exemptions

A. This rule, excluding Section 5, shall apply to all new or modified stationary sources which are required pursuant to District rules to obtain an Authority to Construct.

This rule shall be effective September 12, 1979, and shall apply to all applications for Authority to Construct which are received after September 12, 1979, or which are pending on its adoption. However all applications reviewed under Rule 210.1, as adopted 12/28/76, and which prior to September 12, 1979, received a preliminary decision pursuant to Section (h) of that rule, shall not be subject to this provision.

B. Section 5A of this Rule shall apply to all new stationary sources or modifications which are to result in a net increase in emissions of 150 lbs or more during any day of any air contaminant for which there is a national ambient air quality standard (excluding carbon monoxide) or any precursor of such contaminant.

C. Sections 5B of this Rule shall apply to all new stationary sources or modifications which will result in either:

1. A net increase in emissions of 200 lbs or more during any day of any air contaminant for which there is a national ambient air quality standard (excluding carbon monoxide) or any precursor of such a contaminant; or

2. A net increase in carbon monoxide emissions which the Control Officer determines would cause the violation of any national ambient air quality standard for carbon monoxide at the point of maximum ground level impact.



- D. The provisions of Part C of the Clean Air Act, as amended in 1977, and any regulations adopted pursuant to those provisions, shall not be applicable to any new stationary source or modification which receives an Authority to Construct pursuant to this rule, provided such source or modification complies with the requirements of Section (5)(B)(2)

for all pollutants for which there is a national ambient air quality standard and all precursors of such pollutants. All sources applying for an Authority to Construct pursuant to this section shall be shown not to significantly impact Class I areas as specified in Part C of the Clean Air Act.

- F. This rule shall not apply to any air pollution control equipment for a specific pollutant, which when in operation, will reduce air contaminant emissions from the source operation provided that equipment does not increase emissions of another pollutant.

#### 4. Calculation of Emissions

- A. The maximum design capacity of a new stationary source or modification shall be used to determine the emissions from the new source or modification unless the applicant, as a condition to receiving Authorities to Construct and Permits to Operate such new source or modification, agrees to limitations on the operations of the new source or modification, in which event the limitations shall be used to establish the emissions from the new source or modification.
- B. The emissions from an existing source shall be based on the specific limiting conditions set forth in the source's Authorities to Construct and Permits to Operate, and, where no such conditions are specified, or where no Authority to Construct is required, on the actual operating conditions of the existing source averaged over the three consecutive years immediately preceding the date of application, or such shorter period as may be applicable in cases where the existing source has not been in operation for three consecutive years, or is cyclic in nature. Where the operation of a specific source has been significantly reduced during the previous three years, the Air Pollution Control Officer may specify an averaging period or emission rate which he determines provides an equitable emission base. If violations of laws, rules, regulations, permit conditions, or orders of the District, the California Air Resources Board, or the Federal Environmental Protection Agency occurred during the period used to determine the operating conditions, then adjustments to the operating conditions shall be made to determine the emissions the existing source would have caused without such violations.
- C. The net increase in emissions from new stationary sources and modifications which are not seasonal sources shall be determined using yearly emission profiles or equivalent method (as specified by the Control Officer) subject to consultation with the ARB Executive Officer. Yearly emissions profiles for an existing or proposed stationary source or modification shall be constructed by plotting the daily emissions from such source in descending order. A separate profile shall be constructed for each

pollutant. The net increase in emissions from a modification to an existing source shall be determined by comparing the yearly emissions profiles for the existing source to the yearly emissions profiles for the proposed source after modification. A net increase in emissions exists whenever any part of an emissions profile for a modified source exceeds the emissions profile for the existing source.

- D. The net increase in emissions from new stationary sources and modification which are seasonal sources shall be determined using yearly and quarterly emissions profiles, or equivalent method as specified by the Air Pollution Control Officer, subject to consultation with the ARB Executive Officer. Quarterly emissions profiles shall be constructed by plotting the daily emissions from an existing or proposed seasonal facility in descending order for the continuous 90 day period during which the greatest emissions from the proposed new or modified source will occur. A separate profile shall be constructed for each pollutant. The net increase in emissions from the modification to an existing seasonal source shall be determined by comparing the yearly and quarterly emissions profiles for the existing source to the yearly and quarterly emissions profiles for the proposed source after modification. A net increase in emissions exists whenever any part of an emissions profile for the modified source exceeds the emissions profile for the existing source.

- E. When computing the net increase in emissions for modifications, other than modifications to heavy oil production operations, the Control Officer shall take into account the cumulative net emissions changes which were achieved after December 28, 1976, and which are represented by Authorities to Construct or Permits to Operate issued to the stationary source excluding any emissions reductions required to comply with any federal, state, or district law, rule, order, or regulation. When computing the net increase in emissions for modifications to heavy oil production operations, the Control Officer shall take into account the cumulative net emissions changes represented by Authorities to Construct issued to the stationary source after September 12, 1979, excluding any emissions reductions required to comply with any federal, state, or district law, rule, order, or regulation, except Rule 425. Emission reductions resulting from implementation of Rule 425 shall be taken into account in accordance with the requirements of Rule 425.

## 5. Control Technology and Mitigation Requirements

### A. Best Available Control Technology (BACT)

All new stationary sources and modifications subject to this section shall be constructed using BACT for such net air contaminant increases as specified in Section 3.B.

B. Lowest Achievable Emission Rate (LAER) and Mitigation

1. All new stationary sources and modifications subject to this section shall be constructed using LAER, and mitigation shall be required for such net emission increases (i.e. increases after the application of LAER) as specified in Section 3.C.
  - a. of such air contaminant(s) for which a national ambient air quality standard was exceeded within the air basin more than three discontinuous times within the three years immediately preceding the date when the application for the Authority to Construct was filed, and for all precursors of such air contaminants; provided, however, that mitigation of net emission increases of sulfur oxides, total suspended particulates, oxides of nitrogen or carbon monoxide shall not be required if the applicant demonstrates through modeling that emissions from the new source or modification will not cause a new violation of any national ambient air quality standard for such air contaminants, or make any existing violation of any such standard worse, at the point of maximum ground level impact.
  - b. not subject to Subsection (a) but which the Control Officer determines would cause a new violation of any national ambient air quality standard, or would make any existing violation of any such standard worse, at the point of maximum ground level impact. Emissions reductions required as a result of this subsection must be shown through modeling to preclude the new, or further worsening of any existing, violation of any national ambient air quality standard that would otherwise result from the operation of the new source or modification, unless such reductions satisfy the requirements of Section (5)(B)(2).
2. Net emissions increases subject to Section (5)(B)(1)(a) shall be mitigated (offset) by reduced emissions from existing stationary or nonstationary sources. Emissions reductions shall be sufficient to offset any net emission increase and shall take effect at the time, or before, initial operation, of the new source, or within 90 days after initial operation of a modification.
3. Emissions offset profiles or equivalent method, as specified by the Air Pollution Control Officer, subject to consultation with the ARB Executive Officer, shall be used to determine whether proposed offsets mitigate the net emissions increases from proposed new sources or modifications.
  - a. For all offset sources, a yearly emissions offset profile shall be constructed in a manner similar to that used to construct the yearly emissions profile for the proposed new or modified source. Daily emissions reductions which will result from the further control of such sources shall be plotted in descending order. A separate profile shall be constructed for each pollutant. Seasonal offsets shall not be used to mitigate the emissions from nonseasonal sources.

- b. In addition, for seasonal offset sources, a quarterly emissions offset profile shall be constructed for the same time period and in the same manner as that used to construct the quarterly emissions profile for the proposed new or modified source. Daily emissions reductions which will result from further control of existing sources shall be plotted on the quarterly offset profile in descending order. A separate profile (which may cover different months) shall be plotted for each pollutant.
  - c. Adjusted emissions offset profiles shall be constructed by dividing each entry used in the construction of the emissions offset profiles by the offset ratio determined in Subsection (d).
  - d. The adjusted emissions offset profiles shall be compared with the emissions profiles to determine whether net emissions increases have been mitigated at all points on the profiles.
4. a. A ratio of emissions offsets to emissions (offset ratio) for new sources or modifications, other than heavy oil production operations, of 1.2:1 shall be required for emissions offsets located either:
- i. upwind in the same or adjoining counties; or
  - ii. within a 15 mile radius of the proposed new source or modification. For emissions offsets located outside of the areas described above, the applicant shall conduct modeling to determine an offset ratio sufficient to show a net air quality benefit in the area affected by emissions from the new source of modification.
- b. Emissions from heavy oil production operations shall be offset at a ratio of:
- i. 1.0:1 if the emissions used as offsets are owned by the same company and located within the same stationary source which is to be modified;
  - ii. 1.2:1 if the emissions used as offsets from different companies and located within the same oil field (Western Kern County Fields or Central Kern County Fields as defined in this rule) as the proposed new stationary source or modification;
  - iii. 1.5:1 if the emissions used as offsets are located outside of the oil field (Western Kern County Fields or Central Kern County Fields as defined in this rule) in which the proposed new stationary source or modification is located, regardless of whether they are owned by the same or different companies.

Notwithstanding any other provision of this section the yearly emissions profiles and the yearly emissions offset profiles for a source object to this section may be constructed based on the daily emissions from the source averaged on a monthly basis. In such event, an offset ratio of 2.0:1 shall be required.

5. If an applicant certifies that the proposed new source or modification is a replacement for a source which was shut down or curtailed after December 28, 1976, emissions reductions associated with such shut down or curtailment may be used as offsets for the proposed source, subject to the other provisions of this section.

Sources which were shut down or curtailed prior to December 28, 1976, may be used to offset emissions increases for replacement for such sources, subject to the other provisions of this section provided:

- a. the shut down or curtailment was made in good faith pursuant to an established plan approved by the Control Officer for replacement and emission control, and in reliance on air pollution laws, rules and regulations applicable at the time; and
  - b. the applicant demonstrates to the satisfaction of the Control Officer that there was good cause (which may include business or economic conditions) for delay in construction of the replacement facilities.
6. Notwithstanding any other provision of this section any emissions reductions not otherwise authorized by this rule may be used as offsets of emissions increases from the proposed source provided the applicant demonstrates that such reductions will result in a net air quality benefit in the area affected by emissions from the new source or modification; the Control Officer shall consult with the Executive Officer of the Air Resources Board prior to granting such reduction.
7. Emissions reductions resulting from measures required by adopted federal, state, or district laws, rules or regulations shall not be allowed as emissions offsets unless a complete application incorporating such offsets was filed with the District prior to the date of adoption of the laws, rules or regulations, with the exception of Rule 425. Emission reductions resulting from implementation of Rule 425 shall be used in accordance with the provisions in that rule.

8. The Control Officer shall allow emissions reductions which exceed those required by this rule for a new source or modification to be banked for use in the future by the applicant. All such reductions, when used as offsets for the increased emissions from a proposed new source or modifications, shall be used in accordance with the other provisions of this Section.
9. Emission reductions achieved by the stationary source prior to the establishment of the District's banking system shall be used only for determining the net cumulative changes of emissions from that source. Such emission reductions, as well as emission reductions achieved on or after the establishment of the banking system pursuant to Health and Safety Code Sections 40709-40713, shall be allowed to be banked and transferred according to the requirements of the system.
10. For all power plants subject to Section 8, the applicant may, upon written notice to the Control Officer and the Executive Officer of the Air Resources Board, establish an emissions offset bank for a specific power plant at a specific location. The emissions offset bank shall be established no earlier than the date the applicant's Notice of Intention for the power plant is accepted by the California Energy Commission. The emissions offset bank shall lapse if the Commission rejects the applicable power plant or site; however, in such case the applicant may transfer the emissions offsets contained in the bank to another power plant and location for which the Commission has accepted a Notice of Intention. Emissions offsets may be deposited in the bank only by the applicant to construct the power plant, and all emissions offsets contained in the bank shall be used in accordance with Section (5)(B).
11. If an applicant for a resource recovery project using municipal waste demonstrates to the satisfaction of the Control Officer that the most likely alternative for treating such waste would result in an increase in emissions allowed under existing district permits and regulations, those emissions increases which would not occur as a result of the resource recovery project may be used to offset any net emissions increase from the resource recovery project in accordance with the other provisions of this section.

12. Emissions reductions of one precursor may be used to offset emissions increases of another precursor of the same secondary air contaminant provided the applicant demonstrates to the satisfaction of the Control Officer that the net emissions increase of the latter secondary precursor will not cause a new violation, or contribute to an existing violation, of any national ambient air quality standard at the point of maximum ground level impact. The ratio of the emission reductions between precursor pollutants of the same secondary air contaminant shall be determined by the Control Officer based on existing air quality data after consultation with the Executive Officer of the Air Resources Board.

#### 6. Permit Condition Requirements for Offsets

The Control Officer shall, as a condition for the issuance of an Authority to Construct for a new stationary source modification and with the prior written consent of the owner or operator of any source which provides offsets:

- A. Require that the new source or modification and any new sources which provide offsets shall be operated in the manner assumed in making the analysis required to determine compliance with this rule.
- B. Modify, or require modification of, the Permit to Operate for any source used to provide offsets to ensure that emissions reductions at that source which provide offsets will be enforceable and shall continue for the reasonably expected useful life of the proposed source. If offsets are obtained from a source for which there is no Permit to Operate, a written contract shall be required between the applicant and the owner or operator of such source which contract, by its terms, shall be enforceable by the Control Officer to ensure that such reductions will continue for the reasonably expected useful life of the proposed source.

Such modification does not have to take effect until the new modified source, subject to this rule, commences operation.

- C. Permit any other reasonably enforceable methods, other than those described in Subsections (A) and (B) which the Control Officer is satisfied will assure that all required offsets are achieved.

#### 7. Analysis, Notice, and Reporting

- A. The Air Pollution Control Officer shall determine whether the application is complete not later than 30 calendar days after receipt of the application, or after such longer time as both the applicant and the Air Pollution Control Officer may agree. Such determination shall be transmitted in writing immediately to the applicant at the address indicated on the application. If the application is determined to be incomplete, the determination shall specify which parts of the application are incomplete and how they can be made complete. Upon receipt by the Air Pollution Control Officer of any resubmittal of the application, a new 30-day period



in which the Air Pollution Control Officer must determine completeness shall begin. Completeness of an application or resubmitted application shall be evaluated on the basis of the requirements set forth in (district regulations adopted pursuant to AB 684 regarding information requirements) as it exists on the date on which the application or resubmitted application was received. After the Air Pollution Control Officer accepts an application as complete, the Air Pollution Control Officer shall not subsequently request of an applicant any new or additional information which was not specified in the Air Pollution Control Officer's list of items to be included within such applications. However, the Air Pollution Control Officer may, during the processing of the application, request an applicant to clarify, amplify, correct, or otherwise supplement the information required in such list in effect at the time the complete application was received. Making any such request does not waive, extend, or delay the time limits in this rule for decision on the completed application, except as the applicant and Air Pollution Control Officer may both agree.

- B. Following acceptance of an application as complete the Air Pollution Control Officer shall:
1. Perform the evaluations required to determine compliance with this rule and make a preliminary written decision as to whether a permit to construct should be approved, conditionally approved, or disapproved. The decision shall be supported by a succinct written analysis.
  2. Within 10 calendar days following such decision, publish a notice of prominent advertisement in at least one newspaper of general circulation in the District stating the preliminary decision of the Air Pollution Control Officer and where the public may inspect the information required to be made available under Subsection (3). The notice shall provide 30 days from the date of publication for the public to submit written comments on the preliminary decision.
  3. At the time notice of the preliminary decision is published, make available for public inspection at the Air Pollution Control District's office the information submitted by the applicant, the Air Pollution Control Officer's supporting analysis for the preliminary decision, and the preliminary decision to grant or deny the permit to construct, including any proposed permit conditions, and the reasons therefor. The confidentiality of trade secrets shall be considered in accordance with Section 6254.7 of the Government Code and relevant sections of the Administrative Code of the State of California.
  4. No later than the date of publication of the notice required by Subsection (2), forward the analysis, the preliminary decision, and copies of the notice to the Air Resources Board (attn: Chief, Stationary Source Control Division) and the Regional Office of the U.S. Environmental Protection Agency.

5. Consider all written comments submitted during the 30 day public comment period.
  6. Within 180 days after acceptance of the application is complete, take final action on the application after considering all written comments. The Air Pollution Control Officer shall provide written notice of the final action to the applicant, the Environmental Protection Agency, and the California Air Resources Board, shall publish such notice in a newspaper of general circulation, and shall make the notice and all supporting documents available for public inspection at the Air Pollution Control District's office.
- C. The public notice and reporting requirements set forth in Subsections (B)(2) through (B)(6) shall not be required for any permit which does not include conditions requiring the control of emissions from an existing source.

#### 8. Power Plants

This section shall apply to all power plants proposed to be constructed in the District and for which a Notice of Intention (NOI) or Application for Certification (AFC) has been accepted by the California Energy Commission. The Control Officer, pursuant to Section 25538 of the Public Resources Code, may apply for reimbursement of all costs, including lost fees, incurred in order to comply with the provisions of this section.

- A. Within fourteen days of receipt of an NOI, the Control Officer shall notify the Air Resources Board and the Commission of the District's intent to participate in the NOI proceeding. If the District chooses to participate in the NOI proceeding, the Control Officer shall prepare and submit a report to the Air Resources Board and the Commission prior to the conclusion of the nonadjudicatory hearings specified in Section 25509.5 of the Public Resources Code. That report shall include, at a minimum:
1. a preliminary specific definition of BACT and LAER for the proposed facility;
  2. a preliminary discussion of whether there is substantial likelihood that the requirements of this rule and all other District regulations can be satisfied by the proposed facility;
  3. a preliminary list of conditions which the proposed facility must meet in order to comply with this rule or any other applicable District regulation.

The preliminary determinations contained in the report shall be as specific as possible within the constraints of the information contained in the NOI.

- B. Upon receipt of an AFC for a power plant, the Control Officer shall conduct a Determination of Compliance review. This Determination shall consist of a review identical to that which would be performed if an application for an Authority to Construct had been received for the power plant. If the information contained in the AFC does not meet the District's established requirements for permit applications, the Control Officer shall, within 20 calendar days of receipt of the AFC, so inform the Commission, and the AFC shall be considered incomplete and returned to the applicant for resubmittal.
- C. The Control Officer shall consider the AFC to be equivalent to an application for an Authority to Construct during the Determination of Compliance review, and shall apply all provisions of this rule which apply to applications for an Authority to Construct.
- D. The Control Officer may request from the applicant any information necessary for the completion of the Determination of Compliance review. If the Control Officer is unable to obtain the information, the Control Officer may petition the presiding Commissioner for an order directing the applicant to supply such information.
- E. Within 120 days of accepting an AFC as complete, the Control Officer shall make a preliminary decision on:
1. whether the proposed power plant meets the requirements of this rule and all other applicable district regulations; and
  2. in the event of compliance, what permit conditions will be required including the specific BACT and LAER requirements and a description of required mitigation measures.
- F. The preliminary written decision made under Subsection (E) shall be treated as a preliminary decision under Subsection (7)(A)(1) of this rule, and shall be finalized by the Control Officer only after being subject to the public notice and comment requirements of Section (7). The Control Officer shall not issue a Determination of Compliance unless all requirements of this rule are met.
- G. Within 240 days of the filing date, the Control Officer shall issue and submit to the Commission a Determination of Compliance or, if such a determination cannot be issued, shall so inform the Commission. A Determination of Compliance shall confer the same rights and privilege as a permit to construct only when and if the Commission approves the AFC, and the Commission certificate includes all conditions of the Determination of Compliance.
- H. Any applicant receiving a certificate from the Commission pursuant to this section and in compliance with all conditions by the certificate shall be issued a Permit to Operate by the Control Officer.

9. Severability

If any portion of this rule is 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.

**RULE 210.1A Major New and Modified Stationary Source Review (MNSR)** - Adopted: 1/11/18, Rescinded: 3/5/20, Adopted: 8/4/22

**I. Purpose and Applicability**

A. Purpose: Purpose of this rule is to:

1. Provide for preconstruction review of any new major stationary source, or major modification of an existing major stationary source of a nonattainment pollutant;
2. Insure the applicant provides an analysis demonstrating that the Best Available Control Technology (BACT) has been proposed for each emissions unit included in each such new major stationary source or major modification of an existing major stationary source; and
3. Provide offsets for any significant net emissions increase of a nonattainment pollutant from any new major stationary source or major modification of an existing major stationary source.

B. Applicability:

1. This rule shall apply to the proposed construction of any new major stationary source or any major modification in the District that is major for a nonattainment pollutant, if the stationary source or modification is located anywhere in the designated nonattainment area.
2. Sources subject to this rule may also be subject to other District Rules and Regulations. For purposes of the implementation and enforcement of this rule, the provisions and requirements of this rule, including but not limited to the requirements for obtaining an Authority to Construct, application submittal and content, conditional approval, public participation, and granting an Authority to Construct, shall take precedence over any other such provisions and requirements in other District Rules and Regulations, including but not limited to District Rule 210.1. To the extent that other District Rules or Regulations may affect the stringency or applicability of this rule, such other Rules and Regulations shall not apply for purposes of the implementation or enforcement of this rule.
3. For purposes of this rule, the term “stationary source” does not refer to the source of emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in Section 216 of the Clean Air Act.

**II. Definitions**

The following terms shall have the meanings set forth below in this Section for the purposes of this rule. In addition, certain definitions are incorporated by reference as set forth below in this Section.

- A. Actual Emissions: Actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with this definition. This definition shall not apply for calculating whether a significant emissions increase has occurred. Instead, projected actual emissions and baseline actual emissions shall apply for those purposes.
1. In general, actual emissions as of a particular date shall equal the average rate, in tons per year (tpy), at which the emissions unit actually emitted the pollutant during a consecutive 24-month period, which precedes the particular date and which is representative of normal source operation. The APCO shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
  2. For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the Potential to Emit (PTE) of the unit on that date.
- B. Air Pollution Control Officer (APCO): The Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- C. Allowable Emissions: Emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, hours of operation, or both) and the most stringent of the following:
1. Any applicable standards set forth in District Rules and Regulations or 40 CFR Parts 60, 61, or 63;
  2. Any applicable emission limitation in the District's portion of the State Implementation Plan (SIP), including those with a future compliance date; or
  3. The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.
- D. Baseline Actual Emissions: Rate of emissions, in tpy, of a regulated NSR pollutant, as determined in accordance with paragraphs 1 through 3 of this definition.
1. For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tpy, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The APCO shall allow the use of a different time period upon a determination that it is more representative of normal source operation.
    - a. The average rate shall include fugitive emissions, to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

- b. The average rate shall be adjusted downward to exclude any noncompliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.
  - c. When a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
  - d. The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tpy, and for adjusting this amount if required by paragraph 1.b. of this definition.
2. For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tpy, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the APCO for a permit required under the District's Rules and Regulations, whichever is earlier.
- a. The average rate shall include fugitive emissions to the extent quantifiable and include emissions associated with startups, shutdowns, and malfunctions.
  - b. The average rate shall be adjusted downward to exclude any noncompliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
  - c. The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a Maximum Achievable Control Technology (MACT) standard that the Administrator proposed or promulgated under 40 CFR Part 63, then the baseline actual emissions need only be adjusted if the District has taken credit for such emissions reductions in an attainment demonstration or maintenance plan, consistent with the requirements of 40 CFR 51.165(a)(3)(ii)(G).
  - d. When a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
  - e. The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tpy, and for adjusting this amount if required by paragraphs 2.c. and 2.d. of this definition.

3. For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's PTE.
- E. Begin Actual Construction: Initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to: installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operating, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.
- F. Best Available Control Technology (BACT): The most stringent emission limitation or control technique, based on the following:
  1. Achieved in practice for such emissions unit, class, or category of source;
  2. Is contained in any SIP approved by U.S. EPA for such emissions unit, class or category of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed emissions unit demonstrates to satisfaction of the APCO, such limitation or control technique is not currently achievable; or
  3. Any other emission limitation, control device, alternate basic equipment, or different fuel or process found by the APCO to be technologically feasible for such class or category of source or for a specific source, and cost-effective as determined by official District policy.

BACT shall not be determined to be less stringent than the emission control required by any applicable provision of local, state, or federal law or regulation unless the applicant demonstrates to the APCO such limitations are not achievable. Application of BACT shall not result in the emission of any pollutant exceeding emissions limits contained in any applicable New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP).

- G. Building, Structure, Facility, or Installation: All of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (i.e., which have the same two-digit code) as described in either the Standard Industrial Classification (SIC) manual, 1972, as amended by the 1977 Supplement or the North American Industry Classification System (NAICS) manual.
- H. Categorical Stationary Source: Any stationary source of air pollutants that belongs to one of the following categories of stationary sources:

Coal cleaning plants (with thermal dryers);  
Kraft pulp mills;  
Portland cement plants;  
Primary zinc smelters;

Iron and steel mills;  
 Primary aluminum ore reduction plants;  
 Primary copper smelters;  
 Municipal incinerators capable of charging more than 50 tons of refuse per day;  
 Hydrofluoric, sulfuric, or nitric acid plants;  
 Petroleum refineries;  
 Lime plants;  
 Phosphate rock processing plants;  
 Coke oven batteries;  
 Sulfur recovery plants;  
 Carbon black plants (furnace process);  
 Primary lead smelters;  
 Fuel conversion plants;  
 Sintering plants;  
 Secondary metal production plants;  
 Chemical process plants-The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS-codes 325193 or 312140;  
 Fossil-fuel boilers (or combination thereof) totaling more than 250 million Btu per hour heat input;  
 Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;  
 Taconite ore processing plants;  
 Glass fiber processing plants;  
 Charcoal production plants;  
 Fossil fuel-fired steam electric plants of more than 250 million Btu/hour heat input; and

Any other stationary source category, which as of August 7, 1980 is being regulated under Section 111 or 112 of the Act.

- I. Class I Area: Any area listed as Class I in 40 CFR Part 81, Subpart D, including Section 81.405, 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.
- J. Clean Air Act (CAA): The federal Clean Air Act, 42 U.S.C. 7401 et seq., as amended.
- K. Commence: As applied to construction of a major stationary source or major modification, means that the owner or operator has all necessary preconstruction approvals or permits, including an ATC, and either has:
  - 1. Begun, or caused to begin, a continuous program of actual on-site construction of the source, 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 source, to be completed within a reasonable time.



- L. Complete: In reference to a permit application, means that the application contains all of the information necessary for processing the application.
- M. Construction: Any physical change, or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit), that would result in a change in emissions.
- N. District: Eastern Kern Air Pollution Control District.
- O. Electric Utility Steam Generating Unit: Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity, and more than 25 MW of electrical output, to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
- P. Emission Reduction Credit (ERC): Reductions of actual emissions from emissions units that are certified by a California air district in accordance with applicable district rules and issued by the air district in the form of ERC certificates.
- Q. Emissions Unit: Any part of a stationary source that emits or would have the PTE any regulated NSR pollutant, and includes an electric utility steam generating unit. For purposes of this rule, there are two types of emissions units as described in paragraphs 1 and 2 of this definition:
1. A “new emissions unit” is any emissions unit which is (or will be) newly constructed and which has existed for less than two years from the date such emissions unit first operated.
  2. An “existing emissions unit” is any emissions unit that does not meet the requirements in paragraph 1 of this definition. A replacement unit is an existing emissions unit.
- R. Federally Enforceable: All limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR Parts 60, 61, and 63, requirements within the SIP, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, including operating permits issued under an EPA-approved program that is incorporated into the SIP and expressly requires adherence to any permit issued under such program.
- S. Federal Land Manager: With respect to any lands in the United States, the Secretary of the Department with authority over such lands.
- T. Fugitive Emissions: Emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.

- U. Internal Emission Reductions: Emission reductions which have occurred or will occur at the same major stationary source where the proposed emissions increase will occur.
- V. Major Modification: Any physical change in or change in the method of operation of, a major stationary source, that would result in a significant emissions increase of a nonattainment pollutant and a significant net emissions increase of that pollutant from the major stationary source. Notwithstanding the definition of Net Emissions Increase, for purposes of determining whether a project at a major stationary source located in an area that has been designated as nonattainment for ozone per 40 CFR 81.305 would result in a significant net emissions increase, for volatile organic compounds or nitrogen oxides, the net emissions increase from the project shall be aggregated with all other net emissions increases from the stationary source that occurred during the last 5 consecutive calendar years, including the calendar year in which such increase occurred.
1. Any significant emissions increase from any emissions units or net emissions increase at a major stationary source that is significant for volatile organic compounds or nitrogen oxides shall be considered significant for ozone.
  2. A physical change or change in the method of operation shall not include:
    - a. Routine maintenance, repair, and replacement;
    - b. Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
    - c. Use of an alternative fuel by reason of an order or rule under Section 125 of the Act;
    - d. Use of an alternative fuel at a steam generating unit, to the extent that the fuel is generated from municipal solid waste;
    - e. Use of an alternative fuel or raw material by a stationary source which:
      - i. The source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any federally enforceable permit condition which was established after December 12, 1976 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I; or
      - ii. The source is approved to use under any permit issued under regulations approved pursuant to 40 CFR 51.165.
    - f. An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally enforceable permit condition which was established after December 21, 1976 pursuant to 40 CFR 52.21 or regulations approved pursuant to 40 CFR Part 51, Subpart I;

g. Any change in ownership at a stationary source.

W. Major Stationary Source: Any stationary source of air pollutants, which emits, or has the PTE, 100 tpy or more of any nonattainment pollutant, except if one of the following lower emission thresholds is applicable:

1. For an area designated nonattainment for ozone, a source which emits, or has the PTE, VOC or NO<sub>x</sub> in any of the following amounts shall be considered a major stationary source:
  - a.  $\geq 100$  tpy in areas classified as “marginal” or “moderate”; or
  - b.  $\geq 50$  tpy in areas classified as “serious”; or
  - c.  $\geq 25$  tpy in areas classified as “severe”.
2. For an area designated nonattainment for PM<sub>10</sub> and classified as “serious,” a major stationary source is a stationary source which emits, or has the potential to emit, 70 tpy or more of PM<sub>10</sub> or its precursors NO<sub>x</sub>, SO<sub>2</sub>, or VOC.
3. Any physical change that would occur at a stationary source not qualifying as a major stationary source under paragraph 1 or 2 of this definition, if the change would constitute a major stationary source by itself under paragraph 1 or 2.
4. A major stationary source that is major for volatile organic compounds or nitrogen oxides shall be considered major for ozone.
5. The fugitive emissions of a stationary source shall not be included in determining whether it is a major stationary source, unless the source is a categorical stationary source.

X. National Ambient Air Quality Standards (NAAQS): Those standards established pursuant to Section 109 of the CAA.

Y. Necessary Preconstruction Approvals or Permits: Permits or approvals required under air quality control laws and regulations that are part of the SIP or federal air quality control laws and regulations, including any permits issued pursuant to this rule.

Z. Net Emissions Increase: For the purposes of this rule, with respect to any regulated NSR pollutant emitted by a major stationary source:

1. The amount by which the sum of the following exceeds zero:
  - a. The increase in emissions from a particular physical change, or change in the method of operation, at a stationary source as calculated pursuant to Subsection III.C; and

- b. Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. For the purposes of this paragraph, baseline actual emissions for calculating increases and decreases shall be determined as provided in the definition of Baseline Actual Emissions, excluding paragraphs 1.c and 2.e of that definition.
- 2. An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
  - a. The date five years before construction on the particular change commences; and
  - b. The date that the increase from the particular change occurs.
- 3. An increase or decrease in actual emissions is creditable only if it is contemporaneous and the APCO has not relied on it in issuing a permit for the source under this rule, or any other regulation approved by the Administrator pursuant to 40 CFR 51.165, which permit is in effect when the increase in actual emissions from the particular change occurs.
- 4. An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- 5. A decrease in actual emissions is creditable only to the extent that:
  - a. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;
  - b. It is enforceable as a practical matter at and after the time that actual construction on the particular change begins;
  - c. The APCO has not relied on it in issuing any permit under any other regulations approved pursuant to 40 CFR Part 51, Subpart I, nor has the District relied on it in demonstrating attainment or reasonable further progress; and
  - d. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.
- 6. An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- 7. Paragraph 1 of the definition of Actual Emissions shall not apply for determining creditable increases and decreases or after a change.

- AA. Nonattainment Major New Source Review (MNSR) Program: A major source preconstruction permit program that has been approved by the Administrator and incorporated into the District's portion of the SIP, or a program that implements 40 CFR Part 51, Appendix S, Sections I through VI. Any permit issued under such a program is a major NSR permit.
- BB. Nonattainment pollutant: Any regulated NSR pollutant for which the District, or portion of the District, has been designated as nonattainment, as codified in 40 CFR 81.305, as well as any precursor of such regulated NSR pollutant identified in the definition of Regulated NSR Pollutant.
- CC. NO<sub>x</sub>: Means Nitrogen Oxides.
- DD. PM<sub>10</sub>: Particulate matter with an aerodynamic diameter smaller than or equal to a nominal 10 microns. Gaseous emissions which condense to form PM<sub>10</sub> at ambient temperatures shall also be counted as PM<sub>10</sub>.
- EE. Permanent: An emission reduction which is federally enforceable for the life of a corresponding increase in emissions.
- FF. Potential to Emit (PTE): Maximum capacity of an emissions unit or stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the types or amounts of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the PTE of a stationary source.
- GG. Prevention of Significant Deterioration (PSD) Permit: Any permit issued under a major source preconstruction permit program that has been approved by the Administrator to implement the requirements of 40 CFR 51.166 or 40 CFR 52.21. Any permit issued under such a program is a major NSR permit.
- HH. Project: A physical change in, or change in the method of operation of, an existing major stationary source.
- II. Projected Actual Emissions: Maximum annual rate, in tpy, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the five years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the ten years following that date, if the project involves increasing the design capacity or PTE of any emissions unit for that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.
1. In determining the projected actual emissions (before beginning actual construction), the owner or operator of the major stationary source:

- a. Shall consider all relevant information, including, but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the county, state or federal regulatory authorities, and compliance plans under the SIP; and
- b. Shall include fugitive emissions to the extent quantifiable; and
- c. Shall include emissions associated with startups, shutdowns, and malfunctions; and
- d. Shall exclude, only for calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or
- e. In lieu of using the method set out in paragraphs 1.a. through 1.d. of this definition, the owner or operator of the major stationary source may elect to use the emissions unit's PTE in tpy.

JJ. Real: As it pertains to emission reductions, emissions that were actually emitted.

KK. Regulated NSR Pollutant: Any pollutant for which a NAAQS has been promulgated and any constituents or precursors identified in this definition, provided that such constituent or precursor pollutant may only be regulated under NSR as part of regulation of the general pollutant. For the purposes of NSR, VOC and NO<sub>x</sub> are identified as precursors to ozone in all ozone nonattainment areas, and VOC, NO<sub>x</sub>, and SO<sub>2</sub> are identified as precursors to PM<sub>10</sub> in all PM<sub>10</sub> nonattainment areas.

PM<sub>10</sub> emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011), such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM<sub>10</sub> in nonattainment major NSR permits. Compliance with emissions limitations for PM<sub>10</sub> issued prior to January 1, 2011, shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable state implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this rule unless the applicable implementation plan required condensable particulate matter to be included.

LL. Replacement Unit: An emissions unit for which all the criteria listed in paragraphs 1 through 4 of this definition are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

1. The emissions unit is a reconstructed unit within the meaning of 40 CFR 60.15(b)(1), or the emissions unit completely takes the place of an existing emissions unit.
  2. The emissions unit is identical to, or functionally equivalent to, the replaced emissions unit.
  3. The replacement does not alter the basic design parameters of the process unit.
  4. The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.
- MM. Secondary Emissions: Emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.
- NN. Shutdown: The cessation of operation of any air pollution control equipment or process equipment for any purpose.
- OO. Significant: In reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:  
 40 tpy of VOC or NO<sub>x</sub> in ozone nonattainment areas classified as “marginal” or “moderate”;  
 25 tpy of VOC or NO<sub>x</sub> in ozone nonattainment areas classified as “serious” or “severe”; or  
 15 tpy of PM<sub>10</sub>, 40 tpy of SO<sub>2</sub>, 40 tpy of NO<sub>x</sub>, or 40 tpy of VOC in PM<sub>10</sub> nonattainment areas.
- PP. Significant Emissions Increase: For a regulated NSR pollutant, an increase in emissions that is significant for that pollutant.
- QQ. SO<sub>2</sub>: Means Sulfur dioxide.
- RR. Startup: Setting into operation of any air pollution control equipment or process equipment for any purpose except routine phasing in of process equipment.
- SS. State Implementation Plan (SIP): The State Implementation Plan approved or promulgated for the State of California under Section 110 or 172 of the Clean Air Act.

TT Stationary Source: Any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.

UU. Surplus: The amount of emission reductions that are, at the time of generation and at time of use of an ERC, not otherwise required by federal, state, or local law, not required by any legal settlement or consent decree, and not relied upon to meet any requirement related to the California SIP. However, emission reductions required by a state statute, that provides that the subject emission reductions shall be considered surplus may be considered surplus for purposes of this rule if those reductions meet all other applicable requirements. Examples of federal, state, and local laws, and of SIP-related requirements, include, but are not limited to, the following:

1. The federally-approved California SIP;
2. Other adopted state air quality laws and regulations not in the SIP, including but not limited to, any requirement, regulation, or measure that:
  - a. The District or the state has included on a legally-required and publicly-available list of measures scheduled for adoption by the District or the State in the future; or
  - b. Is the subject of a public notice distributed by the District or the State regarding an intent to adopt such revision;
3. Any other source- or source-category specific regulatory or permitting requirement, including, but not limited to, Reasonably Available Control Technology (RACT), New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), Best Available Control Measures (BACM), Best Available Control Technology (BACT), and the Lowest Achievable Emission Rate (LAER); and
4. Any regulation or supporting documentation that is required by the CAA but is not contained or referenced in 40 CFR Part 52, including but not limited to: Assumptions used in attainment and maintenance demonstrations, including Reasonable Further Progress (RFP) demonstrations and milestone demonstrations, including any proposed control measure identified as potentially contributing to an enforceable near-term emissions reduction commitment; assumptions used in conformity demonstrations; and assumptions used in emissions inventories.

VV. Temporary source: An emissions source such as a pilot plant or a portable facility which will be terminated or located outside the District after less than a cumulative total of 90 days of operation in any 12 continuous months.

WW Tons per year (tpy): Annual emissions in tons.

XX. The definitions contained in 40 CFR 51.100 shall apply, and are hereby incorporated by reference. In the event of any discrepancy between a definition contained in 40 CFR 51.100 and any definition specified above, the definition specified above shall control.



- YY The definitions contained in 40 CFR 51.301 shall apply, and are hereby incorporated by reference. In the event of any discrepancy between a definition contained in 40 CFR 51.300 and any definitions specified above or incorporated by reference above, the definition above shall control.

### **III. Applicability and Related Requirements**

- A. No new major stationary source or major modification to a major stationary source, to which the requirements of this rule apply, shall begin actual construction without first obtaining an ATC issued by the District pursuant to this rule.

B. Calculations to Determine NSR Applicability for New Major Stationary Sources

The definition of Major Stationary Source as incorporated in Section II of this rule shall be used to determine if a new or modified stationary source is a new major stationary source. Different pollutants, including individual precursors, are not summed to determine applicability of a major stationary source.

C. Calculations to Determine NSR Applicability for Major Modifications

Except as otherwise provided in Subsection III.D., the provisions in paragraphs 1-5 of this Subsection shall be used to determine if a proposed project will result in a major modification to an existing major stationary source. Different pollutants, including individual precursors, are not summed to determine applicability of a major modification. These provisions shall not be used to determine the quantity of offsets required for a project subject to the requirements of this rule.

1. A project is a major modification for a nonattainment pollutant if it causes two types of emissions increases: A significant emissions increase and a significant net emissions increase. The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.
2. The procedure for calculating (before beginning actual construction) whether a significant emissions increase will occur depends upon the type of emissions units being added or modified as part of the project, according to paragraphs 3 through 5 of this Subsection. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source is contained in the definition of Net Emissions Increase. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.
3. **Actual-to-Projected-Actual Applicability Test for Projects that Only Involve Existing Emissions Units.** A significant emissions increase of a nonattainment pollutant is projected to occur if the sum of the difference between the projected actual emissions and the baseline actual emissions, for each existing emissions unit, equals or exceeds the significant amount for that pollutant.

4. **Actual-to-Potential Test for Projects that Only Involve Construction of a New Emissions Unit(s).** A significant emissions increase of a nonattainment pollutant is projected to occur if the sum of the difference between the potential to emit from each new emissions unit following completion of the project and the baseline actual emissions of these units before the project equals or exceeds the significant amount for that pollutant.
5. **Hybrid Test for Projects that Involve Multiple Types of Emissions Units.** A significant emissions increase of a nonattainment pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs 3 or 4 of this Subsection, as applicable, with respect to each emissions unit, equals or exceeds the significant amount for that pollutant.

D. Projects that Rely on a Projected Actual Emissions Test

Except as otherwise provided in paragraph 7.c. of this Subsection, the provisions of this Subsection shall apply with respect to any nonattainment pollutant that is emitted from projects at existing emissions units located at a major stationary source, when there is a reasonable possibility, within the meaning of paragraph 7 of this Subsection, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, and the owner or operator elects to use the method specified in paragraphs 1.a. through 1.d. of the definition of Projected Actual Emissions to calculate projected actual emissions.

1. Before beginning actual construction of the project the owner or operator shall document and maintain a record of the following information:
  - a. A description of the project;
  - b. Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
  - c. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph 1.d. of the definition of Projected Actual Emissions and an explanation for why such amount was excluded, and any netting calculations, if applicable.
2. If the emissions unit is an existing emissions unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph 1 of this Subsection to the APCO. Nothing in this paragraph shall be construed to require the owner or operator of such a unit to obtain any determination from the APCO concerning compliance with District Rule 210.1A before beginning actual construction. However, such owner or operator may be subject to the requirements of District Rule 201 (Permits Required), or other applicable requirements.

3. The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and are emitted by any emissions unit identified in paragraph 1.b. of this Subsection; and calculate and maintain a record of the annual emissions (in tpy on a calendar year basis) for a period of five years following resumption of regular operations after the change, or for a period of ten years following resumption of regular operations after the change if the project increases the design capacity or PTE of the regulated NSR pollutant at such emissions unit.
4. If the emissions unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the APCO within sixty days after the end of each calendar year during which records must be generated under paragraph 3 of this Subsection, setting out the unit's annual emissions during the calendar year that preceded submission of the report.
5. If the emissions unit is an existing emissions unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the APCO if the annual emissions, in tpy, from the project identified in paragraph 1. of this Subsection exceed the baseline actual emissions by a significant amount for that regulated NSR pollutant, and if such emissions differ from the projected actual emissions (prior to exclusion of the amount of emissions specified under paragraph 1.d. of the definition of Projected Actual Emissions) as documented and maintained pursuant to paragraph 1.c. of this Subsection. Such report shall be submitted to the APCO within sixty days after the end of such year. The report shall contain the following:
  - a. The name, address, and telephone number of the major stationary source;
  - b. The annual emissions, as calculated pursuant to paragraph 3 of this Subsection; and
  - c. Any other information the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
6. The owner or operator of the source shall make the information required to be documented and maintained pursuant to this Subsection available for review upon a request for inspection by the APCO or the general public pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii).
7. A "reasonable possibility" under this Subsection occurs when the owner or operator calculates the project to result in either:
  - a. A projected actual emissions increase of at least 50 percent of the amount that is a "significant emissions increase," as defined in this rule (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or

- b. A projected actual emissions increase that, added to the amount of emissions excluded under paragraph 1.d. of the definition of Projected Actual Emissions, sums to at least 50 percent of the amount that is a “significant emissions increase,” as defined in this rule (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant.
- c. For a project in which a reasonable possibility occurs only within the meaning of paragraph 7.b. of this Subsection and not also within the meaning of paragraph 7.a. of this Subsection, the provisions of paragraphs 2 through 5 of this Subsection do not apply to the project.

E. Secondary Emissions

Secondary emissions shall not be considered in determining whether a stationary source would qualify as a major stationary source. If a stationary source is subject to this rule on the basis of direct emissions from the stationary source, the requirements of Section V (Emissions Offsets) must also be met for secondary emissions.

**IV. Application Requirements**

A. Application Submittal

The owner or operator of any proposed new major stationary source or major modification of a major stationary source required to obtain an Authority to Construct pursuant to this rule, shall submit a complete application for an Authority to Construct (ATC) on forms provided by the District and include in the application submittal the information listed in Subsection IV.B. as well as the demonstrations listed in Subsections IV.C. – IV.F. Designating an application complete for purposes of permit processing does not preclude the APCO from requesting or accepting any additional information.

B. Application Content

At a minimum, an application for an ATC shall contain the following information related to the proposed new major stationary source or major modification:

1. Identification of the applicant, including contact information.
2. Identification of address and location of the new or modified source.
3. An identification and description of all emission points, including information regarding all regulated NSR pollutants emitted by all emissions units included in the new source or modification.
4. A process description of all activities, including design capacity, which may generate emissions of regulated NSR pollutants in sufficient detail to establish the basis for the applicability of standards and fees.
5. A projected schedule for commencing construction and operation for all emissions units included in the new source or modification.

6. A projected operating schedule for each emissions unit included in the new source or modification.
7. A determination as to whether the new source or modification will result in any secondary emissions.
8. The emission rates of all regulated NSR pollutants, including fugitive and secondary emission rates, if applicable. The emission rates must be described in tpy and for such shorter-term rates as are necessary to establish compliance using the applicable standard reference test method or other methodology specified (i.e., grams/liter, ppmv or ppmw, lbs/MMBtu).
9. The calculations on which the emission rate information is based, including fuel specifications, if applicable and any other assumptions used in determining the emission rates (e.g., HHV, sulfur content of natural gas).
10. The calculations, pursuant to Subsection III.B. or III.C., used to determine applicability of this rule, including the emission calculations (increases or decreases) for each project that occurred during the contemporaneous period.
11. The calculations, pursuant to Section V. (Emissions Offsets), used to determine the quantity of offsets required for the proposed new source or modification.
12. Identification of existing ERCs or identification of internal emission reductions, including related emission calculations and proposed permit modifications required to ensure emission reductions meet the offset integrity criteria of being real, surplus, quantifiable, permanent and federally enforceable or enforceable as a practical matter.
13. If applicable, a description of how performance testing will be conducted, including test methods and a general description of testing protocols.

C. Best Available Control Technology (BACT)

The applicant shall submit an analysis demonstrating that BACT has been proposed for each emissions unit included in the new major stationary source or major modification that emits a nonattainment pollutant, for which the new stationary source or modification is classified as major.

D. Statewide Compliance

The applicant shall submit a certification that each existing major stationary source owned or operated by the applicant (or any entity controlling, controlled by, or under common control with the applicant) in the State is in compliance with all applicable emission limitations and standards under the CAA or is in compliance with an expeditious compliance schedule which is federally enforceable.

E. Analysis of Alternatives

The applicant shall submit an analysis of alternative sites, sizes, production processes, and environmental control techniques for the proposed source that demonstrates the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

F. Sources Impacting Class I Areas

The applicant for a proposed new major source or major modification to a major source that may affect visibility of any Mandatory Class I Federal Area shall provide the APCO with an analysis of impairment to visibility that would occur as a result of the source or modification and general commercial, residential, industrial, and other growth associated with the source or modification, as required by 40 CFR Section 51.307(b)(2).

G. Application & Permit Fees

The applicant shall pay all applicable fees pursuant to District Series 300 Rules.

V. Emissions Offsets

A. Offset Requirements

1. The emissions increases of a nonattainment pollutant for which the new stationary source or modification is classified as major shall be offset with federally enforceable ERCs or with internal emission reductions.
2. ERCs from one or more sources may be used, alone or in combination with internal emission reductions, in order to satisfy offset requirements.
3. Emissions reductions achieved by shutting down an existing emissions unit or curtailing production or operating hours may only be credited for offsets if such reductions are surplus, permanent, quantifiable, and federally enforceable; and
  - a. The shutdown or curtailment occurred after the last day of the base year for the attainment plan for the specific pollutant; or
  - b. The projected emissions inventory used to develop the attainment plan explicitly includes the emissions from such previously shutdown or curtailed emissions units. However, in no event may credit be given for shutdowns that occurred before August 7, 1977.
4. No emissions credit may be allowed for replacing one hydrocarbon compound with another of lesser reactivity, except that emissions credit may be allowed for the replacement with those compounds listed as having negligible photochemical reactivity in 40 CFR 51.100(s).

## B. Timing

1. Internal emission reductions used to satisfy an offset requirement must be federally enforceable prior to the issuance of an ATC, which relies on the emission reductions.
2. Except as provided by paragraph 3 of this Subsection, the decrease in actual emissions used to generate ERCs or internal emission reductions must occur no later than the commencement of operation of the new major stationary source, or major modification of an existing major stationary source.
3. Where the new emissions unit is a replacement for an emissions unit that is being shut down in order to provide the necessary offsets, the APCO may allow up to one hundred eighty (180) calendar days for shakedown or commissioning of the new emissions unit before the existing emissions unit is required to cease operation.

## C. Offset Quantity

The quantity of ERCs or internal emission reductions required to satisfy offset requirements shall be determined in accordance with the following:

1. The unit of measure for offsets, ERCs, and internal emission reductions shall be tpy. All calculations and transactions shall use emission rate values rounded to the nearest one one-hundredth (0.01) tpy.
2. The quantity of ERCs or internal emission reductions required shall be calculated as the product of the amount of increased emissions, as determined in accordance with paragraph 3 of this Subsection, and the offset ratio, as determined in accordance with paragraph 4 of this Subsection.
3. The amount of increased emissions shall be determined as follows:
  - a. When the offset requirement is triggered by the construction of a new major stationary source, the amount of increased emissions shall be the sum of the potential to emit of all emissions units.
  - b. When the offset requirement is triggered by a major modification of an existing major stationary source, the amount of increased emissions shall be the sum of the differences between the allowable emissions after the modification and the actual emissions before the modification for each emissions unit.
  - c. The amount of increased emissions includes fugitive emissions.
4. The ratios listed in Table 1 shall be applied based on the area's highest classification for each pollutant, as applicable. The offset ratio is expressed as a ratio of emissions increases to emissions reductions.

**Table 1. Federal Offset Ratio Requirements by Area Classification & Pollutant**

Area Designation	Pollutant	Offset Ratio
Marginal Ozone Nonattainment Area	NO <sub>x</sub> or VOC	1.0 to 1.1
Moderate Ozone Nonattainment Area	NO <sub>x</sub> or VOC	1.0 to 1.15
Serious Ozone Nonattainment Area	NO <sub>x</sub> or VOC	1.0 to 1.2
Severe Ozone Nonattainment Area	NO <sub>x</sub> or VOC	1.0 to 1.3
PM <sub>10</sub> Nonattainment Area	PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , or VOC	1.0 to 1.0

**D. Offsets Criteria**

1. Internal emission reductions or ERCs used to satisfy an offset requirement shall be:
  - a. Real, surplus, permanent, quantifiable, and federally enforceable; and
  - b. Surplus at the time of issuance of the ATC containing the offset requirements.
2. Permitted sources whose emission reductions are used to satisfy offset requirements must appropriately amend or cancel their ATC or PTO to reflect their newly reduced potential to emit, including practicably enforceable conditions to limit their potential to emit.
3. Emission reductions must be obtained from the same nonattainment area; however, the APCO may allow emission reductions from another nonattainment area if the following conditions are met:
  - a. The other area has an equal or higher nonattainment classification than the area in which the source is located; and
  - b. Emissions from such other area contribute to a violation of the NAAQS in the nonattainment area in which the source is located.
4. The use of ERCs shall not provide:
  - a. Authority for, or the recognition of, any pre-existing vested right to emit any regulated NSR pollutant;
  - b. Authority for, or the recognition of, any rights that would be contrary to applicable law; or
  - c. An exemption to a stationary source from any emission limitations established in accordance with federal, state, or county laws, rules, and regulations.



E. Restrictions on Trading Pollutants

1. The emission offsets obtained shall be for the same regulated NSR pollutant.
2. In no case shall the compounds excluded from the definition of VOC be used as offsets for VOC.

VI. Administrative Requirements

A. Visibility

1. The APCO shall provide written notice and conduct any necessary review and consultation with the Federal Land Manager regarding any proposed new major stationary source, or major modification of an existing major stationary source that may impact visibility in any Mandatory Class I Federal Area, in accordance with the applicable requirements of 40 CFR 51.307.
2. The APCO may require monitoring of visibility in any Federal Class I area near the proposed new stationary source or major modification for such purposes and by such means as the APCO deems necessary and appropriate.

B. Ambient Air Quality Standards

The APCO may require use of an air quality model to estimate the effects of a new major stationary source, or major modification of an existing major stationary source. Analysis shall estimate the effects and verify the new major stationary source, or major modification of the major stationary source will not prevent or interfere with attainment or maintenance of any ambient air quality standard. In making this determination the APCO shall take into account the mitigation of emissions through offsets pursuant to this rule, and the impacts of transported pollutants on downwind pollutant concentrations. The APCO may impose, based on an air quality analysis, offset ratios greater than the requirements listed in Subsection V.C.4., Table 1.

C. Air Quality Models

All estimates of ambient concentrations required, pursuant to this rule, shall be based on applicable air quality models, databases, and other requirements specified in 40 CFR Part 51, Appendix W ("Guideline on Air Quality Models"). Where an air quality model specified is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis. Written approval from the EPA must be obtained for any modification or substitution. In addition, use of a modified or substituted model must be subject to public notification and the opportunity for public comment given.

D. Stack Height Procedures

The degree of emission limitation required of any source for control of any air pollutant must not be affected by so much of any source's stack height that exceeds good engineering practice or by any other dispersion technique, except as provided in 40 CFR 51.118(b).

1. Before the Control Officer issues an Authority to Construct under this rule to a source with a stack height that exceeds good engineering practice (GEP) stack height, the Control Officer shall notify the public of the availability of the demonstration study and provide opportunity for a public hearing.
2. Any field study or fluid model used to demonstrate GEP stack height and any determination concerning excessive concentration must be approved by the EPA and the Control Officer prior to any emission limit being established.
3. The provisions of Subsection VI.D. do not restrict, in any manner, the actual stack height of any stationary source or facility.

E. Environmental Protection Agency Determination

Notwithstanding any other requirements of this rule governing the issuance of an Authority to Construct, the APCO shall not issue an Authority to Construct to a new major stationary source or major modification subject to the requirements of this rule if the federal Environmental Protection Agency has determined that the SIP is not being adequately implemented for the nonattainment area in which the proposed source is to be constructed or modified in accordance with the requirements of Title I, Part D of the Clean Air Act.

**VII. Authority to Construct - Decision**

Following acceptance of an application as complete, the APCO shall perform evaluations required to determine if the proposed new major stationary source or major modification will comply with all applicable District, state and federal rules, regulations, or statutes, including but not limited to the requirements under Section IV of this rule, and shall make a preliminary written decision as to whether an ATC should be approved, conditionally approved, or denied. The decision shall be supported by a succinct written analysis. The decision shall be based on the requirements in force on the date the application is deemed complete, except when a new federal requirement not yet incorporated into this rule applies to the new or modified source.

A. ATC Preliminary Decision Requirements

1. Prior to issuance of a preliminary written decision to issue an ATC for a new major stationary source, or major modification of an existing major stationary source, the APCO shall determine that:
  - a. Each emissions unit(s) that constitutes the new source or modification will not violate any applicable requirement of the District's portion of the SIP; and
  - b. Emissions from the new major stationary source, or major modification of an existing major stationary source will not interfere with attainment or maintenance of any applicable NAAQS; and
  - c. The emission limitation for each emissions unit that constitutes the new source or modification specifies BACT for such units.

If the APCO determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an enforceable numerical emission standard infeasible, the APCO may instead prescribe a design, operational or equipment standard. In such cases, the APCO shall make its best estimate as to the emission rate that will be achieved and must specify that rate in the application review documents.

Any Authority to Construct issued without an enforceable numerical emission standard must contain enforceable conditions which assure that the design characteristics or equipment will be properly maintained or that the operational conditions will be properly performed to continuously achieve the assumed degree of control. Such conditions shall be enforceable as emission limitations by private parties under section 304 of the CAA. The term “emission limitation” shall also include such design, operational, or equipment standards; and

- d. The quantity of ERCs or internal emission reductions required to offset the new source or modification, pursuant to Section V.C.2; and
  - e. All ERCs or internal emission reductions required for the proposed new source or modification have been identified and have been made federally enforceable or legally and practicably enforceable; and
  - f. The quantity of ERCs or internal emission reductions determined pursuant to Section V.C.2 will be surrendered prior to commencing operation.
2. Temporary sources and emissions resulting from the construction phase of a new source are exempt from paragraphs 1.d., 1.e., and 1.f. of this Section.

**B. ATC Contents**

- 1. An ATC for a new major stationary source or major modification to a major stationary source shall contain terms and conditions:
  - a. Which ensure compliance with all applicable requirements and which are enforceable as a legal and practical matter.
  - b. Sufficient to ensure the major stationary source or major modification will achieve BACT in accordance with paragraphs 2 and 3 of this Subsection.
- 2. A new major stationary source shall achieve BACT for each nonattainment pollutant for which the source is classified as major.
- 3. A major modification shall achieve BACT for each nonattainment pollutant for which the modification would result in a significant emissions increase and significant net emissions increase. This requirement applies to each proposed emissions unit at which a net emissions increases in the nonattainment pollutant would occur as a result of a physical change, or change in the method of operation, of the emissions unit.

### C. ATC Final Decision

1. Prior to making a final decision to issue an ATC for a new major stationary source, or major modification of an existing major stationary source, the APCO shall consider all written comments submitted within 30 days of public notification and all comments received at any public hearing(s) in making a final determination on the approvability of the application and the appropriate ATC conditions. The District shall make all comments available, including the District's response to the comments, for public inspection in the same locations where the District made preconstruction information relating to the proposed source or modification available.
2. APCO shall deny any application for an ATC if APCO finds that the new source or modification would not comply with the standards and requirements set forth in District, state, or federal rules or regulations.
3. APCO shall make a final decision whether to issue or deny the ATC after determining the ATC will or will not ensure compliance with all applicable emission standards and requirements.
4. APCO shall notify the applicant in writing of the final decision and make such notification available for public inspection at the same location where the District made preconstruction information and public comments relating to the source available.

### D. Permit to Operate

The applicable terms and conditions of an issued Authority to Construct shall be included in any Permit to Operate (PTO) subsequently issued by the APCO for the same emissions units.

## VIII. Source Obligations

### A. Enforcement

Any owner or operator who constructs or operates a new major stationary source or major modification to an existing major stationary source, not in accordance with the application submitted pursuant to this rule, any changes to the application as required by the APCO, or the terms of its ATC or PTO, shall be subject to enforcement action.

### B. Termination

Approval to construct shall terminate if construction is not commenced within eighteen months after receipt of such approval, if construction is discontinued for a period of eighteen months or more, or if construction is not completed within a reasonable time. The APCO may extend the 18-month period once upon a satisfactory showing of good cause why an extension is justified. This provision does not apply to the time period between construction of approved phases of a phased construction project; each phase must commence construction within eighteen months of the projected and approved commencement date.

C. Compliance

Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the SIP or any other requirement under local, state, or federal law.

D. Relaxation in Enforceable Limitations

At such time that a particular stationary source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the stationary source or modification to emit a pollutant, then the requirements of this rule shall apply to the stationary source or modification as though construction had not yet commenced on the stationary source or modification.

**IX. Public Participation**

After APCO has made a preliminary written decision to issue or deny an ATC for a new major stationary source, or major modification of an existing major stationary source, as specified in Subsections VII.A. and VII.B., the APCO shall:

- A. Publish, in at least one newspaper of general circulation in the District a notice stating the preliminary decision of the APCO, noting how pertinent information can be obtained, including how the public can access the information specified in Subsection IX. B., and inviting written public comment for a 30-day period following the date of publication. The notice shall include the time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled).
- B. No later than the date the notice of the preliminary written determination is published, make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials the applicant submitted, a copy of the preliminary decision, a copy of the proposed ATC and a copy or summary of other materials, if any, considered in making the preliminary written decision.
- C. Send a copy of the notice of public comment to the applicant, EPA Region 9, any persons requesting such notice and any other interested parties such as: Any other State or local air pollution control agencies, the chief executives of the city and county where the source would be located; any comprehensive regional land use planning agency, and any State, Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification.
- D. Provide opportunity for a public hearing for persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations, if in the APCO 's judgment such a hearing is warranted. The APCO shall give notice of any public hearing at least 30 days in advance of the hearing.

**X. Invalidation**

If any provision of this rule or the application of such provision to any person or circumstance, is held invalid, the remainder of this rule or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

**XI. Effective Date for Referenced Federal Regulations**

All references and citations in this rule to Title 40 of the Code of Federal Regulations (CFR) refer to the referenced federal regulation as in effect on (August 4, 2022).

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**RULE 210.2 Standards for Permits to Operate** - Adopted 12/28/76, Amended 4/25/78, 5/15/78, 6/26/79, 4/5/82, 8/27/84, 9/16/85, 6/1/87, 5/2/96

(This Rule becomes effective and replaces Rule 210.2 currently in effect on the date the California Air Resources Board executes the Executive Order that adopts this Rule as a revision to the State Implementation Plan.)

**I. Definitions**

The definitions contained in Rule 210.1 shall be applicable to this Rule.

**II. General**

The Control Officer shall deny a Permit to Operate for any new or modified stationary source, or any portion thereof, to which Rule 210.1 applies unless:

- A. The owner or operator of the source of modification has obtained an Authority to Construct granted pursuant to Rule 210.1;
- B. The Control Officer has determined the source or modification, and any sources or modifications which provide offsets, have been constructed and/or modified to operate and emit quantities of air contaminants, consistent with conditions imposed on respective Authority to Construct permit(s) under Section VI. of Rule 210.1;
- C. The Control Officer has determined that any offsets required as a condition of the Authority to Construct will commence at the time of, or prior to, initial operation of the new source or modification, and that offsets will be maintained throughout operation of the new or modified source. In the case of a new or modified source which will be, in whole or in part, a replacement for an existing source on the same property, the Control Officer may allow a maximum of 180 days as a startup period for simultaneous operation of the existing stationary source and the new stationary source or replacement; and
- D. The Control Officer has determined all conditions specified in the Authority to Construct have been, or likely will be complied with by any dates specified.

**III. Requirements**

The Control Officer shall require as a condition for issuance of any Permit to Operate for a new or modified source, that the source and any offset source be operated consistent with any conditions imposed on respective Authority to Construct permit(s) under Section VI. of Rule 210.1.

**RULE 210.4 Prevention of Significant Deterioration** – Adopted 9/24/84, Amended 11/18/85, 9/2/99, Amended 1/12/12 (Effective 2/8/13)

**I. Purpose**

The purpose of this Rule is to include the federal Prevention of Significant Deterioration (PSD) rule requirements into the Eastern Kern Air Pollution Control District's (District) Rules and Regulations by incorporating the federal requirements by reference. The PSD program is a construction permitting program for new major source facilities and major modifications to existing major source facilities located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant.

**II. Definitions**

The terms used in this rule are defined in Title 40 of the Code of Federal Regulations (hereinafter, CFR) Part 52.21(b) in effect on (date of adoption) unless a revised definition is provided below:

- A. Actual Emissions: The definition of "Actual Emissions" contained in 40 CFR 52.21(b)(21) is revised to read as set forth below whenever reference is made to that term or 40 CFR 52.21(b)(21):
1. Actual emissions is the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with Sections II.A.2 through II.A.4 below.
  2. In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The APCO shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
  3. The APCO may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
  4. For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.
- B. Administrator: The term "Administrator" means:
1. "Federal Administrator" in 40 CFR 52.21(b)(17), (b)(37)(i), (b)(43), (b)(48)(ii)(c), (b)(50)(i), (b)(51), (l)(2) and (p)(2); and
  2. "APCO" elsewhere.



- C. APCO: Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- D. Baseline Actual Emissions: The definition of “Baseline Actual Emissions” contained in 40 CFR 52.21(b)(48) is revised to read as set forth below whenever reference is made to that term or 40 CFR 52.21(b)(48):
1. Baseline Actual Emissions means the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with Sections II.E.2 and II.E.3 below.
  2. In general, Baseline Actual Emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Baseline Actual Emissions shall be calculated using the unit’s actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
  3. For any emissions unit which has not begun normal operations on the particular date, Baseline Actual Emissions shall equal the potential to emit of the unit on that date.
- E. Major Modification: The definition of “Major Modification” contained in 40 CFR 52.21(b)(2) is revised to read as set forth below whenever reference is made to that term or 40 CFR 52.21(b)(2):
1. Major Modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.
  2. Any net emissions increase that is significant for VOCs or NO<sub>x</sub> shall be considered significant for ozone.
  3. A physical change or change in the method of operation shall not include:
    - a. Routine maintenance, repair and replacement;
    - b. Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plant pursuant to the Federal Power Act;
    - c. Use of an alternative fuel by reason of an order or rule under section 125 of the Act;

- d. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- e. Use of an alternative fuel or raw material by a stationary source which:
  - i. The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166; or
  - ii. The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;
- f. An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166;
- g. Any change in ownership at a stationary source;
- h. Fugitive emissions shall not be included in determining for any of the purposes of this Section, whether a physical change in or change in the method of operation of a major stationary source is a major modification, unless the source belongs to one of the source categories listed in paragraph 40 CFR Part 52.21(b)(1)(iii).

F. Net Emissions Increase: The definition of “Net Emissions Increase” contained in 40 CFR 52.21(b)(3) is revised to read as set forth below whenever reference is made to that term or 40 CFR 52.21(b)(3):

- 1. Net Emissions Increase means the amount by which the sum of the following exceeds zero:
  - a. Any increase in actual emissions from a particular physical change or change in method of operation at a stationary source; and
  - b. Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.
- 2. An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
  - a. The date five years before construction on the particular change commences; and

- b. The date that the increase from the particular change occurs.
  - 3. An increase or decrease in actual emissions is creditable only if the Administrator has not relied on it in issuing a permit for the source under this section, which permit is in effect when the increase in actual emissions from the particular change occurs.
  - 4. An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxide, which occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available. With respect to particulate matter, only PM<sub>10</sub> emissions can be used to evaluate the net emissions increase for PM<sub>10</sub>.
  - 5. An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
  - 6. A decrease in actual emissions is creditable only to the extent that:
    - a. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;
    - b. It is federally enforceable at and after the time that actual construction on the particular change begins; and
    - c. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.
  - 7. [Reserved]
  - 8. An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- G. Paragraph (q): The phrase “Paragraph (q) of this section” in 40 CFR 52.21(p)(1) shall read as follows: within ten calendar days following a preliminary decision pursuant to Section IV, Requirements of this rule, the APCO shall publish in at least one newspaper of general circulation in the District a notice stating the preliminary decision of the APCO, noting how pertinent information can be obtained, and inviting written public comment for a 30-day period following the date of publication. The notice shall include the time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled). The APCO shall give notice of any public hearing at least 30 days in advance of the hearing.

### **III. Applicability**

The provisions of this rule shall apply to any source and the owner or operator of any source subject to any requirement under 40 CFR Part 52.21 as incorporated into this rule. This rule shall become effective upon the effective date of the federal Environmental Protection Agency's (EPA's) final approval of Rule 210.4.

Whenever any source is subject to more than one rule, regulation, provision, or requirement relating to the control of any regulated NSR pollutant, in cases of conflict or duplication, the most stringent rule, regulation, provision, or requirement shall apply. The applicability procedures contained in 40 CFR 52.21(a)(2) are replaced with the following language:

- A. No stationary source or modification to which the requirements of subsections (j) through (r) of 40 CFR Part 52.21 apply shall begin actual construction without a District permit stating that the stationary source or modification would meet those requirements.
- B. The requirements of subsections (j) through (r) of 40 CFR Part 52.21 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Act that it would emit, except as this section otherwise provides.
- C. The requirements of subsections (j) through (r) of 40 CFR Part 52.21 apply only to any major stationary source or major modification that would be constructed in an area designated as attainment or unclassifiable under U.S. Code section 7407(d) or (e).
- D. In determining whether a stationary source or modification is major, fugitive emissions from an emissions unit are included only if the emissions unit is part of one of the source categories listed in 40 CFR 52.21(b)(1)(iii) or if the emission unit is located at a stationary source that belongs to one of the source categories listed in 40 CFR 52.21(b)(1)(iii). Fugitive emissions are not included for those emissions units located at a facility whose primary activity is not represented by one of the source categories listed in 40 CFR 52.21(b)(1)(iii) and that are not, by themselves, part of a listed source category.

### **IV. Incorporation by Reference**

- A. Except as provided in Section V.B, below, the provisions of 40 CFR Part 52.21, in effect on (date of adoption), are incorporated herein by reference and made part of the Rules and Regulations of the District. All references to 40 CFR 52.21 in this Rule refer to the CFR in effect on (date of adoption).
- B. General Exclusion: The following subsections of 40 CFR Part 52.21 , in effect (date of adoption), as well as all references to these subsections or the terms defined in these subsections, are excluded in their entirety: (a)(1), (b)(55-58), (f), (g), (i)(1)((i-v) and (ix-xi)), (i)(6-8), (p)(6-8),(q), (s), (t), (u), (v), (w), (x), (y), (z), (aa), and (cc).

## **V. Exemption**

Greenhouse Gas Air Quality Analysis: Greenhouse gas emissions shall not be subject to the requirements of subsections (k) or (m) of 40 CFR Part 52.21 in effect on (date of adoption).

## **VI. Requirements**

- A. An owner or operator must obtain a PSD permit pursuant to this Rule before beginning actual construction of a new major stationary source or a major modification as defined in 40 CFR 52.21(b).
- B. Notwithstanding the provisions of any other District Rule or Regulation, the APCO shall require compliance with this rule prior to issuing a federal PSD permit as required by Clean Air Act (CAA) Section 165.
- C. The applicant shall pay the applicable fees specified in District Rules 301, Permit Fees and 303, Miscellaneous Fees.

## **VII. Public Participation**

- A. Prior to issuing a federal PSD permit pursuant to this rule and after receipt of a complete application, the APCO shall:
  - 1. Make a preliminary determination whether construction should be approved with conditions or disapproved.
  - 2. Make available in at least one location in each region in which the proposed source would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination, a copy of the proposed permit and a copy or summary of other materials, if any, considered in making the preliminary determination.
  - 3. Notify the public, by advertisement in a newspaper of general circulation in the District, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and of the opportunity for written public comment.
  - 4. Send a copy of the notice of public comment to the applicant, United States Environmental Protection Agency, Region 9, any persons requesting such notice and any other interested parties such as: Any other State agency or adjacent local air pollution control agencies, the chief executives of the city and county where the source would be located; any comprehensive regional land use planning agency, and any State, Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification.

5. Provide opportunity for a public hearing for persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations, if in the APCO's judgment such a hearing is warranted.
6. Consider all written comments that were submitted within 30 days after the notice of public comment is published and all comments received at any public hearing(s) in making a final decision on the approvability of the application and make all comments available for public inspection in the same locations where the District made available preconstruction information relating to the proposed source or modification.
7. Make a final determination whether construction should be approved with conditions or disapproved.
8. Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the District made available preconstruction information and public comments relating to the source.

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**RULE 210.5 Visibility Protection - Adopted 11/18/85, Amended 5/2/96**

"This Rule becomes effective on the date the Environmental Protection Agency publishes in the Federal Register its final approval of this Rule for inclusion in the State Implementation Plan, or upon the date the Environmental Protection Agency publishes its final approval of Rule 210.1 for inclusion in the State Implementation Plan, whichever date is later."

**I. Definition**

A. Adverse impact on visibility means visibility impairment which interferes with management, protection, preservation, or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of the visibility impairments and how these factors correlate with:

1. Times of visitor use of the Federal Class I area, and
2. The frequency and timing of natural conditions that reduce visibility.

B. For the purpose of this Rule, definitions of other terms shall be the same as those defined in Rule 210.4 Prevention of Significant Deterioration.

**II. Standards for Approval**

A. For any new major stationary source or major modification which would have the potential to emit nitrogen oxides, sulfur dioxide or particulate matter in significant amounts and is required to utilize BACT/LAER for such pollutants, the APCO shall not issue an Authority to Construct unless the analysis required by this Rule demonstrates that an adverse impact on visibility will not occur.

**III. Procedures**

A. Applicants for Authority to Construct subject to this Rule shall provide:

1. An analysis of the proposed source's anticipated impacts on visibility in any Class I area which may be affected by the source's emissions; and
2. Monitoring of visibility in any Class I area near the proposed source for such purposes and by such means as the Control Officer determines is necessary and appropriate.

The analysis shall be consistent with "The Workbook for Estimating Visibility Impairment" - EPA 450-4-80-031.

**RULE 401    Visible Emissions** - Adopted 4/18/72, Renumbered 5/89, Amended 11/29/93**I.    Limits**

A person shall not discharge into the atmosphere, from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:

- A.    As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- B.    Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection A.

**II.    Exceptions**

The provisions of Section I shall not apply to:

- A.    An emission source for which the owner or operator of such source shows that the source was, at the time of violation of Section I, in compliance with all other applicable emission standards of Regulation IV.
- B.    Smoke from fires set by or permitted by any public officer, if such fire is set or permission given in the performance of the official duty of such officer and such fire in the opinion of such officer is necessary:
  - 1.    For the purpose of the prevention of a fire hazard which cannot be abated by any other means, or
  - 2.    For the instruction of public employees in the methods of fighting fire.
- C.    Smoke from fires set pursuant to a valid burning permit on property used for industrial purposes for the purpose of instruction of employees in methods of fighting fire.
- D.    Agricultural operations necessary for the growing of crops or raising of fowls or animals.
- E.    The use of an orchard or citrus grove heater which does not produce unconsumed solid carbonaceous matter at a rate in excess of one (1) gram per minute.
- F.    The use of other equipment in agricultural operations necessary for the growing of crops, or raising of fowls or animals.

**III.    Wet Plumes**

Where the presence of uncombined water is the only reason for failure of an emission to meet the limits of Section I, that Section shall not apply. The burden of proof establishing the application of this Section shall be upon the person seeking to come within its provisions.



I. Purpose

The purpose of this Rule is to reduce the amount of respirable particulate matter (PM<sub>10</sub>) emitted from significant man-made fugitive dust sources and in an amount sufficient to maintain National Ambient Air Quality Standards. Rule 419 shall still be used to prevent/correct specific public nuisances and health hazards.

II. Applicability

The provisions of this Rule shall apply to specified bulk storage, earthmoving, construction and demolition, and man-made conditions resulting in wind erosion. It shall also apply to unpaved roadways located in the Kern County portion of the "Searles Valley Planning Area" shown on Page 402-11.

III. Definitions

- A. Active Operation - activity capable of generating fugitive dust, including any open storage pile, earth-moving activity, construction/demolition activity, disturbed surface area, and non-emergency movement of motor vehicles on unpaved roadways and any parking lot served by an unpaved road subject to this Rule.
- B. Bulk Material - sand, gravel, soil, aggregate, and any other organic or inorganic solid matter capable of releasing dust.
- C. Calendar Quarter - consecutive three month period and each consecutive three-month period thereafter, beginning on the first day of the calendar month in which an activity qualifies as a large operation.
- D. Construction and Demolition Activity - any on-site mechanical activity preparatory to or related to building, alteration, rehabilitation, demolition or improvement of property, including the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.
- E. Contractor - any person or company, or licensed construction contractor having a contractual arrangement to conduct an active operation subject to this Rule for another person.
- F. Contingency Measure - additional PM<sub>10</sub> control requirements automatically triggered in the event of failure to maintain the National Ambient Air Quality Standards for PM<sub>10</sub> in the Indian Wells Valley.
- G. Disturbed Surface Area - portion of the earth's surface having been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural condition, thereby increasing the potential for emission of fugitive dust. Disturbed surface area does not include areas restored to a natural state with vegetative ground cover and soil characteristics similar to adjacent or nearby natural conditions.
- H. Dust Suppressant - water, hygroscopic materials, or non-toxic chemical stabilizers used as treatment to reduce fugitive dust emissions. A suppressant shall not be

used if prohibited by the Regional Water Quality Control Board, the California Air Resources Board, the Environmental Protection Agency, or any other applicable law, rule or regulation. All suppressants shall meet all specifications, criteria, or tests required by any federal, state, or local water agency. The use of dust suppressants shall be of sufficient concentration and application frequency to maintain a stabilized surface.

- I. Earth-Moving Activity - grading, earth cutting and filling, loading or unloading of dirt or bulk material, adding to or removing from open storage piles of bulk material, landfilling, or soil mulching.
- J. Fugitive Dust - any particulate matter becoming airborne, other than being emitted from an exhaust stack, directly or indirectly as a result of human activity.
- K. Inactive Disturbed Surface Area - any disturbed surface area upon which an active operation has not occurred for a period of at least ten consecutive days.
- L. Large Operation - any active operation, including vehicle movement on unpaved roadways, on property involving in excess of 100 contiguous acres of disturbed surface area, or any earth-moving activity exceeding a daily volume of 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period.
- M. Motor vehicle - any engine-powered device used to convey people, or freight and registered for use on public highways.
- N. Non-Routine - non-periodic active operation occurring no more than three times per year, lasting less than 30 cumulative days per year, and scheduled less than 30 days in advance.
- O. Open Storage Pile - any accumulation of bulk material with 5 percent or greater silt content not fully enclosed, covered or chemically stabilized, and attaining a height of three feet or more and a total surface area of 500 or more square feet. Silt content level shall be assumed to be 5 percent or greater unless a person shows, 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 unless the Control Officer is provided with a logical explanation as to why the silt content should be considered constant. If he concurs it is constant, future sampling may be required to confirm this conclusion.
- P. Particulate Matter - any solid material, existing in finely divided form.
- Q.  $PM_{10}$  - particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by California Air Resources Board Test Method 501.
- R. Prevailing Wind Direction - from Southwest to Northeast (in the Indian Wells Valley) or as specified by the Control Officer as being representative of local conditions.
- S. Property Line - boundaries of an area in which either a person causing fugitive dust emissions or a person allowing fugitive dust emissions has ownership or legal right to use the property.

- T. Reasonably Available Control Measure (RACM) - any technique or procedure used to prevent or reduce the emission and airborne transport of fugitive dust. RACM's include, but are not limited to, application of dust suppressants, use of coverings or enclosures, paving, enshrouding, planting, control of vehicle speeds, and any other measure recognized by the Control Officer as providing equivalent dust control. Table I (Page 402-4) and U.S. EPA's reference document "Control of Open Fugitive Dust Sources", Midwest Research Institute, September 1988 shall be used for guidance.
- U. Simultaneous Sampling - operation of two  $PM_{10}$  samplers such that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period of not less than 290 minutes and not more than 310 minutes.
- V. Stabilized surface - previously disturbed surface area showing visual or other evidence of surface particle conglomeration after application of a dust suppressant.
- W. Unpaved Road - any straight or curved length of well-defined travel way for motor vehicles not covered by one or the following: concrete, asphaltic concrete, or asphalt.
- X. Wind Gust - maximum instantaneous wind speed, as measured by an anemometer or as provided by the nearest local meteorological station.

**TABLE I**  
**SUGGESTED**  
**FUGITIVE DUST REASONABLY AVAILABLE CONTROL MEASURES**

<u>Source Category</u>	<u>Control Measure</u>
Unpaved Road	Improve Road Surface Control Vehicular Traffic Speed Apply Dust Suppressants
Construction/Demolition Activity	Use Wind Breaks Apply Dust Suppressants
Earth-moving or Open Storage Pile	Use Wind Screens Use Enclosures Around Storage Piles Apply Dust Suppressants
Disturbed Surface Area	Use Fences/Barriers Vegetate Apply Dust Suppressants Cover with Gravel Compact Surface

NOTE: If water is selected as a dust suppressant, use of nonpotable water is encouraged.

#### IV. Exemptions

##### A. Provisions of this Rule shall not apply to:

1. Agricultural operations, including activities directly related to raising fowl or animals, or growing crops, for a profit;
2. Actions required by federal or state endangered species legislation, or the Surface Mining and Reclamation Act;
3. Any disturbed surface area less than three acres on residential property in the Indian Wells Valley (see page 11) and less than two acres in the remainder of the District;
4. Active operations conducted during emergency life-threatening situations, or in conjunction with any officially-declared disaster or state of emergency;
5. Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions;
6. Unpaved roads that are not part of a large operation and are outside the Indian Wells Valley and unpaved roads within the Indian Wells Valley, provided such Indian Wells Valley roads:
  - a. are less than 75 (50, if contingency measure triggered) feet long or,
  - b. have a motor vehicle traffic volume less than 25 (15, if contingency measure triggered) vehicle-trips per day, or
  - c. have a motor vehicle traffic volume of 25 (15, if contingency measure triggered) vehicle-trips per day or more, not more than six times per year, or
  - d. provide access to not more than 10 residences;

Contingency measure is triggered if U.S. EPA publishes a finding in the Federal Register that KCAPCD's portion of the Searles Valley Planning Area (see Page 402-11) has failed to maintain National Ambient Air Quality Standards for PM<sub>10</sub>.
7. Restorative grading of unpaved shoulders of paved roads;
8. Non-routine or emergency maintenance of flood control channels and water spreading basins;
9. Weed and dried vegetation removal required by a fire prevention/control agency;
10. Active operations conducted during freezing weather if applicable RACM involves application of water;

11. County or properly permitted private sanitary landfill disposal sites provided such sites conform to California Code of Regulations Title 14: Sections 17659, 17660 and 17706 (County) or KCAPCD dust control permit to operate conditions (private);
  12. Blasting operations permitted by the California Division of Industrial Safety;
  13. Motion picture, television, and video production activities when dust emissions are required for visual effects. This exemption shall be obtained from the Control Officer;
  14. Officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and County regional parks;
  15. Any contractor subsequent to a contract termination date, provided such contractor implemented Reasonably Available Control Measures during the contractual period; and
  16. Any grading contractor, for a phase of active operations conducted after his completion of earth-moving activities, provided such contractor implemented Reasonably Available Control Measures during the entire phase of earth-moving activities and until the final grading inspection.
  17. Federal facilities (outside of Indian Wells Valley) required by the National Environmental Protection Act (NEPA) to implement fugitive dust RACM's for activities otherwise subject to this rule, provided District receives an up-to-date description, including RACM's employed, of such activities.
- B. Provisions of Subsection V.A. (visible emissions limit) shall not apply when wind gusts exceed 25 miles per hour, provided:
1. Table I (Page 402-4) Reasonably Available Control Measures are implemented for each applicable fugitive dust source type, or;
  2. A person has on file with the District an approved "High Wind Fugitive Dust Control Plan" indicating technical reasons why any Reasonably Available Control Measure cannot be implemented. Such Plan shall provide an alternative measure of fugitive dust control, if technically feasible, and shall be subject to the same approval conditions as specified in Section V.
- C. If applicable, provisions of Subsection V.D.2. (large operation PM<sub>10</sub> monitoring) shall not apply for a period of:
- a. One calendar quarter for each new large operation, or;
  - b. Fourteen calendar days after approval or conditional approval of a fugitive dust emission control plan.

V. **Requirements**

- A. A person shall not cause or allow emissions of fugitive dust from any active

operation to remain visible in the atmosphere beyond the property line of the emission source. This Subsection shall not apply to unpaved roadways.

- B. A person shall utilize one or more Reasonably Available Control Measures to minimize fugitive dust emissions from each fugitive dust source type which is part of any active operation subject to this Rule, including unpaved roadways.
- C. For any large operation, except those satisfying Subsection V.D.3. (implementation of RACM's), a person shall not cause or allow downwind  $PM_{10}$  ambient concentrations to increase more than 50 micrograms per cubic meter above upwind concentrations as determined by simultaneous upwind and downwind sampling. High-volume particulate matter samplers, or other EPA-approved equivalent method(s) for  $PM_{10}$  monitoring shall be used. Samplers shall be:
  - a. Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate EPA-published documents for EPA-approved equivalent methods(s) for  $PM_{10}$  sampling;
  - b. Reasonably placed upwind and downwind of the large operation based on prevailing wind direction and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized; and
  - c. Operated during active operations.
- D. Special Requirements for Large Operations
  - 1. No person shall conduct or authorize conducting a large operation subject to requirements of this Rule without either: 1) conducting on-site  $PM_{10}$  air quality monitoring and associated recordkeeping, or 2) filing for and obtaining an approved fugitive dust emissions control plan pursuant to Subsection V.D.3.
  - 2. Any person subject to Subsection V.D.1. electing to conduct on-site  $PM_{10}$  monitoring and recordkeeping shall take the following actions:
    - a. Notify the Control Officer of intent to monitor  $PM_{10}$  at least seven days prior to initiating such monitoring. Notification shall contain, at a minimum, the person's name, address, telephone number, brief description and location of the operation(s), and anticipated first date of sampling.
    - b. Be responsible for acquisition, calibration and operation of  $PM_{10}$  samplers.
    - c. Collect samples on four separate days during each calendar quarter. Sampling shall be conducted during typical operations, and during prevailing wind direction conditions. All other provisions of this Rule shall continue to be applicable on days when monitoring is not conducted.
    - d. Collect samples on four additional days during one calendar quarter if requested by the Control Officer based on receipt of complaints from the public, visible dust emissions, or other determinations by District

personnel indicating violations of conditions specified in Subsection V. C. may be occurring. Each sampling day shall be conducted during typical operations, and during prevailing wind direction conditions.

- e. Conduct laboratory analyses in accordance with 40 CFR, Part 50, Appendix J, for all samples collected as required by Subsections V.D.2.c and V.D.2.d.
  - f. Compile and submit records to the District on a quarterly basis, not later than 30 days after the end of each calendar quarter. Such records shall include:
    - 1) Brief description and location of the operation(s);
    - 2) Hours of active operations on days when particulate sampling occurred;
    - 3) Location, vendor, model, and serial number of PM<sub>10</sub> samplers used on each sampling day;
    - 4) Date, start and end times of all PM<sub>10</sub> sampling;
    - 5) Laboratory results (measured ambient concentrations) of all PM<sub>10</sub> samples;
    - 6) List of consultants, laboratories, and other groups of individuals responsible for collection, analysis, evaluation and validation of each PM<sub>10</sub> sample; and
    - 7) Documentation of any maintenance and calibration actions performed on each PM<sub>10</sub> sampler conducted in accordance with 40 CFR, Part 50, Appendix J.
3. Any person subject to Subsection V.D.1. electing to obtain an approved fugitive dust emissions control plan shall take the following actions:
- a. At least 45 calendar days prior to a calendar quarter during which air monitoring would be conducted in accordance with Subsection V.D.2. submit to the Control Officer a fugitive dust emissions control plan, including at least:
    - 1) Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan;
    - 2) Description and location of operation(s);
    - 3) Listing of all fugitive dust emissions sources included in the large operation;
    - 4) Description of Reasonably Available Control Measures to be applied to each source identified in Subsection V.D.3.a.3). Such description must be sufficiently detailed to demonstrate Reasonably Available



Control Measures will be utilized and/or installed during all periods of active operations.

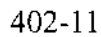
- b. If there are special technical, e.g., non-economic, circumstances preventing use of Reasonably Available Control Measures for any source identified in Subsection V.D.3.a.3), justification shall be provided in lieu of the description required in Subsection V.D.3.a.4). A justification statement shall explain reason(s) why Reasonably Available Control Measures cannot be implemented.
4. The Control Officer shall either approve, conditionally approve, or disapprove the plan, in writing, within 30 calendar days of receipt of the plan. For a plan to be approved or conditionally approved, three conditions shall be satisfied:
  - a. All sources of fugitive dust emissions shall be identified, e.g., earth-moving, storage piles, vehicular traffic on unpaved roads, etc.;
  - b. For each source identified, at least one Reasonably Available Control Measure shall be implemented; and
  - c. If, after implementation of control measures, visible dust emissions cross property line(s), standby control measures, e.g., increased watering, shall be specified for immediate implementation.
5. If a plan can be conditionally approved with actions not specified in the plan, the applicant shall be notified in writing. Such modifications shall be incorporated into the plan within 30 days of receipt of the notice of conditional approval, or the plan shall be disapproved. A letter to the Control Officer stating such modifications will be incorporated into the plan shall be used as a basis to approve the plan.
6. Any plan disapproved by the Control Officer shall require air monitoring and recordkeeping in accordance with Subsection V.D.2.
7. Failure to comply with any provisions in an approved or conditionally approved plan shall result in a violation of Subsection V.D.1.
8. An approved plan for a specific project shall be valid for a period of one year from date of approval or conditional approval. Plans shall be resubmitted, annually, at least 60 days prior to expiration date, or the plan shall be disapproved as of the expiration date. If all fugitive dust sources and corresponding Reasonably Available Control Measures or special circumstances remain identical to those identified in the previously approved plan, the resubmittal may contain a simple statement of "no-change". Otherwise a resubmittal shall contain all items specified in Subsections V.D.3.a. and V.D.3.b.
9. A contractor may have on file with the District a pre-approved plan or plans for one or more types of large projects subject to Subsection V.D.3. Prior to initiation of any project, one or more applicable preapproved plans may be specified by the contractor in lieu of filing a new plan or plans.

10. Any person subject to requirements of Subsection V.D.1. making changes to an active operation resulting in it not fitting the definition for a large operation for a period of at least one year, may request reclassification as a non-large operation. To obtain this reclassification, a person shall submit a request in writing to the Control Officer specifying actions having taken place to reduce disturbed surface area and/or earth-moving process rate to levels below criteria for large operations. A person shall also indicate criteria for a large operation will not be exceeded during the subsequent 12-month period. The Control Officer shall either approve or disapprove reclassification within 60 days from receipt of a reclassification request. The Control Officer shall disapprove the request if indicated changes cannot be verified. If approved, a person shall be relieved of all requirements under Subsections V.D.1, V.D.2, and V.D.3. Any person so reclassified shall again be subject to requirements of Subsection V.D.1. if, at any time subsequent to reclassification, criteria for large operations are met.

VI. Compliance Schedule

Any existing large operation becoming subject to this rule with its amendment on September 8, 2004, shall comply with Section V. no later than March 8, 2005.

C O U N T Y



**Rule 404.1 Particulate Matter Concentration** – Adopted 4/18/72, Amended 01/24/2007

**I. Applicability**

Rule 404.1 applies to any person who discharges particulate matter emissions into the atmosphere from any single source operation.

**II. Exemptions**

1. The requirement of this rule shall not apply to the following equipment provided it combusts only liquid fuels, gaseous fuels, or waste gases, and only emits combustion contaminants:
  - a. Boilers,
  - b. Steam generators,
  - c. Water heaters,
  - d. Process heaters, and
2. This rule shall not apply to rocket testing operations meeting the requirements or exemptions of Rule 431.
3. The rule shall not apply to fires set in accordance with requirements of Rules 416.

**III. Requirements**

Particulate matter emissions shall not exceed 0.1-grains per standard cubic foot of gas at standard conditions (gr/scf).

**IV. Test Methods**

Requirements of Section 3 shall be determined by in accordance with the following test procedures:

Particulate Matter: EPA Test Method 5, 5A, 5B, 5D, 5E, 5F, 5G, 5H, or 5i  
California Air Resources Board (CARB) Method 5, 5A or 5E.

8-30-83

This rule shall not apply to new equipment for which an initial application for a permit is accepted after September 12, 1982 and has not been approved as of (Amendment Adoption Date) which meets all of the following requirements:

1. achieves Lowest Achievable Emission Rate or uses Best Available Control Technology as defined in Sections 1.A and 1.F of Rule 210.1, for federal nonattainment and attainment pollutants, respectively;
2. results in a net air quality benefit in the area affected by emissions from such equipment, as determined by the Air Pollution Control Officer; and
3. otherwise meets the requirements of Rule 210.1.

A person shall not discharge into the atmosphere from any source operation, particulate matter in excess of the following process weight tables:

Process Weight Table - Valley Basin

ALLOWABLE RATE OF EMISSION  
BASED ON PROCESS WEIGHT RATE

Process Weight Lbs./Hr.	Emission Rate Lbs./Hr.
50	0.36
100	0.56
500	1.52
1,000	2.34
5,000	6.34
10,000	9.74
20,000	14.97
60,000	29.57
80,000	31.23
120,000	33.33
160,000	34.90
200,000	36.17
400,000	40.41
1,000,000	46.79

Interpolation of the data for the process weight rates up to 60,000 lbs./hr. shall be accomplished by the use of the equation:

$$E = 3.59P^{0.62} \quad P \leq 30 \text{ tons/hr.}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs./hr. shall be accomplished by use of the equation:

$$E = 17.31P^{0.16} \quad P > 30 \text{ tons/hr.}$$

Where: E = Emissions in pounds per hour.  
P = Process weight rate in tons per hour.

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~~RULE 403 Wet Plumes Where the presence of uncombined water is the only reason for the failure of an emission to meet the limitation of Rule 401, that rule shall not apply. The burden of proof which establishes the application of this rule shall be upon the person seeking to come within its provisions.~~

~~RULE 404 Particulate Matter Concentration - Valley Basin A person shall not discharge into the atmosphere from any single source operation particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions.~~

~~This amendment shall be effective on the date of adoption for any equipment not then completed and put into service. As to all other equipment this amendment shall be effective on January 1, 1974.~~

~~RULE 404.1 Particulate Matter Concentration - Desert Basin A person shall not discharge into the atmosphere from any single source operation, in service on the date this rule is adopted, particulate matter in excess of 0.2 grains per cubic foot of gas at standard conditions.~~

~~A person shall not discharge into the atmosphere from any single source operation, the construction or modification of which commenced after the adoption of this rule, particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions.~~

~~RULE 405 Particulate Matter - Emission Rate A person shall not discharge into the atmosphere from any source operation particulate matter in excess of the following process weight tables:~~

Process Weight Table - Valley Basin

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ALLOWABLE RATE OF EMISSION BASED ON  
PROCESS WEIGHT RATE

<u>Process Weight</u> <u>Lbs./Hr.</u>	<u>Emission Rate</u> <u>Lbs./Hr.</u>
50 . . . . .	0.36
100 . . . . .	0.55
500 . . . . .	1.53
1,000 . . . . .	2.25
5,000 . . . . .	6.34
10,000 . . . . .	9.73
20,000 . . . . .	14.99
60,000 . . . . .	29.60
80,000 . . . . .	31.19
120,000 . . . . .	33.28
160,000 . . . . .	34.85
200,000 . . . . .	36.11
400,000 . . . . .	40.35
1,000,000 . . . . .	46.72

Interpolation of the data for the process weight rates up to 60,000 lbs./hr. shall be accomplished by the use of the equation:

$$E = 3.59 P^{0.62} \quad P \leq 30 \text{ tons/hr.}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs./hr. shall be accomplished by use of the equation:

$$E = 17.31 P^{0.16} \quad P > 30 \text{ tons/hr.}$$

Where: E = Emissions in pounds per hour.

P = Process weight rate in tons per hour.

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Process Weight Table - Desert BasinALLOWABLE WEIGHT OF EMISSION BASED ON  
PROCESS WEIGHT RATE

Process Wt. lbs/hr	Emission Rate lbs/hr	Process Wt. lbs/hr	Emission Rate lbs/hr
250 or less	1.03	6500	7.71
300	1.20	7000	8.05
350	1.35	7500	8.39
400	1.50	8000	8.71
450	1.63	8500	9.03
500	1.77	9000	9.36
600	2.01	9500	9.67
700	2.24	10000	10.00
800	2.43	12000	11.28
900	2.62	14000	12.50
1000	2.80	16000	13.74
1200	3.12	18000	14.97
1400	3.40	20000	16.19
1600	3.66	30000	22.22
1800	3.91	40000	28.30
2000	4.14	50000	34.30
2500	4.64	60000 or more	40.00
3000	5.10		
3500	5.52		
4000	5.93		
4500	6.30		
5000	6.67		
5500	7.03		
6000	7.37		

Where the process weight per hour falls between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

~~This amendment shall be effective on the date of adoption for any equipment not then completed and put into service. As to all other equipment this amendment shall be effective on January 1, 1974.~~



6/30/72

~~24. Add RULE 406.1 Process Weight Chart - Desert Basin~~ALLOWABLE WEIGHT OF EMISSION BASED ON  
PROCESS WEIGHT RATE

Process wt/hr(lbs)	Maximum Weight Disch/hr(lbs)	Process wt/hr(lbs)	Maximum Weight Disch/hr(lbs)
250 or less	1.03	5500	7.03
300	1.20	6000	7.37
350	1.35	6500	7.71
400	1.50	7000	8.05
		7500	8.39
450	1.63	8000	8.71
500	1.77		
600	2.01	8500	9.03
700	2.24	9000	9.36
		9500	9.67
800	2.43	10000	10.00
900	2.62		
1000	2.80	12000	11.28
1200	3.12	14000	12.50
		16000	13.74
1400	3.40	18000	14.97
1600	3.66		
1800	3.91	20000	16.19
2000	4.14	30000	22.22
		40000	28.30
2500	4.64	50000	34.30
3000	5.10	60000	40.00
3500	5.52	or	
4000	5.93	more	
4500	6.30		
5000	6.67		

Where the process weight per hour falls between figures listed in the table, the exact weight of permitted discharged shall be determined by linear interpolation.

This amendment shall be effective on the date of adoption for any equipment not then completed and put into service. As to all other equipment this amendment shall be effective on January 1, 1974.

25. Add RULE 406.2 Process Weight - Portland Cement Kilns Cement kilns, the construction or modification of which is commenced after August 17, 1971 shall not discharge into the atmosphere particulate matter in excess to the Environmental Protection Agency Standards of Performance.

26. RULE 407 is changed to read RULE 407 Sulfur Compounds A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 per cent by volume calculated as sulfur dioxide (SO<sub>2</sub>).
27. Add RULE 407.1 Disposal of Solid or Liquid Waste A person shall not discharge into the atmosphere from any incinerator or other equipment used to dispose of combustible refuse by burning, particulate matter in excess of 0.1 grain per cubic foot of gas calculated to 12 per cent of carbon dioxide (CO<sub>2</sub>) at standard conditions. Any carbon dioxide (CO<sub>2</sub>) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 per cent of carbon dioxide (CO<sub>2</sub>).
- ~~28. Add RULE 407.2 Fuel Burning Equipment Combustion Contaminants A person shall not discharge into the atmosphere combustion contaminants exceeding in concentration at the point of discharge, 0.1 grain per cubic foot of gas calculated to 12 per cent of carbon dioxide (CO<sub>2</sub>) at standard conditions.~~
29. RULE 410 c is changed to read
  - c. Any series of articles, machines, equipment or other contrivances designed for processing a continuously moving sheet, web, strip or wire which is subjected to any combination of operations described in sections (a) or (b) involving any photochemically reactive solvent, as defined in section (k), or material containing such solvent, shall be subject to compliance with section (b). Where only non-photochemically reactive solvents or material containing only non-photochemically reactive solvents are employed or applied, and where any portion or portions of said series of articles, machines, equipment or other contrivances involves operations described in section (a), said portions shall be collectively subject to compliance with section (a).
30. Change the first paragraph of RULE 412 to read RULE 412 Gasoline Loading into Tanks A person shall not load or permit the loading of gasoline into any stationary tank, installed after December 31, 1970, with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device or is a pressure tank.
31. Delete the second paragraph of RULE 412.
32. RULE 417 a is changed to read
  - a. When such fire is set or permission for such fire is given in the performance of the official duty of any public officer, and such fire in the opinion of such officer is necessary for the purpose of the prevention of a fire hazard which cannot be abated by any other means, or for the instruction of public or industrial employees in methods of fire fighting.

6/23/98

RULE 409    Fuel Burning Equipment - Combustion Contaminants - Adopted 4/18/72,  
Amended 7/18/83, 5/7/98

Nothing in this Rule shall be construed as preventing maintenance or preventing alteration or modification of existing fuel burning equipment which will reduce its emission rate of air contaminants.

I.    Definition

For purposes of this Rule fuel burning equipment means any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

II.   Exemption

Fuel burning equipment serving primarily as air pollution control equipment by using a combustion process to destroy air contaminants shall be exempt from provisions of this Rule.

III.   Requirements

- A. Fuel burning equipment, the construction or modification of which commenced after August 17, 1971, shall not discharge into the atmosphere particulate matter, sulfur dioxide or oxides of nitrogen in excess of the U.S. Environmental Protection Agency Standards of Performance. (See Rule 422.)
- B. A person shall not discharge into the atmosphere from any other fuel burning equipment combustion contaminants exceeding in concentration at the point of discharge, 0.1 grain per cubic foot of gas calculated to 12 percent of carbon dioxide (CO<sub>2</sub>) at standard conditions.

RULE 410 Organic Solvents

- a. A person shall not discharge into the atmosphere more than 15 pounds of organic materials in any 1 day from any article, machine, equipment, or other contrivance in which any organic solvent or any material containing organic solvent comes into contact with flame or is baked, heat-cured, or heat-polymerized in the presence of oxygen, unless said discharge has been reduced by at least 85 percent. Those portions of any series of articles, machines, equipment, or other contrivances designed for processing continuous web, strip, or wire that emit organic materials in the course of using operations described in this section shall be collectively subject to compliance with this section.
- b. A person shall not discharge into the atmosphere more than 40 pounds of organic materials in any 1 day from any article, machine, equipment, or other contrivance used under conditions other than those described in paragraph (a) of this section for employing or applying any photochemically reactive solvent, as defined in paragraph (j) of this section, or material containing such photochemically reactive solvent, unless said discharge has been reduced by at least 85 percent. Emissions of organic materials into the atmosphere resulting from air or heated-drying of products for the first 12 hours after their removal from any article, machine, or other contrivance described in this section shall be included in determining compliance with this paragraph. Emissions resulting from baking, heat-curing, or heat-polymerizing as described in paragraph (a) of this section shall be excluded from determination of compliance with this section. Those portions of any series of articles, machines, equipment, or other contrivances designed for processing a continuous web, strip, or wire that emit organic materials in the course of using operations described in this section shall be collectively subject to compliance with this section.
- c. A person shall not, after August 31, 1976, discharge into the atmosphere more than 3,000 pounds of organic materials in any 1 day from any article, machine, equipment, or other contrivance in which any non-photochemically reactive organic solvent or any material containing such a solvent is employed or applied, unless said discharge has been reduced by at least 85 percent. Emissions of organic materials into the atmosphere resulting from air or heated-drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this section shall be included in determining compliance with this section. Emissions resulting from baking, heat-curing, or heat-polymerizing as described in paragraph (a) of this section shall be excluded from determination of compliance with this section. Those portions of any series of articles, machines, equipment, or other contrivances designed for processing a continuous web, strip, or wire that emit organic materials in the course of using operations described in this section shall be collectively subject to compliance with this section.
- d. Emissions of organic materials to the atmosphere from the cleanup with photochemically reactive solvent, as defined in section (j), of any

article, machine, equipment or other contrivance described in sections (a), (b), or (c), shall be included with the other emissions of organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.

~~e. Emissions of organic materials to the atmosphere as a result of spontaneously continuing drying of products for the first 12 hours after their removal from any article, machine, equipment or other contrivance described in sections (a), (b), or (c), shall be included with other emissions of organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.~~

- e. Emissions of organic materials into the atmosphere required to be controlled by sections (a), (b), or (c), shall be reduced by:
  - 1. Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or
  - 2. Adsorption, or
  - 3. Processing in a manner determined by the Air Pollution Control Officer to be not less effective than (1) or (2) above.
- f. A person incinerating, absorbing, or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices as specified in the authority to construct or the permit to operate, or as specified by the Air Pollution Control Officer, for indicating temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control.
- g. Any person using organic solvents or any materials containing organic solvents shall supply the Air Pollution Control Officer, upon request and in the manner and form prescribed by him, written evidence of the chemical composition, physical properties and amount consumed for each organic solvent used.
- h. The provisions of this rule shall not apply to:
  - 1. The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.
  - 2. The use of equipment <sup>412.1,</sup> for which other requirements are specified by Rules 411, 412, 413, and 414, or which are exempt from air pollution control requirements by said rules.
  - 3. The spraying or other employment of insecticides, pesticides or herbicides.

4. The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchloroethylene.
5. The use of any material, in any article, machine, equipment or other contrivance described in sections (a), (b), (c) or (d), if:
  - (i) the volatile content of the material consists only of water and organic solvents, and
  - (ii) the organic solvents content comprises not more than 20% by volume of the total volatile content, and
  - (iii) the volatile content is not photochemically reactive, and
  - (iv) the organic solvent does not come into contact with flame.
6. The use of any material in any article, machine, equipment or other contrivance described in sections (a), (b), (c) or (d) if:
  - (i) until January 1, 1977, the organic solvent content of a material does not exceed 30% by volume of said material; after January 1, 1977, the organic solvent content of such material shall not exceed 20% by volume, and
  - (ii) the volatile content is not photochemically reactive, and
  - (iii) the organic solvent content does not come into contact with flame.
- i. For the purpose of this rule, organic solvents include diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents, except that such materials exhibiting a boiling point higher than 220°F at 0.5 millimeter mercury absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 220°F.
- j. For the purposes of this rule, a photochemically reactive solvent is any solvent with an aggregate of more than 20 percent of its total volume composed of chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:
  1. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;
  2. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;

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3. 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 percentage of the total volume of solvents.

- k. For the purpose of this rule, organic materials are defined as chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

**RULE 410.1A      Architectural Coating Controls - Adopted 3/11/10 Effective as of  
1/1/2011**

**I.      Purpose**

The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies VOC Content limits, storage, cleanup, and labeling requirements for architectural coatings.

**II.     Applicability**

Except as provided in subsection IV, the provisions of this rule are applicable to architectural coatings as defined in this rule and to any person who manufactures, blends, repackages, supplies, sells, offers for sale, solicits, or applies any architectural coating for use within the District.

**III.    Severability**

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.

**IV.    Exemptions**

A. Provisions of this Rule shall not apply to:

1. 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;
2. Any aerosol coating product.

B. Provisions of section VI and subsection VII.A shall not apply to any architectural coating sold in a container with a volume of one liter (1.057 quarts) or less.

**V.      Definitions**

- A. Adhesive: Any chemical substance applied for the purpose of bonding two surfaces together other than by mechanical means.
- B. 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.
- C. Aluminum Roof Coating: A coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10.



- D. 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.
- E. 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 nonstationary structures such as airplanes, airships, ships, boats, locomotives, railcars and automobiles, and adhesives are not considered architectural coatings for the purposes of this Rule.
- F. 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. Basement Specialty Coatings must meet the following criteria:
1. Coating must be capable of withstanding at least 10 psi of hydrostatic pressure, as determined in accordance with ASTM D7088-04, which is incorporated by reference in subsection VII.C.15;
  2. Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of 8 or more, as determined in accordance with ASTM D3273-00 and ASTM D3274-95, incorporated by reference in subsection VII.C.21.
- G. 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 distillation of crude petroleum or coal.
- H. Bituminous Roof Coating: A coating which incorporates bitumens that is labeled and formulated exclusively for roofing.
- I. 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.
- J. 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.
- K. 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.

- L. Colorant: A concentrated pigment dispersed in water, solvent and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.
- M. Concrete Curing Compound: A coating labeled and formulated for application to freshly poured concrete to perform one or more of the following functions:
1. Retard the evaporation of water; or
  2. Harden or dustproof the surface of freshly poured concrete.
- N. 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:
1. Prevent penetration of water;
  2. Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
  3. Harden or dustproof the surface of aged or cured concrete.
- O. Driveway Sealer: A coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:
1. Fill cracks;
  2. Seal the surface to provide protection; or
  3. Restore or preserve the appearance.
- P. 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.
- Q. Exempt Compound: A compound identified as exempt pursuant to the definition of Volatile Organic Compound (VOC), Subsection V. III. Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised August 1993), incorporated by reference in Subsection VII.C.12.
- R. Faux Finish Coating: A coating labeled and formulated to meet one or more of the following criteria:
1. A glaze or textured coating used to create artistic effects including, but not limited to: dirt, suede, old age, smoke damage, and simulated marble or wood grain;
  2. 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 as applied (at least 0.4 pounds per gallon);
  3. 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 with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10;

4. 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 SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10; or
  5. A clear topcoat to seal and protect a Faux Finishing coating that meets the requirements of subsection IV.R.1, IV.R.2, IV.R.3, or VR.4. These clear topcoats must be sold and used solely as part of a Faux Finishing coating system, and must be labeled in accordance with subsection VII.A.4.
- S. Fire Resistive Coating: A coating labeled and formulated to protect structural integrity by increasing fire endurance of interior or exterior steel and other structural materials. The Fire Resistive 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. Any fire resistive coating and a testing agency must be approved by building code officials. Any fire resistive coating shall be tested in accordance with ASTM Designation E 119-07, incorporated by reference in Subsection VII.C.8.
- T. 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. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-07, incorporated by reference in subsection VII.C.7. Effective January 1, 2011, the Fire Retardant coating category is eliminated and coatings with fire retardant properties will be subject to the VOC limit of their primary category (e.g., Flat Nonflat, ECT.).
- U. Flat Coating: A coating not defined under any other definition in this Rule and that registers gloss less than 15 on an 85 degree meter or less than five on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9.
- V. Floor Coating: An opaque coating 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.
- W. Form-Release Compound: A coating labeled and formulated for application to a concrete form to prevent freshly poured concrete from bonding to the form. The form may consist of wood, metal or some material other than concrete.
- X. Graphic Arts Coating or Sign Paint: A coating labeled and formulated for hand-application by artists using brush, air brush, or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers and bulletin enamels.

- Y. 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).
- Z. Industrial Maintenance Coating: High performance architectural coatings 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 V.Z.1. through V.Z.5. and labeled as specified in Subsection VII.A.5:
1. Immersion in water, wastewater or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
  2. Acute or chronic exposure to corrosive, caustic or acidic agents or to chemicals, chemical fumes or chemical mixtures or solution;
  3. Frequent exposure to temperatures above 121°C (250°F);
  4. Frequent heavy abrasion, including mechanical wear and frequent scrubbing with industrial solvents, cleansers or scouring agents; or
  5. Exterior exposure of metal structures and structural components.
- AA. Low Solids Coating: A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material as recommended for application by the manufacturer. The VOC content for Low Solids Coatings shall be calculated in accordance with section V.JJJ.
- BB. Magnesite Cement Coating: A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- CC. Manufacture's Maximum Thinning Recommendations: The maximum recommendation for thinning that is indicated on the label or lid of the coating container.
- DD. Mastic Texture Coating: A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a single coat of at least 10 mils (at least 0.010 inch) dry film thickness.
- EE. 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 a resinated fiber mat.
- FF. Metallic Pigmented Coating: A coating that is labeled and formulated to provide a metallic appearance. Metallic Pigmented coatings 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 SCAQMD Method 318-95,

incorporated by reference in Subsection VII.C.10. The Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers.

- GG. Multicolor Coating: A coating packaged in a single container and that is labeled and formulated to exhibit more than one color when applied in a single coat.
- HH. Nonflat Coating: coating not defined under any other definition in this Rule and that registers a gloss of 15 or greater on an 85 degree meter and 5 or greater on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9.
- II. Nonflat - High Gloss Coating: A nonflat coating that registers a gloss of 70 or above on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9. Nonflat - High Gloss coatings must be labeled in accordance with subsection VII.A.10.
- JJ. 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.
- KK. Pearlescent: Exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pear.
- LL. Plywood: A panel product consisting of layers of wood veneers or composite core pressed together with resin. Plywood includes panel products made by either hot or cold pressing (with resin) veneers to a platform.
- MM. Post Consumer Coating: Finished coatings generated by a business or consumer that have served their intended end uses, and are recovered from or otherwise diverted from the waste stream for the purpose of recycling.
- NN. Pre-Treatment Wash Primer: A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-06, incorporated by reference in Subsection VII.C.11. labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.
- OO. Primer, Sealer, and Undercoater: A coating labeled and formulated for one or more of the following purposes:
1. To provide a firm bond between the substrate and the subsequent coatings; or
  2. To prevent subsequent coatings from being absorbed by the substrate; or
  3. To prevent harm to subsequent coatings by materials in the substrate; or
  4. To provide a smooth surface for the subsequent application of coatings; or
  5. To provide a clear finish coat to seal the substrate; or
  6. To block materials from penetrating into or leaching out of a substrate.
- PP. 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. Reactive Penetrating Sealers must penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. Reactive Penetrating Sealers 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:

1. 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 on standardized test specimens, in accordance with one or more of the following standards, incorporated by reference in subsection VII.C.22: ASTM C67-07, or ASTM C97-02, or ASTM C140-06;
2. The Reactive Penetrating Sealer must not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M-05, incorporated by reference in subsection VII.C.23;
3. Products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria listed in the National Cooperative highway Research Report 244 (1981), incorporated by reference in subsection VII.C.24; and
4. Reactive Penetrating Sealers must be labeled in accordance with subsection VII.A.8.

QQ. Recycled Coating: An architectural coating formulated such that it contains a minimum of 50% by volume post-consumer coating, with a maximum of 50% by volume secondary industrial materials or virgin materials.

RR. 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.

SS. Roof Coating: A non-bituminous coating labeled and formulated for application to roofs for the primary purpose of preventing water penetration, reflecting ultraviolet light, or reflecting solar radiation.

TT. Rust Preventative Coating: A coating formulated to prevent corrosion of metal surfaces for one or more of the following applications:

1. Direct-to-metal coating; or
2. Coating intended for application over rusty, previously coated surfaces.

The Rust Preventative category does not include the following:

3. Coatings that are required to be applied as a topcoat over a primer; or
4. Coatings that are intended for use on wood or any other nonmetallic surface.

Rust Preventative coatings are for metal substrates only and must be labeled as such, in subsection VII.A.6.

- UU. 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.
- VV. 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.
- WW. Shellac: A clear or opaque coating formulated solely with resinous secretions of the lac beetle (*Lacifer lacca*), and formulated to dry by evaporation without a chemical reaction.
- XX. 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).
- YY. Solicit: To require for use or to specify, by written or oral contract.
- ZZ. Specialty Primer, Sealer and Undercoater: A coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire damage; smoke damage; or water damage. Specialty Primers, Sealers, and Undercoaters must be labeled in accordance with subsection VII.A.7.
- AAA. Stain: A semitransparent or opaque coating labeled and formulated to change the color of a surface but not conceal grain pattern or texture.
- BBB. Stone Consolidant: A coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weather or other decay mechanisms. Stone Consolidants must penetrate into substrates to create bonds between particles and consolidate deteriorated material. Stone Consolidants must be specified and used in accordance with ASTM E2167-01, incorporated by reference in subsection VII.C.25.
- Stone Consolidants are for professional use only and must be labeled as such, in accordance with the labeling requirements in subsection VII.C.10.
- CCC. 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.
- DDD. Tint Base: An architectural coating to which colorant is added after packaging in sale units to produce a desired color.
- EEE. 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.

FFF. 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. Tub and Tile Refinish coatings must meet all of the following criteria:

1. The coating must have a scratch hardness of 3H or harder and a gouge hardness of 4H or harder. This must be determined on bonderite 1000, in accordance with ASTM D3363-05, incorporated by reference in subsection VII.C.17;
2. The coating must have a weight loss of 20 milligrams or less after 1000 cycles. This must be determined with CS-17 wheels on bonderite 1000, in accordance with ASTM D4060-07, incorporated by reference in subsection VII.C.18;
3. The coating must withstand 1000 hours or more of exposure with few or no #8 blisters. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99, and ASTM D714-02e1, incorporated by reference in subsection VII.C.19; and
4. The coating must have an adhesion rating of 4B or better after 24 hours of recovery. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99 and ASTM D3359-02, incorporated by reference in subsection VII.C.16.

GGG. 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.

HHH. Virgin Materials: Materials that contain no post-consumer coatings or secondary industrial materials.

III. Volatile Organic Compound (VOC): Any volatile compound containing at least one atom of carbon, excluding Exempt Compounds as listed in Rule 102 Definitions.

JJJ. VOC Actual: VOC Actual is the weight of VOC per volume of coating and it is calculated with the following equation:

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

Where:

VOC Actual = the grams of VOC per liter of coating (also known as Material VOC)

$W_s$  = 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

KKK. VOC Content: The weight of VOC per volume of coating. VOC content is VOC Regulatory, as defined in section V.LLL, for all coatings except those in the Low Solids category. For all coatings in the Low Solids category, the VOC Content is VOC Actual, as defined in section V.JJJ. If the coating is a multi-component product, the VOC content is VOC Regulatory 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.

LLL. VOC Regulatory: VOC Regulatory is the weight of VOC per volume of coating, less the volume of water and exempt compounds. It is calculated with the following equation:

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

Where:

VOC Regulatory = grams of VOC per liter of coating, less water and exempt compounds (also known as Coating VOC)

$W_s$  = 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

MMM. 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 the substrate.

Waterproofing Membranes are intended for the following waterproofing applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials. Waterproofing Membranes must meet the following criteria:

1. Coating must be applied in a single coat of at least 25 mils (at least 0.025 inch) dry film thickness; and
2. Coatings must meet or exceed the requirements contained in ASTM C836-06, incorporated by reference in subsection VII.C.20.

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.).

NNN. Wood Coatings: Coatings labeled and formulated for application to wood substrates only. The Wood Coatings category includes the following clear and semitransparent coatings: lacquers; varnishes; sanding sealers; penetrating oils; clear stains; wood conditioners used as undercoats; and wood sealers used as topcoats. The Wood Coatings category also includes the following opaque wood coatings: opaque lacquers; opaque sanding sealers; and opaque lacquer undercoats. The Wood Coatings 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 VII.A.11.

- OOO. Wood Preservative: A coating labeled and formulated to protect exposed wood from decay or insect attack, registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, et seq.) and with the California Department of Pesticide Regulation.
- PPP. Wood Substrates: 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.
- QQQ. Zinc-Rich Primer: Is a coating that meets all of the following specifications:
1. Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids;
  2. Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings; and
  3. Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection VII.A.12.

## **VI. Requirements**

- A. VOC Content Limits: No person except as provided in Subsections VI.B. and VI.C., shall:
1. Manufacture, blend, or repackage for sale within the District;
  2. Supply, sell or offer for sale within the District; or
  3. Solicit for application or apply within the District, any architectural coating with a VOC content in excess of the corresponding VOC Content limit specified in the Table of Standards, after the specified effective date in the Table of Standards. Limits are expressed as VOC Regulatory, thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.
- B. Most Restrictive VOC Limit: If a coating meets the definition in Section V for one or more specialty coating categories that are listed in the Table of Standards, 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 the Table of Standards.

With the exception of the specialty coating categories specified in subsections VI.B.1 through VI.B.12, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards, the most restrictive (or lowest) VOC content shall apply. This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on 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.

1. Metallic pigmented coatings.
  2. Shellacs.
  3. Pretreatment wash primers.
  4. Industrial maintenance coatings.
  5. Low-solids coatings.
  6. Wood preservatives.
  7. High-temperature coatings.
  8. Bituminous roof primers.
  9. Specialty primers, sealers and undercoaters.
  10. Aluminum roof coatings.
  11. Zinc-rich primers.
  12. Wood Coatings.
- C. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to the VOC Content limit effective date(s) specified for that coating in the Table of Standards, that complied with the VOC Content limit in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified VOC Content limit effective date(s) listed in the Table of Standards. Such a coating may be applied at any time, both before and after the specified effective date. This subsection VI.C does not apply to any coating that does not display the date or date-code required by subsection VII.A.1.
- D. Painting Practices: 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. Such architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.
- E. Thinning: No person who applies or solicits application of any architectural coating shall apply a coating thinned to exceed the applicable VOC limit specified in the Table of Standards.
- F. Coatings Not Listed in the Table of Standards: For any coating that does not meet any of the definitions for specialty coatings categories listed in the Table of Standards, the VOC content limit shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections V.U., V.HH. and V.II. and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in the Table of Standards shall apply.

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**TABLE OF STANDARDS FOR ARCHITECTURAL COATINGS**  
**VOC CONTENT LIMITS EXPRESSED IN GRAMS PER LITER**

<b>Flat Coatings</b>	50	
<b>Nonflat Coatings</b>	100	
<b>Nonflat - High Gloss Coatings</b>	150	
Aluminum Roof Coatings	400	
Basement Specialty Coatings	400	
Bituminous Roof Coatings	50	
Bituminous Roof Primers	350	
Bond Breakers	350	
Concrete Curing Compounds	350	
Concrete/Masonry Sealers	100	
Driveway Sealers	50	
Dry Fog Coatings	150	
Faux Finishing Coatings	350	
Fire Resistive Coatings	350	
Floor Coatings	100	
Form-Release Compounds	250	
Graphic Arts Coatings (Sign Paints)	500	
High Temperature Coatings	420	
Industrial Maintenance Coatings	250	
Low Solids Coatings <sup>2</sup>	120	
Magnesite Cement Coatings	450	
Mastic Texture Coatings	100	
Metallic Pigmented Coatings	500	
Multi-Color Coatings	250	
Pre-Treatment Wash Primers	420	
Primers, Sealers, and Undercoaters	100	
Reactive Penetrating Sealers	350	
Recycled Coatings	250	
Roof Coatings	50	
Rust Preventative Coatings	400	250
Shellacs:		
• Clear	730	
• Opaque	550	
Specialty Primers, Sealers, and Undercoaters	350	100
Stains	250	
Stone Consolidants	450	
Swimming Pool Coatings	340	
Traffic Marking Coatings	100	
Tub and Tile Refinish Coatings	420	
Waterproofing Membranes	250	
Wood Coatings	275	
Wood Preservatives	350	
Zinc-Rich Primers	340	

1. Limits are expressed as VOC Regulatory thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.
2. Limit is expressed as VOC Actual.

## **VII. Administrative Requirements**

A. Labeling Requirements: Each manufacturer of any architectural coating subject to this Rule shall display information listed in Subsections VII.A.1. through VII.A.12 on coating container (or label) in which coating is sold or distributed.

1. Date Code: The date coating was manufactured, or date code representing date, shall be indicated on label, lid or bottom of container. If manufacturer uses a date code for any coating, manufacturer shall file an explanation of each code with the Executive Officer of the ARB.
2. Thinning Recommendations: A statement of manufacturer's recommendation regarding thinning of coating shall be indicated on label or lid of container. This requirement does not apply to thinning of architectural coatings with water. If thinning of coating prior to use is not necessary, recommendation must specify coating is to be applied without thinning.
3. 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:
  - a. Maximum VOC Content as determined from all potential product formulations; or
  - b. VOC Content as determined from actual formulation data; or
  - c. VOC Content as determined using the test methods in subsection VII.C.2.

If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the container must display the 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. VOC Content shall be determined as defined in subsections V.JJJ, V.KKK, and V.LLL.

4. Faux Finishing Coatings: 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."
5. Industrial Maintenance Coatings: The labels of all Industrial Maintenance coatings shall prominently display the statement "For industrial use only" or "For professional use only" or "Not for residential use" or "Not intended for residential use".
6. Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display statement "For Metal Substrates Only".
7. Specialty Primers, Sealers and Undercoaters: Until January 1, 2012, the labels of all specialty primers, sealers and undercoaters shall prominently display one or more of following descriptions:

- a. For fire damaged substrates;
  - b. For smoke damaged substrates;
  - c. For water damaged substrates; or
8. Reactive Penetrating Sealers: The labels of all Reactive Penetrating Sealers shall prominently display the statement “Reactive Penetrating Sealer”.
9. Stone Consolidants: The labels of all Stone Consolidants shall prominently display the statement “Stone Consolidant – For Professional Use Only”.
10. Nonflat-High Gloss Coatings: The labels of all nonflat-high gloss coatings shall prominently display words “High Gloss”.
11. Wood Coatings: The labels of all Wood Coatings shall prominently display the statement “For Wood Substrates Only”.
12. Zinc Rich Primers: The labels of all Zinc Rich Primers shall prominently display one of the following statements “Not For Residential Use” or “Not Intended For Residential Use” or “For Industrial Use Only” or “For professional use only”.

B. Reporting Requirements

1. Sales Data: A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, 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:
- a. The name and mailing address of the manufacturer;
  - b. The name, address and telephone number of a contact person;
  - c. The name of the coating product as it appears on the label and the applicable coating category;
  - d. Whether the product is marketed for interior or exterior use or both;
  - e. The number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);
  - f. 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 liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;
  - g. The names and CAS numbers of the VOC constituents in the product;
  - h. The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition, as listed in Rule 102 Definitions;

- i. Whether the product is marketed as solventborne, waterborne, or 100% solids;
  - j. Description of resin or binder in the product;
  - k. Whether the coating is a single-component or multi-component product;
  - l. The density of the product in pounds per gallon;
  - m. The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC; definition, as listed in Rule 102 Definitions
  - n. The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition, as listed in Rule 102 Definitions.
2. All sales data listed in subsection VII.B.1.a to VII.B.1.n shall be maintained by the responsible official for a minimum of three years. Sales data submitted by the responsible official to the Executive Officer of the ARB 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. Test Methods

1. Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards, the VOC content of a coating shall be determined as defined in subsection V.JJJ, V.KKK, or V.LLL. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.
2. VOC Content of Coatings: To determine physical properties of a coating in order to perform calculations in Subsections V.LLL. or V.JJJ., the reference method for VOC content shall be U.S. EPA Method 24, except as provided in Subsections VII.C.3 and VII.C.4. An alternative method to determine VOC content of coatings is SCAQMD Method 304-91 (Revised 1996), incorporated by reference in Subsection VII.C.4. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1993), BAAQMD Method 43 (Revised 1996), or BAAQMD Method 41 (Revised 1995), as applicable, incorporated by reference in Subsection VII.C.12, VII.C.13, and VII.C.14, respectively.

To determine VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Subsection VII.C.3.,

formulation data, or any other reasonable means for predicting coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between results of a Method 24 test and any other means for determining VOC content, Method 24 test results will govern, except when an alternative method is approved as specified in Subsection VII.C.3. The District Air Pollution Control Officer (APCO) may require manufacturer to conduct a Method 24 analysis.

3. Alternative Test Methods: Other test methods demonstrated to provide results acceptable for purposes of determining compliance with Subsection VII.C.2., after review and approved in writing by the staffs of District, ARB and U.S. EPA, may also be used.
4. Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials", "SCAQMD Laboratory Methods of Analysis for Enforcement Samples" (see Subsection VII.C.2.).
5. 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" (see Subsection VII.C.2.).
6. Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by procedures in 40 CFR Part 59, Subpart D, Appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings". (This method has not been approved for methacrylate multicomponent coatings used for other purposes than traffic marking coatings or for other classes of multicomponent coatings).
7. Flame Spread Index: The flame spread index of a fire retardant coating shall be determined by ASTM E 84-07, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see Subsection V.T., Fire Retardant Coating).
8. Fire Resistance Rating: The fire resistance rating of a fire resistive coating shall be determined by ASTM E 119-07, "Standard Test Methods for Fire Tests of Building Construction Materials" (see Subsection V.S., Fire Resistive Coating).
9. Gloss Determination: Gloss of a coating shall be determined by ASTM D 523-89 (1999), "Standard Test Method for Specular Gloss" (see Subsections V.U., V.HH., and V.II. Flat Coating, Nonflat Coating, and Nonflat-High Gloss Coating).
10. Metal Content of Coatings: Metallic content of a coating shall be determined by SCAQMD Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," *SCAQMD Laboratory Methods of Analysis for*



*Enforcement Samples* (see Subsections V.C., V.R., and V.FF; Aluminum Roof, Faux Finishing, and Metallic Pigmented Coating).

11. Acid Content of Coatings: The acid content of a coating shall be determined by ASTM D 1613-06, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediaries Used in Paint, Varnish, Lacquer and Related Products” (see Subsection V.NN., Pretreatment Wash Primer).
12. Exempt Compounds: The content of compounds pursuant to U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), “Determination of Exempt Compounds”, “SCAQMD Laboratory Methods of Analysis for Enforcement Samples” (see Subsection V.III., Volatile Organic Compound and Subsection VII.C.2.).
13. Exempt Compounds–Siloxanes: Exempt compounds that are cyclic, branched or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section VIII by BAAQMD Method 43, “Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials”, “BAAQMD Manual of Procedures”, Volume III, adopted 11/6/96 (see Subsection V.III., Volatile Organic Compound and Subsection VII.C.2.).
14. Exempt Compounds– Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride shall be analyzed as an exempt compound for compliance with Section VIII by BAAQMD Method 41, “Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride”, “BAAQMD Manual of Procedures”, Volume III, adopted 12/20/95 (see Subsection V.III., Volatile Organic Compounds and Subsection VII.C.2.).
15. 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” (see section V.F., Basement Specialty Coating).
16. 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 V.FFF., Tub and Tile Refinish Coating).
17. Tub and Tile Refinish Coating Hardness: ASTM D 3363-05, “Standard Test Method for Film Hardness by Pencil Test” (see section V.FFF., Tub and Tile Refinish Coating).
18. Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser” (see section V.FFF., Tub and Tile Refinish Coating).
19. 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” (see section V.FFF., Tub and Tile Refinish Coating).

20. Waterproofing Membrane: ASTM C836-06, “Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course” (see section V.MMM., Waterproofing Membrane).
21. 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” (see section V.F., Basement Specialty Coating).
22. 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” (see section V.PP., Reactive Penetrating Sealer).
23. Reactive Penetrating Sealer Water Vapor Transmission: ASTM E96/E96M-05, “Standard Test Method for Water Vapor Transmission of Materials” (see section V.PP., Reactive Penetrating Sealer).
24. Reactive Penetrating Sealer - Chloride Screening Applications: National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the Protection of Bridge Structures” (see section V.PP., Reactive Penetrating Sealer).
25. Stone Consolidants: ASTM E2167-01, “Standard Guide for Selection and Use of Stone Consolidants” (see section V.BBB., Stone Consolidant).

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6.30.72

RULE 410.2 - DISPOSAL AND EVAPORATION OF SOLVENTS

A person shall not during any one day dispose of a total of more than 1½ gallons of any photochemically reactive solvent as defined in Rule 410 (k), or of any material containing more than 1½ gallons of any such photochemically reactive solvent into the atmosphere.

This Rule shall become effective on January 1, 1974 for all sources which are either in operation or under construction on June 21, 1972. This Rule shall be effective for all other sources on June 21, 1972.

6/23/98

RULE 410.3 Organic Solvent Degreasing Operations - Adopted 6/26/79, Amended 11/27/79, 6/29/81, 5/6/91, 3/7/96, 5/7/98

I. Applicability

Requirements of this Rule shall apply to organic solvent degreasing operations.

II. Definitions

- A. Cold Cleaner: any batch loaded, non-boiling solvent degreaser.
- B. Condenser Equipment: any equipment, such as refrigerated or non-refrigerated freeboard chillers, condenser coils, or water jackets, used to condense solvent vapor in a vapor degreaser.
- C. Condenser Flow Switch: safety switch which shuts off sump heat if condenser water fails to circulate or if condenser water temperature rises above designated operating temperature.
- D. Conveyorized Degreaser: any continuously loaded, conveyorized solvent degreaser, either boiling or non-boiling.
- E. Degreaser: tank, tray, drum, or other container in which objects to be cleaned are exposed to a liquid or vapor degreasing solvent.
- F. Freeboard Height:
  - 1. For a cold cleaning degreaser, distance from top of solvent or solvent drain to top of degreaser, based on inside tank dimensions.
  - 2. For a remote reservoir degreaser, distance from solvent drain to top of degreaser, based on inside dimensions.
  - 3. For a vapor degreaser, distance from solvent air-vapor interface to top of basic degreaser tank, based on inside tank dimensions.
- G. Freeboard Ratio: freeboard height divided by smaller of length or width of degreaser.
- H. High Volatility Solvent: any solvent that is not a low volatility solvent.
- I. Low Volatility Solvent: any solvent, including emulsions, containing no more than 2% volatile organic compounds by weight as determined by U.S. EPA Test Method 24.

- J. Make-Up Solvent: solvent added to a degreaser to replace solvent lost through evaporation, carryout, splashing, leakage, or disposal.
- K. Open-Top Vapor Degreaser: any batch loaded, boiling solvent degreaser.
- L. Remote Reservoir: liquid solvent tank which is completely enclosed except for a solvent return opening no larger than 100 cm<sup>2</sup> (15 in<sup>2</sup>) which allows used solvent to drain into it from a separate solvent sink or work area and which is not accessible for soaking parts.
- M. Solvent: any liquid containing an organic compound or combination of organic compounds used as diluent, thinner, dissolver, viscosity reducer, cleaning agent, or other similar uses. These liquids are principally derived from petroleum and include petroleum distillates, chlorinated hydrocarbons, chlorofluorocarbons, ketones, and alcohols. Solutions, emulsions, and dispersions of water and soap, or water and detergent, are not considered organic solvents. Soaps and detergents are considered water based surfactants.
- N. Spray Safety Switch: safety switch which cuts off spray applicator pump if vapor level drops below a specified level.
- O. Vapor Level Control Thermostat: safety switch which turns off sump heater if temperature rises above design operating level at center of air-vapor interface.
- P. Volatile Organic Compound (VOC): any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.
- Q. Ultrasonic: enhancement of cleaning process by vibrating solvent with high frequency sound waves, causing implosion of microscopic vapor cavities within liquid solvent.
- R. Wipe Cleaning: method of cleaning which utilizes a cloth, cotton swab or other material, wetted with a solvent, which is physically rubbed on surface to be degreased.

### III. Exemptions

- A. Provisions of this Rule do not apply to wipe cleaning.
- B. Provisions of this Rule, except Subsection IV.A.3.b., shall not apply to degreasing equipment using low volatility solvent.
- C. Provisions of this Rule shall not apply to single pieces of degreasing equipment which use unheated solvent, and which have liquid surface area of less than 929 cm<sup>2</sup> (1.0 ft<sup>2</sup>). Such equipment is not exempt if aggregate liquid surface area of all degreasers of this type at the stationary source is greater than 0.93 m<sup>2</sup> (10 ft<sup>2</sup>). (See Rule 210.1, Section II for definition of Stationary Source.)

- D. Provisions of this Rule shall not apply to degreasing equipment using halogenated solvents. Such equipment shall comply with Rule 423 (Subpart T of Part 63).

#### IV. Requirements

- A. Cold Cleaner Requirements: Any person who operates a cold cleaner shall conform to following requirements:

1. General Operating Requirements:

- a. Degreaser equipment and any emission control equipment shall be operated and maintained in proper working order;
- b. Solvent leaks shall be corrected immediately, or degreaser shut down and drained;
- c. No device designed to cover solvent shall be opened or removed unless processing work in degreaser or performing maintenance on degreaser;
- d. If solvent flow is utilized, only continuous fluid stream (not fine, atomized, or shower type spray) shall be used at pressure which does not cause liquid solvent to splash outside of solvent container;
- e. No porous or absorbent materials such as cloth, leather, wood, or rope shall be degreased;
- f. No solvent shall be stored or disposed, including waste solvent and solvent residues, in such manner to cause or allow its evaporation into atmosphere;
- g. Waste solvent and waste solvent residues shall be managed in compliance with California and Federal requirements applicable to solid wastes, hazardous wastes, or recyclable materials;
- h. Solvent agitation, where necessary, shall be achieved only by pump circulation, by means of mixer, or with ultrasonics. Air agitation shall not be used;
- i. Cleaned parts shall be drained for at least 15 seconds after cleaning or until dripping ceases; and
- j. Solvent spraying shall be done at least 4 inches below top of vapor layer.

2. Design Requirements (Except Remote Reservoir Cold Cleaners):

- a. Freeboard height shall provide freeboard ratio greater than or equal to 0.75;
- b. Container (degreaser) shall be provided for solvent and objects being degreased;
- c. Apparatus or cover shall be provided which prevents solvent from evaporating when not degreasing objects in degreaser. Such cover shall be designed to be opened and closed easily with one hand;
- d. Device shall be provided for draining cleaned parts such that drained solvent is returned to a reservoir;
- e. If high volatility solvent is used, drainage device shall be internal, so that degreased objects are enclosed under a cover while draining. Such drainage device may be external for applications where internal type cannot fit into cleaning system;
- f. Permanent, conspicuous label or sign shall be affixed which lists all requirements of Subsection IV.A.1.; and
- g. Permanent, conspicuous mark shall be placed locating maximum allowable solvent level which conforms to applicable freeboard requirement of Subsection IV.A.2.a.

3. Control Requirements (Except Remote Reservoir Cold Cleaners)

- a. If high volatility solvent is used, then one of following control devices shall be used:
  - 1) Water cover if solvent is insoluble in and heavier than water; or
  - 2) Any other system of emission control demonstrated to have overall capture and control efficiency equivalent to at least 85%.
- b. If low volatility solvent is used, freeboard height shall be at least six inches.

4. Design Requirements (Remote Reservoir Cold Cleaners)

- a. If high volatility solvent is used, cover shall be provided for drain when no objects are being degreased;
- b. Freeboard height of at least six inches shall be maintained;
- c. Sink-like work area shall be provided which is sloped sufficiently towards drain

to preclude pooling of solvent;

- d. Workplace fans shall not be used in manner which disturbs air-vapor interface;
- e. Permanent, conspicuous label or sign shall be affixed summarizing applicable operating requirements of Subsection IV.A.1.; and
- f. Permanent conspicuous mark shall be placed locating maximum allowable solvent level which conforms to applicable freeboard requirement of Subsection IV.A.4.b.

B. Open-Top Vapor Degreasers: Any person who operates an open-top vapor degreaser shall conform to following requirements:

1. General Operating Requirements:

- a. Degreaser equipment and any emission control equipment shall be operated and maintained in proper working order;
- b. Solvent leaks shall be corrected immediately, or degreaser shut down and drained;
- c. No device designed to cover solvent shall be removed or opened unless degreasing objects work in degreaser or performing maintenance on degreaser;
- d. If solvent flow is utilized, only continuous fluid stream (not fine, atomized, or shower type spray) shall be used at pressure which does not cause liquid solvent to splash outside of solvent container;
- e. No porous or absorbent materials such as cloth, leather, wood, or rope shall be degreased;
- f. No solvent, including waste solvent and solvent residues, shall be stored or disposed in such manner as will cause or allow its evaporation into atmosphere;
- g. Waste solvent and waste solvent residues shall be managed in compliance with California and Federal requirements applicable to solid wastes, hazardous wastes, or recyclable materials;
- h. Solvent agitation, where necessary, shall be achieved only by pump circulation, by means of mixer, or with ultrasonics. Air agitation shall not be used;
- i. Objects to be degreased shall not occupy more than half of degreaser's open top



area;

- j. Solvent spraying shall be done at least 4 inches below top of vapor layer;
- k. Water shall not be visually detectable in solvent returning from water separator to solvent cleaner;
- l. For open-top vapor degreasers equipped with a lip exhaust, exhaust shall be turned off when degreaser is covered;
- m. Solvent carry-out shall be minimized by implementing following measures:
  - 1. Rack degreased objects to allow complete drainage,
  - 2. Move objects in and out of degreaser at less than 3.3 m/min (2.2 inches/sec),
  - 3. Degrease objects in vapor zone until condensation ceases,
  - 4. Allow degreased objects to dry within degreaser until visually dry, and
  - 5. Tip out any pools of solvent on degreased objects before removal;
- n. If unit is equipped with refrigerated freeboard chiller and/or primary condenser, following procedures shall be followed:
  - 1. When starting up degreaser, cooling system shall be turned on before, or simultaneously with, sump heater, and
  - 2. When shutting down degreaser, sump heater shall be turned off before, or simultaneously with cooling system; and
- o. Exhaust ventilation shall not exceed  $20 \text{ m}^3/\text{min}$  per  $\text{m}^2$  ( $65 \text{ cfm}/\text{ft}^2$ ) of degreaser open area, unless necessary to meet OSHA requirements. Ventilation fans shall be positioned to not disturb vapor zone.

2. Design Requirements:

- a. Freeboard height shall provide a freeboard ratio greater than or equal to 0.75;
- b. Container (degreaser) shall be provided for solvent and objects being degreased;
- c. An apparatus or cover shall be provided, which prevents solvent from evaporating when not degreasing objects in degreaser. Cover shall be designed

to be opened and closed easily without disturbing vapor zone;

- d. Device shall be provided for draining degreased objects such that drained solvent is returned to a reservoir; and
- e. Permanent, conspicuous label or signs shall be affixed which lists all operating requirements of Subsection IV.B.1.

3. Control Requirements: One of following or combination of following control devices shall be utilized:

- a. Condenser equipment with chilled air blanket temperature measured in degrees F at coldest point on vertical axis in center of solvent cleaner shall be operated at either temperature no greater than 30% of initial boiling point of the solvent used, or 41°F;
- b. Enclosed design (cover or door opens only when dry object to be degreased is actually entering or exiting degreaser);
- c. Carbon adsorption system which ventilates air-vapor interface at minimum rate of 15 m<sup>3</sup>/min per m<sup>2</sup> (50 cfm/ft<sup>2</sup>), but not greater than 20 m<sup>3</sup>/min per m<sup>2</sup> (65 cfm/ft<sup>2</sup>), unless required by OSHA standards, and exhausts less than 25 ppm of solvent by volume over complete adsorption cycle, and with overall capture and control efficiency of 85%; or
- d. Any other system of emission control demonstrated to have overall capture and control efficiency of at least 85%.

4. Safety Switch Requirements:

- a. Degreaser shall be equipped with condenser flow switch with solvent temperature indicator, except where non-water refrigerant is used;
- b. Degreaser shall be equipped with spray safety switch; and
- c. Degreaser shall be equipped with manual reset vapor level control thermostat with solvent temperature indicator.

C. Conveyorized Solvent Degreaser: Any person who operates a conveyorized solvent degreaser shall conform to following requirements:

1. General Operating Requirements:

- a. Degreaser equipment and emission control equipment shall be operated and maintained in proper working order;
  - b. Solvent leaks shall be corrected immediately, or degreaser shut down and drained;
  - c. If solvent flow is utilized, degreaser shall use only continuous fluid stream (not fine, atomized, or shower type spray) at pressure which does not cause liquid solvent to splash outside of solvent container;
  - d. No porous or absorbent materials such as cloth, leather, wood, or rope shall be degreased;
  - e. No solvent, including waste solvent and solvent residues, shall be stored or disposed in such manner as will cause or allow its evaporation into atmosphere;
  - f. Waste solvent and waste solvent residues shall be managed in compliance with California and Federal requirements applicable to solid wastes, hazardous wastes, or recyclable materials;
  - g. Solvent agitation, where necessary, shall be achieved only by pump circulation, by means of a mixer, or with ultrasonics. Air agitation shall not be used;
  - h. Solvent carryout shall be minimized by implementing following measures:
    - 1. Racking degreased objects to allow complete drainage; and
    - 2. Maintaining vertical conveyor speed at less than 3.3 meters/min. (2.2 inches/sec);
  - i. Exhaust ventilation shall not exceed  $20 \text{ m}^3/\text{min}$  per  $\text{m}^2$  ( $65 \text{ cfm}/\text{ft}^2$ ) of degreaser opening, unless necessary to meet OSHA requirements. Ventilation fans shall be positioned to not disturb vapor zone; and
  - j. Down-time cover shall be placed over entrances and exits of conveyORIZED degreasers immediately after conveyor and exhaust are shutdown and removed just before start up.
2. Design Requirements:
- a. Container shall be provided for solvent and objects being degreased;
  - b. Freeboard height shall provide freeboard ratio greater than or equal to 0.75;

- c. An apparatus or cover shall be provided which prevents solvent from evaporating when not degreasing objects. Covers shall be provided for closing off entrance and exit during non-operation;
  - d. Device for draining degreased objects shall be provided such that drained solvent is returned to a reservoir;
  - e. For degreasers with greater than 2 m<sup>2</sup> air/vapor interface, hood or enclosure shall be provided with device or ductwork to collect degreaser emissions, exhausting to carbon adsorber or equivalent control device;
  - f. Drying tunnel or other device, such as rotating basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor shall be provided; and
  - g. Entrances and exits shall be minimized by silhouetting objects to be degreased so that average clearance between objects and edge of degreaser opening is either less than 10 cm (4in.) or less than 10 percent of width of opening, whichever is less.
  - h. Permanent, conspicuous label or sign shall be affixed which lists all operating requirements of Subsection IV.C.1.
3. Control Requirements: One of following or combination of following control devices shall be utilized:
- a. Condenser equipment with chilled air blanket temperature measured in degrees F at coldest point on vertical axis in center of solvent cleaner shall be operated at temperature no greater than 30% of initial boiling point of solvent used, or 41°F;
  - b. Carbon adsorption system which ventilates air-vapor interface at minimum rate of 15 m<sup>3</sup>/min per m<sup>2</sup> (50 cfm/ft<sup>2</sup>), but not greater than 20 m<sup>3</sup>/min per m<sup>2</sup> (65 cfm/ft<sup>2</sup>), unless required by OSHA standards, and exhausts less than 25 ppm of solvent by volume over complete adsorption cycle, and with overall capture and control efficiency of 85% by weight; or
  - c. Any other system of emission control demonstrated to have overall capture and control efficiency of at least 85%.
4. Safety Switch Requirements:
- a. Degreaser shall be equipped with condenser flow switch with solvent temperature indicator, except where non-water refrigerant is used;
  - b. Degreaser shall be equipped with spray safety switch; and

- c. Degreaser shall be equipped with manual reset vapor level control thermostat with solvent temperature indicator.

V. Administrative Requirements

A. Record Keeping:

1. Any person subject to requirements of this Rule shall have solvent manufacturer specification sheets available for review and shall maintain records which show on quarterly basis, following information for each degreaser:
  - a. Type of degreaser,
  - b. Type of solvent,
  - c. Solvent(s) initial boiling point,
  - d. Volume of solvent used, and
  - e. Volume of make-up solvent added to degreaser.
2. Each time waste solvent or waste solvent residues are removed from facility, records shall be kept confirming compliance with acceptable disposal methods listed in Subsections IV.A.1.g., IV.B.1.g., or IV.C.1.f.
3. Records shall be maintained for minimum of two years and made available for inspection by Control Officer upon request.

B. Test Methods:

Following test methods shall apply to this Rule:

1. Initial boiling point of solvent shall be determined by ASTM 1078-78;
2. Where "add-on" control equipment is utilized, collection efficiency shall be determined using U.S. EPA document entitled "Model Regulatory Language for Capture Efficiency Testing" dated 8/3/90;
3. Analysis of halogenated exempt compounds shall be made using CARB Test Method 432;
4. VOC emissions shall be measured by using U.S. EPA Test Method 25, 25a, or 25b, as applicable, and analysis of halogenated exempt compounds shall be made with CARB Test Method 422; and
5. Exhaust ventilation rates shall be measured using U.S. EPA Test Method 2, 2a, 2b, or 2c.

**RULE 410.4 Metal, Plastic, and Pleasure Craft Parts and Products Coating Operations -**  
Adopted 6/26/79, Amended 4/11/91, 7/12/93, 4/6/95, 3/7/96, 3/13/14

**I. Purpose**

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the coating of metal parts and products, large appliances parts and products, metal furniture, plastic parts and products, automotive/transportation and business machine plastic parts and products, and pleasure crafts, and from cleaning, storage, and disposal of organic solvent solvents and waste solvent materials associated with such coating operations.

**II. Applicability**

Provisions of this Rule are enforceable upon amendment date and shall apply to surface coating of metal parts or products, large appliances parts or products, metal furniture, and plastic parts or products including automotive, transportation, and business machine, and pleasure crafts, and to the cleaning, storage, and disposal of all organic solvents and waste solvent materials associated with such coating operations.

**III. Definitions**

- A. Adhesive: A substance that is used to bond one surface to another.
- B. Aerosol Coating: A mixture of pigments, resins, and liquid and gaseous solvents and propellants packaged in a disposable container for hand-held application.
- C. Aerospace Vehicle: Any complete aircraft, helicopter, missile, or space vehicle.
- D. Air Dried Coating: Curing or drying a coating by heating the coated object above ambient temperature, but below a maximum of 90°C (194°F).
- E. Antifoulant Coating: A coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the EPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136, et seq).
- F. Antifouling Sealer/Tie Coat: A coating applied over Biocidal antifouling coating for the purpose of preventing release of biocides into the environment and/or to promote adhesion between an antifouling and a primer or other antifouling.
- G. APCO: Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- H. Application Equipment: A device used to apply or prepare a coating material for application.
- I. ASTM: American Society for Testing and Materials.

- J. Baked Coating: Curing or drying a coating by heating the coated object above ambient temperature to a temperature at, or above 90°C (194°F).
- K. Basecoat/Clearcoat: A two-step topcoat system in which a highly pigmented, often metallic, basecoat is followed by a clearcoat, resulting in a finish with high gloss
- L. Brush Coating: Manual application of coatings using brushes and rollers.
- M. Business Machine: A device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission, and photocopy machines
- N. California Air Resources Board (CARB or ARB): Air Resources Board of the California Environmental Protection Agency.
- O. Camouflage Coating: A coating applied on military equipment intended to conceal such equipment from detection.
- P. Clearcoat: A coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating..
- Q. Coating: A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes.
- R. Coating of Plastic Parts of Automobiles and Trucks: Coating of any plastic part that is or shall be assembled with other parts to form an automobile or truck.
- S. Coating of Plastic Parts of Business Machines: Coating of any plastic part that is or shall be assembled with other parts to form a business machine.
- T. Coils: Metal sheets or strips rolled into coils for further industrial or commercial use.
- U. Continuous Coating: An enclosed coating system where spray nozzles coat metal parts and products as they are conveyed through the enclosure. Water wash zones control the inlet and outlet of the enclosure and excess coating drains into a recirculation system.
- V. Dip Coating: The process in which a substrate is immersed in a solution (or dispersion) containing the coating and then withdrawn.
- W. Dissolver: An organic solvent that is added to an adhesive, coating, or ink in order to melt or to liquefy solid particles.
- X. Electric Dissipating Coating: A coating that rapidly dissipates a high-voltage electric charge.
- Y. Electrodeposition: A dip coating application method where the paint solids are given an electrical charge which is then attracted to a substrate.
- Z. Electrostatic Spray Application: Any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.

- AA. EMI/RFI Shielding: A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference, or static discharge.
- BB. Emission Control System: Any combination of capture systems and control devices used to reduce VOC emissions from automotive coating operations.
- CC. EPA: The United States Environmental Protection Agency.
- DD. Exempt Compounds: As defined in District Rule 102, Definitions, “Exempt Compounds”.
- EE. Extreme High Gloss Coating: A coating that, achieves at least 95% reflectance on a 60 degree meter when tested by ASTM Method D-523-89.
- FF. Extreme Performance Coating: Coating used on surface of metal parts or products, intended, during use, to be exposed to salt water, corrosives, caustics, acids, oxidizing agents, electromagnetic pulse, wind or ocean driven debris, repeated abrasion, mechanical wear, or temperatures consistently in excess of 250°F.:
- GG. Flow Coating: 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 a collection system.
- HH. Fog Coating: A coating that is applied to a plastic part for the purpose of color matching without masking in a molded-in texture. A fog coat shall be applied to a thickness of more than 0.5 mils of coating solids.
- II. Finish Primer/Surfacer: A coating applied with a wet film thickness of less than 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.
- JJ. Grams of VOC per Liter of Coating, Less Water and Exempt Compounds: The weight of VOC content per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per liter of coating, less water and exempt compounds} = \frac{W_s - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

Where:

- Ws = weight of volatile compounds (grams)
- Ww = weight of water (grams)
- Wec = weight of exempt compounds (grams)
- Vm = volume of material (liters)
- Vw = volume of water (liters)
- Vec = volume of exempt compounds (liters)



KK. Grams of VOC per Liter of Material: The weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{ec}}{V_m}$$

Where:

$W_s$  = weight of volatile compounds (grams)

$W_w$  = weight of water (grams)

$W_{ec}$  = weight of exempt compounds (grams)

$V_m$  = volume of material (liters)

LL. Heat Resistant Coating: A coating designed during normal use to withstand temperatures of at least 204°C (400°F).

MM. High Build Primer/Surfacer: A coating applied with a wet film thickness of 10 mils or more, prior to the application of a topcoat, for purposes of providing corrosion resistance, adhesion or subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

NN. High Performance Architectural Coating: A coating used to protect architectural subsections meeting requirements of Architectural Aluminum Manufacturers Association publication number AAMA 605.2-1980.

OO. High Temperature Coating: Any coating that is certified to withstand temperatures of at least 538°C (1000°F) for 24 hours.

PP. High Volume, Low Pressure (HVLP): 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 and with liquid supply pressure less than 50 psig.

QQ. Light-Duty Truck: Any truck, van, sport utility vehicle, or motor vehicle having a manufacturer's gross vehicle weight rating less than 6,001 pounds.

RR. Magnet Wire: Wire used in establishing electromagnetic field in equipment such as transformers, motors, generators, and magnetic tape recorders.

SS. Marine Vessel: Any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, including both salt water and fresh water vessels.

TT. Mask Coating: A thin film coating applied through a template to coat a small portion of a substrate.

UU. Metal Containers or Closures: The interior or exterior of formed metal cans, drums, pails, or crowns; or flat metal sheets intended to be formed into cans, drums, pails, lids, or crowns.

- VV. Metal Furniture: Includes, but is not limited to, the following types of products: household, office, institutional, laboratory, hospital, public building, restaurants, barber and beauty shop, and dental furniture, as well as components of these products. It also includes office and store fixtures, partitions, shelving, lockers, lamps, and lighting fixtures, and wastebaskets
- WW. Metallic/Iridescent Coating: Any coating which contains more than 5.0 g/l (0.042 lb/gal) of metal or iridescent particles, as applied, where such particles are visible in the dried film.
- XX. Metal Parts and Products: Any components or complete unit fabricated from metal, except those subject to coating requirements of other source-specific Rules.
- YY. Military Specification Coating: A coating which has a formulation approved by the United States Military Agency for use on military equipment.
- ZZ. Mold Seal Coating: The initial coating applied to a mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.
- AAA. Motor Vehicle: As defined in Rule 102, Definitions.
- BBB. 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.
- CCC. Non-Absorbent Container: A container made of non-porous material that does not allow the migration of solvents through it.
- DDD. Non-Leaking Container: A container without liquid leak.
- EEE. Non-Structural Adhesive: An adhesive that bonds non-load carrying aircraft component in non-critical applications.
- FFF. Normal Business Hours: Monday through Friday, 8:00 am to 5:00 pm.
- GGG. Optical Coating: A coating applied to optical lenses.
- HHH. Organic Solvent: The same as "Solvent."
- III. Organic Solvent Cleaning: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- JJJ. Plastic Part: A piece made from a substance that has been formed from resin through the application of pressure or heat or both.
- KKK. Pleasure Craft: Marine 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 vessel shall be responsible for certifying that the intended use is for recreational purposes.

- LLL. Pleasure Craft Coating: Any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, or roller, or other means to a pleasure craft.
- MMM. Powder Coating: Coating applied without solvent or other carrier as a dry, finely divided solid, adhering to a substrate as a paint film when melted and fused.
- NNN. Pretreatment Coating or Pretreatment Wash Primer: Any coating which contains no more than 25 percent solids by weight, and a minimum of 0.1 percent acid by weight, necessary to provide surface etching, and is applied directly to metal or fiberglass surfaces to provide corrosion resistance and adhesion of subsequent coatings.
- OOO. Repair: Recoating portions of previously coated metal parts or products to cover mechanical damage to the coating following normal painting operations.
- PPP. Roll Coating: Application of coatings from a paint trough to a flat surface by mechanical series of rollers.
- QQQ. Shock-Free Coating: A coating applied to electrical components to protect the user from electric shock. The coating has characteristics of having a low capacitance and high resistance, and being resistance to breaking down under a high voltage.
- RRR. Silicone Release: A coating containing silicone resin and having as its primary function the release of food products from metal surfaces such as baking pans.
- SSS. Single Pack (1K): A coating that comes as a ready to use product which, after application, will physically dry from the evaporation of solvents.
- TTT. Solar Absorbent Coating: A coating having as its primary purpose the absorption of solar radiation.
- UUU. Solid Film Lubricant: A very thin coating consisting of a binder system containing as its chief pigment material one (1) or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between closely-fitting surfaces.
- VVV. Solvent: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- WWW. Specialty Coating: A coating necessary due to unusual job performance requirements, including, but not limited to, adhesion promoters, uniform finish blenders elastomeric materials, gloss flatteners, bright metal trim repair, and anti-glare/safety coatings.
- XXX. Stencil Coating: A coating that is applied over a stencil to a plastic part at a thickness of 1 mil or less of coating solids. Stencil coat is most frequently letters, numbers, or decorative designs.
- YYY. 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.

- ZZZ. 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.
- AAAA. Transfer Efficiency: A ratio of the amount 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.
- BBBB. Thinner: A solvent that is used to dilute coatings to reduce viscosity, color strength, and solids, or to modify drying conditions.
- CCCC. Texture Coating: A coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.
- DDDD. Topcoat: Any final coating applied to a substrate. Several layers of topcoat maybe applied in some cases.
- EEEE. Touch Up Coating: A coating used to cover minor coating imperfections appearing after the main coating operation.
- FFFF. Two-Pack System (2K): A Coating which is supplied in two parts and must be mixed in the correct proportions before use in order to cure.
- GGGG. Vacuum Metalizing/Physical Vapor Deposition (PVD): A process whereby metal is vaporized and deposited on a substrate in a vacuum chamber
- HHHH. Volatile Organic Compound (VOC): As defined in Rule 102, Definitions.

#### **IV. Exemptions**

- A. Provisions of this rule do not apply to coatings, coating removers (strippers), surface preparation material, and cleanup material specifically subject to the requirements of the following District rules:
1. 410.1A, Architectural Coating Controls;
  2. 410.4A, Motor Vehicle and Mobile Equipment Refinishing Operations;
  3. 410.7, Graphic Arts;
  4. 410.8, Aerospace Assembly and Coating Operations;
  5. 410.9 Wood Products Surface Coating Operations;
  6. 432, Polyester Resin.
- B. Any source in full compliance with provisions of this rule shall be exempt from otherwise applicable portions of Rule 410, Organic Solvents.
- C. Requirements of this Rule shall not apply to application of coatings to automobiles, light duty trucks, aircraft, aerospace vehicles, marine vessels, cans, coils, or magnetic wire.

- D. Coatings applied using non-refillable aerosol spray containers.
- E. Powder Coating operations.
- F. VOC limits of Sections V.A (except large appliance parts and products and metal furniture), V.B, V.C, and V.D shall not apply to any stationary source using less than a total volume of 55 gallons of materials per calendar year. All other provision of this Rule, including coating application methods and recordkeeping shall apply.
- G. VOC limits of Section V.A. Table 1, solvent cleaning requirements of Section V.G., and application methods listed in V.F. shall not apply to the following metal parts and products coating operations, recommended work practices still apply:
  - 1. Stencil coatings;
  - 2. Safety-indicating coatings;
  - 3. Solid-film lubricants;
  - 4. Electric-insulating and thermal-conducting coatings;
  - 5. Magnetic data storage disk coatings; and
  - 6. Plastic extruded onto metal parts to form a coating.
- H. The following metal parts and products coating operations are exempt from application methods listed in Section V.F. but are still subject to VOC requirements listed in Table 1 and recommended work practices:
  - 1. Touch-up coatings;
  - 2. Repair coatings; and
  - 3. Textured finishes.
- I. VOC limits of Section V.C. Table 2 and solvent cleaning requirements of Section V.G. shall not apply to the following plastic parts and products coating operations (except for automotive/transportation and business machine plastic parts as specified in Section IV.I.), provided operator complies with coating application methods listed in Section V.F. and storage and disposal requirements in Section V.H.
  - 1. Touch-up and repair coatings;
  - 2. Stencil coatings applied on clear or transparent substrates;
  - 3. Clear or translucent coatings;
  - 4. Coatings applied at a paint manufacturing facility while conducting performance tests on coatings;
  - 5. Any individual coating category used in volumes less than 50 gallons per calendar year, if substitute compliance coatings are not available, and the total usage of all such coatings does not exceed 200 gallons per calendar year, per stationary source;
  - 6. Reflective coatings used on highway cones;

7. Mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches;
  8. Electro-Magnetic Interference (EMI) Radio Frequency Interference (RFI) shielding coatings;
  9. Heparin-bezalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gallons per calendar year, per stationary source;
- J. VOC limits of Section V.C. Table 2 and solvent cleaning requirements of Section V.G. shall not apply to the following automotive/transportation and business machine plastic parts and products coating operations, provided operator complies with coating application methods listed in Section V.F. and storage and disposal requirements in Section V.H.
1. Texture Coatings;
  2. Texture Topcoats;
  3. Gloss Reducers;
  4. Vacuum Metalizing Coatings;
  5. Adhesion Primers;
  6. Electrostatic Preparation Coatings;
  7. Resist Coatings;
  8. Stencil Coatings.
- K. Coating application methods listed in Section V.F. shall not apply to airbrush operations for plastic parts and products (except for automotive/transportation and business machine plastic parts as specified in Section IV.I) using five (5) gallons or less of coating per calendar year, provided operator complies with applicable VOC content limits in Table 2, storage and disposal requirements in Section V.H., and applicable recordkeeping requirement of Section VI.B.
- L. Coating application methods listed in Section V.F. shall not apply to extreme gloss surface coating of pleasure crafts, provided the operator complies with the extreme gloss coating VOC content limit in Table 3 and storage and disposal requirements in Section V.H.

## **V. Requirements**

Sections V.A., V.C., and V.D. apply to any stationary source with total actual VOC emissions from all metal parts and products, plastic parts and products, automotive/transportation and business machine plastic parts and products, or pleasure craft coating operations, including related cleaning activities, before consideration of controls, equal to or greater than 2.7 tons per calendar.

If total actual VOC emissions are less than 2.7 tons per calendar year, before consideration of controls, source shall comply with applicable recordkeeping requirements of Section VI.B. and demonstrate VOC emissions regulated by this Rule are less than 2.7 tons.

- A. Metal Parts and Products VOC Content Limits: Except as provided in Subsections V.E. or V.K., no person shall apply a coating to any metal part or product with a VOC regulatory content, as calculated pursuant to Section III.JJ., in excess of the limits expressed in Table 1.

**TABLE 1**  
**VOC CONTENT LIMITS FOR METAL PARTS AND PRODUCTS COATINGS**  
 Content expressed in Grams per Liter (Pounds per Gallon)  
 Less Water and Exempt Compounds

<b>Limits for Miscellaneous Metal Parts and Products, Large Appliance Parts and Products, and Metal Furniture Coatings</b>		
<b>Coating Category</b>	<b>Baked</b>	<b>Air-Dried</b>
All coatings except listed below	275 g/l (2.3 lb/gal)	340 g/l (2.8 lb/gal)
Camouflage	360 (3.0)	420 (3.5)
Electrical Insulating Varnish	420 (3.5)	420 (3.5)
Etching Filler	420 (3.5)	420 (3.5)
Extreme High Gloss	360 (3.0)	420 (3.5)
Extreme Performance	360 (3.0)	420 (3.5)
General, One Component	275 (2.3)	275 (2.3)
General, Multi-Component	275 (2.3)	340 (2.8)
Heat Resistant	360 (3.0)	420 (3.5)
High Performance Architectural	750 (6.2)	750 (6.2)
High Temperature	420 (3.5)	420 (3.5)
Metallic/Iridescent Coating	420 (3.5)	420 (3.5)
Military Specification	275 (2.3)	340 (2.8)
Mold-Seal	420 (3.5)	420 (3.5)
Pan Backing	420 (3.5)	420 (3.5)
Pretreatment Coating	420 (3.5)	420 (3.5)
Touch-up and Repair Coating	360 (3.0)	420 (3.5)
Silicone Release	420 (3.5)	420 (3.5)
Solar Absorbent	360 (3.0)	420 (3.5)
Solid Film Lubricant	880 (7.3)	880 (7.3)
Vacuum-Metalizing	420 (3.5)	420 (3.5)
Drum Coating, New, Exterior	340 (2.8)	340 (2.8)
Drum Coating, New, Interior	420 (3.5)	420 (3.5)
Drum Coating, Reconditioned, Exterior	420 (3.5)	420 (3.5)
Drum Coating, Reconditioned, Interior	510 (4.2)	510 (4.2)

B. VOC Content Limit for Dip coating of steel joists (SIC 3441), air-dried:

1. 340 g/l (2.8 lbs/gal) for coatings with a viscosity, as applied, of more than 45.6 centistokes at 78°F or an average dry-film thickness of greater than 2.0 mils;
2. 400 g/l (3.32 lbs/gal) for coatings with a viscosity, as applied, of less than or equal to 45.6 centistokes at 78°F and an average dry film thickness of less than or equal to 2.0 mils.

C. Plastic Parts and Products VOC Content Limits: Except as provided Subsections V.E. or V.K., no person shall apply a coating to any plastic part or product with a VOC regulatory content, as calculated pursuant to Section III.JJ., in excess of the limits expressed in Table 2.

**TABLE 2**  
**VOC CONTENT LIMITS FOR PLASTIC PARTS AND PRODUCTS COATINGS**  
**VOC Content expressed in Grams per Liter (Pounds per Gallon)**  
**Less Water and Exempt Compounds**

<b>Limits for Plastic Parts and Products Coatings</b> (excluding automotive/transportation and business machine plastic parts and products)	
<b>Coating Category</b>	<b>VOC Limit</b>
General, One Component	280 g/l (2.3 lb/gal)
General, Multi-Component	420 (3.5)
Electric Dissipating and Shock-Free Coatings	800 (6.7)
Extreme Performance	420 (3.5) Two-Pack System(2K)
<u>Metallic/Iridescent</u> Coating	420 (3.5)
Military Specification	340 (2.8) Single Pack(1K) 420 (3.5) Two-Pack System(2K)
Mold-Seal	760 (6.3)
Multi-Colored Coatings	680 (5.7)
Optical Coatings	800 (6.7)
Vacuum-Metalizing	800 (6.7)
<b>Limits for Automotive/Transportation Plastic Parts and Products Coatings<sup>1</sup></b>	
<b>Coating Category</b>	<b>VOC Limit</b>
<i>I. High Baked Coatings - Interior and Exterior:</i>	
Flexible Primer	540 g/l (4.5 lb/gal)
Non-flexible Primer	420 (3.5)
Basecoat	520 (4.3)
Clearcoat	480 (4.0)
Non-Basecoat/Clearcoat	520 (4.3)



**TABLE 2 Continued**

<b>Limits for Automotive/Transportation Plastic Parts and Products Coatings<sup>1</sup></b>	
<b>Coating Category</b>	<b>VOC Limit</b>
<i>II. Low Bake/Air Dried Coatings - Exterior Parts:</i>	
Primers	580 (4.8)
Basecoat	600 (5.0)
Clearcoat	540 (4.5)
Non-Basecoat/Clearcoat	600 (5.0)
<i>III. Low Bake/Air Dried Coatings - Interior Parts:</i>	600 (5.0)
<i>IV. Touch-up and Repair Coatings:</i>	620 (5.2)
<b>Limits for Business Machine Plastic Parts and Products Coatings</b>	
<b>Coating Category</b>	<b>VOC Limit</b>
Primers	350 (2.9)
Topcoat	350 (2.9)
Texture Coat	350 (2.9)
Fog Coat	260 (2.2)
Touchup and Repair	350 (2.9)
<sup>1</sup> For red, yellow, and black automotive coatings, except touch up and repair coatings, the recommended limit is determined by multiplying the appropriate limit in this table by 1.15.	

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- D. Pleasure Craft Coating Operations: Except as provided in Subsections V.E. or V.K., no person shall apply a coating to any pleasure craft with a VOC regulatory content, as calculated pursuant to Section III.JJ., in excess of the limits expressed in Table 3.

**TABLE 3**  
**VOC CONTENT LIMITS FOR PLEASURE CRAFT COATINGS**  
**VOC Content expressed in Grams per Liter (Pounds per Gallon)**  
**Less Water and Exempt Compounds**

<b>Limits for Pleasure Craft Coatings</b>	
<b>Coating Category</b>	<b>VOC Limit</b>
All coatings except listed below	420 g/l (3.5 lb/gal)
Extreme High Gloss Topcoat	490 (4.1)
High Gloss Topcoat	420 (3.5)
Pretreatment Wash Primers	780 (6.5)
Finish Primer/Surfacer	420 (3.5)
High Build Primer Surfacer	340 (2.8)
Aluminum Substrate Antifoulant Coating	560 (4.7)
Antifouling Sealer/Tie Coats	420 (3.5)
Other Substrate Antifoulant Coating	330 (2.8)

- E. Alternate Emissions Control: In lieu of complying with VOC content limits specified in Tables 1, 2, and 3, an emission control system with a capture efficiency of at least 90% and a control efficiency of at least 90% may be used if it has been approved in writing by the APCO. Any approved emission control system must be maintained and used in proper working condition at all times. Use of a VOC emission control system shall not result in emissions in excess of those that would have been emitted had the operator complied with the provisions of Section V.A, B, C or D.
- F. Coating Application Methods: No person shall apply any coating to any metal part or product, large appliance part or product, metal furniture, plastic part or product, automotive/transportation and business machine plastic part or product, or pleasure craft subject to provisions of this Rule unless one of the following application methods is used:
1. Brush, dip, flow, or roll coating conducted in accordance with equipment manufacturer's recommendations,
  2. Electrostatic or electrodeposition application conducted in accordance with manufacturer's recommendations,
  3. HVLP spray equipment operated in accordance with equipment manufacturer's recommendations,

4. Spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section IV.V in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.
  5. Any alternative coating application method which has been demonstrated to achieve at least 65% transfer efficiency or equivalent efficiency of an HVLP and approved, in writing, by APCO.
- G. Surface Preparation and Equipment Cleanup Requirements: No person shall conduct surface preparation or equipment cleanup for activities subject to provisions of this Rule unless the following VOC limits are met and methods used:
1. VOC content of surface preparation solvent shall not exceed 25 g/l (0.2 lb/gal), as calculated pursuant to Section III.KK., unless such cleaning operation is performed within the control of an APCO approved VOC emission control system that meets the requirements of Section V.E.
  2. Cleaning of Coatings Application Equipment: Solvents used for cleaning of coatings application equipment shall comply with both limits specified below:
    - a. Solvent shall have a VOC content of 950 grams or less per liter (7.9 lb/gal) of material; and
    - b. Solvent shall have a VOC composite partial pressure of 35 mm Hg or less at 20/C (68/F).
  3. Cleaning-Devices and Methods: No person shall perform solvent cleaning operations unless one of the following cleaning devices or methods is used:
    - a. Wipe Cleaning;
    - b. Spray bottles or containers with a maximum capacity of 16 fluid ounces from which solvents are applied without a propellant induced force;
    - c. Cleaning equipment having a closed solvent container during cleaning operations, except when depositing and removing objects to be cleaned, and closed during nonoperation except during maintenance and repair of the cleaning equipment itself;
    - d. Remote reservoir cold cleaner operated in conformance with District Rule 410.3, Organic Solvent Degreasing Operations;
    - e. System totally enclosing guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures;

- f. Non-atomized solvent flow method collecting cleaning solvent in a container or a collection system closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
  - g. Solvent flushing method discharging solvent into a closed container, except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. Discharged solvent from such equipment shall be collected in containers without atomizing into open air. Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- H. Storage and Disposal Requirements: Regardless of VOC content, all VOC-containing materials used in solvent cleaning operations shall be stored in non-absorbent, vapor-tight containers that are kept closed at all times except when filling or emptying.
- I. Prohibition of Sale: No person shall offer for sale or sell within the District any coating if such product is prohibited by any provisions of this Rule. This prohibition shall apply to sale of any coating to be applied at any physical location within the District.
- J. Prohibition of Specification: No person shall solicit or require for use or specify application of a coating if such use or application results in a violation of provisions of this Rule. This prohibition shall apply to all written or oral contracts under terms of which any coating subject to provisions of this Rule is to be applied to any metal part or product at any physical location within the District.
- K. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to amendment date of this rule, that complied with the VOC Content limit(s) in effect at that time, may be sold, supplied, or offered for sale for 12 months after rule adoption date. Such a coating may be applied at any time, both before and after adoption date, provided manufacture Date-Code and VOC Content is clearly printed on coating container.

## **VI. Administrative Requirements**

### **A. Labeling Requirements**

- 1. VOC Content: Each container or accompanying data sheet of any coating subject to this Rule shall display maximum VOC content of the coating as applied, and after any thinning as recommended by the manufacturer. VOC content shall be displayed as grams of VOC per liter of coating less water and exempt compounds. VOC content displayed shall be determined using Subsection VII.A. test methods or calculated using product formulation data if EPA approves this as equivalent to Subsection VII.A.
- 2. Thinning Recommendations: Each container (or accompanying data sheet) of any coating subject to this Rule and manufactured after May 6, 1992 shall display a statement of manufacturer's recommendation regarding thinning of the coating. This requirement shall not apply to thinning of coatings with water.

3. Solvent Compliance Statement Requirements: Manufacturers of any solvent subject to this rule shall indicate on the solvent container, or on a separate product data sheet or material safety data sheet, name of the solvent, manufacturer's name, VOC content, and density of the solvent, as supplied. The VOC content shall be expressed in units of g/l or lb/gal.

B. Record Keeping Requirements

Any operator that uses coatings or solvents subject to this Rule shall maintain and have the following available on site at all times:

1. A current list of all VOC containing products in use that includes any data necessary to evaluate compliance, including but not limited to the following information, as applicable:
  - a. Material name and manufacturer's identification,
  - b. Application method,
  - c. Material type and specific use instructions,
  - d. Specific mixing instructions,
  - e. VOC actual and VOC regulatory for coatings as applied, or VOC content for solvent.
2. Daily coating and solvent use records, including the following information for each:
  - a. Volume of each coating/solvent mix ratio,
  - b. VOC content in grams/liter (or pounds/gallon) as applied/used,
  - c. Volume of each coating/solvent in liters (or gallons) applied/used.
  - d. Type and amount of solvent used for cleanup and surface preparation.

If purchase records are used to determine the amount of solvents used, then records and manifests of the amounts of solvents disposed of or sent to a recycler must also be maintained and made available to the APCO upon request.

3. Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC actual for coatings and VOC regulatory for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio), and VOC content of each solvent.
4. Purchase records identifying the coating category as listed in Section V, which includes name and volume of coatings and solvents.
5. Alternate Emissions Control Records: Any person using an emission control system shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities. "Key system operating parameters" are those parameters necessary to ensure or document compliance with Section V.E., including, but not limited to, temperatures, pressure drops, and air flow rates.

6. Record Retention: Records required by this Rule shall be retained for a minimum of three years and made available to the APCO upon request.

## **VII. Test Methods**

The following test methods are incorporated by reference herein, and shall be used to test emission sources subject to the provisions of this rule. A source is in violation of this rule if any measurement by any of the listed applicable test methods exceeds any standard of this rule.

- A. Acid Content: Acid content of Pre-Treatment Wash Primers shall be conducted and reported in accordance with ASTM D1613-03 “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products” (October 2003).
- B. Analysis of Samples: Samples of VOC as specified in this Rule shall be analyzed by EPA 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”. Analysis of halogenated exempt compounds shall be conducted using CARB Method 422, “Determination of Volatile Organic Compounds in Emissions from Stationary Sources” (September 12, 1990).
- C. Alternative Test Methods: The use of other test methods which are determined to be equivalent or better and approved, in writing, by the APCO, ARB, and EPA may be used in place of the test methods specified in this rule.
- D. Control and Capture Efficiency: Capture and control efficiency of emission control systems shall be determined as specified in EPA’s “Guidelines for Determining Capture Efficiency,” (January 9, 1995) and 40 CFR 51, Appendix M, Methods 204-204F as applicable. Total organic emissions of emission control systems shall be determined using EPA Method 25, 25A or 25B.
- E. Determination of Emissions: Emissions of VOC shall be measured by EPA Method 25, 25A, or 25B, as applicable and analysis of halogenated exempt compounds shall be conducted using CARB Method 432, “Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings” (September 12, 1998).
- F. Exempt Organic Compound Content of Coatings: The exempt organic compound content of coatings or solvents shall be determined using ASTM Method D 6133- 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 Chromatograph. Exempt organic compound content, other than as determined above, shall be determined by using CARB Method 422; CARB Method 432; or South Coast AQMD Method 303-91, “Determination of Exempt Compounds” (August 1996).

- G. HVLP Equivalency: Spray Equipment HVLP equivalency shall be determined by using South Coast Air Quality Management District's "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" (September 26, 2002).
- H. Metallic Content: The metallic content of a coating shall be determined by South Coast Air Quality Management District Test Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray" (July 1996).
- I. Transfer Efficiency: Spray equipment transfer efficiency shall be determined by using South Coast AQMD Method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User" May 24, 1989.
- J. VOC Composite Partial Pressures: VOC composite partial pressures shall be determined using either manufacturer's information regarding formulation or using ASTM methods E169-04 Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis or E260-96, Standard Practice for Packed Column Gas Chromatography for determination of mole fractions and then summing products of each VOC component's vapor pressure and its mole fraction. For materials containing no non-VOC components, VOC composite partial pressure can be measured directly by ASTM Method D2879-10, Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
- K. VOC Emissions from Spray Gun Cleaning Systems: VOC emissions from spray gun cleaning systems shall be made using South Coast AQMD "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" (October 3, 1989).

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**RULE 410.4A Motor Vehicle and Mobile Equipment Refinishing Operations - Adopted 5/6/91, Amended 4/6/95, 3/7/96, 3/13/14**

**I. Purpose**

The purpose of this rule is to limit volatile organic compound (VOC) emissions from coatings and solvents used in production, repair, refinish, or maintenance operations where motor vehicles, mobile equipment, or associated parts and components are coated.

**II. Applicability**

The provisions of this Rule are enforceable upon amendment date and shall apply to any person who supplies, sells, offers for sale, manufactures, distributes, uses, applies, or solicits the use or application of any automotive coating or associated solvent within the District.

**III. Severability**

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.

**IV. Definitions**

- A. 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.
- B. 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.
- C. APCO: Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- D. 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.
- E. Associated Parts and Components: Structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of motor vehicles or mobile equipment that are designed to be a part of motor vehicles or mobile equipment but which are not attached to motor vehicles or mobile equipment at the time of coating the structure, device, piece, module, section, assembly, subassembly, or element. "Associated parts and components" does not include circuit boards.



- F. Automotive Coating: Any coating or coating component used or recommended for use in motor vehicle or mobile equipment refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. Any reference to automotive refinishing or automotive coating made by a person on the container or in product literature constitutes a recommendation for use in motor vehicle or mobile equipment refinishing.
- G. 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.
- H. Automotive Refinishing Facility: Any shop, business, location, or parcel of land where motor vehicles or mobile equipment or their associated parts and components are coated, including autobody collision repair shops. "Automotive Refinishing Facility" does not include the original equipment manufacturing plant where the motor vehicle or mobile equipment is completely assembled.
- I. California Air Resources Board (CARB or ARB): Air Resources Board of the California Environmental Protection Agency.
- J. 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.
- K. Clear Coating: Any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.
- L. Coating: A material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.
- M. Color Coating: Any pigmented coating, excluding adhesion promoters, primers, and multi-color coatings, that requires a subsequent clear coating and which is applied over a primer, adhesion promoter, or color coating. Color coatings include metallic/iridescent color coatings.
- N. Electrodeposition: Applying an electrically-charged dip coating onto object to be coated.
- O. Electrostatic Spray Application: Any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.
- P. Emission Control System: Any combination of capture systems and control devices used to reduce VOC emissions from automotive coating operations.
- Q. EPA: The United States Environmental Protection Agency.

- R. Exempt Compounds: As defined in District Rule 102, Definitions, “Exempt Compounds”.
- S. Graphic Arts Operation: Application of logos, letters, numbers or graphics to a painted surface with or without use of a template.
- T. High-Volume, Low-Pressure (HVLP): 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 and with liquid supply pressure less than 50 psig.
- U. Metallic/Iridescent Topcoat: Coating as applied containing more than 5 g/1 (0.042 lb/gal) of visible metal or iridescent particles, where such particles are visible in the dried film.
- V. Mobile Equipment: Equipment drawn or capable of being driven on a roadway, including, but not limited to a: truck body, truck trailer, utility body, camper shell, mobile crane, bulldozer, construction and farm heavy equipment, concrete mixers, street cleaner, golf cart, all terrain vehicles, implements of husbandry, military tank or other tracked military vehicle and hauling equipment used inside and around airports, depots, and industrial and commercial plants.
- W. Motor Vehicle: As defined in Rule 102, Definitions.
- X. 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.
- Y. Precoat: Coating applied to bare metal primarily to deactivate metal surface for corrosion resistance and adhesion.
- Z. Pretreatment Coating: Coating containing a minimum of 0.5% 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.
- AA. Primer: Any coating, which is labeled and formulated for application to a substrate to provide 1) a bond between the substrate and subsequent coats, 2) corrosion resistance, 3) a smooth substrate surface, or 4) resistance to penetration of subsequent coats, and on which a subsequent coating is applied. Primers may be pigmented.
- BB. Refinish: Coating of vehicles, their parts and components, or mobile equipment, including partial body collision repairs, for the purpose of protection or beautification and subsequent to the original coating applied at an Original Equipment Manufacturing (OEM) plant coating assembly line.
- CC. Single-Stage Coating: Any pigmented coating, excluding primers and multi-color coatings, labeled and formulated for application without a subsequent clear coat. Single-stage coatings include single-stage metallic/iridescent coatings.

- DD. Solvent: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- EE. Spray Booth: Any power ventilated structure of varying dimensions and construction provided to enclose or accommodate a spraying operation and which meets the Uniform Fire Code. A spray booth shall confine and limit, by dry or wet filtration, the escape to the atmosphere of overspray particulate matter, exhaust through filters or other air pollution control device approved by the APCO and provide adequate ventilation, air velocity, and safety features, as required by the Uniform Fire Code.
- FF. Specialty Coating: Coating necessary for unusual job performance requirements, including, but not limited to, adhesion promoters, uniform finish blenders elastomeric materials, gloss flatteners, bright metal trim repair, anti-glare/safety coatings, and cut in or jamming clear coatings.
- GG. Spot/Panel Repair: Non-assembly line process of repairing and restoring a portion of a motor vehicle, or associated parts or components of less than 1 square foot (929 square centimeters).
- HH. Surface Preparation: The use of VOC containing solvents applied with cloth, sponge, or other medium for the purpose of removing dust, grease, and other contaminants from a surface just prior to application of a coating.
- II. Temporary Protective Coating: Any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- JJ. Topcoat: Coating applied over a primer or an original equipment manufacturer finish for the purpose of protection or appearance.
- KK. Touch-Up Coating: A coating used to cover minor coating imperfections appearing after the main coating operation.
- LL. Transfer Efficiency: The amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage.
- MM. 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.
- NN. 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.
- OO. 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.
- PP. Utility Body: Special purpose service compartment or unit to be bolted, welded, or affixed onto an existing cab and chassis. Such compartment may serve as storage for equipment or parts.

QQ. Volatile Organic Compound (VOC): Any compound containing at least one atom of carbon, excluding Exempt Compounds as listed in Rule 102 Definitions.

RR. VOC Content:

1. VOC regulatory for Coatings: VOC in grams per liter of coating, excluding water and exempt compounds, and shall be calculated by the following equation:

$$\text{VOC regulatory content} = \frac{W_v - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

2. VOC actual for Coatings: VOC in grams per liter of material shall be calculated using the following equation:

$$\text{VOC actual content} = \frac{W_v - W_w - W_{ec}}{V_m}$$

3. VOC content for Solvents: VOC in grams per liter of material shall be calculated by the following equation:

$$\text{VOC content} = \frac{W_v - W_w - W_{ec}}{V_m}$$

Where:

VOC content = amount of volatile organic compounds in grams/liter

$W_v$  = weight of volatiles in grams

$W_w$  = weight of water in grams

$W_{ec}$  = weight of exempt compounds in grams

$V_m$  = volume of material (coating or solvent, as applicable) in liters

$V_w$  = volume of water in liters

$V_{ec}$  = volume of exempt compounds in liters

## V. Exemptions

A. Requirements of this Rule shall not apply to the following operations:

1. Graphic Arts Operations as defined in Section IV.S.
2. Any automotive coating or associated solvent that is offered for sale, sold, or supplied in 0.5 fluid ounce or smaller containers intended to be used by the general public to repair tiny surface imperfections.
3. Coating operations employing hand-held non-refillable aerosol cans, 18 oz. or less, provided the area to be covered does not exceed nine square feet per vehicle to repair minor surface damage and imperfections.
4. Any automotive coating or associated solvent that is offered for sale, sold, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

5. Any coating applied to motor vehicles or mobile equipment, or their associated parts and components, during manufacture on an assembly line.
- B. Requirements of Section VI.D (Spray Booth) shall not apply to:
1. Touch-up coating operations as defined in Section IV.KK, not exceeding nine square feet per vehicle.
  2. Coating of motor vehicle engine compartments, engine components, and suspension components, provided such components are replaced in the vehicle.
  3. Application of primers, primer surfacers and precoats not exceeding nine square feet per vehicle, provided VOC content does not exceed 250 g/l and coatings contain no lead or chromium compounds.
  4. Application of coatings to a vehicle, due to shape or size, not reasonably contained in a spray booth. To qualify for this exemption a person shall comply with the following requirements:
    - a. Submit a written request on a case by case basis to the APCO describing vehicle(s) to be coated, size of spray booth, physical size of vehicle(s) (length, width, and height), number of vehicle(s) to be coated, time required to paint vehicle(s), estimated volume of coating(s) to be used, date when vehicle(s) or mobile equipment is to be coated, and VOC content of each coating used;
    - b. Such request shall be submitted ten calendar days prior to surface coating a motor vehicle or mobile equipment outside a spray booth. The APCO shall provide a written determination to the requester within five calendar days of proposed surface coating of the motor vehicle or mobile equipment; and
    - c. The APCO may grant written approval for a specified time period, not to exceed one year.
- C. Coating operations and/or facilities exempt from this Rule shall comply with all other applicable District prohibitory Rules.
- D. Provisions of Sections VI.C. through VI.G. and Section VII. shall not apply to coating of one vehicle per twelve month period, by the registered owner of the vehicle being painted, provided the surface coating does not contain lead or chromium compounds.
- E. Section VI.F, Surface Preparation and Equipment Cleanup Requirements, shall not apply to the use of surface preparation solvents to clean plastic parts just prior to coating or VOC-containing materials for the removal of wax and grease provided that nonaerosol, hand-held spray bottles are used with a maximum solvent VOC content of 780 g/l and the total volume of the solvent does not exceed 20 gallons per year per facility. Records of solvent usage shall be kept in accordance with Section VII.C.4 of this Rule.

## VI. Requirements

- A. VOC Content Limits: No person shall apply a coating to any motor vehicle, mobile equipment, or its associated parts and components, with a VOC regulatory content, as calculated pursuant to Section IV.RR.1, in excess of the limits expressed in Table of Standards, except as provided in Sections VI.C and VI.J.

**TABLE OF STANDARDS**  
**VOC CONTENT LIMITS FOR MOTOR VEHICLE COATINGS**  
**Content expressed in Grams per Liter (Pounds per Gallon)**  
**Less Water and Exempt Compounds**

<b>Coating Category</b>	<b>VOC Limit</b>
Adhesion Promoter	540 (4.5)
Cavity Wax	650 (5.4)
Clear Coating	250 (2.1)
Color Coating	420 (3.5)
Deadener	650 (5.4)
Gasket/Gasket Sealing Material	200 (1.7)
Lubricating Wax/Compound	700 (5.8)
Multi-Color Coating	680 (5.7)
Pretreatment Coating	660 (5.5)
Primer	250 (2.1)
Sealer	650 (5.4)
Single-Stage Coating	340 (2.8)
Specialty Coating	540 (4.5)
Temporary Protective Coating	60 (0.5)
Truck Bed Liner Coating	200 (1.7)
Trunk Interior Coating	650 (5.4)
Underbody Coating	650 (5.4)
Uniform Finish Coating	540 (4.5)
Any other coating type	250 (2.1)

- B. Most Restrictive VOC Limit: 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 supplied by a person, 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 of Standards, then the lowest VOC content limit shall apply.

- C. Alternate Emission Control: In lieu of complying with VOC content limits specified in Table of Standards, an emission control system with a capture efficiency of at least 90% and a control efficiency of at least 90% may be used if it has been approved in writing by the Air Pollution Control Officer (APCO). Any approved emission control system must be maintained and used in proper working condition at all times. Use of a VOC emission control system shall not result in emissions in excess of those that would have been emitted had the operator complied with the provisions of Section V.A.
- D. Spray Booth: All surface coatings subject to this Rule shall be applied within a permitted, properly maintained, and operational paint spray booth located at a site with proper city or county zoning.
- E. Coating Application Methods: No person shall apply any coating to any motor vehicle, mobile equipment, or associated parts and components unless one of the following application methods is used:
1. Brush, dip, flow, or roll coating conducted in accordance with manufacturer's recommendations.
  2. Electrostatic or electrodeposition application conducted in accordance with manufacturer's recommendations.
  3. HVLP spray equipment operated in accordance with manufacturer's recommendations.
  4. Spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section IV.T in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.
  5. Any alternative coating application method which has been demonstrated to achieve at least 65% transfer efficiency or the equivalent efficiency of an HVLP and approved, in writing, by APCO.

Section VI.E does not apply to underbody coatings, graphic arts operations, truck bed liner coatings, or any coating use of less than one (1) fluid ounce (29.6 milliliters).

- F. Surface Preparation and Equipment Cleanup Requirements: No person shall conduct surface preparation or equipment cleanup for activities subject to provisions of this Rule unless the following VOC limits are met and methods are used:
1. VOC content of surface preparation solvent shall not exceed 25 g/l (0.2 lb/gal), as calculated pursuant to Section IV.RR.3, unless Section V.E applies.
  2. Coatings Application Equipment Cleaning: Solvents used for cleaning of coatings application equipment shall comply with both limits specified below:

- a. Solvent shall have a VOC content of 950 grams or less per liter (7.9 lb/gal) of material; and
  - b. Solvent shall have a VOC composite partial pressure of 35 mm Hg or less at 20/C (68/F).
3. Cleaning Devices and Methods Requirements: No person shall perform solvent cleaning operations unless one of the following cleaning devices or methods is used:
- a. Wipe cleaning;
  - b. Spray bottles or containers with a maximum capacity of 16 fluid ounces from which solvents are applied without a propellant-induced force;
  - c. Cleaning equipment having a closed solvent container during cleaning operations, except when depositing and removing objects to be cleaned, and closed during nonoperation except during maintenance and repair of the cleaning equipment itself;
  - d. Remote reservoir cold cleaner operated in conformance with District Rule 410.3, Organic Solvent Degreasing Operations;
  - e. System totally enclosing spray guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures;
  - f. Non-atomized solvent flow method collecting cleaning solvent in a container or a collection system closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
  - g. Solvent flushing method discharging cleaning solvent into a container closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. Discharged solvent from such equipment shall be collected into containers without atomizing into open air. Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- G. Storage and Disposal: Regardless of VOC content, all automotive coating components, automotive coatings, and solvents, shall be stored in non-absorbent, vapor-tight containers kept closed at all times except when filling or emptying.
- H. Prohibition of Sale or Manufacture: No person shall manufacture, blend, repackage for sale, supply, sell, offer for sale or distribute within the District any coating with a VOC content in excess of the limits specified in Section VI.A.

Notwithstanding the provisions of this section, a person may manufacture, blend, repackage for sale, supply, sell, offer for sale, or distribute a coating with a VOC content in excess of the limits specified in section VI.A under the following circumstances and provided all of the requirements of section VII.C.6 are also met:



1. The coating is used exclusively within an emission control system as allowed in Section VI.C, or
  2. Coating is exempt under one or more of the provisions of Section V.A.
- I. Prohibition of Specification: No person shall solicit or require the use of, or specify the application or use of any coating or solvent on a motor vehicle or mobile equipment, or its associated parts and components, if such use or application results in a violation of this Rule. This prohibition shall apply to all written or oral contracts, including but not limited to, job orders, under the terms of which any coating or solvent subject to provisions of this Rule is to be applied. This prohibition shall not apply to coatings or solvents that meet the criteria specified in Section VI.H.
  - J. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to amendment date of this rule, that complied with the VOC Content limit(s) in effect at that time, may be sold, supplied, or offered for sale for 12 months after rule adoption date. Such a coating may be applied at any time, both before and after adoption date, provided manufacture Date-Code and VOC Content is clearly printed on coating container.

## **VII. Administrative Requirements**

### **A. Compliance Statement Requirement**

1. For each individual automotive coating or automotive coating component, the manufacturer and repackager shall include the following information on product data sheets, or an equivalent medium:
  - a. The VOC actual for coatings and VOC regulatory for coatings, expressed in grams per liter;
  - b. The weight percentage of volatiles, water, and exempt compounds;
  - c. The volume percentage of water and exempt compounds; and
  - d. The density of the material (in grams per liter).
2. For each individual ready to spray mixture (based on the manufacturer's and repackager's stated mix ratio), the manufacturer and repackager shall include the following information on product data sheets, or an equivalent medium:
  - a. The VOC actual for coatings and VOC regulatory for coatings, expressed in grams per liter;
  - b. The weight percentage of volatiles, water, and exempt compounds;
  - c. The volume percentage of water and exempt compounds; and
  - d. The density of the material (in grams per liter).
3. The manufacturer and repackager of solvents subject to this rule shall include the VOC content as supplied, calculated pursuant to section IV.RR.3, expressed in grams per liter, on product data sheets, or an equivalent medium.

## B. Labeling Requirements

1. The manufacturer and repackager of automotive coatings or automotive coating components shall include on all containers the applicable use category(ies), and the VOC actual for coatings and VOC regulatory for coatings, as supplied, expressed in grams per liter.
2. The manufacturer and repackager of solvents subject to this rule shall include on all containers the VOC content for solvents, as supplied, expressed in grams per liter.

## C. Record Keeping Requirements

Any person who uses coatings or solvents, subject to this rule, shall maintain and have the following available on site at all times:

1. A current list of all VOC containing products in use that includes any data necessary to evaluate compliance, including but not limited to, the following information as applicable:
  - a. Material name and manufacturer's identification;
  - b. Application method;
  - c. Material type (coating as listed in Table of Standards) and specific use instructions;
  - d. Specific mixing instructions;
  - e. VOC actual and VOC regulatory for coatings, as applied, or VOC content for solvent.
2. Daily coating and solvent use records, including the following information for each:
  - a. Volume of each coating/solvent mix ratio;
  - b. VOC content in grams/liter (or pounds/gallon) as applied/used;
  - c. Volume of each coating/solvent in liters (or gallons) applied/used;
  - d. Type and amount of solvent used for cleanup and surface preparation.

If purchase records are used to determine the amount of solvents used, then records and manifests of the amounts of solvents disposed of or sent to a recycler must also be maintained and made available to the APCO upon request.

3. Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC actual for coatings and VOC regulatory for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio), and VOC content of each solvent.
4. Purchase records identifying the coating type (as listed in Table of Standards), name, and volume of coatings and solvents.
5. Alternate Emissions Control Records: Any person using an emission control system shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system

during periods of VOC emission producing activities. “Key system operating parameters” are those parameters necessary to ensure or document compliance with Section VI.C., including, but not limited to, temperatures, pressure drops, and air flow rates.

6. Record Keeping Requirements for Prohibition of Sale: Any person claiming an exception specified in Section VI.H shall keep a detailed log of each automotive coating component and automotive coating manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed showing:
  - a. The quantity manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed, including size and number of containers;
  - b. The VOC regulatory for coatings;
  - c. The VOC actual for coatings;
  - d. To whom they were supplied, sold, offered for sale, or distributed, or for whom they were manufactured, blended, or repackaged for sale including the name, address, phone number; and
  - e. The specific exception being utilized under Section VI.C.
7. Record Retention: Records required by this Rule shall be retained for a minimum of three years and made available to the APCO upon request.

### **VIII. Test Methods**

The following test methods are incorporated by reference herein, and shall be used to test emission sources subject to the provisions of this rule. A source is in violation of this rule if any measurement by any of the listed applicable test methods exceeds any standard of this rule.

- A. Acid Content: Measure of acid content shall be determined by using ASTM D1613-03 “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products” (October 2003).
- B. Analysis of Samples: Samples of VOC as specified in this Rule shall be analyzed by EPA 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”. Analysis of halogenated exempt compounds shall be conducted using CARB Method 422, “Determination of Volatile Organic Compounds in Emissions from Stationary Sources” (September 12, 1990).
- C. Alternative Test Methods: The use of other test methods which are determined to be equivalent or better and approved, in writing, by the APCO, ARB, and EPA may be used in place of the test methods specified in this rule.
- D. Control and Capture Efficiency: Capture and control efficiency of emission control systems shall be determined as specified in EPA’s “Guidelines for Determining Capture Efficiency,” (January 9, 1995) and 40 CFR 51, Appendix M, Methods 204-204f as

applicable. Total organic emissions of emission control systems shall be determined using EPA Method 25, 25A or 25B.

- E. Determination of Emissions: Emissions of VOC shall be measured by EPA Method 25, 25A, or 25B, as applicable and analysis of halogenated exempt compounds shall be conducted using CARB Method 432, "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings" (September 12, 1998).
- F. Exempt Organic Compound Content of Coatings: The exempt organic compound content of coatings or solvents shall be determined using ASTM Method D 6133- 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 Chromatograph. Exempt organic compound content, other than as determined above, shall be determined by using CARB Method 422, CARB Method 432, or South Coast AQMD Method 303-91, "Determination of Exempt Compounds" (February 1993).
- G. HVLP Equivalency: Spray Equipment HVLP equivalency shall be determined by using South Coast Air Quality Management District's "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" (September 26, 2002).
- H. Metallic Content: The metallic content of a coating shall be determined by South Coast Air Quality Management District Test Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-ray" (July 1996).
- I. Transfer Efficiency: Spray equipment transfer efficiency shall be determined by using South Coast Air Quality Management District Method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User", (May 24, 1989).
- J. VOC Composite Partial Pressures: VOC composite partial pressures shall be determined using either manufacturer's information regarding formulation or using ASTM Methods E169-04, Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis or E260-96, Standard Practice for Packed Column Gas Chromatography for determination of mole fractions and then summing products of each VOC component's vapor pressure and its mole fraction. For materials containing no non-VOC components, VOC composite partial pressure can be measured directly by ASTM Method D2879-10 Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
- K. VOC Emissions from Spray Gun Cleaning Systems: VOC emissions shall be determined using South Coast AQMD "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" (October 3, 1989).

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5/10/96

**RULE 410.5 Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations** - Adopted 6/26/79, Amended 5/6/91, 3/7/96

**I. Applicability**

This Rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

**II. Definitions**

- A. Asphalt: a dark-brown to black refined liquid or solid cementitious material of which the main constituents are bitumens suitable for use in the manufacture of paving materials or dust palliatives.
- B. Cutback Asphalt: paving grade asphalt liquified with petroleum distillate and conforming to specification of the American Society for Testing & Materials (ASTM) as following:
  - Rapid cure type: ASTM D2028-76 (Reapproved 1981)
  - Medium cure type: ASTM D2027-76 (Reapproved 1981)
- C. Dust Palliative: any light application of cutback asphalt, slow cure asphalt or emulsified asphalt for the express purpose of controlling loose dust.
- D. Emulsified Asphalt: any asphalt liquified with water containing an emulsifier. The two kinds of emulsions most pertinent are the anionic and cationic types.
- E. Organic Compound: any compound which contains VOC's.
- F. Paving and Maintenance Operations: all activities involved in the new construction and maintenance of roadways and parking areas.
- G. Penetrating Prime Coat: means any application of asphalt to an adsorptive surface to penetrate and bind the aggregate surface and promote adhesion between it and the new superimposed construction. Prime coats do not include dust palliative or tack coats.
- H. Road Oils: shall be synonymous with slow cure asphalt.
- I. San Joaquin Valley Air Basin: is all of San Joaquin, Stanislaus, Merced, Madera, Fresno Counties and the San Joaquin Valley Portion of Kern County.
- J. Slow Cure Asphalt: paving grade asphalt conforming to specification of the American Society for Testing & Materials (ASTM) D2026-72 (Reapproved 1979).

- K. Tack Coat: any application of asphalt applied to an existing surface to provide a bond between new surfacing and existing surface and to eliminate slippage planes, where the new and existing surfaces meet.
- L. Volatile Organic Compound (VOC): any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.

### III. Exemptions

- A. The requirements of Section IV. shall not apply to the manufacture of cutback asphalt or emulsified asphalt in the manufacturing of paving materials where such materials are for shipment and use outside of Kern County and the San Joaquin Valley Air Basin.
- B. The requirements of Subsection IV.A.2 shall not apply to the use of medium cure asphalt where the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F (10°C).

### IV. Requirements

- A. A person shall not manufacture for sale nor use any of the following for penetrating prime coat, tack coat, dust palliative, or other paving and maintenance operations:
  - 1. Rapid cure cutback asphalt;
  - 2. Medium cure cutback asphalt;
  - 3. Slow cure asphalt which as produced for application, contains more than 0.5 percent of organic compounds which evaporate at 500°F (260°C) or lower.
  - 4. Emulsified asphalt containing organic compounds, in excess of 3 percent by volume, which evaporate at 500°F (260°C) or lower.

### V. Administrative Requirements

#### A. Record Keeping

- 1. The manufacturer of cutback, slow cure or emulsified asphalt for dust palliative, or any other road paving and maintenance operations shall maintain records showing the types and amounts of cutback asphalt slow cure asphalt and emulsified asphalt which contain organic compounds produced and the destination of these products.
- 2. The users of cutback slow cure or emulsified asphalt for penetrating prime coat, tack coat, dust palliative, or other paving and maintenance operations shall maintain records showing the types, amounts received, and amounts used.

3. Such records shall be maintained daily and retained and available for inspection by the Control Officer for the previous 24 month period.

B. Test Methods

1. Analysis of Cutback Asphalt samples for VOC content shall be in accordance with ASTM Method D402-76 (Reapproved 1987).
2. Analysis of Emulsified Asphalt samples for VOC content shall be in accordance with ASTM Method D244-88.
3. Analysis for halogenated exempt compounds shall be by ARB Method 432.

VI. Compliance Schedule

- A. Any person subject to the requirements of this Rule prior to May 6, 1991 shall be in compliance with all previous requirements by January 1, 1985.
- B. Any person subject to the requirements of this Rule revised on May 6, 1991 or now subject to the recordkeeping requirements of Subsection V.A. shall be in full compliance before January 1, 1992.

KERN  
5/30/91

ULE 410.6 PERCHLOROETHYLENE DRY CLEANING SYSTEM

I. Applicability

This Rule applies to perchloroethylene solvent washers, dryers, solvent filters, settling tanks, vacuum stills, and other containers and conveyors of perchloroethylene solvents that are used in perchloroethylene dry cleaning facilities.

II. Definitions

- A. Dry-to-Dry Systems dry cleaning equipment which combines the functions of cleaning and drying in one unit and where articles to be cleaned are placed in the equipment and not removed until the drying cycle is complete.
- B. Leak: the dripping of liquid perchloroethylene solvent at a rate of more than three drops per minute from equipment in organic service; or an emission of perchloroethylene solvents which causes a portable hydrocarbon detection instrument to register at least 10,000 ppm as methane, as determined by EPA Method 21.
- C. Liquid and Vapor Leak: a liquid and vapor leak shall be determined by inspection of the following sources:
1. hose connections, unions, couplings and valves;
  2. machine door gasket and seating;
  3. filter head gasket and seating;
  4. pumps;
  5. base tanks and storage containers;
  6. water separators;
  7. filter sludge recovery;
  8. distillation unit;
  9. diverter valves;
  10. saturated lint from lint basket; and
  11. cartridge filters.
- D. Perchloroethylene Dry Cleaning Facility: any facility engaged in the cleaning of fabrics or leather using one or more waxes in perchloroethylene solvent, extracting excess solvent by spinning, and drying by tumbling in an airstream. The facility includes, but is not limited to, washers, dryers, filters, purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and valves.



- E. Portable Hydrocarbon Detection Instrument: a hydrocarbon analyzer which uses the flame ionization detection or thermal conductivity methods and satisfies Method 21, 40 CFR Part 60. The instrument shall be equated to calibrating on methane and sampling at one liter per minute.

### III. Exemptions

Dry cleaning facilities which use petroleum solvents exclusively are not subject to this Rule.

### IV. Requirements

- A. A perchloroethylene dry cleaning facility shall comply with all of the following requirements:
1. Any solvent liquid or solvent vapor leaks shall be repaired immediately.
  2. All washer lint traps, access doors and other parts of this equipment where solvent may be exposed to the atmosphere are kept closed at all times except when required for proper operation or maintenance.
  3. Backwashing from all filters other than diatomaceous earth types is treated in a still or muck cooker so that the solvent content of the residue does not exceed 60 percent by weight.
  4. Backwashing from all diatomaceous earth type filters is treated in a still or muck cooker so that the solvent content of the residue does not exceed 0.25 percent by weight.
  5. Cartridge type filters are drained in the filter housing for at least 24 hours, before discarding the cartridges.
  6. All waste containing perchloroethylene shall be stored in sealed containers and disposed of at a permitted hazardous waste disposal facility.
- B. A person shall not operate a perchloroethylene dry cleaning facility unless one of the following requirements is satisfied:
1. All of the exhaust gases from drying tumblers, cabinets, and floor pickups are vented through a carbon adsorber which reduces the total emissions of organic compounds to the atmosphere during the entire drying cycle to 100 parts per million by volume before dilution; or
  2. Exhaust gases from drying tumblers, cabinets, and floor pickups are vented through a control device, other than a carbon adsorber, which reduces the total emissions of organic compounds to the atmosphere during the entire cycle by at least 90 percent by weight.
- C. After July 1, 1991, a person shall not install any dry cleaning equipment unless such equipment is a dry-to-dry system and is operated in compliance with the requirements of Section IV.
- D. A person shall not operate any dry cleaning equipment unless such equipment does not leak.

## V. Administrative Requirements

### A. Record Keeping

1. Any person subject to this Rule shall maintain records such that daily of perchloroethylene consumption can be determined.
2. Such records shall be retained and available for inspection by the Control Officer for the previous 24 month period.
3. An inspection log shall be maintained. This log shall include the following:
  - a. Daily inspection schedule
  - b. Leak(s) found - liquid or vapor
  - c. Leak(s) repaired

### B. Test Methods

1. Determination of Emissions: Emissions of perchloroethylene solvent subject to the rule shall be determined using EPA reference Method 18, 24, 24A, 25 or 25A, as applicable, or ARB Method 100.
2. Leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21.

## VI. Compliance Schedule

- A. The owner or operator subject to this Rule shall comply with the following increment of progress:
  1. Be in full compliance with Subsection IV.A within six months from the original date of adoption of this Rule.
  2. Be in full compliance with the Rule by July 1, 1982.
- B. Any owner or operator who becomes subject to the requirements of this Rule through loss of exemption shall comply Subsection VI.A.

RULE 410.6A PETROLEUM SOLVENT DRY CLEANING OPERATIONS

I. Applicability

This Rule applies to petroleum solvent washers, dryers, solvent filters, settling tanks, vacuum stills, and other containers and conveyors of petroleum solvents that are used in petroleum solvent dry cleaning facilities.

II. Definitions

- A. Cartridge Filter: a discrete filter unit containing both filter paper and activated carbon that traps and removes contaminants from petroleum solvents, together with the piping and ductwork used in the installation of this device.
- B. Dryer: a machine used to remove petroleum solvents from articles of clothing or other textile or leather goods, after washing and removing of excess petroleum solvent, together with the piping and ductwork used in the installation of this device.
- C. Leak: the dripping of liquid petroleum solvent at a rate of more than three drops per minute from equipment in organic service; or an emission of organic compounds which causes a portable hydrocarbon detection instrument to register at least 10,000 ppm as methane, as determined by EPA Method 21.
- D. Liquid and Vapor Leak: liquid and vapor leaks shall be determined by visual inspection of the following sources:
  - 1. Hose connections, unions, couplings and valves;
  - 2. Machine door gasket and seating;
  - 3. Filter head gasket and seating;
  - 4. Pumps;
  - 5. Base tanks and storage containers;
  - 6. Water separators;
  - 7. Filter sludge recovery;
  - 8. Distillation unit;
  - 9. Diverter valves;
  - 10. Saturated lint from lint basket; and
  - 11. Cartridge filters.

- E. Petroleum Solvent Dry Cleaner: a dry cleaning facility that uses petroleum solvent in a combination of washers, dryers, filters, stills, and settling tanks.
- F. Petroleum Solvent: any clear petroleum distillate having a minimum flash point of 38°C (100°F), and the following distillation ranges: not less than 50% over at 177°C (350°F), 90% over at 190°C over (375°F), and the end point not higher than 210°C (410°F). The distillation is performed at standard conditions.
- G. Portable Hydrocarbon Detection Instrument: a hydrocarbon analyzer which uses the flame ionization detection or thermal conductivity methods and satisfies Method 21, 40 CFR Part 60. The instrument shall be equated to calibrating on methane and sampling at one liter per minute.
- H. Solvent Recovery Dryer: a class of dry cleaning dryers that employs a condensor to condense and recover solvent vapors evaporated in a closed-loop stream of heated air, together with the piping and ductwork used in the installation of this device.
- I. Washer: a machine which agitates fabric articles in a petroleum solvent bath and spins the articles to remove the solvent, together with the piping and ductwork used in the installation of this device.

### III. Exemptions

Dry cleaning facilities which use perchloroethylene dry cleaning solvents exclusively are not subject to this Rule.

### IV. Requirements

A petroleum solvent dry cleaner shall comply with all of the following requirements:

- A. Petroleum solvent dry cleaning equipment shall not be operated if solvent liquid and/or vapor is leaking from any portion of the equipment.
- B. Solvents shall be stored in closed containers, except where closed containers are prohibited by law, regulation, or fire control authority.
- C. All washer lint traps, button traps, access doors and other parts of the equipment where solvent may be exposed to the atmosphere shall be kept closed at all times except as required for proper operation or maintenance.
- D. All wastes from dry cleaning facilities subject to Department of Health Services regulation shall be stored, transported and disposed of in accordance with Department of Health Services regulations.
- E. The used filtering material shall be put into a sealed container immediately after removal from the filter, unless the dry cleaning system is equipped with one of the following filtering systems:

1. Cartridge filters containing paper or carbon or a combination thereof which are fully drained in a sealed filter housing for at least 24 hours before being discarded, or 12 hours if the filter is dried in a dryer vented to an emission control device; or
  2. Reduce the petroleum solvent content in all filtration wastes to 1.0 kilograms or less per 100 kilograms dry weight of articles dry cleaned, before disposal, and exposure to the atmosphere.
- F. A clearly visible label specifying leak inspection and leak repair cycle information for petroleum solvent dryers shall be posted. Such information should state:

"To protect against fire hazards, loss of valuable solvents, and emissions of solvents to the atmosphere, periodic inspection of this equipment for evidence of leaks and prompt repair of any leaks is recommend. The EPA recommends that the equipment be inspected every 15 days. Each owner or operator shall repair all petroleum solvent vapor and liquid leaks within 3 working days after identifying the sources of the leaks. If necessary repair parts are not on hand the owner or operator shall order these parts within 3 working days, and repair the leaks no later than 3 working days following the arrival of the necessary parts."

- G. Articles which have been cleaned shall be transferred to the dryer within five minutes after they are received from the washer, or shall be stored in closed transfer carts.
- H. Emission Control Requirements: A person shall not operate any petroleum solvent dry cleaner unless one of the following requirements is satisfied:
1. Add-On-Control Device: All exhaust gases from drying tumblers, washers, and cabinets are vented through a control device, which reduces the total emissions of petroleum solvent vapors by at least 90 percent by weight.
  2. Solvent Recovery Dryer: A solvent recovery dryer that recovers at least 90 percent of petroleum solvent by weight shall be installed. For the purpose of determining compliance with the 90 percent recovery efficiency of this Subsection, 3 kilograms of petroleum solvent emitted per 100 kilograms dry weight of articles cleaned shall be deemed to be in compliance.
- J. The flow rate of recovered solvent from the solvent recovery dryer at the termination of the recovery cycle shall not exceed 0.05 liters per minute.

#### V. Administrative Requirements

##### A. Record Keeping

The following records shall be retained for a minimum of two years and made available for inspection by the Control Officer upon request.

1. Usage Records: Any person seeking to satisfy the requirements of this rule shall maintain purchase and actual usage records showing amounts of solvents purchased and used.

**RULE 410.7 Graphic Arts - Adopted 6/29/81, Renumbered 5/89, Amended 5/6/91, 3/7/96**

**I. Applicability**

This Rule is applicable to all graphic arts printing operations as defined in Section II. of this Rule.

**II. Definitions**

- A. 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.
- B. Control Device: Equipment such as an incinerator or adsorber, or cooler/condenser filtration used to prevent air pollutants from being emitted into the atmosphere.
- C. Converting Operation: Coating, waxing, laminating, extrusion coating, or printing, to fabricate base materials which are then used to produce wraps, bags, and other preformed packages.
- D. Doctor Blade: A steel blade used to scrape excess ink from a printing plate or inking cylinder.
- E. Dryer: A hot air, high velocity system used to dry inks on printed or coated substrate.
- F. Flexible Packaging Industry: Establishments that convert materials consisting of light gauge papers, plastic films, cellulosic films such as cellophane, thin gauge metal sheets such as aluminum foil or steel foil, and combinations thereof into a variety of product packages.
- G. 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 materials. As compared to gravure (intaglio) printing, the image to be printed via flexography is raised above the carrier surface, while in the gravure process the image to be printed is sunk below the surface.
- H. Fountain Solution: Solution composed mainly of water, gum arabic, and other additives which is applied to the lithographic plate to maintain the hydrophilic properties of the non-image areas.
- I. Fugitive Emissions: Emissions of VOC from any portion of the printing, coating, or laminating operation other than from the dryer.

- J. Graphic Arts Industry: Those operations employing gravure, flexography, letterpress, lithography, screen, or any coating or laminating process to produce published products and packages.
- K. 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.
- L. Intaglio Printing: Printing done from a plate or cylinder in which the image is sunk below (etched or engraved into) the surface.
- M. Letterpress Printing: A 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.
- N. Line: The minimum equipment which is required for the application and/or drying of inks and/or curing of ultraviolet coatings of inks, or coatings on a substrate, including ink the and/or coating applicators and drying systems, and associated ink and coating agitation and delivery systems.
- O. Non-Heatset Inks: An ink which dries by oxidation and is absorbed into the substrate without use of heat from dryers or ovens.
- P. Nonporous Substrate: Any substance other than paper or paperboard, including but not limited to foil, polyethylene, polypropylene, cellophane, metallized polyester, nylon, and polyethylene terephthalate (mylar), but not including wood, metal, or ceramic materials.
- Q. Offset Lithographic Printing: A plane-o-graphic method in which the image and non-image areas are on the same plane and the ink is offset from a plate to a rubber blanket, and then from the blanket to the substrate.
- R. Packaging Gravure: Gravure printing on paper, paperboard, foil, film, or other substrates which are to be used to produce containers or packages.
- S. Porous Substrate: Paper or paperboard.
- T. Publication Gravure: Gravure printing on paper which is subsequently formed into books, magazines, catalogs, brochures, directories, newspaper supplements or other types of printed material.
- U. Screen Printing: A commercial and industrial printing technique where which involves passage of a printing medium, such as ink, through a taut fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimension of the imprint.

- V. 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.
- W. Web: A continuous sheet of substrate.
- X. Web Feed: An automatic system which supplies substrates from a web.
- Y. Volatile Organic Compound (VOC): Any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.

### III. Exemptions

The requirements of this Rule, except for Subsection V.A, shall not apply to any printing, coating, or laminating facility which emits less than 75 pounds per day of volatile organic compounds. Once a facility exceeds this exemption threshold it shall become subject to the requirements of this Rule.

### IV. Requirements

- A. Any person operating a publication gravure printing line shall comply with one of the following:
  - 1. Use only low VOC inks and coatings as specified in Subsection IV.C; or
  - 2. Install and operate on the line, an emission control system as defined in Subsection IV.D, with a control device efficiency of 95 percent on a mass basis; or
  - 3. The VOC emissions from the line have been reduced by at least 85 percent overall on each day from the baseline daily emissions, as determined by Section VII.
- B. Any person operating any graphic arts printing line for packaging gravure, specialty gravure, screen printing, flexographic printing, offset lithography, letterpress printing or related coating or laminating process, printing or coating on porous or non-porous substrate, shall comply with one of the following:
  - 1. Use only low VOC inks, coatings, and adhesives as specified in Subsection IV.C; or
  - 2. Install and operate on the line, an emission control system as defined in Subsection IV.D, with a control device efficiency of 95 percent on a mass basis; or



3. The VOC emissions from the line have been reduced by at least 75 percent overall on each day from the baseline daily emissions, as determined by Section VII.

C. Low VOC Ink, Coating, Adhesive, and Fountain Solution:

Any ink, coating or adhesive must satisfy Subsection IV.C.1. in order to be deemed a low VOC ink, coating, or adhesive for the purposes of this Rule.

1. The ink, coating, or adhesive contains less than 300 grams of VOC per liter (2.50 pounds VOC per gallon), as applied, excluding water and exempt compounds, provided that the total volatile content does not exceed that of other inks, coatings, or adhesives previously used by the operator for the same or equivalent products.
2. Fountain solutions shall not contain more than 15% VOC (by volume), as applied.

D. Emission Control System:

An emission control system is a system for reducing emissions of VOC consisting of collection and control devices which includes the following:

1. A control device designed and operated to achieve the efficiency specified in the applicable section of this rule at all times during normal operation of the line being controlled; and
2. A collection system, with a capture efficiency of at least 90%, which vents all dryer exhaust to the control device; and
3. A collection system, with a capture efficiency of at least 90%, which has one or more inlets for collection of fugitive emissions from each line.

E. Evaporative Loss Minimization:

1. A person shall not use open containers for the storage or disposal of cloth or paper impregnated with volatile organic compounds that is used for surface preparation or cleanup.
2. A person shall not store spent or fresh volatile organic compounds to be used for surface preparation or cleanup in open containers.

V. Administrative Requirements

A. Record Keeping

Any person subject to the provisions of this Rule (including exempt facilities) shall comply with the following requirements:

1. The facility operator shall maintain a current list of coatings, inks and solvents in use which contains all of the data necessary to evaluate compliance, including the following information, as applicable:
  - a. Mix ratio of components used,
  - b. VOC content and specific chemical constituents of inks and coatings as applied,
  - c. VOC content and specific chemical constituents of solvents used for surface preparation and cleanup.
2. The permitted facility operator shall maintain records on a daily and monthly basis to include the following information:
  - a. Volume ink/solvent mix ratio,
  - b. VOC content of ink and/or coating (pounds/gallon),
  - c. Volume of each coating or ink used (gallons), and
  - d. VOC content and quantity of cleanup solvent used (gallons).
3. The exempt facility operator shall maintain records on an extended basis provided the records substantiate emissions are being maintained below 75 pounds for the entire extended period and include the following information:
  - a. VOC content of ink and/or coating (pounds/gallon),
  - b. Volume of each coating or ink used (gallons), and
  - c. VOC content and quantity of cleanup solvent used (gallons).
4. All records shall be retained for a period of 2 years and shall be made available for inspection by the Control Officer upon request.

B. Test Methods

1. VOC content in samples of low VOC printing inks and coatings shall be determined by EPA Method 24 or 24A as applicable.
2. VOC content in samples of non-heatset printing inks and coatings shall be determined by Bay Area Air Quality District (BAAQMD) Manual of Procedures Method 30.

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3. EPA Test Method 25 or ARB Test Method 100 shall apply for VOC control efficiency compliance determinations.
4. ARB Test Method 432 shall apply for quantification of halogenated compounds exempted by this Rule.
5. Where add-on control equipment is utilized, and capture efficiency needs to be determined, collection efficiency shall be determined by the EPA document "Model Regulatory Language for Capture Efficiency Testing" dated 8/3/90.

#### VI. Compliance Schedule

- A. Any person subject to the requirements of this Rule due to revisions adopted May 6, 1991, shall submit a compliance plan which designates the measures and increments of progress that will be taken to achieve compliance. As a minimum, the compliance plan shall include provisions for reducing the amounts of VOC used in all inks, coatings, and adhesives applied on the line, in accordance with the following schedule:
  1. By September 1, 1991 submit to the District a plan describing the methods used to comply with the applicable Rules.
  2. By January 1, 1992 submit a completed application for Authority to Construct, if needed.
  3. Complete on site construction and achieve final compliance by July 1, 1993.
- B. Any person subject to the requirements of this rule other than described in Subsection IV.A.1. by January 1, 1987, shall be in full compliance with the requirements of the Rule.

#### VII. Calculations

The allowable emissions necessary to comply with the overall percent reduction, shall be calculated using as a baseline the average of the actual amount of solvent used for each line on a weight by solids basis for any two years selected from the calendar years 1978, 1979, 1980, 1981. The control plan required under this section shall identify which two of the four years have been selected, and the plan shall delineate the quantity of solvent used for each line for each of the two baseline years.

Baseline daily emissions shall be the sum of VOC emissions during the baseline years divided by the number of operating days.

**RULE 410.8 Aerospace Assembly and Coating Operations - Adopted 3/13/2014****I. Purpose**

The purpose of this rule is to limit volatile organic compound (VOC) emissions from aerospace coatings and adhesives, and from cleaning, stripping, storing, and disposal of organic solvents and waste solvent materials associated with the use of aerospace coatings and adhesives. This rule also provides administrative requirements for recording and measuring VOC emissions.

**II. Applicability**

Except as provided in Section IV, the provisions of this rule are applicable to the manufacturing, assembling, coating, masking, bonding, paint stripping, surface cleaning, service, and maintenance of aerospace components, and the cleanup of equipment, storage, and disposal of solvents and waste solvent materials associated with these operations.

**III. Definitions**

- A. 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 heat or open flame.
- B. Adhesion Promoter: A coating applied to a substrate in a monomolecular thickness to promote wetting and form a chemical bond with the subsequently applied material.
- C. Adhesive: A substance that is used to bond one surface to another.
- D. Adhesive Bonding Primer: A coating applied in a very thin film to aerospace adhesive bond detail components for corrosion inhibition and adhesion.
- E. Aerosol Coating: A mixture of pigments, resins, and liquid and gaseous solvents and propellants packaged in a disposable container for hand-held application.
- F. Aerospace Component: Any raw material, partial or completed fabricated part, assembly of parts, or completed unit of any aircraft, helicopter, missile, or space vehicle, including integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons.
- G. 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. Preservative oils and compounds, form release agents not containing solids, greases, and waxes are not aerospace materials for the purpose of this rule.
- H. Antichafe Coating: A coating applied to areas of moving aerospace components which may rub during normal operation.

- I. 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.
- J. Anti-Wicking Wire Coating: The outer coating of a wire which prevents fluid wicking into the insulation of the wire.
- K. Air Pollution Control Officer (APCO): Eastern Kern Air Pollution Control District Air Pollution Control Officer, or his designee.
- L. ARB: California Air Resources Board.
- M. ASTM: American Society for Testing and Materials.
- N. Barrier Coating: A coating applied in a thin film to fasteners to inhibit dissimilar metal corrosion and to prevent galling.
- O. Bearing Coating: A coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect the base 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.
- P. Brush Coating: Manual application of coatings using brushes and rollers.
- Q. Caulking and Smoothing Compounds: 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.
- R. Chemical Agent-Resistant Coating (CARC): An exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.
- S. Chemical Milling: The removal of metal by chemical action of acids or alkalis.
- T. Clear Topcoat: A clear or semi-transparent coating applied over a primer for purposes such as appearance, identification, or protection.
- U. 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 excluding preservative oils and compounds, form release agents not containing solids, greases, and waxes.
- V. Commercial Exterior Aerodynamic Structure Primer: A primer utilized for the purpose of extended corrosion protection, which is only used on the exterior of passenger and cargo doors, supporting door structures, aerodynamic components, and structures of commercial aircraft which protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizer, vertical fins, wing-to-body fairings, antennae, landing gear and landing gear doors.

W. Composite Partial Pressure: The sum of the partial pressures of the VOC compounds in a solvent. The VOC composite partial pressure is calculated as follows:

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

Where:

- $W_i$  = Weight of the "i"th VOC compound, in grams
- $W_w$  = Weight of water, in grams
- $W_e$  = Weight of exempt compound, in grams
- $MW_i$  = Molecular weight of the "i"th VOC compound, in grams per gram-mole
- $MW_w$  = Molecular weight of water, in grams per gram-mole
- $MW_e$  = Molecular weight of the "e"th exempt compound, in grams per gram-mole
- $PP_c$  = VOC composite partial pressure at 20°C (68°F), in mm Hg
- $VP_i$  = Vapor pressure of the "i"th VOC compound at 20°C (68°F), in mm Hg

- X. Conformal Coating: A coating applied to electrical conductors and circuit boards to protect them against electrical discharge damage and/or corrosion.
- Y. Decorative Laminate Primer: An adhesive bonding primer which is applied to a substrate to enhance adhesion between the decorative laminate and the subsequently applied substrate, and is cured at a maximum temperature of 250°F.
- Z. Dip Coating: The process in which a substrate is immersed in a solution (or dispersion) containing the coating and then withdrawn.
- AA. Dry Lubricative Coating: A coating 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.
- BB. Electric-Effect Coating: An electrically-conductive coating.
- CC. Electrodeposition: A dip coating application method where the paint solids are given an electrical charge which is then attracted to a substrate.
- DD. Electromagnetic Interference (EMI) Coating: A coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.
- EE. Electronic Wire Coating: The outer electrical insulation coating applied to tape insulation of a wire specifically formulated to smooth and fill edges.
- FF. Electrostatic Application: A sufficient charging or atomized paint droplets to cause deposition principally by electrostatic attraction. This application shall be operated at a minimum 60 KV power.

- GG. EPA: United States Environmental Protection Agency.
- HH. Epoxy Based Fuel Tank Coating: A coating which contains epoxy resin that is applied to integral fuel tank components of aircraft to protect the fuel tank from corrosion and the by-products of bacterial growth.
- II. Epoxy Polyamide: A tough chemically resistant polyamide-cured epoxy coating that provides long-term protection for alloys exposed to hot corrosive environments.
- JJ. Fastener Sealant: A sealant applied to a device used to join two or more parts together.
- KK. Fire Resistant Coating - Civilian (interior): A cabin interior coating that passes Federal Aviation Administration standards using the Ohio State University Heat Release, Fire and Burn Tests.
- LL. 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.
- MM. Flow Coating: 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 a collection system.
- NN. Fuel Tank Adhesive: An adhesive used to bond components continuously exposed to fuel and which must be compatible with and used with fuel tank coatings.
- OO. Fuel Tank Coating: A coating applied to the interior of a fuel tank or areas of an aircraft that are continuously wetted by fuel to protect it from corrosion and/or bacterial growth.
- PP. Grams of VOC per Liter of Coating, Less Water and Exempt Compounds: The weight of VOC content per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per liter of coating, less water and exempt compounds} = \frac{Ws - Ww - Wec}{Vm - Vw - Vec}$$

Where:

- Ws = weight of volatile compounds (grams)  
 Ww = weight of water (grams)  
 Wec = weight of exempt compounds (grams)  
 Vm = volume of material (liters)  
 Vw = volume of water (liters)  
 Vec = volume of exempt compounds (liters)

QQ. Grams of VOC per Liter of Material: The weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{ec}}{V_m}$$

Where:

$W_s$  = weight of volatile compounds (grams)

$W_w$  = weight of water (grams)

$W_{ec}$  = weight of exempt compounds (grams)

$V_m$  = volume of material (liters)

RR. Hand Application Methods: The application of coatings, sealants, or adhesives by non-mechanical hand-held equipment including but not limited to paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, non-refillable aerosol cans, rags, and sponges.

SS. High Temperature Coating: A coating that is certified to withstand temperatures of more than 350°F.

TT. High-Volume, Low-Pressure (HVL) Spray Equipment: 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 and with liquid supply pressure less than 50 psig.

UU. Impact Resistant Coating: A flexible coating that protects aerospace components, such as aircraft landing gear, landing gear compartments, and other surfaces subject to abrasive impacts from runway debris.

VV. 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.

WW. Lacquer: 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.

XX. Liquid Leak: A visible solvent leak from a container at a rate of more than three drops per minute or a visible liquid mist.

YY. Long Term Adhesive Bonding Primer (Metal to Structural Core Bonding): An adhesive bonding primer that has met the aircraft manufacturers' required performance characteristics following 6000 hours testing. Used for metal to structural core bonding and with an adhesive that is specified to be cured at 350°F ± 10°F.

ZZ. Maskant for Chemical Milling: A coating applied directly to an aerospace component to protect surface areas when chemical milling such component.



- AAA. Metalizing Epoxy Coating: A coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.
- BBB. Mold Release: A coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.
- CCC. Non-Absorbent Container: A container made of non-porous material that does not allow the migration of solvents through it.
- DDD. Non-Leaking Container: A container without liquid leak.
- EEE. Non-Structural Adhesive: An adhesive that bonds non-load carrying aircraft component in non-critical applications.
- FFF. Normal Business Hours: Monday through Friday, 8:00 am to 5:00 pm.
- GGG. Optical Anti-Reflective 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.
- HHH. Organic Solvent: The same as "Solvent."
- III. Organic Solvent Cleaning: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- JJJ. Part Marking Coating: Coatings or inks used to make identifying markings on materials, components, or assemblies. These markings may be permanent or temporary.
- KKK. Phosphate Ester Resistant Wire Ink Coating: A coating that is used for surface identification, mark on aerospace wire or cable, and inhibits the corrosion caused by contact with phosphate ester type hydraulic fluids.
- LLL. Pretreatment Coating: A coating which contains no more than 12 percent solids by weight and at least one-half (0.5) percent acid by weight and is applied directly to metal surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.
- MMM. Primer: A coating applied directly to an aerospace component for purposes of corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings, adhesives, or sealants.
- NNN. Radiation-Effect Coating: A coating which helps in the prevention of radar detection.
- OOO. Rain Erosion Resistant Coating: A coating that protects leading edges, flaps, stabilizers, and engine inlet lips against erosion caused by rain during flight.
- PPP. Remanufactured Aircraft Part: An aerospace component that is built as a spare part or replacement part subject to an existing commercial aircraft specification.

- QQQ. Rocket Motor Nozzle Coating: A catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.
- RRR. Roll Coating: Application of coatings from a paint trough to a flat surface by mechanical series of rollers.
- SSS. Scale Inhibitor: A coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of tenacious scale.
- TTT. SCAQMD: South Coast Air Quality Management District.
- UUU. Screen Print Ink: An ink used in screen printing processes during fabrication of decorative laminates and decals.
- VVV. Sealant: A viscous semisolid material that is applied with a syringe, caulking gun, or spatula to fill voids in order to seal out water, fuel, other liquids and solids, and in some cases air movement.
- WWW. 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”.
- XXX. Short Term Adhesive Bonding Primer: An adhesive bonding primer that has met the manufacturers’ required performance characteristics following 1000 hours testing. Used for metal to metal and metal to structural core bonding with an adhesive which is specified to be cured at a temperature of 350°F ± 10°F.
- YYY. Solid Film Lubricant: A very thin coating consisting of a binder system containing as its chief pigment material one (1) or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between closely-fitting surfaces.
- ZZZ. Solvent: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- AAAA. Sonic and Acoustic Applications: The use of aerospace materials on aerospace components that are subject to mechanical vibration or sound wave cavitation.
- BBBB. Space Vehicle Coating: A coating applied to a vehicle designed to travel and operate beyond earth's atmosphere.
- CCCC. 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.

- DDDD. Specialized Function Coating: A coating that fulfills specific engineering requirements that are limited in application and characterized by low volume usage. This category excludes coatings covered in other Specialty Coating categories.
- EEEE. Stripper: A volatile liquid applied to remove a maskant for chemical processing, cured or dried paint, cured or dried paint residue, or temporary protective coating.
- FFFF. Structural Adhesive - Autoclavable: An adhesive used to bond load-carrying aircraft components and is cured by heat and pressure in an autoclave.
- GGGG. Structural Adhesive - Nonautoclavable: An adhesive cured under ambient conditions and is used to bond load-carrying aircraft components or other critical functions, such as nonstructural bonding near engines.
- HHHH. Surface Cleaning: Any method of cleaning outside of a degreaser, including, but not limited to, wipe cleaning and equipment flushing.
- IIII. Temporary Protective Coating: A coating applied to an aerospace component to protect it from mechanical and environmental damage during manufacturing or shipping.
- JJJJ. Thermal Control Coating: A coating formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.
- KKKK. Topcoat: A coating applied over a primer for purposes such as appearance, identification, or protection.
- LLLL. Touch-Up Operation: The application of Aerospace Materials to repair minor surface damage and imperfections after the main coating process.
- MMMM. Transfer Efficiency: The ratio of the weight or volume of coating solids adhering to the part being coated to the weight or volume of coating solids used in the application process expressed as a percentage.
- NNNN. Unicoat: A coating that is applied directly to an aerospace component for purposes of corrosion protection, environmental protection, and functional fluid resistance that is not subsequently topcoated. A unicoat is used in lieu of the application of a primer and a topcoat.
- OOOO. Volatile Organic Compounds (VOCs): As defined in Rule 102, Definitions.
- QQQQ. Waste Solvent Material: Any solvent which may contain dirt, oil, metal particles, sludge, or waste products; or wiping material containing VOCs including, but not limited to, paper, cloth, sponge, rag, or cotton swab used in organic solvent cleaning.
- RRRR. Wet Fastener Installation Coating: A primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.
- SSSS. Wing Coating: A coating that is corrosion resistant and is resilient enough to withstand the flexing of wings.

#### **IV. Exemptions**

- A. Jet engine or rocket engine flushing operations using any solvent other than trichloroethylene are exempt from this rule.
- B. Coatings applied using non-refillable aerosol spray containers.
- C. Except for the provisions of Section VI, VOC limits for solvents and strippers listed in Section V shall not apply to space vehicle manufacturing.
- D. Except for the recordkeeping provisions of Sections VI.A.1 and VI.A.4, the requirements of Section V shall not apply to aerospace assembly and component coating facilities using not more than four (4) gallons of products containing VOCs per day. Solvent-containing materials used in operations subject to Rule 410.3, Organic Solvent Degreasing Operations shall not be included in this determination.
- E. Except for the provisions of Section VI, Section V shall not apply to laboratories which apply coatings, solvents, and adhesives to test specimens for purpose of research, development, quality control, and testing for production-related operations. Any person claiming this exemption shall provide operational records, data, and calculations as determined by the APCO to be necessary to substantiate this claim.
- F. Coatings that have been designated as “classified” by the Department of Defense or used on space vehicles are exempt from the VOC content limits of the following categories as listed in the Table of Standards:
  - 1. Ablative Coating, Bearing Coating, Caulking and Smoothing Compounds, Chemical Agent-Resistant Coating, Electromagnetic Interference Coating, Intermediate Release Coating, Lacquer, Metalized Epoxy Coating, Mold Release, Part Marking Coating, Rocket Motor Nozzle Coating, Silicone Insulation Material, Specialized Function Coating, Thermal Control Coating, Epoxy Polyamide, and Wet Fastener Installation Coating;
  - 2. The Fastener Sealant category is exempt from the 600 g/l VOC limit but must still comply with the 675 g/l VOC limit;
  - 3. The Sealant (Extrudable/Rollable/Brushable) category is exempt from the 280 g/l VOC limit but must still comply with the 600 g/l VOC limit.
- G. Provisions of Section V.A. shall not apply to:
  - 1. Coatings or refillable aerosols with separate formulations that are used in volumes of less than fifty (50) gallons in any calendar year provided that the total of such formulations applied annually by a facility is less than 200 gallons;
  - 2. Adhesives with separate formulations that are used in volumes of less than one half (0.5) gallon on any day or less than ten (10) gallons in any calendar year;
  - 3. Touch-up coatings and stencil coatings; or

4. Rework operations performed on antique aerospace vehicles or associated components.

Any operator seeking to claim the exemption in Section IV.F shall notify the APCO in writing that substitute compliant coatings are not available.

- H. The provisions of Section V.E. shall not apply to the application of coatings that contain less than 20 grams of VOC per liter of coating less water and exempt compounds.

## V. Requirements

- A. Aerospace Coatings and Adhesives: An operator shall not apply to any aerospace component, any coating, aerosol, or adhesive with a VOC content, less water and exempt compounds, as applied, in excess of the limits listed in the Table of Standards for Aerospace Component Products Containing VOCs.

**TABLE OF STANDARDS**  
**VOC CONTENT LIMITS FOR AEROSPACE COMPONENT COATING PRODUCTS**  
 Content expressed in Grams per Liter  
 Less Water and Exempt Compounds

VOC Content Category	VOC Limit
<b>I. PRIMERS</b>	
1. General	350
2. Adhesive Bonding Primers	
a. Commercial Aircraft	250
b. Military Aircraft	805
3. Commercial Exterior Aerodynamic Structure Primer	650
4. Compatible Substrate Primer	780
5. Cryogenic Flexible Primer	645
6. Elevated-Temperature Skydrol-Resistant Commercial Primer	740
7. Flexible Primer	640
8. Low-Solids Corrosion Resistant Primer	350
9. Primer Compatible with Rain Erosion-Resistant Coating	850
<b>II. COATINGS</b>	
1. Ablative Coating	600
2. Adhesion Promoter Coating	850
3. Antichafe Coating	600
4. Bearing Coating	620 <sup>1</sup>
5. Chemical Agent-Resistant Coating	550 <sup>1</sup>

**TABLE OF STANDARDS Continued**

<b>VOC Content Category</b>	<b>VOC Limit</b>
6. Conformal Coating	750
7. Cryoprotective Coating	600
8. Electromagnetic/Radiation Effect Coating	800
9. Electromagnetic Interference (EMI) Coating	800 <sup>1</sup>
10. Fire-Resistant (Interior) Coating	
a. Civilian	650
b. Military	800
c. Space	800
11. Flight-Test Coating	
a. Used on Missiles or Single Use Aircraft	420
b. All Other	840
12. Fuel-Tank Coating	
a. General	420
b. Rapid Cure	720
13. High-Temperature Coating	850
14. Impact-Resistant Coating	420
15. Intermediate Release Coating	750 <sup>1</sup>
16. Lacquer Coating	830
17. Metallized Epoxy Coating	740 <sup>1</sup>
18. Mold Release Coatings	780 <sup>1</sup>
19. Optical Anti-Reflection Coating	700
20. Part Marking Coating	850 <sup>1</sup>
21. Pretreatment Coating	780
22. Rain Erosion-Resistant Coating	800
23. Rocket Motor Nozzle Coating	660 <sup>1</sup>
24. Scale Inhibitor Coating	880
25. Space-Vehicle Coatings, Other: does not include Electric Discharge and EMI Protection Coating or Fire-Resistant (Interior) Coating	1000
26. Specialized Function Coating	890 <sup>1</sup>
27. Temporary Protective Coating	250
28. Thermal Control Coating	800 <sup>1</sup>
29. Topcoat	
a. Clear	520
b. Epoxy Polyamide	660 <sup>1</sup>
c. Other	420
30. Unicoat Coating (Self Priming Topcoats)	420
31. Wet Fastener Installation Coating	675 <sup>1</sup>

**TABLE OF STANDARDS Continued**

<b>VOC Content Category</b>	<b>VOC Limit</b>
32. Wing Coating	750
33. Wire Coatings	
a. Electronic	420
b. Anti-Wicking	420
c. Pre-Bonding Etchant	420
d. Phosphate Ester Resistant Ink	925
<b>III. ADHESIVES</b>	
1. Commercial Interior Adhesive	760
2. Cyanoacrylate Adhesive	1020
3. Fuel-Tank Adhesive	620
4. Non-Structural Adhesive	250
5. Rocket Motor Bonding Adhesive	890
6. Rubber-Based Adhesive	850
7. Space Vehicle Adhesive	800
8. Structural Adhesive	
a. Autoclavable	50
b. High Temperature - Autoclavable	650
c. Non-Autoclavable	850
<b>IV. SEALANTS</b>	
1. Rollable, Brushable or Extrudable Sealant	280 <sup>2</sup>
2. Fastener Sealant	675
3. Other	600
<b>V. MASKANTS</b>	
1. Bonding Maskant	1230
2. Critical Use and Line Sealer Maskant	750
3. Chemical Milling Maskant	
a. For use with Type I Etchant	250
b. For use with Type II Etchant	160
c. For Chemical Processing *Less water, Exempt Compounds and (PERC)	250*
4. Photolithographic Maskant	850
5. Seal Coat Maskant	1230

**TABLE OF STANDARDS Continued**

<b>VOC Content Category</b>	<b>VOC Limit</b>
<b>VI. LUBRICANTS --</b>	
1. Fastener Installation Lubricant (applied at time of Aircraft/component assembly)	
a. Solid-Film Lubricant	880
b. Dry Lubricative Material	675
2. Fastener Lubricative Coating (applied at time of Fastener Manufacture)	
a. Solid-Film Lubricant	250
b. Dry Lubricative Material	120
c. Barrier Coating	420
3. Non-Fastener Lubricative Coatings (applied at time of non-Fastener Manufacture)	
a. Solid-Film Lubricant	880
b. Dry Lubricative Materials	675
<b>VII. OTHER</b>	
1. Caulking and Smoothing Compound	850
2. Corrosion Prevention Compound System	710
3. Insulation Covering	740
4. Screen Print Ink	840
5. Silicone Insulation Material	850
<p>1 Coatings that have been designated as “classified” by the Department of Defense or coatings that are used on space vehicles are exempt from these coating limits.</p> <p>2 Coatings that have been designated as “classified” by the Department of Defense or coatings that are used on space vehicles are exempt from the 280 g/l limit, but must comply with a 600 g/l limit.</p>	

**B. Evaporative Loss Minimization**

1. Surface Cleaning: No operator shall use a solvent for surface cleaning, clean-up, or jet engine or rocket engine gas path cleaning or flushing. Not exempt under Section IV of this rule, excluding stripping coatings or cleaning coating application equipment, unless:
  - a. The solvent contains less than 200 grams of VOC per liter (1.67 lb/gal) of material, as applied; or
  - b. The VOC composite vapor pressure of the solvent is less than or equal to 45 mm Hg (0.87 psia) at a temperature of 68°F.



## 2. Coating Application Equipment Cleaning

An operator shall not use VOC-containing materials to clean spray equipment used for the application of coatings, adhesives, or ink, unless one of the following methods is used:

- a. An enclosed system or equipment proven to be equally effective at controlling emissions is used for cleaning. The enclosed system must totally enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures; be used according to the manufacturer's recommendations; and remain closed when not in use;
  - b. Unatomized discharge of cleaning solvent into a waste container that is kept closed when not in use;
  - c. Disassembled spray gun that is cleaned in a vat and kept closed when not in use; or
  - d. Atomized spray into a waste container that is fitted with a device designed to capture atomized cleaning solvent emissions.
3. In lieu of compliance with Sections V.B.1. or V.B.2. an operator may control VOC emissions from surface cleaning operations or from cleaning coating application equipment with a VOC emission control system that meets the requirements of Section V.F.

## C. Coating Strippers

1. No operator shall use or specify for use within the District a coating stripper unless it contains less than 300 grams of VOC per liter (2.5 lb/gal), as applied, or has a VOC composite vapor pressure of 9.5 mm Hg (0.18 psia) or less at 68°F.
2. In lieu of compliance with Section V.C.1, an operator may control emissions from coating stripper operations with a VOC emission control system that meets the requirements of Section V.F.

D. Storage and Disposal of VOC Containing Materials: An operator shall store or dispose of fresh or spent solvents, waste solvent cleaning materials such as cloth, paper, etc., coatings, adhesives, catalysts, and thinners in closed nonabsorbent and non-leaking containers. Storage containers shall remain closed at all times except when depositing or removing the contents or when empty.

E. Application Equipment Requirements: No operator shall apply any coating subject to the provisions of this rule unless one (1) of the following application methods is used:

1. Brush, dip, flow, or roll coating conducted in accordance with manufacturer's recommendations;

2. Electrostatic or Electrodeposition application conducted in accordance with manufacturer's recommendations;
3. HVLP spray equipment operated in accordance with manufacturer's recommendations:
  - a. HVLP spray equipment 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.
  - b. A person shall not sell or offer for sale for use within the District any HVLP spray equipment without a permanent marking denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section III.TT.
4. Spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section III.TT. in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.
5. Any alternative coating application method which has been demonstrated to achieve at least 65 percent transfer efficiency or the equivalent efficiency of HVLP spray equipment and approved, in writing, by APCO.
8. In lieu of compliance with Sections V.E.1. through V.E.5., an operator may control VOC emissions from application equipment with a VOC emission control system that meets the requirements of Section V.F.

F. VOC Emission Control System

As an alternative to meeting the requirements of Sections V.A., V.B., V.C., or V.E., an operator may install a VOC emission control system provided that the VOC emission control system meets all of the following requirements:

1. The VOC emission control system shall be approved by the APCO.
2. The VOC emission control system shall comply with the requirements of Sections V.F.3. through V.F.5. during periods of emission-producing activities.
3. The VOC emission control system collection device shall have a control efficiency of at least 95 percent, by weight.
4. The VOC emission control system can demonstrate a capture efficiency of at least 90 percent by weight.

5. In no case shall compliance through the use of a VOC emission control system result in VOC emissions in excess of the VOC emissions which would result from compliance with applicable provisions of Sections V.A., V.B., V.C., or V.E.
6. The minimum required overall capture and control efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by using the following equation:

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

Where:

- CE = Minimum Required Overall Capture and Control Efficiency, percent
- VOC<sub>LWc</sub> = VOC Limit, less water and exempt compounds
- VOC<sub>LWn,Max</sub> = Maximum VOC content of noncompliant coating used in conjunction with a control device, less water and exempt compounds
- D<sub>n,Max</sub> = Density of solvent, reducer, or thinner contained in the noncompliant coating, containing the maximum VOC content of the multi-component coating
- D<sub>c</sub> = Density of corresponding solvent, reducer, or thinner used in the compliant coating system.

- G. Prohibition of Solicitation: No person shall solicit, specify, or require an operator to use any coating, solvent, spray equipment, or VOC emission control system that does not meet the limits or requirements of this rule.
- H. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to amendment date of this rule, that complied with the VOC Content limit(s) in effect at that time, may be sold, supplied, or offered for sale for 12 months after rule adoption date. Such a coating may be applied at any time, both before and after adoption date, provided manufacture Date-Code and VOC Content is clearly printed on coating container.
- I. Specialized Military Coating Operations VOC Requirements: APCO may approve alternative VOC or vapor pressure limits for coatings, adhesives or solvents that are specified in specialized military Technical Orders, for which no viable substitutions are available. The owner/operator must submit a written request to the APCO, and present documentation and sufficient justification regarding the operation and materials.

## **VI. Administrative Requirements**

### **A. Recordkeeping**

1. An operator subject to the requirements of this rule shall have coating manufacturer's specifications, either listed on the coating container, product data sheet, or on Safety Data Sheet (SDS), available for review and shall maintain daily records which show the following information as applicable:
  - a. Manufacturer name and type for each coating, solvent, thinner, reducer or stripper used;
  - b. Mix ratio by volume of components added to the original material prior to application;
  - c. Grams of VOC per liter of each coating, solvent, thinner, reducer, or stripper less water and exempt compounds, as applied;
  - d. Volume and method of application of each coating, solvent, thinner, reducer, or stripper applied; and
  - e. Vapor pressure of solvents used.
2. An operator shall maintain records to support that the following coatings have been specified for their intended application:
  - a. Adhesion promoter;
  - b. Antichafe coating;
  - c. Electric/radiation effect;
  - d. Fuel tank adhesive;
  - e. High temperature coating;
  - f. Impact resistant coating;
  - g. Optical anti-reflective coating;
  - h. Rain erosion resistant wing coating.
3. An operator using a VOC emission control system pursuant to Section V.F. as a means of complying with this Rule, shall maintain daily records of key system operating parameters and maintenance procedures, which will demonstrate continuous operation and compliance of the VOC emission control system during periods of emission-producing activities. Key system operating parameters are those necessary to ensure compliance with VOC limits. The parameters may include, but are not limited to, temperatures, pressures, and flow rates.
4. Records required by this Rule shall be retained for a minimum of five (5) years and made available on site during normal business hours to the APCO, ARB, or EPA upon request.

## B. Test Methods

1. Coating and solvent VOC content shall be determined using EPA Method 24 or its constituent methods. The VOC content of coatings containing exempt halogenated VOCs shall be determined by using ARB Method 432, "Determination of Dichloromethane and 1,1,1- Trichloroethane in Paints and Coatings" (September 12, 1998). or SCAQMD Method 303 (Determination of Exempt Compounds).
2. The solid content of pretreatment coatings shall be determined using EPA Method 24. The acid content of pretreatment coatings shall be determined using ASTM Method D1613 06 (Standard Test for Acidity of Volatile Solvents and Chemical Intermediates used in Paint, Varnish, Lacquer and Related Products).
3. The test method for determining the fire resistance of an interior coating shall be Federal Aviation Administration-required Ohio State University Heat Release, Fire and Burn Tests.
4. The VOC composite vapor pressure of a blended solvent shall be determined by quantifying the amount of each organic compound in the blend using gas chromatographic analysis SCAQMD Test Method 308-91 "Quantitation of Compounds by Gas Chromatography" (February 1993) and by calculating the VOC composite vapor pressure of the solvent by summing the product of the vapor pressure of each pure component and its molar fraction. For the purpose of this calculation, the blend shall be assumed to be an ideal solution where Raoult's Law applies. The vapor pressure of each pure component shall be obtained from published reference manuals or handbooks.
5. VOC emissions from enclosed systems used to clean coating application equipment shall be determined by the manufacturer using the SCAQMD General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems.
6. The control efficiency of a VOC emission control system's control device(s) shall be determined using EPA Methods 2, 2A, 2C, or 2D for measuring flow rates and EPA Methods 25, 25A, or 25B for measuring the total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 or ARB Method 422, "Determination of Volatile Organic Compounds in Emissions from Stationary Sources" (September 12, 1990) shall be used to determine the emissions of exempt compounds.
7. 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, Methods 204-204F, as applicable, or any other method approved by EPA, ARB, or APCO.
8. When more than one test method or set of test methods are specified for any emissions testing, a violation of any test established in Section VI.B. shall constitute a violation of the Rule.

**RULE 410.9 Wood Products Surface Coating Operations – Adopted 3/13/2014**

**I. Purpose**

The Purpose of this Rule is to limit Volatile Organic Compound (VOC) emissions from wood product surface coatings. This Rule specifies wood coatings, storage, cleanup and disposal of organic solvents and waste solvent materials associated with the use of wood product coatings.

**II. Applicability**

Provisions of this Rule shall apply to surface coating of wood products.

**III. Definitions**

- A. Air Dried: A process whereby the coated object is cured or dried at ambient temperature or at a temperature below 194°F.
- B. Application Equipment: A device, including, but not limited to, a spray gun, brush, and roller, used to apply adhesives, coatings, or inks.
- C. ASTM: American Society for Testing and Materials.
- D. Baked: A process whereby the coated object is heated above ambient temperature to a temperature at or above 194°F for the purpose of curing or drying.
- E. Brush Coating: The manual application of coatings using brushes or rollers.
- F. Capture Efficiency: In percent, is the ratio of the weight of the VOC in the effluent stream entering the control device to the weight of VOC emitted from wood product coating operations, both measured simultaneously, and can be calculated by the following equation:  
$$\text{Capture Efficiency} = [W_c/W_e] \times 100$$

Where:  $W_c$  = weight of VOC entering control device  
 $W_e$  = weight of VOC emitted
- G. Clear Sealer: A coating containing binders, but not opaque pigments, which seals the wood product prior to application of the subsequent coatings.
- H. 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.
- I. Coating: A material which is applied to a surface and which forms a film in order to beautify and/or protect such surface.

- J. 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.
- K. Cured Adhesive, Cured Coating, or Cured Ink: an adhesive, coating, or ink that is dry to the touch.
- L. Degreaser: A tank, tray, drum or other container in which objects to be cleaned are exposed to a solvent or solvent vapor in order to remove contaminants. The objects to be cleaned include, but are not limited to, parts, products, tools, machinery, and equipment. An enclosed spray application equipment cleaning system is not a degreaser.
- M. Dip Coating: The process in which a substrate is immersed in a solution (or dispersion) containing the coating material, and then withdrawn after allowing the excess coating to drain.
- N. Dissolver: An organic solvent that is added to an adhesive, coating, or ink in order to melt or to liquefy solid particles.
- O. EPA: United States Environmental Protection Agency
- P. 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. This shall not include composite wood edge filler.
- Q. Grams of VOC per Liter of Coating, Less Water and Exempt Compounds: The weight of VOC content per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per liter of coating, less water and exempt compounds} = \frac{W_s - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

Where:

- W<sub>s</sub> = weight of volatile compounds (grams)  
W<sub>w</sub> = weight of water (grams)  
W<sub>ec</sub> = weight of exempt compounds (grams)  
V<sub>m</sub> = volume of material (liters)  
V<sub>w</sub> = volume of water (liters)  
V<sub>ec</sub> = volume of exempt compounds (liters)

- R. High Gloss Coating: Any coating which achieves at least 85% reflectance on a 60 degree gloss meter when tested by ASTM Method D-523-08.
- S. High-Solid Stains: Stains containing more than 1 pound of solids per gallon of material, and include wiping stains, glazes, and opaque stains.

- T. High-Volume, Low-Pressure (HVL) Spray Equipment: 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 and with liquid supply pressure less than 50 psig.
- U. Ink: A fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.
- V. Liquid Leak: A visible solvent leak from a container at a rate of more than three drops per minute, or a visible liquid mist.
- W. Low-Solid Stain: A stain containing 1 pound, or less, of solids per gallon of material.
- X. Maintenance Cleaning: The cleaning of tools, forms, molds, jigs, machinery, and equipment (except coating application equipment, ink application equipment, or adhesive application equipment), and the cleaning of work areas where maintenance or manufacturing occurs.
- Y. 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.
- Z. Multi-Colored Coating: a coating which exhibits more than one (1) color when applied and which is packaged in a single container and applied in a single coat.
- AA. Non-Absorbent Container: A container made of non-porous material that does not allow the migration of solvents through it.
- BB. Non-Atomized Solvent Flow: Solvents in the form of a liquid stream without the introduction of any propellant.
- CC. Pigmented Coating: 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.
- DD. Potential to Emit: The maximum capacity of a facility to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation, emissions, or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the EPA Administrator.
- EE. Roll Coating: The application of coatings from a paint trough to a flat surface by a mechanical series of rollers.
- FF. Sanding Sealer: A coating containing binders, which seals the wood prior to application of the subsequent coatings.



- GG. Stripper: Solvent used to remove material such as cured adhesives, cured inks, cured or dried paint, cured or dried paint residue or temporary protective coating.
- HH. 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.
- II. Transfer Efficiency: A ratio of the amount 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.
- JJ. Thinner: A solvent that is used to dilute coatings to reduce viscosity, color strength, and solids, or to modify drying conditions.
- KK. Touch Up: That portion of the coating operation which is incidental to the main coating process but necessary to cover minor imperfections or to achieve coverage as required.
- LL. Volatile organic Compound (VOC): As defined in Rule 102, Definitions.
- MM. Wood Products: Surface-coated room furnishings which include cabinets (kitchen, bath, and vanity), tables, chairs, beds, sofas, shutters, art objects, and any other coated objects made of wood, composite wood, simulated wood material used in combination with wood or composite wood; and/or paper laminated on composite wood.

#### IV. **Exemptions**

Requirements of this Rule shall not apply to the following operations:

- A. Residential noncommercial operations.
- B. Small wood products coating operations (< 20 gallons usage/year).
- C. Coating of wooden musical instruments.
- D. The application of coatings by template (to add designs, letters or numbers to wood products).
- E. Aerosol-spray coatings used for touch up and repair.
- F. Specific types of finishes (imitation wood grain, crackle lacquers, and faux and leaf finishes).Architectural coatings.

## V. Requirement

- A. With the exception of the exemptions listed in Section IV of Draft Rule 410.9, an operator shall not apply to any wood product, any coating, aerosol, or adhesive with a VOC content as applied, that exceeds the applicable limit specified in Table 1 or Table 2.

**TABLE 1**  
**VOC CONTENT LIMITS FOR WOOD PRODUCT COATING OPERATION**

VOC Content Limits Expressed in Grams per Liter Less Water and Exempt Compounds		
Content Category	VOC Limit g/l	VOC Limit lb/gal
1. Clear Topcoat	275	2.3
2. Clear Sealers	240	2.3
3. Filler	275	2.3
4. High-Solids Stain	240	2.0
5. Ink	500	4.2
6. Mold-Seal Coating	750	6.3
7. Multi-Colored Coating	275	2.3
8. Pigmented Coating	275	2.3
9. Sanding Sealer	240	2.3

**TABLE 2**  
**VOC CONTENT LIMITS FOR WOOD PRODUCT COATING OPERATION**

VOC Content Limits Expressed in Grams per Liter of Material, as Applied		
VOC Content Category	VOC Limit g/l	VOC Limit lb/gal
1. Low-Solids Stain	120	1.0
2. Stripper	350	2.9

No person shall use any stripper on wood products unless:

1. The reactive organic compound content is 350 grams per liter (2.9 lb/gal) of material or less; or
  2. The reactive organic compound composite partial pressure of the stripper is 2 mm Hg (0.04 psia) or less at 20°C (68°F).
- B. Most Restrictive VOC Limit: If anywhere on the container of any wood coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a person, 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 lowest VOC content limit shall apply.

- C. Alternate Emission Control: In lieu of complying with VOC content limits specified in Table of Standards, an emission control system with a capture efficiency of at least 90% and a control efficiency of at least 90% may be used if it has been approved in writing by the Air Pollution Control Officer. Any approved emission control system must be maintained and used in proper working condition at all times.
- D. Equipment Requirements: Spray application of wood coatings shall only be performed by the following: electrostatic equipment, high-volume, low pressure (HVLV) spray equipment, hand roller, flow coat, roll coater, dip coat, paint brush, detailing or touchup guns,
- E. Surface preparation and Equipment Cleanup Requirements: No person shall conduct preparation or equipment cleanup for activities subject to provisions of this Rule unless the following VOC limits are met and methods are used:
1. VOC content of surface preparation solvent shall not exceed 25 g/l (0.2 lb/gal), as calculated pursuant to Section III.Q., unless such cleaning operation is performed within the control of an APCO approved VOC emission control system that meets the requirements of Section V.C.
  2. Cleaning of Coatings Application Equipment: Solvents used for cleaning of coatings application equipment shall comply with both limits specified below:
    - a. Solvent shall have a VOC content of 950 grams or less per liter (7.9 lb/gal) of material; and
    - b. Solvent shall have a VOC composite partial pressure of 35 mm Hg or less at 20/C (68/F).
  3. Cleaning-Devices and Methods: No person shall perform solvent cleaning operations unless one of the following cleaning devices or methods is used:
    - a. Wipe Cleaning;
    - b. Spray bottles or containers with a maximum capacity of 16 fluid ounces from which solvents are applied without a propellant induced force;
    - c. Cleaning equipment having a closed solvent container during cleaning operations, except when depositing and removing objects to be cleaned, and closed during nonoperation except during maintenance and repair of the cleaning equipment itself;
    - d. Remote reservoir cold cleaner operated in conformance with District Rule 410.3, Organic Solvent Degreasing Operations;
    - e. System totally enclosing guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures;

- f. Non-atomized solvent flow method collecting cleaning solvent in a container or a collection system closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
- g. Solvent flushing method discharging solvent into a closed container, except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. Discharged solvent from such equipment shall be collected in containers without atomizing into open air. Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.

## **VI. Administrative Requirements**

A. Labeling Requirements: Each manufacturer of any wood product coating subject to this Rule shall display information listed in Subsections VI.A.1. through VI.A.3. on coating container (or label) in which coating is sold or distributed or an accompanying data sheet

- 1. Date Code: date coating was manufactured, or date code representing date, shall be indicated on label, lid or bottom of container. If manufacturer uses a date code for any coating, manufacturer shall file an explanation of each code with the Executive Officer of the CARB.
- 2. Thinning Recommendations: statement of manufacturer's recommendation regarding thinning of coating shall be indicated on label or lid of container. This requirement does not apply to thinning of architectural coatings with water. If thinning of coating prior to use is not necessary, recommendation must specify coating is to be applied without thinning.
- 3. VOC Content: Each container or accompanying data sheet of any coating subject to this Rule shall display either maximum or actual VOC content of coating, as supplied, as well as maximum thinning as recommended by manufacturer. VOC content shall be displayed in grams of VOC per liter (or pounds per gallon) of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using test methods in Subsection VII.

### **B. Record Keeping Requirements**

An operator is required to maintain the coating manufacturer's specifications, either listed on the coating container, product data sheet, or Safety Data Sheet (SDS), available for review and shall maintain daily records which show the following information as applicable:

- 1. A current list of VOC containing products in use containing all data necessary to evaluate compliance, including the following information, as applicable:
  - a. Material name and manufacturer's identification;

- b. Application method;
  - c. Material type and specific use instructions;
  - d. Specific mixing instructions;
  - e. Maximum VOC content of coating as applied, including thinning solvents; hardeners, etc., excluding water and exempt compounds; and
  - f. Coating composition and density.
2. Daily coating and solvent use records, including the following information for each:
- a. Volume used of each component and mix ratio;
  - b. VOC content in grams/liter (or pounds/gallon) as applied/used; and
  - c. Volume in liters (or gallons) applied/used.
3. Capture and control equipment operating records, if applicable, including:
- a. Periods of operation corresponding to use records kept for Subsection VI.B.2. showing control equipment was used as necessary;
  - b. Key system operating parameters showing operation as required to comply with this Rule and as intended by manufacturer; and
  - c. Date performed, and description of all control system maintenance.

Records required by the proposed Rule shall be retained for a minimum of three (3) years and made available on site during normal business hours to the APCO, ARB, or EPA upon request.

## **VII. Test Methods**

- A. Analysis of Samples - Samples of VOC as specified in this Rule shall be analyzed by U.S. EPA Method 24 Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings and analysis of halogenated exempt compounds shall be conducted using CARB Method 432 - Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings , or ASTM D-4457-85 Standard Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph.
- B. Determination of Emissions - Emissions of VOC shall be measured by U.S. EPA Method 25, 25A, or 25B, as applicable.

- C. Determination of Capture Efficiency - Where add-on control equipment is utilized, capture efficiency shall be determined in accordance with 40 CFR Appendix M – Methods 204-204F.
- D. Measurement of Acid Content - Acid content of Pre-Treatment Wash Primers shall be conducted and reported in accordance with ASTM D1613-06 Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates used in Paint, Varnish, Lacquer, and Related Products.
- E. Demonstration of Transfer Efficiency - Transfer efficiency shall be demonstrated using South Coast Air Quality Management District Method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User".
- F. Determination of VOC Composite Partial Pressures - VOC composite partial pressures shall be determined using either manufacturer's information regarding formulation or using ASTM methods E168-06 – Standard Practices for General Techniques of Infrared Quantitative Analysis, E169-93 – Standard Practices for General Techniques of Ultraviolet- Visible Quantitative Analysis, or E260-96 – Standard practice for Packed Column Gas Chromatography for determination of mole fractions and then summing products of each VOC component's vapor pressure and its mole fraction. For materials containing no non-VOC components, VOC composite partial pressure can be measured directly by ASTM Method D2879-10 – Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
- G. Determination of VOC Emissions From Spray Gun Cleaning Systems - VOC emissions from spray gun cleaning systems shall be made using South Coast Air Quality Management District "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems".
- H. When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule."

## **VIII. Compliance Schedule**

### **A. New Sources**

- 1. Owners or Operators of any facility proposing to install wood coating operations and required to comply with Section V of this rule shall obtain an Authority to Construct (ATC) in accordance with Rule 210.1 prior to installation or operation of any wood coating operation.
- 2. Owners or Operators of any facility with wood coating operations exempt by Section IV of this rule shall maintain records of wood coatings use, in accordance with Section VI, B upon initial operations.

B. Existing Sources

1. Owners or Operators of any facility with wood coating operations required to comply with Section V of this rule shall obtain a valid Permit to Operate (PTO) or an Authority to Construct (ATC). Owner or operator shall apply for an ATC within 180 days from the adoption of this Rule.
2. Owners or Operators of any facility with wood coating operations exempt by Section IV of this rule shall maintain records of wood coatings use within 180 days of this rule being adopted.
3. Owners or operators with valid PTO(s), required to comply with Section V of this rule shall be in full compliance within 12 months of rule adoption.

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**RULE 411 Storage of Organic Liquids** - Adopted 4/18/72, Amended 1/9/79, 6/29/79, 11/27/79, 4/5/82, 5/6/91, 4/6/95, 3/7/96

**I. Applicability**

This Rule applies to equipment used to store organic liquids and petroleum distillates, with a true vapor pressure of greater than 1.5 psia.

**II. Definitions**

- A. Emergency Standby Tank: Tank not used (filled or partially filled) more than twice in any twelve month period.
- B. Gas Leak: Reading as methane on a portable hydrocarbon detection instrument in excess of 10,000 ppm above background when measured with an instrument calibrated with methane and conducted in accordance with U.S. EPA Method 21.
- C. Gas-Tight: Any emission of less than or equal to 10,000 ppm as methane measured with an instrument calibrated with methane and conducted in accordance with U.S. EPA Method 21.
- D. Gasoline: Organic liquid used as motor fuel with true vapor pressure of greater than 1.5 psia.
- E. Metallic-Shoe Type Seal: Floating roof tank seal with typical geometry and components as shown on Figure 1, Page 411-10.
- F. Organic Liquid: Any liquid containing VOC's and having a true vapor pressure (TVP) greater than 1.5 psia at actual storage conditions.
- G. Petroleum Distillate: The product of a distillation or condensation process obtained by condensing vapors for the purpose of purification, fractionation or the formation of new substances.
- H. Resilient-Toroid Type Seal: Floating roof tank seal with typical geometry and components as shown on Figure 2, Page 411-11.
- I. Roof Drain: Any drain located in roof of tank opening directly into organic liquid content of tank.
- J. Tank: Any stationary storage tank, reservoir or other container having a capacity of 251 gallons, or greater.
- K. Visible Gap: Gap between tank shell and seal exceeding 1.5 mm (0.06 in.).



- L. Volatile Organic Compound (VOC): Any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.
- M. "Zero" gap: No gap between tank shell and seal exceeding 1.5 mm (0.06 in.), and cumulative length of all gaps exceeding 0.5 mm (0.02 in.) not being more than 5 percent of tank circumference, excluding gaps less than 5 cm (1.79 in.) from vertical seams.

### III. Exemptions

- A. Provisions of this Rule shall not apply to tanks, reservoirs or other containers which are pressure vessels maintaining working pressures sufficient at all times to prevent organic liquid or VOC loss to the atmosphere.
- B. Requirements of Subsection IV.A., IV.B. and IV.C. shall not apply to:
  - 1. Fixed or floating roof tanks, designated for emergency standby, in existence prior to May 1, 1979 storing exclusively petroleum distillates. Prior to return to emergency standby status, each tank shall be thoroughly drained. Each use of tank shall not exceed 30 days. After tank has been used (filled or partially filled) and draining of tank has begun, any further filling of tank shall constitute a separate use of tank. Each fixed roof emergency standby tank shall be equipped with pressure relief device set to within ten percent of maximum allowable working pressure of tank.
  - 2. Portable temporary tanks, with capacities of 21,000 gallons (500 Barrels), or less left on site for six months or less.

### IV. Requirements

#### A. Floating Roof Tanks

- 1. A floating roof tank shall not be used to store organic liquid having a true vapor pressure of 11 psia, or greater under storage conditions.
- 2. No person shall place, store or hold in any floating roof tank of 19,800 gallons (471 barrels), or greater, any organic liquid unless such tank is equipped with:
  - a. A floating roof, consisting of a pontoon type or double-deck type cover, resting on the surface of liquid contents; and
  - b. A closure device between the tank shell and roof edge consisting of two seals, one above the other. The lower one shall be referred to as the primary seal, and upper one shall be referred to as the secondary seal.

3. Seal designs shall be submitted to the Control Officer and not installed or used unless approved by the Control Officer as meeting criteria of Subsections IV.A.3.a. through IV.A.3.d., as applicable.

Seal designs other than those in Subsections IV.A.3.a. through IV.A.3.d. may be approved provided notice allowing use of such design has been published in the Federal Register pursuant to CFR 40 Part 60: Subpart Kb Paragraph 60.114b.

a. Metallic-Shoe Type Seal on Welded Tank:

For a closure device on a welded tank shell using a metallic-shoe type seal as its primary seal:

1. No gap between tank shell and primary seal shall exceed 1 1/2 inches. Cumulative length of all gaps between tank shell and primary seal greater than 1/2 inch shall not exceed 10 percent of tank circumference. Cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30 percent of tank circumference. No continuous gap greater than 1/8 inch shall exceed 10 percent of tank circumference.
2. No gap between tank shell and secondary seal shall exceed 1/2 inch. Cumulative length of all gaps between tank shell and secondary seal greater than 1/8 inch shall not exceed 5 percent of tank circumference.
3. Metallic-shoe type seals shall be installed so that one end of shoe extends into stored liquid and other end extends a minimum vertical distance of 24 inches above stored liquid surface.
4. Geometry of shoe shall be such that maximum gap between shoe and tank shell is no greater than double gap allowed by seal gap criteria for a length of at least 18 inches in vertical plane above liquid surface.
5. There shall be no holes, tears, or openings in secondary seal or primary seal envelope surrounding annular vapor space enclosed by roof edge, stored liquid surface, shoe, and seal fabric.
6. Secondary seal shall allow easy insertion of probes up to 1 1/2 inches in width to allow measurement of gaps in primary seal.
7. Secondary seal shall extend from roof to tank shell and shall not be attached to primary seal.

b. Metallic-Shoe Type Seal on Riveted Tank:

For a closure device on a riveted tank shell using a metallic-shoe type seal as its primary seal:

1. No gap between tank shell and primary seal shall exceed 2 1/2 inches. Cumulative length of all primary seal gaps greater than 1 1/2 inch shall not exceed 10 percent of tank circumference. Cumulative length of all gaps between the tank shell and the primary seal greater than 1/8 inch shall not exceed 30 percent of tank circumference. No continuous gap greater than 1/8 inch shall exceed 10 percent of tank circumference.
2. No gap between tank shell and secondary seal shall exceed 1/2 inch. Cumulative length of all gaps between tank shell and secondary seal greater than 1/8 inch shall not exceed 5 percent of tank circumference.
3. Metallic-shoe type seals shall be installed so that one end of shoe extends into stored liquid and other end extends a minimum vertical distance of 24 inches above stored liquid surface. Geometry of shoe shall be such that maximum gap between shoe and tank shell is no greater than double gap allowed by seal gap criteria for a length of at least 18 inches in vertical plane.
4. There shall be no holes, tears, or openings in seal(s) envelope surrounding annular vapor space enclosed by roof edge, stored liquid surface, shoe, and seal fabric.
5. Any secondary seal shall allow easy insertion of probes up to 2 1/2 inches in width to allow measurement of gaps in primary seal.
6. Any secondary seal shall extend from roof to tank shell and shall not be attached to primary seal.

c. Resilient-Toroid Type Seal On Any Tank:

For a closure device on a tank using a resilient-toroid type seal:

1. No gap between tank shell and primary seal shall exceed 1/2 inch. Cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30 percent of tank circumference. No continuous gap greater than 1/8 inch shall exceed 10 percent of tank circumference.
2. No gap between tank shell and secondary seal shall exceed 1/2 inch. Cumulative length of all gaps between tank shell and secondary seal

greater than 1/8 inch shall not exceed 5 percent of the tank circumference.

3. There shall be no holes, tears, or openings in secondary seal or primary seal envelope surrounding annual vapor space enclosed by roof edge, seal fabric and secondary seal.
  4. Secondary seal shall allow easy insertion of probes up to 1/2 inch in width to allow measurement of gaps in primary seal.
  5. Secondary seal shall extend from roof of tank to shell and not be attached to primary seal.
- d. Following seal designs have been found to be equivalent to seals meeting criteria of Subsections IV.A.3.a. through IV.A.3.c.:
1. Republic Fabricators, "Weather Guard Seal" when installed and maintained with "zero" gap; and
  2. HMT, "Dual/Multi Wiper Blade Seals" when installed and maintained to meet gap criteria for primary and secondary seals as described in Subsections IV.A.3.a. or IV.A.3.b.

4. Inspection of Seals:

Primary seal envelope shall be made available for unobstructed inspection by District on annual basis at locations selected along its circumference at random. For riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; for other tanks, a minimum of four locations shall be made available. If District suspects non-conformance with this Rule, District may require such further unobstructed inspection of primary seal as may be necessary to determine seal condition for its entire circumference.

5. Openings:

All openings in roof used for sampling or gauging, except pressure-vacuum valves which shall be set to within ten percent of maximum allowable working pressure of roof, shall provide a projection below liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from liquid contents of tank and shall be equipped with a cover, seal, or lid. Such covers, seals, or lids shall, at all times, be in closed position with no visible gaps and be gas-tight, except when device or appurtenance is in use.

6. Roof Drain:

Any roof drain shall be provided with slotted membrane fabric cover, or equivalent, covering at least nine-tenths of opening area.

B. Fixed Roof Tanks with Internal Floating Roof

1. A fixed roof tank with an internal floating roof shall not be used to store organic liquid having a true vapor pressure of 11 psia, or greater under storage conditions.
2. No person shall place, store or hold in any fixed roof tank with an internal floating roof and a capacity of 19,800 gallons (471 barrels), or greater any organic liquid, or petroleum distillate unless internal floating roof is equipped with a closure device meeting requirements of Subsection IV.A.
3. A fixed roof tank with internal floating type cover shall be made available for inspection by District upon request.
4. Following seal designs for internal floating roofs have been found to be equivalent to seals meeting criteria of Subsection IV.A.:
  - a) Ultraflote "Single Ultraseal" when installed and maintained with "zero" gap; and
  - b) Ultraflote "Dual Ultraseal" when installed and maintained to meet gap criteria for primary and secondary seals as described in Subsections IV.A.3.a. or IV.A.3.b.

C. Fixed Roof Tank with Vapor Recovery System

1. No person shall place, store or hold in any fixed roof tank of 19,800 gallons (471 barrels), or greater capacity any organic liquid, or petroleum distillate unless tank is equipped with vapor recovery system. System shall be designed to collect all VOC's, and shall include system recovering or disposing of VOC's to prevent emission to the atmosphere at a control efficiency of at least 95 percent by weight.
2. Any tank gauging or sampling device on a tank vented to a vapor recovery system shall be equipped with gas-tight cover closed at all times except during gauging or sampling.
3. All piping, valves and fittings shall be constructed and maintained in gas-tight condition.

D. Aboveground Tank Containing Gasoline

A person shall not place, store, or hold in any aboveground tank of 19,800 gallons (471 barrels), or less capacity any gasoline unless such tank is equipped with a pressure relief device set to within 10 percent of maximum allowable working pressure of container or is equipped with a vapor loss control device complying with requirements of Subsection IV.C.

V. Administrative Requirements

A. Record Keeping

1. A person whose tanks are subject to requirements of this Rule shall keep an accurate record of liquids stored in each container, storage temperature and Reid vapor pressure of such liquids.
2. A person whose emergency standby tanks are exempt from requirements of Subsections IV.A., IV.B., or IV.C. of this Rule shall maintain records required in Subsection V.A.1. and date(s) liquid is first introduced to each tank and date(s) tank is fully drained. Such records shall be submitted to Control Officer 60 days prior to permit renewal.
3. A person whose portable temporary tanks are exempt by Subsection III.B.2. shall maintain records required in V.A.1. in addition to tank capacity, date(s) liquid is first introduced, and date(s) tank is fully drained and moved off-site. Such records shall be submitted to Control Officer within 45 days of tank removal.

B. Test Methods

1. Analysis of halogenated exempt compounds shall be by CARB Method 432.
2. True vapor pressure shall be measured using Reid vapor pressure ASTM Method No. D-323-82 modified by maintaining hot water bath at storage temperature. Where storage temperature is above 100°F, true vapor pressure may be determined by Reid Vapor pressure at 100°F and California Air Resources Board-approved calculations. An organic liquid listed in Table I, Page 411-9 shall be deemed in compliance with appropriate vapor pressure limits for liquid, provided actual storage temperature does not exceed corresponding maximum temperature listed.
3. Control efficiency, as used in Subsection IV.C., shall be determined by CARB Method 202 or 203, as applicable.

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4. Efficiency of any VOC destruction device shall be measured by U.S. EPA Method 25, 25A, or 25B, as applicable, and analysis of halogenated exempt compounds shall be by CARB Method 422.

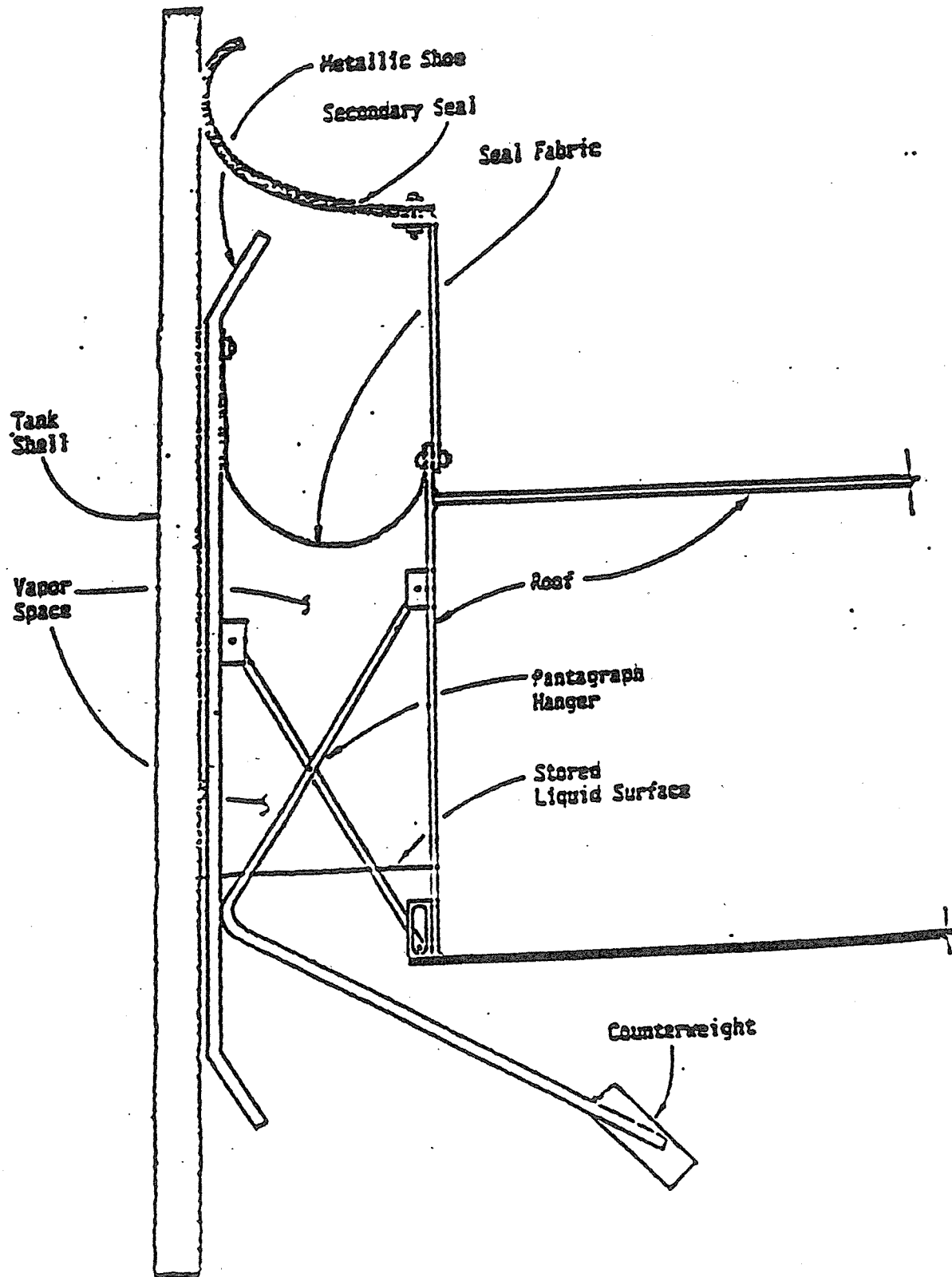
Table I  
Organic Liquids  
Maximum Storage Temperatures For Organic Liquids  
For Purposes Of Subsection V.B.2.

<u>Organic Liquid</u>	<u>Gravity</u> °API	<u>Initial Boiling</u> <u>Point °F</u>	<u>Vapor Pressure Limit</u>	
			<u>0.5 (psia)</u>	<u>1.5 (psia)</u>
<u>Middle Distillates</u>			<u>Maximum Storage Temp.(°F)</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
JP-8	37-51	---	167	222
<u>Fuel Oil</u>				
No. 1	42.5	350	195	250
No. 2	36.4	372	230	290
No. 3	26.2	390	249	310
No. 4	23	421	275	340
No. 5	19.9	560	380	465
Residual	19.27	---	405	---
No. 6	16.2	625	450	---
<u>Asphalts</u>				
60 - 100 pen.	---	---	490	550
120 - 150 pen.	---	---	450	500
200 - 300 pen.	---	---	360	420



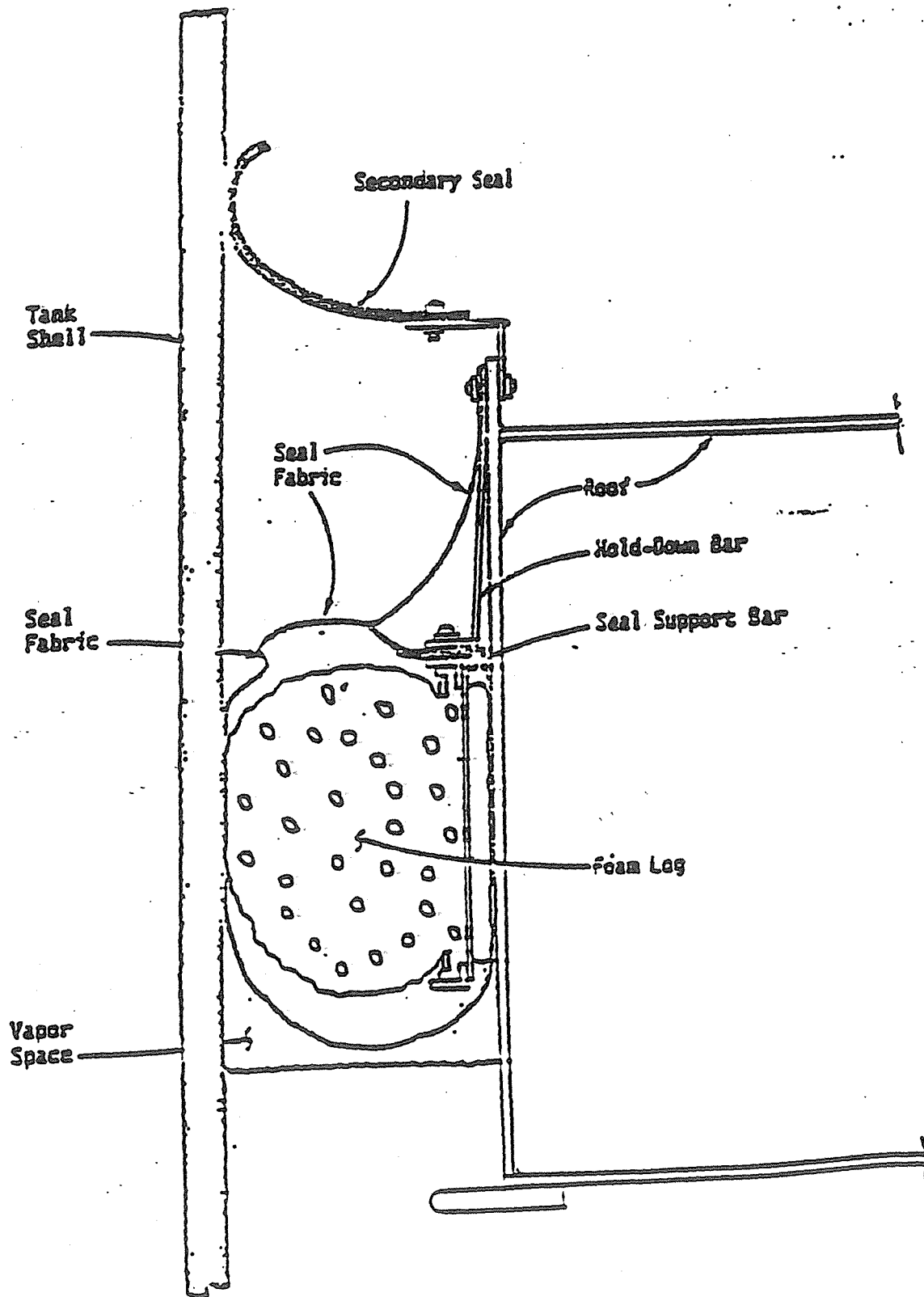
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Figure 1  
Metallic-Shoe-Type Seal



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Figure 2  
Resilient-Toroid-Type Seal



**KERAPCD 412 GAS TRANSFER TO STA. SRCE STOR. CONTAINRS,DELIVERY VESSELS,& BULK PLNTS**  
**LAST REVISED 05/06/91**

**RULE 412 Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants** - Adopted 4/18/72, Amended 12/17/74, 6/17/75, 6/20/78, 6/29/81, 1/9/89, 5/6/91

**I. Applicability**

This Rule applies to the transfer of gasoline into stationary storage tanks, gasoline delivery vessels and gasoline bulk plants.

**II. Definitions**

A. CARB Certified Phase I Vapor Recovery System: A vapor recovery system which has been certified by the California Air Resources Board as capable of recovering or processing displaced gasoline vapors to an efficiency of ninety-five (95) percent or greater.

B. Gasoline Bulk Plant: Any loading facility and associated unloading facilities, storage tanks and vapor recovery systems (s) used to load less than 20,000 gallons in any one day of gasoline to delivery vessels (i.e., tank trucks or trailers).

C. Gasoline: Any petroleum distillate or petroleum distillate/alcohol blend or alcohol having a true vapor pressure of 1.5 psia or greater under actual storage conditions used as a motor fuel.

D. Gasoline Vapors: Volatile Organic Compounds in the displaced vapors including any entrained liquids.

E. Loading Facility: Any aggregate or combination of organic liquid loading and vapor control equipment from the connection at the inlet of the organic liquid pump to and including the hose end connector at the portable delivery tanks and the discharge of the vapor control device(s).

F. Submerged Fill Pipe: Any fill pipe, the discharge opening of which is entirely submerged when the liquid level is 6 inches above the bottom of the container. "Submerged fill pipe" when applied to a container which is loaded from the side is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is 18 inches above the bottom of the container.

G. Vapor Tight: Any emission of less than or equal to 10,000 ppm when measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21.

H. Vapor Leak: A reading in excess of 10,000 ppm as methane measured at a distance of one centimeter using a portable hydrocarbon detection instrument in accordance with EPA Method 21.

### **III. Exemptions**

A. The requirements of Subsection IV.A.1. shall be subject to the following exceptions:

1. The transfer of gasoline into any stationary storage container with a capacity of 550 gallons or less used exclusively for fueling of implements of husbandry as such vehicles are defined in Division 16 (Section 36000 et seq.) of the California Vehicle Code, if such container is equipped with a permanent submerged fill pipe.
2. The transfer of gasoline into any stationary storage container having a capacity of 2,000 gallons or less which was installed prior to July 1, 1975, if such container is equipped with a permanent submerged fill pipe.
3. The transfer of gasoline into any stationary container when such container is served by a delivery vessel previously exempted by the Control Officer pursuant to Subsection III.B. of this Rule, if such container is equipped with a permanent submerged fill pipe. This exemption expires on May 1, 1993.
4. The transfer of gasoline into any stationary storage container in existence prior to July 1, 1975 which is equipped with an offset fill pipe if such container is equipped with a permanent submerged fill pipe.

B. Until May 1, 1993, the following facilities shall be exempt from the requirements of Subsections IV.B.1 and IV.B.2:

1. The owner or operator of any bulk loading facility not subject to the provisions of Rule 413 - Organic Liquid Loading which was in operation on or before July 1975, and for which the annual throughput to stationary storage containers that are not exempted by Subsection III.A.1 and III.A.2 does not exceed 500,000 gallons, may petition the Control Officer to have the facility's delivery vessels and other independently owned gasoline delivery vessels which are exclusively serviced at such facility exempted from the provisions of Subsection IV.A.1. The owner or operator of such a facility must petition annually to renew such exemptions.

### **IV. Requirements**

A. Gasoline Storage Tanks:

1. A person shall not transfer or permit the transfer of gasoline from any delivery vessel (i.e., tank truck or trailer) into any stationary storage container with a capacity of more than 250 gallons unless such container is equipped with a permanent submerged fill pipe and a CARB certified Phase I vapor recovery, system which is maintained and operated according to the manufacturers specifications.
2. A person shall not place, store, or hold in any above-ground tank with a capacity of more than 250 gallons any gasoline unless such tank is equipped with a pressure-vacuum valve set to within 10 percent of the maximum allowable working pressure of the tank.

B. Delivery Vessels:

1. No person shall operate, or allow the operation of a gasoline delivery vessel unless valid State of California

decals, as required by Section 41962 of the Health and Safety Code and which attest to the vapor integrity of the tank are displayed.

2. No person shall store gasoline in or otherwise use or operate any gasoline delivery vessel unless such vessel is designed and maintained to be vapor tight. Any delivery vessel into which gasoline vapors have been transferred shall be filled only at a loading facility that is equipped with a system that prevents at least 95 percent by weight of the gasoline vapors displaced from entering the atmosphere.
3. A person shall not load gasoline into any delivery vessel from any loading facility granted an exemption pursuant to Subsection III.B. unless such delivery vessel is loaded through a submerged fill pipe.

#### **C. Gasoline Bulk Plants:**

1. No delivery vessel shall be loaded at a facility granted an exemption pursuant to Subsection III.B. of this Rule if any portion of the previous load was delivered to a stationary storage tank equipped with a CARB Certified Stage I vapor recovery system.
2. A person shall not operate any gasoline bulk plant which is not subject to the provisions of Rule 413 - Organic Liquid Loading unless:
  - a. The facility is equipped with a system or systems to prevent the release to the atmosphere of at least 95 percent by weight of the gasoline vapors displaced during the filling of the facility's stationary storage containers as certified by ARB pursuant to the requirements of Section 41954 of the State Health and Safety Code; and
  - b. The facility is equipped with a pressure-vacuum valve on the above ground stationary storage containers with a minimum pressure valve setting of 8 ounces, provided that such setting will not exceed the container's maximum pressure rating.
3. Gasoline vapors shall not be purged into the atmosphere.
4. The vapor recovery system shall not cause the pressure in the delivery vessel to exceed 18 inches H<sub>2</sub>O or 6 inches H<sub>2</sub>O vacuum.

#### **D. General:**

1. Vapor-return and/or vapor recovery systems used to comply with the requirements of this Rule shall comply with all safety, fire, weights and measures, and other applicable codes and/or regulations.

### **V. Administrative Requirements**

#### **A. Record Keeping:**

All data necessary to demonstrate qualifications for the exemptions allowed in this Rule shall be maintained on the premise at all times and shall be submitted for District review upon request. Such records shall include exemption status and volume delivered to each stationary storage container serviced.

**B. Test Methods:**

1. Compliance with the vapor recovery requirements of this Rule shall be demonstrated using California Air Resources Board (CARB) Method 202.
2. True vapor pressure shall be determined using Reid vapor pressure ASTM Method No. D-323-82 at storage temperature.
3. The test method to determine vapor tightness of delivery vessels shall be EPA Method 27.

**VI. Compliance Schedule**

A. The owner or operator of any stationary storage container or gasoline loading facility which is subject to this Rule and which is installed, constructed or modified on or after the effective date of this regulation shall comply with the provisions of this Rule at the time of installation.

B. The owner or operator of any stationary storage container or any loading facility previously exempted from the vapor recover requirements of this Rule shall achieve compliance according to the following schedule:

1. By August 1, 1991, submit a completed application for an Authority to Construct for the installation of the needed gasoline vapor recovery system.
2. By May 1, 1992, submit to the Control Officer evidence that all necessary contracts for design, procurement, and installation of the required vapor recovery systems have been negotiated and signed, or evidence that orders for the purchase of component parts necessary to accomplish the necessary gasoline vapor recovery system have been issued.
3. By January 1, 1993, complete on site construction or installation of the required gasoline vapor recovery systems.
4. By May 1, 1993 be in full compliance with the requirements of this Rule.

C. The owner operator of any equipment subject to the requirements of this Rule prior to May 6, 1991 shall be in compliance with all applicable requirements before January 9, 1991.

**KERAPCD RULE 412-1 TRANSFER OF GAS TO VEHICLE FUEL TANKS**  
**LAST REVISED 11/09/92**

**RULE 412.1 Transfer of Gasoline into Vehicle Fuel Tanks** - Adopted 12/17/74, Amended 6/17/75, 12/30/75, 6/7/77, 6/20/78, 1/9/79, 6/26/79, 12/15/80, 1/9/89, 11/9/92

**I. Applicability**

This Rule applies to the transfer of gasoline into vehicle fuel tanks from stationary storage containers subject to the requirements of Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants).

**II. Definitions**

A. CARB-Certified Phase II Vapor Recovery System: a vehicle refueling vapor recovery system certified by the California Air Resources Board, pursuant to Section 41954 of the Health and Safety Code, as capable of collecting and controlling displaced gasoline vapors at an efficiency of at least ninety-five (95) percent by weight.

B. Gasoline: any organic liquid, including petroleum distillates and alcohols having a Reid vapor pressure of four (4) pounds, or greater as determined by ASTM Test Method D323-82 and used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline.

C. Gasoline Storage and Dispensing Facility: an aggregate of one or more stationary storage containers, and associated dispensing equipment, any of which is subject to the provisions of Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants).

D. Gasoline Vapors: the organic compounds in displaced vapors, including any entrained liquid gasoline.

E. Hold-Open Latch: the integral component of a gasoline dispensing nozzle permitting the nozzle to remain open without sustained effort by the operator.

F. Leak-Free: not having liquid (three drops per minute, or more), or vapor (10,000 ppmv as methane, or more) loss from gasoline dispensing or vapor collection components as determined by visual inspection and/or EPA Test Method 21.

G. Major Modification: replacing, repairing, or upgrading 75%, or more of a CARB-Certified Phase II Vapor Recovery System.

H. Motor Vehicle: any self propelled vehicle registered for use on public highways.

I. Retail Service Station: any new or existing gasoline storage and dispensing facility subject to payment of California Sales Tax on gasoline dispensed.

J. Topping Off: attempting to dispense gasoline into a motor vehicle fuel tank after a vapor recovery dispensing nozzle has automatically shut off.

### III. **Exemptions**

This Rule shall not apply to transfer of gasoline into motor vehicle fuel tanks from any gasoline storage and dispensing facility with a throughput of:

A. less than or equal to 24,000 gallons per calendar year, and

B. less than or equal to 10,000 gallons in any one month.

A facility whose gasoline throughput exceed the level in Section A. or B. shall lose the exemption provided by this Section.

### IV. **Requirements**

A. A person shall not transfer or permit the transfer of gasoline from a stationary storage container into a motor vehicle fuel tank with a maximum capacity of more than five (5) gallons unless the gasoline dispensing unit is equipped with and has in correct operation a CARB-Certified Phase II Vapor Recovery System.

B. A person shall not operate any CARB-Certified Phase II Vapor Recovery System, or any portion thereof, containing a defect listed in Section 94006 of Title 17 of the California Code of Regulations until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. All such defects shall be tagged "out-of-service" upon detection and authorization to reuse equipment shall not include permission to operate prior to correction of defective components.

C. All CARB-Certified Phase II Vapor Recovery Systems shall be maintained and operated to be leak-free.

D. No person shall tamper with, or permit tampering with a CARB-Certified Phase II Vapor Recovery system in any way which could impair collection and/or disposal of gasoline vapors.

E. Gasoline storage and dispensing equipment used to comply with provisions of this Rule shall comply with all applicable codes and regulations, including safety, fire, weights and measures, etc..

F. An owner or operator of a retail service station subject to this Rule shall conspicuously post operating instructions for the system in the gasoline dispensing area. These instructions shall: 1) clearly describe how to correctly fuel vehicles using Phase II dispensing nozzles, 2) include a warning that topping off may result in spillage or recirculation of gasoline and is prohibited, and 3) prominently display the District's or CARB's toll-free telephone numbers, or both, and the information that such numbers can be used to register complaints regarding the operation of the vapor recovery system.



G. No person shall top off a motor vehicle fuel tank.

H. All retail service stations shall utilize hold-open latches on all gasoline dispensing nozzles. All hold-open latches shall be installed on the gasoline dispensing nozzle by the original manufacturer of the nozzle, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer.

Requirements of this Subsection shall not apply to facilities if use of hold-open latches is prohibited by law or a fire control authority.

## **V. Administrative Requirements**

### **A. Recordkeeping and Reporting**

1. Each gasoline dispensing facility exempt pursuant to Section III shall maintain gasoline throughput records allowing gasoline throughput for any 30-day period to be continuously determined. These records shall be available upon request to the APCO and maintained on the premises for 2 years.

2. Verification that each CARB-Certified Phase II Vapor Recovery System meets or exceeds the requirements of tests specified in Subsection V.C. shall be maintained. These test results shall be dated and shall contain the names, addresses, and telephone numbers of person(s) responsible for system installation and testing.

### **B. Testing**

Each facility subject to Subsection IV.A. shall be pressure tested to determine proper installation and function before startup, and thereafter as directed by the Control Officer if not consistently operated leak-free or a major modification is implemented.

### **C. Test Methods**

Tests shall be conducted in accordance with test procedures found in CARB's "Test Procedures for Determination of the Efficiency of Gasoline Vapor Recovery Systems at Service Stations".

## **VI. Compliance Schedule**

A. Any new gasoline dispensing system subject to this Rule shall comply with the provisions of this Rule at the time of installation.

B. Stationary storage containers greater than 2000 gallons capacity installed prior to July 1, 1975 and subject to Section IV, shall comply with the provisions of this Rule in accordance with the schedule of increments contained in Subsection VI.B. of Rule 412, unless subject to Subsection C, below.

C. Any person becoming subject to the requirements of this Rule through loss of exemption shall comply with the following increments of progress:

1. Within thirty (30) days from November 9, 1992 or 30 days from the date of loss of exemption from this Rule, submit an application for Authority to Construct necessary vapor control equipment.
2. For gasoline dispensing facilities having commenced construction on or before November 15, 1990, construction for compliance with this Rule shall begin no later than May 15, 1993, or within one hundred eighty (180) days after the date of loss of exemption from this Rule.
3. Full compliance shall be demonstrated:
  - a. by November 15, 1994, or within two years after the date of the loss of exemption for facilities having commenced construction on or before November 15, 1990, and
  - b. by May 15, 1993, for gasoline dispensing facilities having commenced construction after November 15, 1990.

**RULE 413 Organic Liquid Loading** - Adopted 4/18/72, Amended 8/27/84, 8/22/89, 5/6/91, 4/6/95, 3/7/96

**I. Applicability**

This Rule shall apply to organic liquid loading facilities as defined in this Rule loading 4,000 gallons, or more in any one day. This Rule shall not apply to gasoline bulk plants subject to requirements of Rule 412.

**II. Definitions**

- A. Class I Organic Liquid Loading Facility: any facility loading 20,000 gallons, or more on any one day of organic liquids with a true vapor pressure of 1.5 psia, or greater into tank trucks, trailers, or railroad tank cars.
- B. Class II Organic Liquid Loading Facility: any facility loading 4,000 gallons, or more but less than 20,000 gallons on any one day of organic liquids with a true vapor pressure of 1.5 psia, or greater into tank trucks, trailers, or railroad tank cars.
- C. Excess Organic Liquid Drainage: more than ten milliliters liquid drainage. Such liquid drainage for disconnect operations shall be determined by computing average drainage from three consecutive disconnects at any one permit unit.
- D. Leak: dripping of liquid organic compounds at a rate of more than three drops per minute; or detection of organic compounds in excess of 10,000 ppm as methane when measured with a portable hydrocarbon detection instrument calibrated with methane and conducted in accordance with U.S. EPA Method 21.
- E. Organic Liquid: any liquid containing VOC's and having a true vapor pressure (TVP) greater than 1.5 psia at actual loading conditions.
- F. Organic Liquid Loading Facility: any aggregate, or combination of organic liquid loading and vapor control equipment, from the connection at the inlet of the organic liquid pump to, and including, the hose end connector at the portable delivery tanks and the discharge of the vapor control device(s).
- G. Portable Hydrocarbon Detection Instrument: hydrocarbon analyzer using flame ionization detection or thermal conductivity and satisfying U.S. EPA Method 21, 40 CFR, Part 60. Output of any such instrument shall be equivalent to calibration on methane and a sampling rate of one liter per minute.
- H. Volatile Organic Compound (VOC): any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.

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### III. Exemptions

- A. Requirements of Subsection IV. of this Rule shall not apply to organic liquid loading facilities used exclusively for loading of less than 4,000 gallons of organic liquids in any one day.
- B. Requirements of this Rule shall not apply to loading facilities subject to requirements of Rule 412 - Gasoline Transfer into Stationary Storage Containers, Gasoline Delivery Vessels, and Gasoline Bulk Plants.
- C. Requirements of this Rule shall not apply to loading of organic liquids with true vapors pressure less than 1.5 psia at actual loading temperature.

### IV. Requirements

#### A. Emission Limits

Loading Facility	VOC Emission Limit
Class I	0.08 pounds per 1,000 gallons loaded
Class II	95% combined collection/control efficiency

#### B. Equipment

- 1. Class I facilities shall be equipped with provisions for bottom loading, vapor collection, and vapor disposal.
- 2. Class II facilities shall be equipped with provisions for vapor collection, and vapor disposal.
- 3. Any vapor collection and control system serving a gasoline tank truck shall operate with a pressure in the delivery tank being loaded of not more than 18 inches water column.
- 4. All delivery tanks previously containing organic liquids with a true vapor pressure greater than 1.5 psia at loading conditions shall be filled only at loading facilities conforming to Subsections IV.A. and B.
- 5. Loading and vapor collection equipment shall be designed, installed, maintained and operated without leaks or excess organic liquid drainage at disconnections.
- 6. Construction of any new top loading facility or reconstruction, as defined in Rule 422 - NSPS, or expansion of any existing top loading facility with top loading

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equipment shall not be allowed after May 6, 1991.

7. Notwithstanding Subsection IV.B.1., above, organic liquid loading facilities exclusively handling liquified petroleum gas need not utilize bottom loading, provided the operator complies with emission limit of Subsection IV.A. and provisions of Subsection IV.B.5.

## V. Administrative Requirements

### A. Record Keeping

1. Facilities exempted by Section III. of this Rule shall maintain accurate daily records of liquid throughput, loading temperature and liquid true vapor pressure and make such records readily available to District staff upon request. All records shall be maintained at the facility or a minimum of two years.
2. Class I and Class II facilities shall maintain daily records of liquid throughput, loading temperature, and liquid true vapor pressure and make such records readily available to District staff upon request. All records shall be maintained at the facility for a minimum of two years.

### B. Test Methods

1. Analysis of exempt halogenated exempt compounds shall be by CARB Method 432.
2. Compliance with Subsections IV.A. and IV.B. shall be determined, for initial compliance determination and when inspection reveals conditions indicative of performance less effective than during previous compliance determination(s), using 40 CFR 60.503 "Test Methods and Procedures" and U.S. EPA Reference Methods 2A, 2B, 25A and 25B and CARB Method 432, or CARB Method 2-4.
3. True vapor pressure shall be measured using Reid vapor pressure ASTM Method No. D-323-82 modified by maintaining hot water bath at storage temperature. Where storage temperature is above 100°F, true vapor pressure may be determined by Reid Vapor pressure at 100°F and California Air Resources Board-approved calculations. Organic liquid listed in Table I shall be deemed in compliance with appropriate vapor pressure limits for material, provided actual storage temperature does not exceed the corresponding maximum temperature listed.

**TABLE I**

**MAXIMUM STORAGE TEMPERATURES FOR ORGANIC LIQUIDS  
FOR PURPOSES OF SUBSECTION IV.B.3.**

Temp(°F)	Gravity °API	Initial Boiling Point °F	Vapor Pressure Limit	
			Maximum	Storage
<u>ORGANIC LIQUID</u>	<u>°API</u>	<u>Point °F</u>	<u>0.5 (psia)</u>	<u>1.5 (psia)</u>
<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
JP-8	37-51	---	167	222
<u>Fuel Oils</u>				
No. 1	42.5	350	195	250
No. 2	36.4	372	230	290
No. 3	26.2	390	249	310
No. 4	23	421	275	340
No. 5	19.9	560	380	465
Residual	19.27	----	405	----
No. 6	16.2	625	450	----
<u>Asphalts</u>				
60 - 100 pen.	----	----	490	550
120 - 150 pen.	----	----	450	500
200 - 300 pen.	----	----	360	420

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5/10/96

**RULE 414    Wastewater Separators** - Adopted 4/18/72, Amended 6/26/79, 6/29/81, 5/6/91, 3/7/96

**I.    Applicability**

This Rule applies to wastewater separators as defined in this Rule.

**II.    Definitions**

- A.    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.
- B.    Volatile Organic Compound (VOC): any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.
- C.    Wastewater Separator: any device or piece of equipment that is used to remove VOC-containing liquids from water, or any device, such as a flocculation tank, clarifier, etc. that removes petroleum-derived compounds from wastewater.
- D.    Wastewater Separator Forebay: that section of a gravity-type wastewater separator which: (a) receives the untreated, oil-water waste from the pre-separator flume; and (b) acts as a header which distributes the influent to the separator channels.

**III.    Exemptions**

- A.    This Rule shall not apply to any wastewater separator receiving effluent containing volatile organic compounds with a Reid vapor pressure of less than 0.5 pound per square inch and recovering less than 200 gallons per day of VOC-containing liquid.
- B.    Air Flotation Units.

**IV.    Requirements**

- A.    A person shall not use any compartment of any vessel or device operated for the recovery of oil or tar from effluent water, from any equipment which processes, refines, stores or handles petroleum or coal tar products unless such compartments is equipped with one of the following vapor loss control devices, except when gauging or sampling is taking place:
  - 1.    A solid cover with all openings sealed and totally enclosing the liquid contents of the compartment, except for such breathing vents as are structurally necessary; or

2. A floating pontoon 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 0.32 centimeters (1/8 inch) for an accumulative length of 97 percent of the perimeter of the tank, and shall not exceed 1.3 centimeters (1/2 inch) for an accumulative length of the remaining 3 percent of the perimeter of the tank. No gap between the compartment wall and the seal shall exceed 1.3 centimeters (1/2 inch); or
  3. A vapor recovery system with a combined collection and control efficiency of at least 90% by weight.
- B. Any gauging and sampling device in a compartment cover shall be equipped with a cover or lid. The cover shall be in a closed position at all times, except when the device is in actual use.
- C. All wastewater separator forebays shall be covered.
- D. Skimmed oil or tar removed from wastewater separating devices shall be either charged to process units with feed or transferred to a container with a control system with at least 90% control efficiency by weight. Any control device must be under District permit.

V. **Administrative Requirements**

A. **Test Methods**

1. Efficiency of any VOC control device shall be determined by U.S. EPA Test Method 25 and analysis of halogenated exempt compounds shall be by CARB Method 422.
2. Analysis of halogenated exempt compounds shall be by CARB Method 432.
3. Where add-on control equipment is utilized, collection efficiency shall be determined by the U.S. EPA's document entitled "Model Regulatory Language for Capture Efficiency Testing" dated 8/3/90.



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5/10/96

**RULE 414.1 Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants - Adopted 1/9/79, Amended 6/26/79, 11/27/79, 4/5/82, 8/22/89, 4/3/90, 5/6/91, 3/7/96**

**I. Applicability**

This Rule applies to all valves, pressure relief valves, flanges, threaded connections and process drains at petroleum refineries and chemical plants that may be the source of fugitive VOC emissions.

**II. Definitions**

- A. Background: a reading on a portable hydrocarbon detection instrument which is taken at least three meters upwind from any valve, pressure relief valve (PRV), flange, threaded connections, or process drain to be inspected and which is uninfluenced by any specific emission point.
- B. Chemical Plant: an establishment that produces organic chemicals and/or manufactures products by organic chemical processes.
- C. Commercial Natural Gas: a mixture of gaseous hydrocarbons, chiefly methane and less than 10% VOC's excluding ethane as determined in accordance with ASTM Methods E168-67, E169-63, or E260-73, used as a fuel and obtained from a company licensed to dispense such gases.
- D. Component Type: any one of the following groups of things: valves, pressure relief valves, flanges, threaded connections, and process drains.
- E. Essential Device: any device which cannot be taken out of service without reducing by more than 33% the throughput of the process unit which it serves.
- F. Essential Refinery Operation: any operation which cannot be taken out of service without reducing by more than 33% the throughput of the process unit which it serves.
- G. Flange: a projecting rim on a pipe used to attach it to another pipe or any other component in a piping system.
- H. Inaccessible: a location that is over fifteen (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.

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- I. Leak:
  - 1. for valves, flanges and threaded connections:
    - a. the dripping of liquid organic compounds at a rate of more than three drops per minute:
    - b. a reading as methane on a portable hydrocarbon detection instrument in excess of 10,000 ppm above background when measured at a distance of one centimeter of the potential source with an instrument calibrated with methane.
  - 2. for pressure relief valves (PRV's) a reading as methane on a portable hydrocarbon detective instrument in excess of 10,000 ppm above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane.
  - 3. for process drains a reading as methane on a portable hydrocarbon detection instrument in excess of 10,000 ppm above background when measured at a distance of one centimeter of the potential source with an instrument calibrated with methane.
- J. Maintenance Operation: a routine program of inspection and repair of equipment designed to detect and eliminate conditions which may result in a breakdown.
- K. Portable Hydrocarbon Detection Instrument: a hydrocarbon analyzer which uses the flame ionization detection or thermal conductivity methods and satisfies Method 21, 40 CFR Part 60. The instrument shall be equated to calibrating on methane and sampling at one liter per minute.
- L. Pressure Relief Valve (PRV): an automatic pressure relieving device associated with a process vessel or piping system which is activated by static pressure upstream of the device and relieves to the atmosphere.
- M. Process Drain: any open portion of a non-continuous piping system, including open origination portion(s) of such a system used for collection and transport of liquids discharged from process vessels. Drains used exclusively during breakdown conditions pursuant to Rule 111 or exclusively for maintenance operations are not process drains for the purposes of this Rule.
- N. Refinery: an establishment that processes petroleum as defined in the Standard Industrial Classification Code under 2911 - petroleum refining.
- O. Unsafe: those components which are operating at temperatures or pressures which

make inspection of these components hazardous to inspection personnel.

- P. Valve: any device that regulates the flow of fluid in a piping system by means of an external actuator acting to permit or block passage of fluid.
- Q. Volatile Organic Compound (VOC): any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.

### III. Exemptions

- A. Valves, PRV's, flanges, and threaded connections handling only commercial natural gas are exempt from the provisions of this Rule.
- B. Valves, PRV's, flanges, threaded connections, and process drains handling material which has less than 10% by weight volatile organic compounds (as determined in accordance with ASTM Method E-168-68, E-169-63, E-260-73), are exempt from the provisions of this Rule.
- C. The requirements of Subsection IV.B.1., and IV.B.2. shall not apply to valves, flanges, threaded connections and PRV's that are unsafe to inspect due to conditions of operation (e.g. high temperature). Prior written concurrence of the Control Officer shall be obtained and such valves, threaded connections and PRV's shall be inspected for signs of leakage during turnaround.
- D. The requirements of Subsection IV.B.1., and IV.B.2. shall not apply to valves, flanges, threaded connections and PRV's which are in inaccessible locations provided the prior written concurrence of the Control Officer has been obtained and such valves, threaded connections and PRV's are inspected for leakage during each process unit shutdown or annually, whichever is more frequent.
- E. The requirements of this Rule shall not apply to components handling exclusively heavy liquid streams which have less than 10% evaporation at 150°C as determined by ASTM Method D-86-78 and provided the operator so identifies such components as outlined in Subsection V.A. or prior to changing service of existing components.
- F. Except in Kern County, the requirements of Subsection IV.A.1. shall not apply to components handling volatile organic compounds with a true vapor pressure less than or equal to 1.55 pounds, process drains and threaded connections, until November 1, 1991. In Kern County, the requirements of Subsection IV.A.1. shall be effective upon date of adoption.
- G. The requirements of Subsections IV.A.4. and IV.B.1. shall not apply to threaded connections provided that the operator inspects each threaded connection after

assembly with a portable hydrocarbon detection instrument to establish such connections do not have volatile organic compound emissions under operating conditions, and provided such connections are visually inspected at least quarterly and no leakage is detected. This Subsection shall also apply to threaded connections in service prior to the adoption of this Rule.

- H. Ethane shall be excluded from the requirements of this Rule if the ethane content of the stream being handled is less than 20% by volume. A facility operator requesting exemption of ethane shall demonstrate for each leak detected, that such stream has an ethane content less than 20%. Analysis of ethane content shall be by gas chromatographic (qualitative and quantitative determination in accordance with ASTM Method E-260-73) analysis.

#### IV. Requirements

##### A. General

1. A facility operator shall not use any valve, PRV, flange, threaded connections, or process drain at a petroleum refinery or chemical plant for handling volatile organic compounds unless such valve, PRV, flange, threaded connection, or process drain does not allow the material being handled to leak into the atmosphere.
2. Emissions from components which have been tagged by the facility operator for repair within fifteen calendar days or which have been repaired and are awaiting re-inspection pursuant to Subsection IV.B. shall not be in violation of the prohibition in Subsection IV.A.1. providing the total number of leaking components of any component type does not exceed two percent of the total number of components of that type that were inspected and that are subject to the prohibitions of this Rule.
3. In a petroleum refinery or chemical plant a facility operator shall inspect every valve, PRV, flange, threaded connection, and process drain handling volatile organic compounds in accordance with Subsection IV.B. Any such device that leaks shall be repaired in accordance with Subsection IV.C., such that each device shall not leak.
4. A facility operator shall not use any valve, other than a valve on a product sampling line, a safety pressure relief valve, or a double block and bleeder valve, which is located at the end of a pipe or line containing volatile organic compounds unless such valve is sealed with a blind flange, plug or cap. This shall not include loading spouts and water drain valves.
5. Every leaking valve, PRV, flange, threaded connection, and process drain

shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.

B. Inspection

1. All valves, threaded connections and PRV's handling volatile organic compounds shall be inspected for leakage at least once every three months. If less than 2% of the components of any component type subject to the prohibitions of this Rule, except PRV's, is found to leak during each of five consecutive quarterly inspections, the inspection frequency for that component type may be changed from quarterly to annual. If any annual inspection shows that 2% or more of all of a specific component type subject to the prohibitions of this Rule are leaking, then quarterly inspections of that component type shall be resumed.
2. All flanges and process drains handling volatile organic compounds shall be inspected at least once every twelve months.
3. Within three days after any PRV vents to atmosphere the operator shall inspect with a portable hydrocarbon detection instrument any such PRV and shall repair any leak in accordance with Subsection IV.C.1.
4. Inspection shall be accomplished by sampling for vapors with a portable hydrocarbon detection instrument and by visual examination for indication of liquid leakage.
5. Any leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this Rule.
6. Each leak detected shall be recorded on the inspection record along with the date of inspection, component identification number, actual instrument reading, and the inspector's initials.

C. Repair

1. Within fifteen days after detection any valve, PRV, flange, threaded connection, or process drain found to leak shall be repaired or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95% efficient as measured by EPA Method 25.
2. The following repair schedule shall apply to any valve, PRV. flange,

threaded connection, or process drain that is found to leak and that cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations:

- a. If the leak rate is less than ten drops per minute the following shall be required and the Control Officer shall be notified of:
  1. the expected date of repair, not to exceed one year or the date of the next process unit turnaround whichever is less, for each valve, PRV, flange, threaded connection, and process drain,
  2. the actual date of repair for each valve, PRV, flange, threaded connection, and process drain.
- b. If the leak rate is greater than 9 drops per minute or 10,000 ppm measured one centimeter from the source, the following shall be required and the Control Officer shall be notified of:
  1. an emergency repair, within 15 days after detection, to reduce the leak to less than ten drops per minute or 10,000 ppm as methane measured one centimeter from the source, or
  2. the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of Subsection IV.C.1., or
  3. a demonstration, within 30 days after detection, that measures a. and b. are infeasible. The demonstration shall include documentation that the component is an essential device and that no vapor control device that satisfies the requirements of Subsection IV.C.1. exists.
- c. Repair an essential device to eliminate the leak during the next process unit shutdown, but in no case later than one year from the date of the original leak detection.

## V. Administrative Requirements

### A. Operator Management Plans

1. Each operator shall, not later than November 1, 1991, submit a management plan to the Control Officer. The management plan shall describe how the operator will comply with the requirements of this Rule.

The management plan must include:

- a. a description of any hazard which might affect the safety of an inspector;
  - b. identification of process units which cannot be immediately shutdown for repair of leaks;
  - c. identification of components for which an exemption in accordance with Subsection III.A. through III.F. of this Rule is requested;
  - d. specific identification of the resource commitment to a program to implement, inspect, and repair components;
  - e. schedule of quarterly inspections to be conducted in accordance with EPA Method 21.; and
  - f. repair procedures to be used within 15 calendar days following leak detection which results in compliance with the requirements of this Rule.
2. The operator of a new facility or a facility to be modified shall submit a new or modified operator management plan to the Control Officer prior to implementation of an Authority to construct.
  3. Each management plan shall:
    - a. Specify whether contractor or employee inspection will be used;
    - b. Specify training standards for personnel performing inspections, and
    - c. Provide leak detection training (using a portable hydrocarbon detection instrument) for new operators, and for experienced operators as necessary.
  4. Changes to the management plan must be submitted to the Control Officer before implementation. If Control Officer fails to respond to the plan in writing within 30 days, it shall be deemed approved.

B. Recordkeeping

1. Each facility operator shall maintain an inspection log containing, at a minimum, the following:

- a. Name, location, type of components, and description of any unit where leaking components are found.
  - b. Date of leak detection, emission level (ppm) of leak, and method of detection.
  - c. Date and emission level of recheck after leak is repaired.
  - d. Identification of leaks than cannot be repaired until next process unit turnaround.
  - e. Total number of components inspected, and total number and percentage of leaking components found.
2. Copies of the inspection log shall be retained by the operator for a minimum of 2 years after the date of an entry.
  3. Copies of the inspection log shall be made available upon request to District personnel.

C. Test Methods

1. Analysis of halogenated exempt compounds shall be by ARB Method 432.



KENN  
5/10/96

**RULE 414.5 Pump and Compressor Seals at Petroleum Refineries and Chemical Plants -**  
Adopted 1/9/79, Amended 6/26/79, 11/27/79, 4/5/82, 8/22/89, 4/30/90, 5/6/91,  
3/7/96

**I. Applicability**

This Rule applies to seals on pumps and compressors and associated seal fluid systems in petroleum refineries and chemical plants that may be the source of fugitive VOC emissions.

**II. Definitions**

- A. Background - a reading on a portable hydrocarbon detection instrument which is taken at least three meters upwind from any pump or compressor seal to be inspected and which is uninfluenced by any specific emission point.
- B. Chemical Plant - an establishment that produces organic chemicals and/or manufactures products by organic chemical process.
- C. Commercial Natural Gas - a mixture of gaseous hydrocarbons, chiefly methane and less than 10% VOC's excluding ethane as determined in accordance with ASTM Methods E168-67, E169-63, or E260-73, used as a fuel and obtained from a company licensed to dispense such gases.
- D. Device - a pump or compressor at a refinery or chemical plant which handles a volatile organic compound or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors.
- E. Essential Device - any device which cannot be taken out of service without reducing by more than 33% the throughput of the process unit which it serves.
- F. Leak -
  - 1. a reading as methane on a portable hydrocarbon detection instrument which is in excess of 10,000 ppm above background when measured at a distance of one centimeter from the potential source with an instrument calibrated with methane.
  - 2. the dripping of liquid VOC's at a rate of more than three drops per minute.
- G. Refinery - an establishment that processes petroleum as defined in the Standard Industrial Classification Code under 2911 - petroleum refining.
- H. Portable Hydrocarbon Detection Instrument - a hydrocarbon analyzer which uses

the flame ionization detection or thermal conductivity methods and satisfies Method 21, 40 CFR Part 60. The instrument shall be calibrated on methane and sampling at one liter per minute.

- I. Process Unit - components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates which can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.
- J. Volatile Organic Compound (VOC) - any compound containing at least one atom of carbon except for compounds exempted by Rule 102, Subsection L.

### III. Exemptions

The provisions of this Rule shall not apply to:

- A. Any device handling only commercial natural gas.
- B. Any device handling material containing less than 10% by weight volatile organic compounds (as determined by ASTM Methods E-260-73,, E-168-67, or E-169-63.)
- C. Any device exclusively handling heavy liquid streams which have less than 10% evaporation at 150°C as determined by ASTM Method D-86-78 provided the facility operator so identifies such components as outlined in Subsection V.A.
- D. Ethane shall be excluded from the requirements of this Rule if the ethane content of the stream being handled is less than 20% by volume. A facility operator requesting exemption of ethane shall demonstrate by gas chromatographic analysis (qualitative and quantitative determination done in accordance with ASTM Method E-260-73), that such stream has an ethane content less than 20%.

### IV. Requirements

#### A. General

- 1. Any device shall be inspected for leaks at least once every three months.
- 2. Any pump shall be visually inspected weekly. Whenever volatile organic liquids are observed dripping from a pump seal, the seal shall be checked within three days with a portable hydrocarbon detection instrument to determine if a leak is present or the drippage stopped within the same time frame. If a leak is present, the leak shall be repaired in accordance with Section IV.B.

3. A facility operator shall not use any device at a Petroleum Refinery or Chemical Plant unless such device does not leak.
4. Emissions from devices which have been tagged by the facility operator for repair in accordance with the requirements of Subsection IV.B. or which have been repaired and are waiting re-inspection pursuant to Subsection IV.A. shall not be in violation of the prohibitions in Subsection IV.A.3. providing the number of leaking devices of any type does not exceed two percent of the total number of devices of that type that were inspected and that are subject to the prohibitions of this Rule.

B. Repairs

1. Any person operating a device handling volatile organic compounds which is leaking shall repair the leaking device within fifteen calendar days. If the leaking device is essential and cannot be repaired within fifteen days after detection, one of the following actions shall be taken:
  - a. replace the leaking device and inspect for leaks within three days after detection, or
  - b. vent emissions to a vapor recovery device that is at least 95% efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or
  - c. repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one year from the date of the original leak detection.
2. A readily visible identification, in the form of a weather proof tag shall be attached to any device which leaks. Devices to be repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.

V. Administrative Requirements

A. Operator Management Plans

1. Each operator shall, not later than November 1, 1991, submit a management plan to the Control Officer. The management plan shall describe how the operator will comply with the requirements of this Rule.

The management plan must include:

- a. a description of any hazard which might affect the safety of an inspector;
  - b. identification of process units which cannot be immediately shutdown for repair of leaks;
  - c. identification of components for which an exemption in accordance with Subsection III.A. through III.F. of this Rule is requested;
  - d. specific identification of the resource commitment to a program to implement, inspect, and repair components;
  - e. schedule of quarterly inspections to be conducted in accordance with EPA Method 21.; and
  - f. repair procedures to be used within 15 calendar days following leak detection which results in compliance with the requirements of this Rule.
2. The operator of a new facility or a facility to be modified shall submit a new or modified operator management plan to the Control Officer prior to implementation of an Authority to Construct.
  3. Each management plan shall:
    - a. specify whether contractor or employee inspection will be used;
    - b. specify training standards for personnel performing inspections, and
    - c. provide leak detection training (using a portable hydrocarbon detection instrument) for new operators, and for experienced operators as necessary.
  4. Changes to the management plan must be submitted to the Control Officer before implementation. If Control Officer fails to respond to the plan in writing within 30 days, it shall be deemed approved.

B. Recordkeeping

1. Each operator shall maintain an inspection log containing, at a minimum, the following:
  - a. Name, location, type of components, and description of any unit where leaking components are found;
  - b. Date of leak detection, emission level (ppm) of leak, and method of detection;

- c. Date and emission level of recheck after leak is repaired;
  - d. Identification of leaks that cannot be repaired until next process unit turnaround; and
  - e. Total number of components inspected, and total number and percentage of leaking components found.
- 2. Copies of the inspection log shall be retained by the facility operator for a minimum of 2 years after the date of an entry.
  - 3. Copies of the inspection log shall be made available upon request to District personnel.

C. Test Methods

- 1. Inspection procedures
  - a. Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with Method 21, 40 CFR Part 60.
  - b. Sampling of a seal shall be performed one centimeter from the outer end of the shaft seal interface or at a distance of one centimeter of any other point on the seal which could leak.
  - c. Sampling of atmospheric vents on pump and compressor seal fluid systems shall be measured in the plane of the opening of the vent at the centrad.
- 2. Analysis of halogenated exempt compounds shall be by ARB Method 432.
- 3. Determination of Emissions: Emissions of VOC shall be measured by EPA Method 25, 25a, or 25b, as applicable, and analysis of halogenated exempt compounds shall be analyzed by ARB Method 422.

VI. Compliance Schedule

- A. By November 1, 1991, the operator of a device shall be in full compliance with the requirements of this Rule.

RULE 415 Reduction of Animal Matter A person shall not operate or use any article, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from such an article, machine, equipment or other contrivance are:

- a. Incinerated at temperatures of not less than 1200 degrees Fahrenheit for a period of not less than 0.3 second, or
- b. Processed in such a manner determined by the air pollution control officer to be equally, or more, effective for the purpose of air pollution control than (a) above.

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 in the Authority to Construct or Permit to Operate or as specified by the air pollution control officer for indicating temperature, pressure or other operating conditions.

For the purpose of this rule, "reduction" is defined as any heated process, including rendering, cooking, drying, dehydration, digesting, evaporating and protein concentrating.

The provisions of this rule shall not apply to any article, machine, equipment or other contrivance used exclusively for the processing of food for human consumption.

~~RULE 416 Open Burning No person shall burn any refuse or other material in an open outdoor fire within the boundaries of the Kern County Air Pollution Control District.~~

~~RULE 417 Exceptions The exceptions to the Open Burning Rule 416 are as follows:~~

- ~~a. When such fire is set or permission for such fire is given in the performance of the official duty of any public officer, and such fire in the opinion of such officer is necessary for the purpose of the prevention of a fire hazard which cannot be abated by any other means, or for the instruction of public or industrial employees in methods of fire fighting.~~
- ~~b. Safety flares for the combustion of waste gases.~~
- ~~c. Fires used only for cooking of food for human beings.~~
- ~~d. When the material to be burned is residential rubbish and originates on and is being burned on premises not served by an organized solid waste disposal service, or available to a disposal site.~~

10-18-96 KCAPCD

**RULE 416 Open Burning - Adopted 4/18/72 Amended 3/19/74, 8/22/89, 7/11/96****I. Purpose**

The purpose of this Rule is to limit open burning to only those activities for which there is no feasible or practical alternative.

**II. Applicability**

This Rule shall apply to all burning activities not confined to a chamber which meets requirements of Rule 418 (Incinerators), but shall not apply to combustion of fuels in a device designed to produce useful energy and which meets all applicable parts of Regulation IV.

**III. Prohibition**

No person shall burn any refuse or other material in an open outdoor fire within the boundaries of the Kern County Air Pollution Control District.

**IV. Exemptions**

The following exemptions shall apply:

- A. A fire set or permission for such fire is given in the performance of the official duty of any public officer, and such fire in the opinion of such officer is necessary for the purpose of the prevention of a fire hazard which cannot be abated by any other means, or for the instruction of volunteer firemen, public, or industrial employees in methods of fire fighting.
- B. A backfire or other fire control method used for the purpose of controlling an existing wild fire.
- C. A fire used only for cooking of food for human consumption.
- D. A fire used for conducting agricultural operations in the growing of crops, or raising of fowl, animals, or bees on a farm for the primary purpose of making a profit or for a livelihood; and wildland vegetation management, forest management, or range improvement. This exemption shall be subject to all applicable provisions of Rule 417.
- E. Burning of plant life for right-of-way clearing, levee and ditch bank maintenance. This exemption shall be subject to all applicable provisions of Rule 417.

- F. Combustion of waste gases using a flare provided such flare complies with Rule 401 (Visible Emissions).
- G. A fire used to test the integrity of compressed gas cylinders provided the fuel used is the lowest-emitting allowed by the applicable state or federal test procedure.
- H. Burning of residential rubbish originating on and being burned on premises not served by an organized solid waste disposal service and more than 15 miles from a county sanitary landfill. An exemption shall not apply to burning of rubbish from any industrial, commercial, or institutional facility wherever located, or to a residential facility constructed for use of more than two families.

**V. Treatment of Federal Facility Materials**

- A. No open burn/open detonation (OB/OD) operation to treat unwanted materials at a federal facility may be conducted without prior approval from the Control Officer through approval of an OB/OD burn plan. A burn plan approval shall not be valid for more than one year, but may be renewed annually by the Control Officer.
- B. No person shall conduct open burning/open detonation on "no burn" days as specified by CARB or when such burning is prohibited by the Control Officer for public health reasons.
- C. Open burn/open detonation operations, when permitted, shall conform to the following conditions:
  - 1. Before an OB/OD operation takes place, a plan shall be submitted by the Base Commanding Officer or by his designated representative for a military base or by the facility manager or his designated representative for a federal facility, to the Control Officer, and any other designated agencies having jurisdiction over the proposed OB/OD operations. This plan shall:
    - a. Specify methods to be used to achieve detonation or combustion.
    - b. Limit the category and amount of waste propellants, explosives, munitions, and pyrotechnics to be disposed of each year to an amount with a projected lifetime toxic cancer risk less than one-in-one million and limit daily disposal amounts to that level not causing an impact above acute toxic thresholds. Toxic risks shall be demonstrated with modeling approved by the Control Officer.
    - c. Limit open burn/open detonation operations or provide for mitigation when meteorological conditions could cause emissions to result in or contribute to an exceedance of any state or federal ambient air quality standard or cause



a public nuisance.

- d. Require waste propellants, explosives, munitions, and pyrotechnics (PEMP) treated to be free of non-PEMP materials, except for those materials necessary to safely store, handle, or treat PEMP or intimately-related materials also requiring treatment.
- e. Require waste propellants, explosives, munitions, and pyrotechnics to be in a condition facilitating combustion, assuring safe operation, and minimizing the amount of emissions emitted during treatment.
- f. Include the following information:
  - 1) location of proposed treatment operation,
  - 2) category and amount of waste propellants, explosives, munitions, and pyrotechnics to be treated,
  - 3) directions and distances to nearby receptor areas,
  - 4) air quality impact analysis showing expected impacts with respect to state and federal ambient air quality standards,
  - 5) risk assessment for acute and chronic health effects,
  - 6) meteorological criteria developed for the project,
  - 7) projected schedule or frequency of OB/OD events,
  - 8) specifications for monitoring and recording of critical project parameters, and
  - 9) specifications for reporting and disseminating project information.
- 2. Material to be treated shall be limited to PEMP generated from operations at the federal facility where the OB/OD operation is to take place.
- 3. Open burn/open detonation operations shall be allowed on normal business days for the District, or on such other days as the District may approve.
- 4. All open burn/open detonation operations shall conform to applicable jurisdictional fire codes.
- 5. Open burn/open detonation operations shall not be initiated if emissions may drift into a populated area or create a public nuisance.
- D. Total amount of material treated in any one day may be limited by the District, taking into consideration potential for creation of a threat to public health.
- E. Records shall be maintained for the type and amount of PEMP for each open burn/open detonation operation and shall be submitted to the District no more than sixty days prior to the end of the burn plan approval period. Records shall be

maintained for five years.

**F. District staff shall be permitted, when accompanied by appropriate personnel:**

- 1. To enter premises where the OB/OD site is located or in which any records are required to be kept under requirements of the burn plan.**
- 2. To inspect any equipment, operation, or method required by the burn plan.**

**KCAPCD shall also have authority to require collection and analysis of emission samples from the source.**

**G. A summary of data required to determine compliance with applicable provisions of this Rule shall be submitted to, and as prescribed by, the Control Officer.**

## **RULE 416.1 Wood Burning Heaters and Wood Burning Fireplaces** - Adopted 7/8/4

### **I. Purpose**

The purpose of this Rule is to minimize emissions of smoke (particulate matter), organic gases and carbon monoxide from wood burning fireplaces in new housing subdivisions and wood burning heaters throughout East Kern.

### **II. Applicability**

This Rule applies to:

- A. Any person who manufactures, sells, offers for sale, installs or operates a wood burning heater.
- B. Any person who installs a wood burning fireplace in a new residential subdivision.

### **III. Exemptions**

The following devices are exempt from provisions of this Rule:

- A. Fireplaces, space heaters or stoves that are exclusively fired with a gaseous fuel.
- B. Cookstoves, as described in Code of Federal Regulations 60.531.

### **IV. Definitions**

- A. APCO: the Air Pollution Control Officer of the Kern County Air Pollution Control District.
- B. Distributor: any person other than a manufacturer or a retailer who sells, offers for sale or supplies wood burning heaters to retailers or others for resale.
- C. U.S. EPA: the United State Environmental Protection Agency.
- D. U.S. EPA Phase II Certified: meets performance and emissions standards set forth in Part 60, Title 40, Subpart AAA Code of Federal Regulations.
- E. Fireplace: any permanently installed masonry or factory built device designed to operate at an air-to-fuel ratio greater than or equal to 35-to-1.
- F. Manufacturer: any person who constructs or imports a wood burning heater.
- G. New Residential Subdivision: any group of dwellings on one property or contiguous properties under common control of a person (as defined in Rule 102, Subsection X), shown on the latest equalized county assessment roll as a unit or as contiguous units, for

which construction begins on or after July 9, 2004. Construction has begun when the foundation for a structure is poured or constructed. Community and/or commercial buildings are not included.

- H. New Wood Burning Heater: any wood burning heater that has not been sold, supplied or exchanged for the first time by the manufacturer, the manufacturer's distributor or agency, or a retailer.
- I. Pellet-Fueled Wood Burning Heater: any wood burning heater which uses pellet fuel and is either U.S. EPA-certified or is exempted under U.S. EPA requirements set forth in Part 60, Title 40, Subpart AAA Code of Federal Regulations.
- J. PM<sub>10</sub>: any particulate matter having an aerodynamic diameter equal to or less than 10 microns.
- K. Retailer: any person engaged, for profit, in the sale of wood burning fireplaces or wood burning heaters directly to the consumer.
- L. Wood Burning Heater: an enclosed, wood burning appliance capable of, and intended for, space heating, i.e., a free standing wood stove or wood burning fireplace insert.

**V. Requirements for Wood Burning Heaters**

- A. No person shall sell, offer for sale, supply, install or transfer a new wood burning heater unless it is U.S. EPA Phase II Certified or is a pellet-fueled wood burning heater.
- B. No retailer shall advertise, sell, offer for sale, supply, install or transfer a used wood burning heater unless it has been rendered permanently inoperable, or is U.S. EPA Phase II Certified, or is a pellet-fueled wood burning heater.
- C. Retailers selling or offering for sale new wood burning heaters shall supply public awareness information with each sale of a wood burning heater in the form of pamphlets, brochures or fact sheets concerning topics listed in Subsections 1. through 5. below.
  - 1. Proper installation, operation and maintenance of the wood burning heater,
  - 2. Proper fuel selection and use,
  - 3. Health effects of exposure to wood smoke,
  - 4. Weatherization methods for the home, and
  - 5. Proper sizing of wood burning heaters.

**VI. Limitations on Wood Burning Fireplaces in New Residential Subdivisions**

Beginning July 9, 2004, no person shall install a wood burning fireplace in a new residential subdivision which will consist of 10 or more dwellings.

**VII. Administrative Requirements**

Upon request of the APCO, a manufacturer shall demonstrate each wood heater subject to requirements of Section V. meets applicable U.S. EPA's Phase II certification standards.

## **RULE 417 - AGRICULTURAL AND PRESCRIBED BURNING**

Adopted 4/18/72, Amended 12/12/79, 6/30/80, 8/22/89, 7/11/96, 3/13/03, 7/24/3

### **I. Applicability**

This Rule applies to all agricultural and prescribed burning conducted within the District.

Provisions of this Rule implement Smoke Management Guidelines for Agricultural and Prescribed Burning, promulgated under Title 17, California Code of Regulations and as adopted September 13, 2001.

### **II. Definitions**

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

- A. Agricultural and Prescribed Burning means open outdoor fires used in agricultural operations in the growing of crops or the raising of fowl or animals; or open outdoor fires used in forest management, range improvement, or improvement of land for wildlife and game habitat, wildland vegetation management, or disease or pest prevention; or open outdoor fires used in the operation or maintenance of a system for the delivery of water for purposes specified in Subsection I.A.1.
- B. Air Quality means characteristics of ambient air based on California Ambient Air Quality Standards which have been adopted by the California Air Resources Board pursuant to Section 39606 of the California Health and Safety Code and National Ambient Air Quality Standards which have been established pursuant to Sections 108 and 109 of the Federal Clean Air Act pertaining to criteria pollutants and Section 169A of the Federal Clean Air Act pertaining to visibility.
- C. Ambient Air means that portion of the atmosphere, external to buildings, to which the general public has access.
- D. Approved Ignition Devices means those instruments or materials able to ignite agricultural waste without production of black smoke by the ignition device, including liquid petroleum gas, butane, propane or diesel oil burners and flares, but not including tires, tar paper, oil or other similar materials.
- E. Brush Treated means dead, felled, crushed or uprooted with mechanical equipment, or desiccated with herbicides.
- F. Burn Plan means written operational plan for managing a specific fire to achieve resource benefits and specific management objectives. Such plan includes, at a minimum, project objectives, contingency responses for when the fire is out of prescription with the smoke management plan, fire prescription (including smoke

management component), and description of pre-fire fuel treatment, personnel, organization and equipment.

- G. Burn Project means active or planned prescribed burn or naturally ignited wildland fire managed for resource benefit.
- H. Designated Agency means any agency designated by CARB as having authority to issue agricultural or prescribed burning permits. The Districts may request such designation for an agency. The U.S. Department of Agriculture Forest Service and the California Department of Forestry and Fire Protection are so designated within their respective areas of jurisdiction.
- I. Fire Protection Agency means any agency with responsibility and authority to protect people, property and the environment from fire and having jurisdiction within a district or region.
- J. Forest Management means use of open fires as part of forest management practice to remove forest debris. Forest management practices include timber operations, silvicultural practices or forest protection practices.
- K. Forty-eight Hour Forecast means prediction of meteorological and air quality conditions expected to exist for a specific prescribed burn in a specific area 48 hours from the date of the prediction. Such prediction shall indicate degree of confidence.
- L. Land Manager means any federal, state, local or private entity, or his designee, who administers, directs, oversees or controls use of public or private land, including application of fire to land.
- M. Marginal Burn Day means day when limited amounts of prescribed burning, for individual projects in specific areas for limited times, is not prohibited by CARB and burning is authorized by the District consistent with this Rule.
- N. Ninety-six Hour Trend means prediction of meteorological and air quality conditions expected to exist for a specific prescribed burn in a specific area 96 hours from the date of prediction.
- O. No-Burn Day means any day on which agricultural burning and prescribed burning is prohibited by CARB or the District.
- P. Open Burning for Agricultural Operations in the Growing of Crops or Raising of Fowl or Animals means burning in the open of materials produced wholly from operations in the growing of crops and harvesting of crops or raising of fowl or animals for the primary purpose of making a profit, providing a livelihood or conducting agricultural research or instruction by an educational institution. This includes, for the purpose of cultural practice burns, burning of fence rows and ditch banks for weed control and

weed abatement and burning in nontillage orchard operations and burning of material not produced wholly from such operations, but intimately related to the growing or harvesting of crops and used in the field, except as prohibited by District regulations. Examples are pesticide and fertilizer sacks emptied in the field.

- Q. Permissive-Burn Day or Burn Day means any day on which agricultural burning, including prescribed burning, is not prohibited by CARB and burning is authorized by the District consistent with this Rule.
- R. Pre-fire Fuel Treatment means any of several vegetation removal techniques that can reasonably be employed prior to prescribed burning to reduce amount of vegetation that would otherwise be consumed in a prescribed fire.
- S. Prescribed Burning - means planned application of fire to vegetation to achieve any specific objective on lands selected in advance of that application. Planned application of fire may also include natural or accidental ignition.
- T. Prescribed Fire means any fire ignited by management actions to meet specific objectives and may include naturally ignited wildland fires managed for resource benefits.
- U. Range Improvement Burning means use of open fires to remove vegetation for a wildlife, game or livestock habitat, or for initial establishment of an agricultural practice on previously uncultivated land.
- V. Seventy-two Hour Outlook means prediction of meteorological and air quality conditions expected to exist for a specific prescribed burn in a specific area 72 hours from the date of the prediction.
- W. Silviculture means establishment, development, care and reproduction of stands of timber.
- X. Smoke Management Plan means document prepared for each fire by a land manager or fire manager that provides information and procedures required in Section VII.
- Y. Smoke Management Prescription means measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses and indicate other required actions. Prescription criteria may include, but are not limited to, minimizing smoke impacts and insuring safety and consideration of economic, public health, environmental, geographic, administrative, social or legal issues such as complying with Health and Safety Code Section 41700 (public nuisance prohibition).
- Z. Smoke Management Program means program defined in the Smoke Management Guidelines for Agricultural and Prescribed Burning, promulgated under Title 17,



California Administrative Code.

- AA. Smoke Sensitive Areas means populated areas and other areas where the District determines smoke and air pollutants can adversely affect public health or welfare. Such areas can include, but are not limited to, towns and villages, campgrounds, trails and other populated recreational areas, hospitals, nursing homes, schools, roads, airports, public events, shopping centers and mandatory Class I areas.
- BB. Wildfire means unwanted wildland fire.
- CC. Wildland means area where development is generally limited to roads, railroads, power lines and widely scattered structures. Such land is not cultivated, i.e., soil is disturbed less frequently than once in 10 years, is not fallow and is not in the United States Department of Agriculture Conservation Reserve Program. Such land may be neglected altogether or managed for such purposes as wood or forage production, wildlife, recreation, wetlands or protective plant cover.
- DD. Wildland Fire means any nonstructural fire, other than prescribed fire, that occurs in wildland.
- EE. Wildland/Urban Interface means line, area or zone where structures and other human development meet or intermingle with wildland.
- FF. Wildland Vegetation Management means 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, California Code of Regulations (CCR), Section 1561.1), trees, grass or standing brush.

### **III. General Requirements - Agricultural and Prescribed Burning**

#### **A. Burn Permits**

1. No person shall knowingly set, conduct or allow agricultural or prescribed burning unless he or she has a valid burn permit from the District or designated agency.
2. A valid burn permit shall be required from the fire protection agency that has jurisdiction in the area of the proposed burn project.
3. Burning conducted pursuant to permits issued by the Control Officer or a designated agency shall comply with all conditions specified on such permits. Failure to abide by permit conditions shall be a violation of Section 48152 of the California Health and Safety Code and District Regulation IV.
4. All permits issued by the Control Officer or designated agencies for agricultural and prescribed burning shall contain the following words or words of similar import:

“This permit is valid only on those days during which agricultural burning, including prescribed burning, is not prohibited by the California Air Resources Board or by the District pursuant to Section 41855 of the California Health and Safety Code and when burning on lands identified has been approved by the District.”

5. Permits issued by designated agencies and fire protection agencies shall be subject to the Rules and Regulations of the District.
6. The Control Officer may issue special permits for agricultural and prescribed burning on days designated as no-burn days if denial of such permit would threaten imminent and substantial economic loss. In authorizing such burning, the District may limit amount of material that can be burned in any one day such that burning is not likely to cause or contribute to exceedances of air quality standards or result in adverse smoke impacts to smoke sensitive areas.
7. Each applicant for a permit shall provide information required by the designated agency for fire protection purposes.
8. Each application for a permit shall provide information requested by the District.

**B. Registration and Reporting**

1. All persons desiring to conduct prescribed burning in the District shall register their planned burn projects with the District as far in advance as possible. Project updates to this registration process shall be submitted as appropriate and in advance of the burn. Burn registration shall include: name of the permittee, including a contact person with phone number, listing of planned projects, project location and total acreage to be burned for each project.
2. Designated agencies shall submit a written report to the District describing agricultural and prescribed burning conducted pursuant to this Rule by February 1<sup>st</sup> of each year. Such report shall include estimated tonnage or acreage burned in agricultural burning operations and estimated tonnage burned in prescribed burning operations during the prior calendar year.

**C. Permissive Burn, Marginal Burn and No-Burn Days**

1. Agricultural burning shall be permitted only on days designated as permissive burn days by CARB. Such designations shall be announced by 3:00 pm every day whether the following day is a permissive burn day, a marginal burn day or a no-burn day, or whether the decision will be announced the following day. If conditions preclude a forecast until the next day, the decision will be announced by CARB by 7:45 am. Such notices are based on Meteorological Criteria for Regulation Agricultural Burning and Prescribed Burning, set forth in CARB's

## Smoke Management Guidelines for Agricultural and Prescribed Burning.

2. Burning of empty sacks (not containers) which have contained pesticides or other agricultural substances shall be permitted on no-burn days provided such sacks are within the definition of Open Burning in Agricultural Operations.
3. A marginal burn day may be declared if meteorological conditions approach criteria for permissive burn days in CARB's Smoke Management Guidelines for Agricultural and Prescribed Burning, and adverse smoke impacts are not expected. On marginal burn days the Control Officer may authorize limited amounts of prescribed burning for individual projects when smoke impacts to smoke sensitive areas are not expected as a result of that burning. Agricultural and residential burning shall be prohibited on any day which is a marginal burn day.

### D. Advance Forecasts

1. Forty-eight hour forecast - Permittee shall initiate a forty-eight hour burn forecast request seven days in advance of the proposed burn using CARB controlled burned forecast request form (CB-3) or other District/CARB approval request mechanism such as a prescribed fire incident reporting system. Such request shall be submitted to the District, and if the District needs assistance, passed on to CARB. CARB shall then continue to issue forty-eight hour burn forecasts until the District issues a burn authorization notice for the project or until the District requests CARB's forty-eight hour forecasts be discontinued.
2. Seventy-two hour outlook - A 72 hour burn outlook shall be available up to 72 hours in advance of burns specified in Section 80145, Subsection (f), Title 17, CCR.
3. Ninety-six hour trend - A 96 hour burn trend shall be available up to 96 hours in advance of burns as specified in Section 80145, Subsection (f), Title 17, CCR.

### E. Daily Burn Authorization System

1. A burn authorization shall be requested and obtained from the Control Officer, on a daily basis, before any prescribed burning may commence. To request such authorization, a burn operator shall submit a District-approved smoke management plan.
2. Burn authorizations for prescribed burning shall be granted on a first come-first served basis. To avoid conflict in burn planning, the Control Officer shall authorize no more than one burn on the same day in the same general area. The Control Officer may immediately rescind a burn authorization if meteorological conditions change such that adverse air quality impacts are likely, or if burning by a fire protection agency to abate an imminent fire hazard is required suddenly and unexpectedly in the same area.

3. Smoke management plan conditions shall be met at the time of burn ignition and shall be expected to be met for duration of the burn, regardless of issuance of a burn authorization. The burn operator shall be responsible for ensuring all conditions listed in the smoke management plan are met prior to ignition of, and during, the burn.
4. Multi day burns shall require District authorization on a daily basis and consultation with CARB to continue with the burn.
5. The District may cancel burn authorization any time before, or during, a prescribed burn if cancellation is necessary to protect ambient air quality per Section 80145, Subsection (g), Title 17, CCR.

#### **IV. Special Requirements - Agricultural Burning**

- A. Agricultural burning shall take place only on days permitted by public fire protection agencies having jurisdiction for purposes of fire control or prevention.
- B. Waste materials to be burned in open fires in agricultural operations, including prescribed burning, shall be free of waste not conforming to the definition of "Open Burning in Agricultural Operations." The following materials shall not be considered agricultural waste: tires, rubbish, tar paper, plastic, treated wood, construction/demolition debris or material containing asbestos, weeds, shrubs and trees from nonproductive areas such as along roads and around buildings and waste foreign to land being cleared for agricultural use. Weeds, shrubs and trees in, or bordering, pastures or crop production areas or on land being cleared for the growing of crops or animals shall be considered to be agricultural waste.
- C. Waste materials to be burned in agricultural operations, including prescribed burning, shall be ignited as rapidly as practicable within applicable fire control restrictions.
- D. Waste materials to be burned in open fires in agricultural operations shall be arranged to burn with a minimum of smoke. Materials shall be loosely stacked to allow maximum drying in preparation for burning to provide good combustion. Materials shall be free of dirt and soil to the extent such dirt or soil will not hinder burning nor be carried into the air as particulate matter and shall be reasonably free of visible surface moisture.
- E. Waste materials to be burned in open fires in agricultural operations shall have been dried for the minimum periods listed below. These periods include time from drying or cutting to day of burning.
  1. Dry Cereals - 0 Days,
  2. Prunings and Small Branches - 3 Weeks, and

3. Large Branches and Trees - 6 Weeks.

- F. The Control Officer may restrict agricultural burning to selected permittees on designated burn days if total tonnage to be ignited would discharge a volume of contaminants into the atmosphere sufficient to threaten public health.
- G. Agricultural burning may commence at any time after announcement of a burn day, but in no case shall it commence before sunrise. No additional waste material or ignition fuel shall be ignited or added to any fire after two hours before sunset.
- H. Wind direction at a burning site shall be such that smoke will not cause a public nuisance.
- I. Materials to be burned shall be ignited only by use of approved ignition devices. Tires, tar paper, plastic, dirty oils and other similar materials shall not be used.

**V. Special Requirements - Field Crop Burning**

- A. Cereal straw shall be ignited only by strip-firing into-the-wind or by backfiring except under a special permit issued by the District when and where extreme fire hazards are declared by a public fire protection agency to exist, or where crops are determined not to lend themselves to these techniques.
- B. No field crop burning shall commence before 10:00 am, nor after 5:00 pm of any day.

**VI. Special Requirements - Range Improvement Burning**

- A. No brush or unwanted trees shall be burned unless it has been brush treated at least six months prior to the burn, provided it is economically and technically feasible.
- B. If burning is to be done primarily for improvement of land for wildlife and game habitat, no permit shall be issued unless the applicant has filed with the District a statement from the Department of Fish and Game certifying the burn is desirable and proper. The Department of Fish and Game may specify the amount of brush treatment required.

**VII. Special Requirements - Prescribed Burning and Prescribed Fires in Wildland and Wildland/Urban Interface Area**

- A. The land manager shall submit a smoke management plan to the District for all burn projects greater than 10 acres in size or estimated to produce more than 1 ton of particulate matter. Smoke management plans must contain, at a minimum, the following information:

1. Project name, location, size (acres), types and amounts of material to be burned;
  2. Expected duration of fire from ignition to extinction;
  3. Identification of responsible personnel, including telephone contacts;
  4. Identification and location of all smoke sensitive areas;
  5. Expected particulate matter emission calculations, including U.S. EPA approved calculation method;
  6. Identification of vegetation conditions and burn limitations to minimize smoke, including requirements for materials to be piled, where possible;
  7. If applicable, California Department of Fish and Game statement certifying the burn is desirable and proper;
  8. Public notification procedures, including requirement for appropriate signage at burn sites and for reporting of public smoke complaints; and
  9. Procedures for permittees to report public smoke complaints to the District.
- B. If a natural ignition occurs on a no-burn day, such fire may be managed as a prescribed fire provided the Control Officer determines the following:
1. For smoke management purposes, the burn can be managed for resource benefit; or
  2. For periods of less than 24 hours, a reasonable effort has been made to contact the District, or if District staff are not available, CARB;
  3. After 24 hours, the District has been contacted, or if the District is not available, CARB has been contacted and concurs the burn can be managed for resource benefit.
- A “no-go” decision does not necessarily mean the fire must be extinguished, but does mean the fire cannot be managed as a prescribed fire.
- C. A burn project shall not occur unless all conditions and requirements stated in the smoke management plan are met prior to ignition on the date of the burn event, CARB and the District have both declared the day to be a burn day and the Control Officer has authorized the burn on the day of the burn.
- D. For naturally-ignited wildfires that are expected to exceed 10 acres, the land manager shall submit a smoke management plan that contains at a minimum, information required by in Section VII.A. and the following additional information:

1. A burn plan within 72 hours of the start of any naturally ignited wildland fire managed for source benefits that is expected to exceed 10 acres in size; and
  2. Description of source of ignition.
- E. For prescribed burn projects greater than 100 acres in size or estimated to produce more than 10 tons of particulate matter, the land manager shall submit a smoke management plan that contains at a minimum, information contained in Subsections VII.A. and VII.D. and the following additional information:
1. Identification of meteorological conditions necessary for burning;
  2. Smoke management criteria the land manager will use for making burn ignition decisions;
  3. Projections, including a map, of where smoke from burns is expected to travel, both day and night;
  4. Specific contingency actions (such as fire suppression or containment) to be taken if smoke impacts occur or meteorological conditions deviate from those specified in the smoke management plan;
  5. An evaluation of alternatives to burning considered. If an analysis of alternatives has been prepared as part of environmental documentation required for the burn project pursuant to the National Environmental Policy Act (NEPA) or the California Environmental Quality Act (CEQA), as applicable, the analysis shall be attached to the smoke management plan in satisfaction of this requirement.
- F. If smoke may impact smoke sensitive areas, smoke management plans shall include appropriate monitoring such as visual monitoring, ambient particulate matter monitoring or other monitoring approved by the District, as required by the District for the following burn projects:
1. Projects greater than 250 acres;
  2. Projects that will continue burning or producing smoke overnight;
  3. Projects conducted near smoke sensitive areas; or
  4. Where the Control Officer determines monitoring is necessary for public health and safety.
- G. The land manager shall coordinate daily with the District or CARB for multi day burns that may impact smoke sensitive areas, to affirm the burn project remains within conditions specified in the smoke management plan, or whether contingency actions are necessary.

- H. Alternate thresholds to those specified in Subsections VII.D., VII.E. and VII.F. and may be specified by the District where the Control Officer determines such alternative thresholds are necessary to protect public health.
- I. The land manager conducting a prescribed burn shall ensure all conditions and requirements stated in the smoke management plan are met on the day of the burn event and prior to ignition.
- J. The land manager shall submit a post-burn smoke management evaluation to the District for fires greater than 250 acres within 30 days of project completion. Such evaluation shall address whether smoke management plan objectives were met. This evaluation shall also address the following:
  - 1. What were meteorological conditions (wind speed, direction, temperature, relative humidity (percent)), prior to, during and following the burn?
  - 2. Did the weather meet the prescription?
  - 3. Were there adverse smoke impacts? If so, where? How were impacts monitored and documented?
  - 4. Were there complaints related to smoke impacts from the burn? If so, list them. How were complaints responded to and remedied?
  - 5. What went wrong, if anything, with the weather or smoke? How can this be improved upon for future burns?
- K. Vegetation to be burned shall be in a condition that will minimize smoke emitted during combustion when feasible, considering fire safety and other factors.
- L. Material to be burned shall be windrowed or piled where possible, unless good silvicultural practices or ecological goals dictate otherwise.
- M. Piled material to be burned shall be prepared so it will burn with a minimum of smoke.
- N. The permit applicant shall file with the District a statement from the Department of Fish and Game certifying the burn is desirable and proper if the burn is to be done primarily for improvement of land for wildlife and game habitat. The Department of Fish and Game may specify amount of brush treatment requirement, including any other conditions it deems appropriate.

## **VIII. Exemptions**

Upon receipt of a burning permit from the appropriate fire control agency, tumbleweeds and star thistle may be burned provided no other feasible or practical method is available, an approved ignition device is used and a public nuisance is not created.



**IX. Enforcement Procedures**

- A. Designated fire protection agencies or the District shall enforce provisions of this Rule by not allowing agricultural burning unless the person responsible for the burn has a valid agricultural burning permit.
- B. Fire protection agencies having the required authority shall issue a notice of violation or citation or shall order other corrective action when a permit violation occurs.
- C. Smoke complaints or other air pollution complaints not involving permit violations, or for any violation found by an agency not having authority to take enforcement action, shall be referred to the District for investigation.

**X. Meteorological Criteria for Regulating Agricultural and Prescribed Burning**

Meteorological criteria for the Mojave Desert Air Basin at Section 80311 of Title 17 of the California Code of Regulations, Subchapter 2, Smoke Management Guidelines for Agricultural and Prescribed Burning are incorporated herein by reference.

~~The granting of an exception does not exempt the applicant from any other district or fire control regulation. The applicant shall submit in writing, on the form provided, his reasons for the exception. The air pollution control officer may seek the advice of the county agricultural commissioner, the county farm advisor, or other informed sources.~~

~~B. Agricultural burning at 4,000 feet or more above sea level is exempt from Rule 417-II-E.~~

**RULE 418 Incinerator Burning** A person shall not burn in any incinerator within the county air pollution control district except in a multiple-chamber incinerator as described in Rule 102c, or in equipment found by the air pollution control officer to be equally effective for the purpose of air pollution control as an approved multiple-chamber incinerator. The incineration of residential rubbish as permitted in Rule 417d shall be conducted in accordance with the Uniform Fire Code.

~~**RULE 419 Nuisance** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.~~

~~**RULE 420 Exemption** The provisions of Rule 419 do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowl or animals.~~

**RULE 421 Orchard Heaters**

- ~~a. **Definition:** "Orchard heater" means any article, machine, equipment, or other contrivance burning any type of fuel, or charcoal briquettes or similar substances burned by an open flame, capable of being used for the purpose of giving protection from frost damage. For the purpose of this rule, "orchard heater" shall include heaters used for frost protection for orchards, vineyards, field crops and truck crops. The contrivance commonly known as a wind machine is not included.~~
- ~~b. No new orchard heater produced or manufactured shall be sold for use against frost damage after January 1, 1971, unless it has been approved by the State Air Resources Board.~~
- ~~c. No person shall use any orchard heater after January 1, 1973, unless it has been approved by the State Air~~

## Rules in the Eastern Kern County Air Pollution Control District SIP

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

### Rule 421 Orchard Heaters. (Submitted to the EPA on 6/30/1972)

- a. Definition: "Orchard heater" means any article, machine, equipment, or other contrivance burning any types of fuel, or charcoal briquettes or similar substances burned by an open flame, capable of being used for the purpose of giving protection from frost damage. For the purpose of this rule, "orchard heater" shall include heaters used for frost protection for orchards, vineyards, field crops and truck crops. The contrivance commonly known as a wind machine is not included.
- b. No new orchard heater produced or manufactured shall be sold for use against frost damage after January 1st, 1971, unless it has been approved by the State Air Resources Board.
- c. No person shall use any orchard heater after January 1, 1973, unless it has been approved by the State Air Resources Board or does not produce more than one gram per minute of unconsumed solid carbonaceous material.
- d. It shall be unlawful to sell, or offer to sell for frost protection any orchard heater which does not comply with Rule 421c.
- e. All orchard heaters shall be maintained in reasonably clean condition, good repair and working order. Whenever orchard heaters are burning, they must be adequately attended and supervised to maintain the condition, adjustment and proper operation the orchard heaters.
- f. It shall be unlawful for any person, for the purpose of frost protection, to burn any rubber, rubber tires, or other substance containing rubber, or to burn oil or other combustible substances in drums, pails or other containers except orchard heaters.

**RULE 424    Residential Water Heaters (Oxides of Nitrogen)    Adopted 4/19/93****I        APPLICABILITY**

The provisions of this rule shall apply to any person selling, offering for sale, or installing natural gas-fired residential water heaters.

**II.      DEFINITIONS**

- A.      Residential water heater - a natural gas-fired appliance designed to supply hot water to a residence, but not including space heating equipment.
- B.      Heat output - the product of the "recovery efficiency", as defined by Title 20, California Administrative Code, Chapter 2, Subchapter 4, Article 4, Sections 1603 and 1607 and the rated heat input of natural gas (@ 1050 Btu's/scf) of the water heater.
- C.      Natural gas - a mixture of gaseous hydrocarbons containing at least 80 percent methane by volume, as determined according to Standard Method ASTM D1945-64.
- D.      Rated heat input - the maximum design amount of energy a water heater consumes in one hour (Btu/hr).

**III.     EXEMPTIONS**

- A.      Water heaters with a rated heat input of 75,000 Btu per hour, or greater.
- B.      Water heaters used in recreation vehicles.
- C.      Water heaters installed in mobile homes constructed in compliance with Title 24, CFR, Part 3280 (Manufactured Home Construction and Safety Standards).

**IV.     REQUIREMENTS**

After 11/1/93, a person shall not sell, offer for sale, or install, any residential water heater within the Kern County Air Pollution Control District:

- A.      Emitting oxides of nitrogen (NO<sub>x</sub>) in excess of 40 nanograms of NO<sub>x</sub> (calculated as NO<sub>2</sub>) per joule (70 lb per billion Btu) of heat output.
- B.      Not certified in accordance with Section V.

## V. CERTIFICATION

### A. TESTING

The manufacturer of any water heat offered for sale in Kern County Air Pollution Control District shall have each water heater model offered for sale tested in accordance with the following procedures:

1. During testing, operated in accordance with Section 2.4 of American National Standard ANSI Z21.01.1-1975 at normal test pressure, input rates, and with a five-foot exhaust stack.
2. During oxides of nitrogen emissions testing, tested in accordance with SCAQMD Rule 1121 "NO<sub>x</sub> Compliance Testing Procedure for Natural Gas-Fired Water Heaters and Small Boilers". (Based upon EPA test methods 7 and 7-A-E.)

### B. CALCULATIONS

The following formula shall be used to determine a water heater's NO<sub>x</sub> emission factor:

$$N = \frac{(4.566 \times 10^4 \times P \times U)}{HCE}$$

Where:

- N = nanograms of NO<sub>x</sub> emitted per joule of heat output
- P = parts per million (volume) NO<sub>x</sub> in flue gas
- U = volume percentage of CO<sub>2</sub> in dry flue gas for stoichiometric combustion
- H = gross heating value of gas, 1050 Btu/scf (60°F, 30" Hg)
- C = volume percentage of CO<sub>2</sub> in dry flue gas
- E = recovery efficiency (percentage) as defined in Section 6.1.3, CFR, Title 10, Part 430, Subpart B, Appendix E.

### C. COMPLIANCE REPORT

The manufacturer of a water heater subject to this rule and to be offered for sale in Kern County APCD shall submit to the Air Pollution Control Officer a compliance report by 11/1/93 containing the following information for each model:

#### 1. GENERAL INFORMATION

- a. Name and address of manufacturer,
- b. Brand name,
- c. Rated heat input (Btu's/Hr), and
- d. Model number, as it appears on the water heater rating plate.

## 2. TEST REPORT

- a. All certification test data, and
- b. Calculations showing compliance with Section IV.

Manufacturer may submit a certification report including the above approved by the South Coast Air Quality Management District or the Bay Area Air Quality Management District.

## 3. COMPLIANCE STATEMENT

- a. Signed and dated statement attesting to the accuracy of all statements and information in the Compliance Report.
- b. A new Compliance Report shall be submitted for any water heater whose design is changed in any manner which may change NO<sub>x</sub> emissions. New Compliance Reports, for either altered models or new models, shall be submitted to the APCO at least 30 days before the water heater is offered for sale in Kern County.

## VI. IDENTIFICATION OF COMPLYING WATER HEATERS

Each water heater manufacturer offering for sale water heaters subject to this rule shall display the model number of the water heater on the shipping carton and heater rating plate.

## VII. ENFORCEMENT

- A. The Air Pollution Control Officer may require of the manufacturer additional emission test results when deemed necessary to verify compliance.
- B. The Air Pollution Control Officer may periodically inspect distributors, retailers, and installers of water heaters located in the District and conduct such tests as deemed necessary to insure compliance with the provisions of this rule.

**RULE 425    Stationary Gas Turbines (Oxides of Nitrogen)** - Adopted 8/16/93, Amended 1/11/18

**I.    Purpose**

The purpose of this Rule is to limit oxides of nitrogen (NO<sub>x</sub>) emissions from stationary gas turbines.

**II.   Applicability**

The provisions of this Rule shall apply to any stationary gas turbine with a rating equal to or greater than 0.88 megawatts (MW) operating in the Eastern Kern Air Pollution Control District (District).

**III. Definitions**

- A.   Combined Cycle: 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.
- B.   Dry Low-NO<sub>x</sub> Combustor: Any gas turbine engine combustor using staging, air/fuel premixing or other design features to reduce NO<sub>x</sub> emissions.
- C.   Gaseous Fuel: Any fuel existing as gas at standard conditions.
- D.   Liquid Fuel: Any fuel, including distillate and residual oil, existing as liquid at standard conditions.
- E.   Oxides of Nitrogen (NO<sub>x</sub>): Total nitrogen oxides (expressed as NO<sub>2</sub>).
- F.   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.
- G.   Rating: Manufacturer's continuous electrical output megawatt (MW) specification for a gas turbine system.
- H.   Simple Cycle: Any stationary gas turbine in which all electric generators are driven by shaft work from fuel combustion.
- I.   Selective Catalytic Reduction (SCR): A post-combustion control technology that utilizes a reducing agent, such as ammonia, injected into the exhaust gas stream where it converts NO<sub>x</sub> to molecular nitrogen in the presence of a catalyst.
- J.   Stationary Gas Turbine: Any gas turbine system, with or without power augmentation, which is permanently attached to a foundation, or is not a portable gas turbine. The gas turbine is not self-propelled nor intended to be propelled while performing its function, although it may be mounted onto a foundation. Two or more gas turbines powering a common shaft shall be treated as one gas turbine.

- K. Standard Conditions: As defined in Rule 102, Subsection RR.
- L. Shut-Down Period: The time necessary to cease operation of a gas turbine from operating under load conditions. The time shall not exceed one (1) hour.
- M. Start-Up Period: The time necessary to bring operation of a gas turbine up to the designed rating. The time shall not exceed six (6) hours for combined cycle gas turbine power plants or two (2) hours for simple cycle gas turbine power plants.

#### IV. Exemptions

The provision of this Rule shall not apply to the operation of stationary gas turbines under the following conditions:

- A. Emergency standby units demonstrated to operate less than 200 hours per year.
- B. Units less than 4 MW that operate less than 877 hours per year.
- C. Laboratory units used in research and testing for the advancement of gas turbine technology.
- D. Units operated exclusively for firefighting and/or flood control.
- E. Turbines used in test cells and test stands.
- F. Portable equipment registered in accordance with ARB regulations under 13 CCR 2450-2465, Portable Equipment Registration Program (PERP) or 13 CCR 2420 Off-road Compression-ignition Engines and Equipment. Portable turbines used by the Department of Defense or National Guard exclusively used for military tactical support or other federal emergency purposes.

#### V. Requirements

##### A. Emission Limits

The owner or operator of any stationary gas turbine unit shall not operate such unit under load conditions, excluding the start-up or shut-down period which results in the measured NOx emissions concentration exceeding the compliance limit listed below, averaged over one (1) hour based on four consecutive 15-minute averages:

Unit Size Megawatt Rating (MW)	<u>Compliance Limit</u> NOx, ppmv at 15% O <sub>2</sub>	
	Gaseous Fuel	Liquid Fuel
Units Rated 0.88 to Less Than 2.9 MW OR Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42	65
2.9 MW to Less Than 10 MW	25	65
10.0 MW and Greater	9	25



B. The owner or operator of Westinghouse W251B10 with Authority to Construct issued before January 1, 1983 using dry low-NOx combustors shall have the following NOx emission limits:

1. 25 ppmv at 15% O<sub>2</sub> when fired with gaseous fuel or,
2. 65 ppmv at 15% O<sub>2</sub> when fired with liquid fuel.

C. Start-up/Shut-down Combined Cycle Units

The NOx emissions shall meet at least one of the following averaged over the duration of the start-up or shut-down period:

1. 70 ppmv at 15% O<sub>2</sub> for turbines fired with gaseous fuel or,
2. 226 ppmv at 15% O<sub>2</sub> for turbines fired with liquid fuel.

D. Start-up/Shut-down Simple Cycle Units

The NOx emission shall be kept to a minimum by use of the following:

1. Manufacturer's recommendation for operation during start-up and shut-down.
2. Injection of water as soon as reasonably possible.
3. Maintaining proper air to fuel ratios.

**VI. Administrative Requirements**

A. Emission Control Plan

The owner or operator of any existing stationary gas turbine subject to this Rule shall submit to the APCO for approval an emissions control plan, including a schedule of increments of progress to be taken to meet or exceed requirements of Section V to comply with the compliance schedule prescribed by Section VIII.

An emissions control plan shall be submitted for each stationary gas turbine subject to this Rule, including:

1. District permit number,
2. Gas turbine manufacturer's name and model number,
3. Rated electrical energy output (MW) and rated heat recovery (Btu/hr),
4. Type of fuel (gas and/or liquid),
5. Last year's fuel consumption (cubic feet of gas or gallons of liquid),
6. Last year's hours of operation,
7. Type of emissions control to be applied to engine, and
8. Documentation showing current NOx emissions concentration.

## B. Monitoring and Recordkeeping

The owner or operator of any stationary gas turbine subject to the provisions of this rule shall perform the following actions:

1. Install, operate, and maintain in calibration equipment capable of continuously measuring and recording the following:
  - a. Control system operating parameters:
    - i. Periodic NO<sub>x</sub> emission concentrations,
    - ii. Turbine exhaust oxygen concentration,
    - iii. Air-to-fuel ratio,
    - iv. Flow rate of reducing agents added to turbine exhaust,
    - v. Catalyst inlet and exhaust temperature,
    - vi. Catalyst inlet and exhaust oxygen concentration,
    - vii. Other operational characteristics.
  - b. Elapsed time of operation measured by an hourly meter.
2. For units with 10 MW or greater, the owner or operator shall monitor the exhaust gas NO<sub>x</sub> concentrations. The NO<sub>x</sub> monitoring system shall meet EPA requirements as specified in 40 CFR Part 60, Appendix B, Specification 2, or other systems approved by EPA. The owner or operator shall submit to the Air Pollution Control Officer the information demonstrating that emission monitoring system has data gathering and retrieval capability.
3. Submit to the Air Pollution Control Officer, prior to issuance of Permit to Operate, information correlating the control system operating parameters to the associated NO<sub>x</sub> output. This information may be used by the Air Pollution Control Officer to determine compliance when there is no continuous emission monitoring system for NO<sub>x</sub> available or when the continuous emission monitoring system is not operating properly.
4. Provide source test information regarding the exhaust gas NO<sub>x</sub> concentration at ISO conditions corrected to 15 percent oxygen on a dry basis.
5. Maintain a stationary gas turbine engine operating log, including, on a daily basis, actual start-up and stop times, total hours of operation, and type and quantity of fuel used (liquid/gas).
6. Maintain and make all records available for District inspection at any time for a period of five (5) years.

## C. Compliance Testing

The owner or operator of any stationary gas turbine subject to provisions of this rule shall conduct annual testing using the methods specified in Section VI.D below.

#### D. Test Methods

1. Oxides of nitrogen (NO<sub>x</sub>) emissions shall be determined using EPA Method 7E or EPA Method 20 or ARB Method 100.
2. Exhaust gas Oxygen (O<sub>2</sub>) concentration content shall be determined using EPA Method 3A or ARB Method 100.

#### E. Exempt Units

Exempt units shall comply with the following:

1. The owner or operator of any unit exempt under Section IV shall submit support documentation to the Air Pollution Control Officer within seven days if the hour-per-year limit is exceeded. If the hour-per-year limit is exceeded, the exemption shall be permanently withdrawn. Within 30 days after the exceedance, the owner or operator shall submit an application for Authority to Construct that details a plan to meet the applicable limits specified in Section V of this Rule. Included in the application, the owner or operator shall submit a schedule of increments of progress for the installation of the required control equipment. This schedule shall not exceed four years from the date of the receipt of Authority to Construct application.
2. A public service unit operating during a state of emergency, when such emergency is declared by proclamation of the Governor of the State of California and when the unit is located in the specific geographical location identified in the proclamation, shall be excluded from the hour-per-year limit.

### VII. Calculations

NO<sub>x</sub> emissions concentrations shall be calculated using the following equation:

$$\text{NO}_x = (\text{NO}_{x\text{obs}}) (\text{P}_{\text{ref}}/\text{P}_{\text{obs}})^{0.5} (288 \text{ K}/\text{T}_{\text{amb}})^{1.53} (e^{19(\text{H}_{\text{obs}}-0.00633)})$$

where:

NO <sub>x</sub>	=	NO <sub>x</sub> emissions concentration (ppmv) corrected to 15 percent oxygen and ISO standard conditions on a dry basis.
NO <sub>xobs</sub>	=	Measured stack gas NO <sub>x</sub> emissions concentration (ppmv) corrected to 15 percent oxygen on a dry basis.
P <sub>ref</sub>	=	standard atmospheric pressure (14.7 psia).
P <sub>obs</sub>	=	atmospheric pressure measured at site during testing, psia.
H <sub>obs</sub>	=	absolute ambient humidity measured at site during testing, pounds water per pound dry air.
e	=	transcendental constant (2.718).
T <sub>amb</sub>	=	ambient air temperature in K and measured at site during testing.

### **VIII. Compliance Schedule**

An owner or operator of a stationary gas turbine subject to Section V and not currently achieving such limits shall comply with requirements of Section V in accordance with the following schedule:

- A. By (18 months after rule adoption date), submit to the Control Officer a compliance plan, and a complete application for Authority to Construct for all necessary equipment modifications subject to Rule 201.
- B. By January 1, 2021, demonstrate full compliance.

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**RULE 425.1 Hot Mix Asphalt Paving Plants (Oxides of Nitrogen) - Adopted 10/13/94**

**I. Purpose**

The purpose of this Rule is to reduce oxides of nitrogen emissions (NOx) from hot mix asphalt paving plants to fulfill mandates of the 1988 California Clean Air Act and the 1990 Federal Clean Air Act Amendments. Section V emission limits represent Reasonably Available Retrofit Control Technology (RARCT).

**II. Applicability**

This Rule shall apply, in accordance with Section VII, to all hot mix asphalt paving plants located and operated in KCAPCD.

**III. Exemptions**

Equipment used to heat liquid asphalt prior to mixing with aggregate to form hot mix asphalt paving shall not be subject to this Rule.

**IV. Definitions**

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

- A. Hot Mix Asphalt Paving is any material used for surfacing roadways, parking lots, etc. formed by mixing hot aggregate and heated liquid petroleum asphalt.
- B. Hot Mix Asphalt Paving Plant is any facility producing hot mix asphalt paving in equipment burning fuel to dry and heat the aggregate and maintain an adequate temperature for mixing with asphalt.

**V. Requirements**

- A. No person shall operate a hot mix asphalt paving plant unless the exhaust stack is equipped with a continuously recording stack gas oxygen monitor, or provisions are made to periodically (at least monthly) analyze and record exhaust gas oxygen content.
- B. No person operating a hot mix asphalt paving plant shall allow NOx emissions to exceed:

0.15 pounds (as NO<sub>2</sub>) per one million Btu's of heat input averaged over one hour.

## VI. Administrative Requirements

### A. Recordkeeping

1. Written records of fuel type, Btu content and usage shall be collected, preserved for a period of at least two years, and made readily available at the plant site to District personnel.
2. Continuous (or monthly) stack gas oxygen content records shall be collected, preserved for a period of at least two years, and made readily available at the plant site to District personnel.

### B. Test Method

1. Testing for purposes of demonstrating compliance with Subsection V.B. shall be conducted using EPA Test Methods 3A (O<sub>2</sub> content), 7E (NO<sub>x</sub> content), and 19 (NO<sub>x</sub> emission rate per million Btu's of heat input).
2. Continuous (or monthly) stack gas oxygen monitoring (or sampling) shall be conducted in accordance with EPA Test method 3 or 3A.

### C. Permit to Operate

After initial demonstration of a facility's compliance with Subsection V.B., such facility's KCAPCD Permit to Operate shall be revised to include an operational condition requiring on-going operation at the stack gas oxygen content measured during the compliance test ( $\pm 10\%$ ).

## VII. Compliance Schedule

- A. Any person operating a hot mix asphalt paving plant subject to this Rule and needing to install or modify equipment to comply with Subsection V.B. shall submit a complete application for Authority to Construct such equipment on or before March 1, 1995.
- B. Any person operating a hot mix asphalt paving plant subject to this Rule shall demonstrate compliance with Subsection V.B. on or before January 1, 1997 and yearly, thereafter.

**RULE 425.2 Boilers, Steam Generators, and Process Heaters (Oxides of Nitrogen) –**  
Adopted 10/13/94, Amended 4/6/95, 7/10/97, 3/8/18

**I. Purpose**

The purpose of this Rule is to limit oxides of nitrogen (NO<sub>x</sub>) emissions from boilers, steam generators, and process heaters.

**II. Applicability**

This Rule shall apply, as specified, to any boiler, steam generator or process heater operating in the Eastern Kern Air Pollution Control District (District) with rated heat input of 5 million Btu per hour or more and fired with gaseous and/or liquid fuels.

**III. Definitions**

- A. Annual Heat Input: total heat released (therms) by fuel(s) burned in a unit during a calendar year as determined from higher heating value and cumulative annual fuel(s) usage.
- B. Boiler or Steam Generator: any external combustion unit fired with liquid and/or gaseous fuel used to produce hot water or steam, but not including gas turbine engine exhaust gas heat recovery systems.
- C. British Thermal Unit (Btu): amount of heat required to raise the temperature of one pound of water from 59°F to 60°F at one atmosphere.
- D. Gaseous Fuel: any fuel existing as gas at standard conditions.
- E. Heat Input: total heat released (Btu's) by fuel(s) burned in a unit as determined from higher heating value, not including sensible heat of incoming combustion air and fuel(s).
- F. Higher Heating Value (HHV): total heat released per mass of fuel burned (Btu's per pound), when fuel and dry air at standard conditions undergo complete combustion and all resulting products are brought to standard conditions.
- G. Liquid Fuel: any fuel, including distillate and residual oil, existing as liquid at standard conditions.
- H. Natural Gas Curtailment: a shortage in the supply of natural gas, due solely to limitations or restrictions in distribution pipelines by the utility supplying natural gas, and not due to the cost of natural gas.
- I. Oxides of Nitrogen (NO<sub>x</sub>): total nitrogen oxides (expressed as NO<sub>2</sub>).
- J. Process Heater: any external combustion unit fired with liquid and/or gaseous fuel used to transfer heat from combustion gases to liquid process streams.

- K. Rated Heat Input: heat input capacity (Btu's/hr) specified on nameplate of unit or by manufacturer for that model number, or as limited by District permit.
- L. Standard Conditions: as defined in Rule 102, Subsection RR.
- M. Therm: 100,000 British thermal units (Btu's).
- N. Unit: any boiler, steam generator or process heater as defined in this Rule.

#### **IV. Exemption**

- 1. This Rule shall not apply to any unit with rated heat input less than 5 million Btu per hour.
- 2. Section V.A.2 shall not apply to any unit while forced to burn liquid fuel during time of natural gas curtailment. NOx emission limit shall not exceed 150 ppmv or 0.215 pounds per million Btu of heat input when burning liquid fuel. This exemption shall not exceed 168 cumulative hours of operation per calendar year excluding equipment testing not to exceed 48 hours per calendar year.

#### **V. Requirements**

- A. An owner/operator of any unit subject to this Rule with annual heat input of 90,000 therms or more during one or more of the three preceding years of operation shall comply with following applicable NOx emission limit(s):
  - 1. 30 parts per million by volume (ppmv) or 0.036 pound per million Btu of heat input when operated on gaseous fuel.
  - 2. 40 parts per million by volume (ppmv) or 0.052 pound per million Btu of heat input when operated on liquid fuel.
  - 3. The heat-input weighted averaged of the limits specified in Section V.A.1 and V.A.2 above when operated on combination of gaseous and liquid fuel.
- B. The owner/operator of Union Iron Works CA B21841-68 and Combustion Engineering CA B35362-74 with Permit to Operate issued before January 1, 1983 shall have the following NOx emission limit(s):
  - 1. 70 parts per million by volume (ppmv) or 0.084 pound per million Btu of heat input when operated on gaseous fuel.
  - 2. 115 parts per million by volume (ppmv) or 0.150 pound per million Btu of heat input when operated on liquid fuel.



For units subject to this Section, carbon monoxide (CO) emissions shall not exceed 400 parts per million by volume (ppmv).

NOx emission limit for any unit fired simultaneously with gaseous and liquid fuels shall be heat input-weighted average of applicable limits. Calculations shall be performed as prescribed in Section VIII.C.

NOx and CO emission limits in ppmv are referenced at dry stack gas conditions, adjusted to 3.00 percent by volume stack gas oxygen in accordance with Section VIII, and averaged over 15 consecutive minutes from no less than 5 data sets, recorded from sampling of no more than 3 minutes.

C. An owner/operator of any unit subject to this Rule with annual heat input rate of 90,000 therms or more shall comply, until March 8, 2021, and any unit with annual heat input rate of less than 90,000 therms shall comply with one of the following NOx minimization procedures:

1. Tune each unit at least once per year in accordance with Section IX.;
2. Operate each unit in a manner maintaining stack gas oxygen at no more than 3.00 percent by volume on dry basis; or
3. Operate each unit with an automatic stack gas oxygen trim system set at 3.00 ( $\pm 0.15$ ) percent by volume on dry basis.

D. Monitoring Requirements

1. An owner/operator of any unit simultaneously firing a combination of different fuels shall install and maintain a totalizing mass or volumetric flow rate meter in each fuel line.
2. An owner/operator of any unit utilizing equipment intended to reduce or control NOx shall install and maintain appropriate provisions to monitor operational parameters of unit and/or NOx control system that correlate to NOx emissions.

E. Compliance Demonstration

1. An owner/operator of any unit subject to Section V shall have the option of complying with either concentration (ppmv) emission limits or heat input basis (lb/MMBtu) emission limits as specified in Section V. All compliance demonstrations shall be performed using applicable test method(s) specified in Section VI.B and methods selected to demonstrate compliance shall be specified in Emission Control Plan required by Section VI.D.
2. All emission measurements shall be made with unit operating at conditions as close as physically possible to maximum firing rate allowed by the District Permit to Operate.

## **VI. Administrative Requirements**

### **A. Recordkeeping and Reporting**

1. An owner/operator of any unit subject to this Rule or limited by permit condition to firing less than 5 million Btu's/hr shall monitor and record HHV and cumulative annual use of each fuel.
2. An owner/operator of any unit operated under natural gas curtailment limit of Section V.A shall monitor and record cumulative annual hours of operation on liquid fuel during curtailment and during testing.
3. An owner/operator of any identical units wishing to limit emissions testing to one unit per group of units pursuant to Section VI.C shall establish correlation of NO<sub>x</sub> emissions and key operating parameters and keep records of these data for each affected unit.
4. Records shall be maintained for a period of five (5) years and made available for District inspection at any time.
5. Compliance test data and results collected to satisfy Section VI.C shall be submitted to District within 60 days of collection.

### **B. Test Methods**

1. Fuel HHV shall be certified by third party fuel supplier or determined by:
  - a. ASTM D 240-87 or D 2382-88 for liquid fuels; and
  - b. ASTM D 1826-88 or D 1945-81 in conjunction with ASTM D 3588-89 for gaseous fuels.
2. Oxides of nitrogen (ppmv) - EPA Method 7E, or CARB Method 100.
3. Carbon monoxide (ppmv) - EPA Method 10, or CARB Method 100.
4. Stack gas oxygen - EPA Method 3 or 3A, or CARB Method 100.
5. NO<sub>x</sub> emission rate (heat input basis) - EPA Method 19, or CARB Method 100 and data from fuel flow meter.
6. Stack gas velocity - EPA Method 2.
7. Stack gas moisture content - EPA Method 4.

C. Compliance Testing

1. Units subject to requirements of Section V shall be tested to determine compliance with applicable requirements not less than once every 12 months. An owner/operator of gaseous fuel-fired units demonstrating compliance for two consecutive years can, if desired, demonstrate compliance once every thirty-six months.
2. An owner/operator of any unit subject to Section V.C.2 shall sample and record stack gas oxygen content at least monthly.
3. Test results from an individual unit may be used for other units when the following criteria are met:
  - a. Units are located at the same facility,
  - b. Units are produced by the same manufacturer, have the same model number, and have the same rated capacity and operating specifications,
  - c. Units are operated and maintained in a similar manner, and
  - d. Based on documentation provided by the facility, District determines that the variability of emissions from tested unit is low enough for confidence that identical untested units will be in compliance.
4. An owner/operator utilizing Section VI.C.3 above is required to test all units at least once every thirty-six months. For example, testing one third of a fleet every year shall result in every unit being tested after three years, and not the same units being tested every year.

D. Emission Control Plan

An owner/operator of any unit subject to this Rule shall submit to Control Officer an Emission Control Plan including:

1. List of units subject to Rule, including rated heat inputs, anticipated annual heat input, applicable Section V requirements, and control option chosen, if applicable;
2. Description of actions to be taken to satisfy requirements of Section V. Such plan shall identify actions to be taken to comply, including any type of emissions control to be applied to each unit and construction schedule, or shall include test results to demonstrate unit already complies with applicable requirements; and
3. Specification of proposed test methods.

## **VII. Compliance Schedule**

- A. An owner/operator of any unit subject to Section V shall comply with following schedule:
1. By October 1, 2018, submit to Control Officer an Emission Control Plan pursuant to Section VI.D, and a complete application for Authority to Construct emission control equipment, if necessary;
  2. By January 31, 2019 demonstrate compliance with Section V.C; and
  3. By March 8, 2021 demonstrate full compliance with all additional and applicable provisions of this Rule.
- B. An owner/operator of any unit becoming subject to requirements of Section V.A by exceeding the annual heat input exemption threshold shall comply with following increments of progress:
1. On or before December 31st of calendar year immediately following year annual heat input threshold was exceeded, submit an Emission Control Plan containing information prescribed in Section VI.D; and
  2. No later than three calendar years following submission of Emission Control Plan, demonstrate final compliance with all applicable standards and requirements of this Rule.

## **VIII. Calculations**

- A. All ppmv emission limits specified in Section V are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen as follows:

$$[\text{ppmv NOx}]_{\text{corrected}} = \frac{17.95\%}{20.95\% - [\%O_2]_{\text{measured}}} \times [\text{ppmv NOx}]_{\text{measured}}$$

$$[\text{ppmv CO}]_{\text{corrected}} = \frac{17.95\%}{20.95\% - [\%O_2]_{\text{measured}}} \times [\text{ppmv CO}]_{\text{measured}}$$

- B. All lb/MMBtu NOx emission rates shall be calculated as pounds of nitrogen dioxide per million Btu's of heat input (HHV).
- C. Heat input-weighted average NOx emission limit for combination of gaseous and liquid fuel shall be calculated as follows:

$$\text{NOx Emission Limit} = \frac{(30 \text{ ppmv} \times X) + (40 \text{ ppmv} \times Y)}{X + Y}$$

Where X = heat input from gaseous fuel and Y = heat input from liquid fuel.

## **IX. NOx Minimization Tuning Procedures**

### **A. Purpose**

The purpose of these procedures is to provide a reasonable, cost-effective method to minimize NOx emissions from smaller, or low-fire/low use-rate combustion units subject to this Rule. These procedures not only minimize NOx emissions, but also result in reduced operating costs.

### **B. Equipment Tuning Procedure<sup>1</sup> for Mechanical Draft Boilers, Steam Generators, and Process Heaters**

Nothing in this Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, California Department of Industrial Relations (Occupational Safety and Health Division), Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

1. Operate unit at firing rate most typical of normal operation. If unit experiences significant load variations during normal operation, operate at its average firing rate.
2. At this firing rate, record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke spot number<sup>2</sup> (for liquid fuels), and observe flame conditions after unit operation stabilizes at firing rate selected. If excess oxygen in the stack gas is at lower end of range of typical minimum values<sup>3</sup>; and if CO emissions are low and there is no smoke, unit is probably operating at near optimum efficiency - at this particular firing rate. However, complete remaining portion of this procedure to determine whether still lower oxygen levels are practical.
3. Increase combustion air flow to unit until stack gas oxygen levels increase by one to two percent over level measured in Step 2. As in Step 2, record 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 unit operation stabilizes.
4. Decrease combustion air flow until stack gas oxygen concentration is at level measured in Step 2. From this level gradually reduce combustion air flow, in small increments. After each increment, record stack gas temperature, oxygen concentration, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels). Also, observe flame and record any changes in its condition.

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<sup>1</sup> This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for U.S. EPA.

<sup>2</sup> The smoke-spot number can be determined with ASTM Test Method D-2156 or with the Bacharach method.

<sup>3</sup> Typical minimum oxygen levels for boilers at high firing rates are:

For natural gas: 0.5% to 3% and For liquid fuels: 2% to 4%.

5. Continue to reduce combustion air flow stepwise, until one of these limits is reached:
  - a. Unacceptable flame conditions- such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability,
  - b. Stack gas CO concentrations greater than 400 ppmv,
  - c. Smoking at the stack, or
  - d. Equipment-related limitations such as low windbox/furnace pressure differential, built in air-flow limits, etc.
6. Develop O<sub>2</sub>/CO curve (for gaseous fuels) or O<sub>2</sub>/smoke curve (for liquid fuels) similar to those shown in Figures 1 and 2 using excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.
7. From curves prepared in Step 6, find stack gas oxygen levels where CO emissions or smoke-spot number equal following values:

<u>Fuel</u>	<u>Measurement</u>	<u>Value</u>
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

Above conditions are referred to as CO or smoke thresholds, or as minimum excess oxygen levels.

Compare this minimum value of excess oxygen to expected value provided by combustion unit manufacturer. If minimum level found is substantially higher than value provided by combustion unit manufacturer, burner adjustments can probably be made to improve fuel and air mix, thereby allowing operations with less air.

8. Add 0.5 to 2.0 percent to minimum excess oxygen level determined in Step 7 and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or "play" in automatic controls.

9. If load of unit varies significantly during normal operation, repeat Steps 1-8 for firing rates that represent upper and lower limits of 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 optimum excess oxygen level at all firing rates. If this is the case, choose burner control settings that give best performance over range of firing rates. If one firing rate predominates, setting should optimize conditions at that rate.
10. Verify that new settings can accommodate sudden load changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing flame and stack. If any of conditions in Step 5 result, reset combustion control to provide slightly higher level of excess oxygen at affected firing rates. Next verify these new settings in a similar fashion. Then make sure that final control settings are recorded at steady-state operating conditions for future reference.

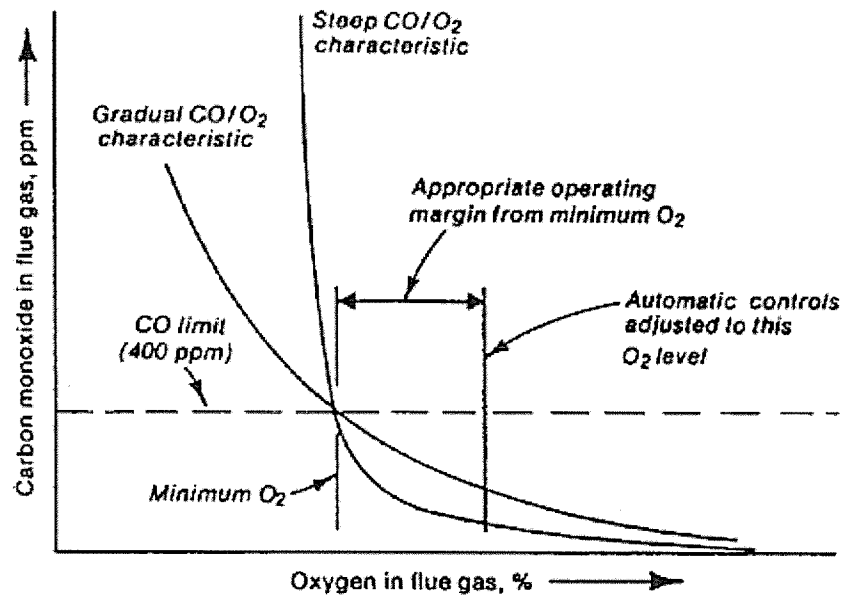


Figure 1: Oxygen/CO Characteristic Curve

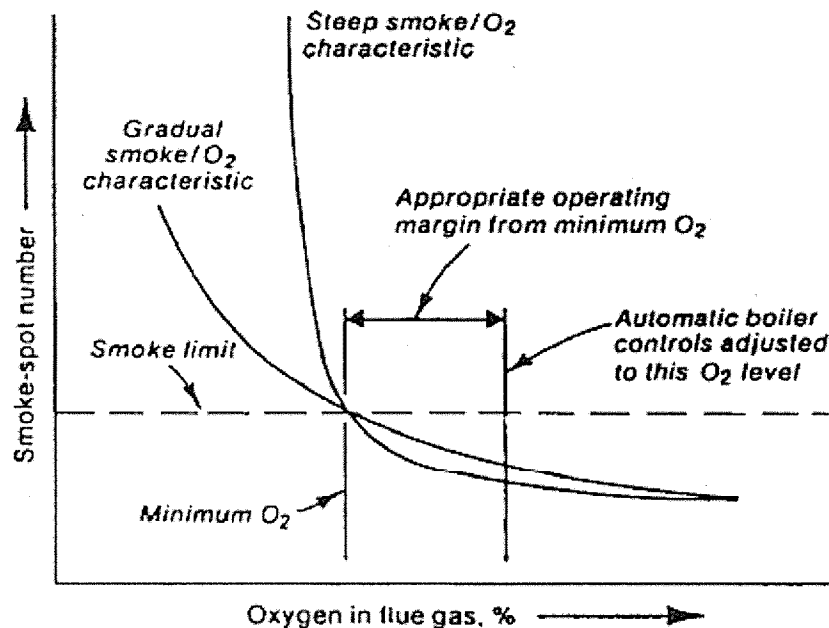


Figure 2: Oxygen/Smoke Characteristic Curve

C. Equipment Tuning Procedure<sup>4</sup> for Natural and Induced-Draft Boilers, Steam Generators, and Process Heaters

Nothing in this Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

1. Preliminary analysis

- a. Check operating pressure or temperature. Operate unit at lowest acceptable pressure or temperature that will satisfy load demand. Determine pressure or temperature that will be used as basis for comparative combustion analysis before and after tune-up.
- b. Check operating hours. Plan workload so that unit operates only the minimum hours and days necessary to perform work required.
- c. Check air supply. Area of air supply openings must be in compliance with applicable codes and regulations. Air openings must be kept wide open when burner is firing and clean from restriction to flow.

<sup>4</sup> This tuning procedure is based on a tune-up procedure developed by Parker Boiler for South Coast AQMD.



- d. Check vent. Check to be sure vent is in good condition, sized properly and with no obstructions.
- e. Perform combustion analysis. Perform an "as is" flue gas analysis (O<sub>2</sub>, CO, CO<sub>2</sub>, etc.) at high and low fire, if possible. In addition to data obtained from combustion analysis, also record following:
  - 1) Inlet fuel pressure at burner (at high and low fire),
  - 2) Draft at inlet of draft hood or barometric damper at high, medium, and low settings, if applicable,
  - 3) Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving unit, and
  - 4) Unit rate, if meter is available.

With above conditions recorded, make following checks and corrective actions as necessary.

## 2. Checks and Corrections

- a. Check burner condition. Clean burners and burner orifices thoroughly. To clean burners effectively all burners must be removed, blown out with high pressure air and checked for obstructions. All accumulated sediment, dirt, and carbon must be removed. Check for smooth lighting and even flame. Also, ensure that fuel filters and moisture traps are in place, clean, and operating properly, to prevent plugging of gas orifices. Confirm proper location and orientation of burner diffuser spuds, gas canes, etc. Look for any burned-off or missing burner parts, and replace as needed.
- b. Check for clean boiler, steam generator, or process heater tubes and heat transfer surfaces. Clean tube surfaces, remove scale and soot, assure proper fluid flow, and flue gas flow.
- c. Check water treatment and blowdown program. Employ timely flushing and periodic blowdown to eliminate sediment and scale build-up in heat exchange tubes.
- d. Check for steam hot water or process fluid leaks. Repair all leaks immediately. Be sure there are no leaks through the blow-off drains, safety valve, by-pass lines or at the feed pump, if used.

### 3. Safety Checks

- a. Test primary and secondary low water level controls.
- b. Check operating and limit pressure and temperature controls.
- c. Check safety valve pressure and capacity to meet boiler, steam generator, or process heater requirements.
- d. Check limit safety control and spill switch.

### 4. Adjustments

While taking combustion readings with unit at operating temperature and at high fire perform checks and adjustments as follows:

- a. Adjust unit to fire at rated capacity. Record fuel manifold pressure.
- b. Adjust draft and/or fuel pressure to obtain efficient, clean combustion at both high, medium and low fire. Carbon monoxide value should always be below 400 ppm at 3% O<sub>2</sub>. If CO is high make necessary adjustment such as increasing draft. Check to ensure burner light offs are smooth and safe. A reduced fuel pressure test at both high and low fire should be conducted in accordance with manufacturer's instructions and maintenance manuals.
- c. Check and adjust operation of modulation controller. Insure proper, efficient and clean combustion through range of firing rates. When above adjustments and corrections have been made, record all data.

### 5. Final Test

Perform final combustion analysis with unit at operating temperature and at high, medium, and low fire, whenever possible. In addition to data from combustion analysis, also check and record:

- a. Fuel pressure at burner (high, medium, and low settings, if applicable).
- b. Draft at inlet or above draft hood or barometric damper (high, medium, and low settings, if applicable).
- c. Steam pressure or water temperature entering and leaving unit.
- d. Unit rate, if fuel meter is available.

When above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or process heater records indicating name and signature of person, title, company name, company address and date tune-up was performed.

**RULE 425.3 Portland Cement Kilns (Oxides of Nitrogen)** - Adopted 10/13/94, Amended 3/8/18

**I. Purpose**

The purpose of this Rule is to limit nitrogen oxide (NO<sub>x</sub>) emissions from Portland cement kilns.

**II. Applicability**

Provisions of this Rule shall apply to all Portland cement manufacturing facilities operating in the Eastern Kern Air Pollution Control District (District).

**III. Definitions**

- A. 30-Operating Day Rolling Average: Total of all hourly emissions data (in pounds) fuel was combusted in a cement kiln, in the preceding 30 operating days, divided by the total number of tons of clinker produced in that kiln during the same 30-day period.
- B. Clinker: The product of feedstock sintered in a kiln which is then ground and mixed with additives to make cement.
- C. Continuous Emissions Monitoring System (CEMS): An instrument satisfying the requirements of 40 CFR, Part 60.
- D. Low-NO<sub>x</sub> Burner: Type of cement kiln burner that results in decreasing NO<sub>x</sub> emissions and has an indirect-firing system and a series of channels or orifices that:
  - 1. Allow for the adjustment of the volume, velocity, pressure, and direction of the air carrying the fuel (known as primary air) and the combustion air (known as secondary air) into the kiln; and
  - 2. Impart high momentum and turbulence to the fuel stream to facilitate mixing of the fuel and secondary air.
- E. Kiln: Any device including associated preheater and precalciner devices that produce clinker by heating limestone and other raw materials for subsequent production of Portland cement.
- F. Nitrogen Oxides (NO<sub>x</sub>) Emissions: The sum of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) in the flue gas, collectively expressed as nitrogen dioxide.
- G. Operating Day: A calendar day during which Portland cement is manufactured by the kiln. An operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates and excludes any measurements made during the daily 24-hour period when the kiln was not operating or was in startup or shutdown.

- H. 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.
- I. Portland Cement Manufacturing Facility: Any facility that produces Portland cement or associated products, as defined in the Standard Industrial Classification Manual as Industry Number 3241, Portland Cement Manufacturing.
- J. Shutdown: The period of time between when kiln raw material feed and fuel to the kiln begin to be decreased to reduce the kiln operating temperature until both feed and fuel are no longer fed into the kiln and it has ceased operation. A shutdown period shall not last more than 36 hours.
- K. Startup: Period of time after non-production of clinker during which a cement kiln is heated to operating temperature from a lower temperature and feed rate is increased to normal production levels. A startup period shall not last longer than 48 hours.

#### IV. Exemptions

The requirements of Section V of this Rule shall not apply to:

- A. Startup and shutdown as defined in this rule; and
- B. Breakdown conditions qualifying under District Rule 111.

#### V. Requirements

- A. Emissions Limits: Effective March 8, 2018, No person shall operate a Portland cement manufacturing facility unless 30-operating day rolling average of NO<sub>x</sub> emissions from the kiln do not exceed:
  - 1. 2.8 lb/ton of clinker produced; or
  - 2. 3.4 lb/ton of clinker produced if low-NO<sub>x</sub> burner or low-NO<sub>x</sub> precalciner was installed and made operational by January 1, 2007.
- B. Emissions Monitoring: Any person who operates a Portland cement manufacturing facility shall provide, properly install, maintain, calibrate, and operate a continuous emission monitoring system (CEMS), as defined in Section III.C., for each emission point from the kiln.
- C. Production Monitoring: Any person who operates a Portland cement manufacturing facility shall determine hourly clinker production by one of the following two methods:
  - 1. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within  $\pm 5$  percent accuracy; or

2. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within  $\pm 5$  percent accuracy. Calculate the hourly clinker production rate using a kiln specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. This ratio must be updated monthly. Note that if this ratio changes at clinker reconciliation, the new ratio must be used going forward, but a retroactive change in clinker production rates previously estimated is not required.

## **VI. Administrative Requirements**

- A. Annual Demonstration of Compliance: Any person who operates a Portland cement manufacturing facility shall demonstrate compliance with this Rule by conducting annual testing, not more than 13 months after the most recently conducted testing, pursuant to the following test methods:
  1. NO<sub>x</sub> stack testing for purposes of this Rule shall be conducted using EPA Test Method 7E.
  2. Stack gas flow rate testing for purposes of this Rule shall be conducted using EPA Test Method 2.
  3. Any owner or operator of a kiln subject to this Rule shall convert observed NO<sub>x</sub> 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):  
  
$$\text{lb/hr} = 7.1497 \times 10^{-6} (\text{ppmv})(\text{dscfm})$$
  
  
Parts Per Million by Volume: (ppmv)  
  
Dry Standard Cubic Feet per Minute: (dscfm)
  4. For the purposes of this Rule, NO<sub>x</sub> shall be calculated as NO<sub>2</sub> on a dry basis.
- B. Recordkeeping: Any person subject to the requirements of this rule shall maintain records of the following:
  1. Results of any testing conducted to determine compliance with this Rule as specified in Section VI.A;
  2. Daily clinker production rates and kiln feed rates. During each quarter of operation, you must determine, record, and maintain the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow);
  3. Calculated NO<sub>x</sub> emission rates from the kiln in lbs/ton of clinker produced for each day of operation of the kiln;

4. Date, time, and duration of any startup, shutdown or malfunction in the operation of any unit, emissions control equipment or emission monitoring equipment; and
5. Results of performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS required by this rule.

Such records shall be retained for a minimum of 60 months from date of entry and be made available to District staff upon request.

C. Reporting: Any person subject to this Rule shall meet the following reporting requirements:

1. Report to the APCO: date, time, duration, magnitude, nature and cause (if known), and corrective action taken of any exceedance;
2. Supply APCO copy of all test protocols at least 30-days prior to testing and copy of test results within 60 days following testing.

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Kern Co.  
3/23/81

~~RULE 423 National Emission Standards for Hazardous Air Pollutants The provisions of Part 61, Chapter 1, Title 40, Code of Federal Regulations, in effect September 20, 1980, are hereby adopted by reference and made a part hereof. All sources of hazardous air pollutants shall comply with the standards, criteria and requirements set forth therein. For the purpose of this rule, the word "Administrator" as used in Part 61, Chapter 1, Title 40, Code of Federal Regulations shall mean the Air Pollution Control Officer of the Kern County Air Pollution Control District.~~

RULE 426 Experimental Research Operations The Control Officer may exempt experimental research operations from the provisions of Regulation IV, except Rule 419, when all of the provisions of Rule 202.1 are met:

## KERN COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 427 -- STATIONARY PISTON ENGINES (OXIDES OF NITROGEN)**

*(Adopted 6/1/87) (Amended 10/13/94, 1/25/96, 7/2/98, 7/1/99, 5/4/00, 11/1/01)*

#### **I. Purpose**

The purpose of this Rule is to limit oxides of nitrogen (NO<sub>x</sub>) emissions from existing stationary piston engines to levels consistent with Reasonably Available Control Technology (RACT) to satisfy California Health & Safety Code, Section 40918 (b) and 1990 Federal Clean Air Act Amendments, Section 182(f). Carbon monoxide emissions are also limited to insure maintenance of efficient combustion at reduced NO<sub>x</sub> levels.

#### **II. Applicability**

This Rule shall apply, as specified, to all rich-burn, lean-burn, and diesel engines of more than 50 rated brake horsepower.

#### **III. Definitions**

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

- A. Diesel Engine - any compression-ignited engine fueled with diesel oil, or combination of diesel oil and gaseous fuel;
- B. Emergency Standby Engine - any engine used as a temporary replacement for primary mechanical or electrical power sources during periods of fuel or energy shortage, or while primary power source is under repair;
- C. Gaseous Fuel - any fuel existing as gas at standard conditions, including, but not limited to: natural gas, methane, ethane, propane, butane, and liquefied petroleum gas (LPG);
- D. Higher Heating Value (HHV) - total heat released per mass of fuel burned (Btu's per pound) when fuel and dry air at standard conditions undergo complete combustion and all resulting products are brought to standard conditions;
- E. Lean-Burn Engine - any spark-ignited Otto cycle or two stroke engine fueled with gaseous or liquid fuel and operated with an exhaust gas oxygen concentration of 4 percent by volume, or greater;
- F. Oxides of Nitrogen (NO<sub>x</sub>) - total nitrogen oxides expressed as NO<sub>2</sub>;
- G. Rated Brake Horsepower (bhp) - maximum continuous service rating specified for engine by manufacturer and listed on nameplate of unit;



- H. Reasonably Available Control Technology (RACT) - lowest emission limitation a particular source is capable of meeting by application of control technology reasonably available considering technological and economic feasibility;
- I. Rich-Burn Engine - any spark-ignited Otto cycle or two stroke engine fueled with gaseous or liquid fuel and operated with an exhaust gas oxygen concentration of less than 4 percent by volume;
- J. Shaft Output - actual engine work done (brake horsepower-hours) calculated from measurements and data derived from operating parameters and/or performance curve(s) of device being powered by engine;
- K. Site - any specific location within a facility, for example, a building;
- L. Stationary Piston Engine (engine) - any spark or compression-ignited reciprocating internal combustion engine attached to a foundation at a site, or portable and operated at the same site for more than one year.

#### IV. **Exemptions**

This Rule shall not apply to:

- A. Engines used exclusively for agricultural operations necessary for growing of crops or raising of fowl or animals;
- B. Emergency standby, and low use rate engines operating less than 200 hours per year as documented by an elapsed operating time meter;
- C. Engines used exclusively for firefighting purposes or flood control;
- D. Laboratory engines used in research and testing;
- E. Engines operated exclusively for purposes of performance verification and testing; or
- F. Portable engines not operated at the same site for more than one year.

#### V. **Requirements for Engines Greater Than 50 bhp**

An owner/operator of any engine subject to this Section shall service such engine in accordance with following NOx minimization maintenance schedule:

- A. Lubricating Oil and Filter (if so equipped): Change once every three months or after no more than 300 hours of operation;
- B. Inlet Air Filter: Clean once every three months or after no more than 300 hours of operation; replace (if cartridge type) once every 1000 hours of operation;

- C. Fuel Filter: Clean once every year or replace (if cartridge type) once every 1000 hours of operation;
- D. Intake and Exhaust Valves (if so equipped and adjustable), Spark Plugs (if so equipped), Spark Timing and Dwell or Fuel Injection Timing (if adjustable), and Carburetor Mixture (if adjustable): Check and adjust (if necessary) to factory specifications once every year or after no more than 1000 hours of operation;
- E. Spark Plugs and Ignition Points (if so equipped): Replace after 3000 hours of operation;
- F. Coolant (if so equipped): Change once every year;
- G. Exhaust System: Check for leaks and/or restrictions once every year.

## VI. **Requirements for Engines 250 bhp or More**

An owner/operator of any engine subject to this Section shall comply with following NOx reduction requirements or emission limits, as applicable:

### A. Rich-Burn Engine:

1. Exhaust gas oxides of nitrogen concentration, averaged over not less than 15 consecutive minutes:
  - a. Shall be reduced by 90 percent across any exhaust gas control device; or
  - b. Shall not exceed 50 ppm by volume, on dry basis, corrected to 15 percent oxygen.
2. Exhaust gas carbon monoxide concentration, averaged over not less than 15 consecutive minutes, shall not exceed 2,000 ppm by volume, on dry basis, corrected to 15 percent oxygen.

### B. Lean-Burn Engine:

1. Exhaust gas oxides of nitrogen concentration, averaged over not less than 15 consecutive minutes:
  - a. Shall be reduced by at least 80 percent across any exhaust gas control device; or
  - b. Shall not exceed 125 ppm by volume, on dry basis, corrected to 15 percent oxygen; or
2. For lean burn engines controlled exclusively by combustion modifications,

exhaust gas oxides of nitrogen emission rate shall not exceed 2.0 grams per brake horsepower hour of output, or where engine has no means to measure shaft output, exhaust gas oxides of nitrogen concentration, averaged over not less than 15 consecutive minutes, shall not exceed 125 ppm by volume, on dry basis, corrected to 15 percent oxygen.

3. Exhaust gas carbon monoxide concentration, averaged over not less than 15 consecutive minutes, shall not exceed 2,000 ppm by volume, on dry basis, corrected to 15 percent oxygen.

C. Diesel Engine:

Exhaust gas oxides of nitrogen concentration, averaged over not less than 15 consecutive minutes:

1. Shall be reduced by at least 30 percent across any exhaust gas control device; or
2. Shall not exceed 600 ppm by volume, on dry basis, corrected to 15 percent oxygen;
3. Exhaust gas carbon monoxide concentration, averaged over not less than 15 consecutive minutes, shall not exceed 2,000 ppm by volume, on dry basis, corrected to 15 percent oxygen.

D. Thermal Efficiency Adjustment:

For any engine subject to this Section with demonstrated thermal efficiency greater than 30%, the following procedure may be used to determine allowable emission limits. Each emission limit in Subsection A., B., or C. may be multiplied by engine thermal efficiency and divided by reference efficiency of 30 percent. Engine efficiency (E) shall be determined using one of following two methods, whichever is lower:

1. 
$$E = \frac{(2542.5 \text{ Btu/bhp-hr}) (100)}{\text{Actual Heat Rate at HHV of fuel (Btu/bhp-hr)}}$$

Where demonstrated percent E applies to engine only, without consideration of any downstream energy recovery, and is averaged over not less than 15 consecutive minutes and measured within 30 days of first emissions compliance test; or

2. 
$$E = \frac{(\text{Manufacturer's Rated Efficiency [Continuous] at LHV})(\text{LHV})}{(\text{HHV})}$$

Engine with less than 30 percent efficiency, shall be assigned an efficiency of 30 percent for purposes of this Rule.

## VII. **Monitoring**

An owner/operator of any engine subject to Section VI. of this Rule shall:

- A. Install, operate, and maintain automatic combustion controls to ensure on-going compliance with applicable emission limit(s); or
- B. Install, operate, and maintain analytical equipment and/or procedures or sensing devices indicating:
  - 1. For Rich-Burn Engine:
    - a. Exhaust gas oxides of nitrogen and carbon monoxide concentrations; or
    - b. For a catalyst system, air to fuel ratio showing operation within limits as recommended by catalyst system manufacturer.
  - 2. For Lean-Burn or Diesel Engine:
    - a. Exhaust gas oxides of nitrogen and carbon monoxide concentrations; and
    - b. Flow rate of any reducing liquids or gases added to exhaust gases for operation of catalyst system.

## VIII. **Administrative Requirements**

### A. Emission Control Plan

An owner/operator of any engine subject to Section V. or VI. shall submit to the Control Officer, for his approval, a Control Plan. Such Control Plan shall include for each facility:

- 1. List of all engines subject to Rule, including type of engine service and KCAPCD Permit number;
- 2. Engine manufacturer, model number, rated brake horsepower, type of fuel (liquid and/or gas), and type of ignition (compression or spark);
- 3. Description of actions to be taken or emission controls to be applied to each engine;
- 4. For any engine subject to Section VI. and for which the owner/operator chooses to

comply with control efficiency limits, baseline NOx test data. Such data shall represent emissions during maximum normal operating conditions; and

5. Emission control equipment construction schedule, if applicable.

B. Recordkeeping

1. An owner/operator of any engine subject to Section V. of this Rule shall maintain, for at least two years, an engine service log for each engine demonstrating compliance with Section V. and make such log readily available to District personnel.
2. An owner/operator of any engine subject to Section VI. of this Rule shall maintain an engine operating log, including, on monthly basis, total hours of operation, type and quantity of fuel used, any data related to NOx emissions, and cumulative hours of operation since last source test required by Subsection C., below. Data shall be collected with properly calibrated and operated equipment. This information shall be maintained for period of at least two years (five years if part of a source subject to Rule 201.1) and made readily available to District personnel.

C. Compliance Testing

1. An owner/operator of any engine subject to Section VI. of this Rule shall demonstrate compliance with applicable limits by:
  - a. Each year, providing the Control Officer with documentation related to NOx emissions showing the engine has been operating as when last tested. If, based on review of these data, the Control Officer has reason to suspect non-compliance, an emissions tests shall be performed, and
  - b. Testing every two years, or after no more than 8760 hrs of operation (whichever time period is shorter).
2. Notwithstanding Subsection VIII.C.1.b., compliance with applicable limits can be demonstrated by annually testing an engine (or engines) that represents a group of engines, provided:
  - a. The group of engines is owned or operated by a single person;
  - b. All engines in the group are of similar rated brake horsepower, engine manufacturer and series, operational conditions, fuel, and emissions control method;
  - c. All engines in the group are initially tested and emissions of all engines in the group are at least 10% below the applicable limit;

- d. Selection of the representative engine(s) is approved by the Control Officer prior to testing and not less than " of all engines in a group are tested, and over the course of three years, all engines are tested;
  - e. All engines in the group have, and will continue to receive, the same maintenance and tune-up procedures as the representative engine(s); and
  - f. An engine operating log is maintained for each engine in the group. Such log shall include, on a monthly basis, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, and other information deemed necessary to show compliance with this Rule. This information shall be retained for at least five years and shall be made readily available to District personnel.
- 3. If any engine used to demonstrate compliance for a group of engines pursuant to Subsection VIII.C.2. exceeds applicable emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of such failed test shall result in untested engines being considered in violation of this Rule.
  - 4. If Subsection VIII.C.3. becomes applicable, testing shall be performed pursuant to Subsection VIII.C.1.b., or VIII.C.2.

**IX. Test Methods**

Compliance with requirements of Section VI. shall be determined in accordance with following test procedures:

- A. Oxides of nitrogen - U.S. EPA Method 7E, or CARB Method 100;
- B. Carbon monoxide - U.S. EPA Method 10, or CARB Method 100; and
- C. Stack gas oxygen - U.S. EPA Method 3 or 3A, or CARB Method 100.

**X. Compliance Schedule**

Engines subject to Section VI. are not subject to Section V. after complying with Section VI.

8/24/07

**Rule 431 Propellant Combustion and Rocket Testing – Adopted 01/24/2007, Amended 03/08/07.**

**I. Applicability**

Rule 431 shall apply to open-air rocket propellant combustion operations conducted on rocket test stands.

**II. Definitions**

- A. Hybrid Rocket Motor - Rocket type where prior to ignition the oxidizer may be either a liquid or a gas. The solid fuel typically consists of a polymeric rubber grain with a center perforation. The liquid or gas oxidizers are typically supplied to the solid fuel grain via a fuel injection system.
- B. Permissible Burn Day - Days designated as permissible burn days by the California Air Resources Board (ARB) based on the meteorological criteria for the Mojave Desert Air Basin at section 80311 of Title 17 of the California Code of Regulations, Subchapter 2, Smoke Management Guidelines for Agricultural and Prescribed Burning.
- C. Permitted Test Stand - Any rocket test stand with a valid permit to operate issued by the Kern County Air Pollution Control District (District).
- D. Receptor - The closest downwind person not associated with testing or the property fence line, whichever is closest.
- E. Rocket - A device consisting of a combustion chamber in which materials referred to as propellants, providing both fuel and oxidizer for combustion, are burned. Products of combustion escape through the nozzle, providing thrust.
- F. Rocket Engine - Rocket type where prior to ignition the propellants may be in either in a liquid or gaseous state and are typically supplied via a fuel injection system.
- G. Rocket Test Plan - Document specifying designated testing conditions and information as described in Section V.
- H. Rocket Test Stand - Any open-air ground-based structure used for testing of rocket propellant combustion or apparatus
- I. Solid Rocket Motor - Rocket type where prior to ignition the propellants are in a solid state.

**III. Exemptions**

The provisions of this Rule shall not apply to:

- A. Rocket propellant combustion during rocket test stand operations with a total consumed or combusted propellant mass of 75 lbs. or less.
- B. Emergency destruction/disposal of propellant by qualified bomb squad or explosive ordinance disposal groups
- C. Combustion of rocket propellants outside of the rocket body for purposes of fire training or for purposes of disposal by combustion under an approved burn plan.
- D. Rocket propulsion systems that do not require the combustion of propellants for operation.
- E. Rocket propellants comprised primarily of liquid fuels as approved by the District Air Pollution Control Officer (APCO). Exempt liquid fuels include, but not limited to the following:
  - 1. RP-1 (kerosene) and liquid oxygen (LOX),
  - 2. Liquid hydrogen and LOX,
  - 3. Isopropyl alcohol (IPA) and LOX,
  - 4. Propane and LOX,
  - 5. Methane and LOX, and
  - 6. Nitrogen tetroxide and hydrazine.

**IV. General Requirements**

- A. Without a Rocket Test Plan - Combustion of rocket propellants at a permitted rocket test stand may be conducted without a Rocket Test Plan, if conditions in Sections IV.A.1 and IV.A.2 are met.
  - 1. Rocket propellant mass must be less than or equal to 500 lbs. for a solid rocket motor or hybrid rocket motor, and less than or equal to 1000 lbs. for a rocket engine.
  - 2. The ARB has designated the day as a permissible burn day.
- B. Prior to Approval of a Rocket Test Plan – before APCO approval of Rocket Test Plan, combustion of rocket propellants at a permitted test stand may be conducted in accordance with rules, regulations, and policies in effect before the adoption of this rule for up to 180 days after rule promulgation, or until approval or disapproval of submitted plan, whichever is sooner.
- C. With a Rocket Test Plan - Combustion of rocket propellants at a permitted test stand may be conducted when there is an APCO approved Rocket Test Plan, if the meteorological conditions in the approved Rocket Test Plan are met, as required in Section V.

**V. Rocket Test Plan**

The rocket test stand operator shall submit a rocket testing plan to the District every two years for rocket test stand operations, where any individual solid rocket motor or hybrid rocket exceeds a mass of 500 lbs. of propellant, or for any rocket engine that exceeds a mass of 1000 lbs. of propellant. Rocket testing plans must contain, at a minimum, the following information (V.H, V.I, V.J, and V.K are not required if facility has an approved AB2588 Plan):

- A. Company name and project name (program name);
- B. Identification of responsible personnel, including telephone contacts;
- C. Detailed description of testing area including location of test stand(s), size of test area (acres) and plot plan of the site;
- D. Maximum number of each rocket type (solid, liquid or hybrid) and amount of propellants to be used each year of the plan;
- E. Air quality impact analysis for the rocket with the maximum particulate matter emissions expected to be tested on the test stand(s);
- F. Description of monitoring to be conducted during testing; and
- G. Description of the minimum record keeping and reporting to be conducted.
- H. Identification and location to nearest receptor downwind of the test stand;
- I. Toxic risk analysis conducted on the highest yearly estimated toxic emissions to be tested on test stand(s);
- J. Identification of those meteorological conditions under which propellant testing will cause insignificant risk to the nearest receptor;
- K. Identification meteorological conditions that were used in the toxic risk analysis;

**VI. Recordkeeping Requirements**

Owner or Operator of rocket motor, solid rocket propellant, or any equipment subject to this rule shall maintain records specified in Section VI.A and VI.B for at least five years and shall make those records available to the District upon request.

- A. Without a Rocket Test Plan –  
Documentation for all rocket propellant combustion tests subject to Section IV.A shall be kept on-site or at the operator's nearest place of business and shall include the following:
  - 1. Net mass and type of propellant burned
  - 2. Wind Direction and Speed
  - 3. Date and time of test or combustion
  - 4. Location of test or combustion



**B. With a Rocket Test Plan –**

Documentation for all rocket propellant combustion tests shall be kept on-site or at the operator's nearest place of business specified in the Rocket Testing Plan and shall include the following:

1. Net mass and type of propellant burned
2. Wind Direction and Speed
3. Date and time of test or combustion
4. Location of test or combustion

**VII. Compliance Schedule**

**A. New Sources**

1. Owners or Operators of any rocket test stand capable and intending to test rockets with a propellant mass of 75 lbs or greater and without a valid Permit to Operate (PTO) or an Authority to Construct (ATC) shall apply for an ATC within 90 days from the adoption of this Rule.
2. Owners or Operators that are not required to comply with Section IV.B and choosing to operate without a Rocket Test Plan shall comply with the guidelines under Section IV.A of this Rule.
3. Owners or Operators intending to operate with a Rocket Test Plan shall submit a Rocket Test Plan to the District during initial permitting of the rocket test stand. The Rocket Test Plan shall be updated every two years, or Test Plan shall be updated as necessary to document changes in test procedure prior to enacting said changes, or District shall be notified every two years there have been not any changes to Rocket Test Plan.

**B. Existing Sources**

1. Owners or Operators that are not required to comply with Section IV.B and choosing to operate without a Rocket Test Plan shall comply with the guidelines under Section IV.A of this Rule within 90 days of rule promulgation.
2. Owners or Operators intending to operate with a Rocket Test Plan shall submit a Rocket Test Plan to the District within 180 days of rule promulgation. The Rocket Test Plan shall be in effect from the date of approval by the APCO. The Rocket Test Plan shall be updated every two years, or Test Plan shall be updated as necessary to document changes in test procedure prior to enacting said changes, or District shall be notified every two years there have been not any changes to Rocket Test Plan.
3. Owners or operators with valid PTO(s) shall, within 90 days of rule promulgation, notify the District in writing of PTO(s) subject to this rule.
4. Owners or operators with valid ATC(s) or ATC applications in process shall, within 30 days of rule promulgation, notify the District in writing of ATC(s) or ATC applications subject to this rule.

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**RULE 432    Polyester Resin Operations** - Adopted 3/13/2014

**I.    Applicability**

The purpose of this rule is to reduce volatile organic compounds (VOC) emissions from polyester resin operations. The provisions of this rule apply to commercial polyester resin operations, industrial polyester resin operations, and organic solvents (use {including cleaning}, storage, waste, and disposal {off-site transfer}) associated with polyester resin operations.

**II.   Definitions**

- A. APCO: Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- B. Application Equipment: Device, including, but not limited to, a spray gun, brush, and roller, used to apply adhesives, coatings, or inks.
- C. ARB: California Air Resources Board.
- D. Assembly Adhesive: Chemical material used to join two or more fiberglass, metal, foam, plastic, or wood parts. Assembly adhesives include, but are not limited to, methacrylate adhesives and putties made from polyester or vinylester resin mixed with inert filler or fibers.
- E. ASTM: American Society of Testing and Materials International.
- F. Atomized Resin Application: Technology that utilizes application equipment that breaks resin into droplets (or aerosol) as it exits 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.
- G. Bench Scale Project: Project (not located at Research and Development facility) operated on a small scale, such as one capable of being located on a laboratory bench top.
- H. Catalyst: Substance is added to a resin to initiate or promote polymerization.
- I. CFR: Code of Federal Regulations.
- J. Cleaning Materials: Materials including, but not limited to, materials used for cleaning hands, tools, molds, application equipment, and work areas.
- K. Clear Gel Coat: Clear (translucent) gel coating used to allow underlying colors or patterns to be visible. Tooling gel coat used to build or repair molds is NOT a clear gel coat.

- L. Closed Molding Process: Molding process that utilizes pressure to distribute resin through the reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. Pressure utilized can be one or combination of the following forms: clamping, fluid (hydraulic), vacuum, or atmospheric. 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. The following are not closed molding processes:
1. Processes utilizing a closed mold to compact saturated fabric or remove air or excess resin from the fabric (such as in vacuum bagging).
  2. Open molding steps, such as application of gel coat or skin coat layer by conventional open molding prior to a closed molding process.
- M. Coating: A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes.
- N. Corrosion-Resistant Material: Polyester resin material used to make products for corrosion resistant applications such as tooling, fuel or chemical tanks, boat hulls, pools and outdoor spas.
- O. Cure: Polymerization process where small molecules, called monomers, combine chemically to produce a very large chainlike or network molecule. Chemicals are transformed from a liquid to a solid state or semisolid state to achieve desired physical properties for the product, including hardness.
- P. Cured Coating: Coating that is dry to the touch.
- Q. Degreaser: Solvent containing tank, tray, drum, etc. utilized to clean objects. Objects are cleaned by immersion into solvent or exposure to solvent vapor. Objects include, but not limited to, parts, products, tools, machinery, and equipment. An enclosed spray application equipment cleaning system is not a degreaser.
- R. Dissolver: Organic solvent that is added to an adhesive, coating, or ink to melt or to liquefy solid particles.
- S. EPA: United States Environmental Protection Agency.
- T. Filament Application: Resin application method to an open mold where reinforcement fibers are fed through a resin bath and winding the resin impregnated fibers on a rotating mandrel.
- U. Filled Polyester Resin Material: Material formulated by adding compatible filler(s) to polyester resin material(s).

- V. Filler: Inert (non-VOC) substance added to the resin to enhance its mechanical properties or extend its volume. Resin fillers include, but are not limited to, silica, carbon black, talc, mica and calcium carbonate.
- W. Fire Retardant Material: Polyester resin material used to make products that are resistant to flame or fire.
- X. Fluid Impingement Technology: Spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.
- Y. Gel Coat: Polyester resin topcoat that provides a cosmetic enhancement and improves resistance to degradation from environmental exposure.
- Z. Grams of VOC per Liter of Material: The weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{ec}}{V_m}$$

Where:

- $W_s$  = weight of volatile compounds (grams)
- $W_w$  = weight of water (grams)
- $W_{ec}$  = weight of exempt compounds (grams)
- $V_m$  = volume of material (liters)

- AA. High-Strength Material: Polyester resins which have a casting tensile strength of 10,000-psi or more.
- BB. High-Volume, Low-Pressure (HVLP): 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 and with liquid supply pressure less than 50 psig.
- CC. Lamination Resin: Orthophthalate, isophthalate and dicyclopentadiene (DCPD) resin which is used in composite system made of layers of reinforcement fibers and resins.
- DD. Liquid Leak: Visible solvent leak from a container at a rate of more than three drops per minute, or a visible liquid mist.
- EE. Maintenance Cleaning: Cleaning of tools, forms, molds, jigs, machinery, and equipment (excluding coating, ink and adhesive application equipment), and the cleaning of work areas where maintenance or manufacturing occurs.
- FF. Manual Application: Application of resin to an open mold using a hand layup technique. Components of successive plies of resin-impregnated reinforcement fibers are applied using hand tools such as brushes and rollers.
- GG. Manufacturing Process: Process of making goods or products by hand or by machine.
- HH. Marble Resin: Orthophthalate and modified acrylic isophthalate resin, which is designed for the fabrication of cast products, such as vanities.

- II. Mold: Cavity or surface where gel coat, resin, and fibers are placed and from which finished fiberglass parts take their form.
- JJ. Monomer: Organic compound, such as styrene, that reacts with unsaturated polyester resins to form a cured polyester resin.
- KK. Month: Calendar month.
- LL. Neat Resin: Resin that has no added filler.
- MM. Non-Absorbent Container: Container made of non-porous material that does not allow the migration of solvents through it.
- NN. Non-Atomized Resin Application: Technology that utilizes application equipment that does not break resin into droplets (or aerosol) as it exits application equipment to the surface of the part. Non-atomized resin application technology includes, but are not limited to, non-atomizing spray guns, flowcoaters, chopper flowcoaters, pressure fed resin rollers, resin impregnators, or fluid impingement technology.
- OO. Non-Atomized Solvent Flow: Solvents in the form of a liquid stream without the introduction of any propellant.
- PP. Non-Atomizing Spray Gun: Spray gun where resin flows in a steady and observable coherent flow, with no droplets formed in the area that is within the first three (3) inches of the applicator orifice. Droplets may form in the area greater than three (3) inches from the applicator orifice.
- QQ. Non-Leaking Container: Container without a liquid leak.
- RR. Normal Business Hours: Monday through Friday, 8:00 am to 5:00 pm.
- SS. Open Molding Resin and Gel Coat Process: Process where reinforcing fibers and resin are placed in an open-air mold while the reinforcing fibers are saturated with resin. Open molding operations include vacuum bags (or similar) used to compress uncured laminate to remove bubbles, excess resin, and to achieve a bond between core material and laminate.
- TT. Organic Solvent: The same as “Solvent.”
- UU. Organic Solvent Cleaning: Activity, operation, or process, (including surface preparation, cleanup, or wipe cleaning), performed outside of a degreaser, that uses organic solvents to remove uncured adhesives, uncured coatings, uncured inks or other contaminants. These operations including, but not limited to, dirt, soil, oil, lubricants, coolants, moisture, fingerprints, and grease, from parts, products, tools, machinery, general work areas and application equipment (including coatings, adhesives, and ink spray equipment).

- VV. Pigmented Gel Coat: Opaque gel coat that provides a colored, glossy surface which improves the aesthetic appearance of the products. Pigmented gel coat does not include tooling gel coat used to build or repair molds.
- WW. Polyester Resin Materials: Materials including, but not limited to: unsaturated polyester resins such as isophthalic, orthophthalic, halogenated, Bisphenol-A, vinyl-ester, or furan resins; cross-linking agents; catalysts, gel coats, inhibitors, accelerators, promoters, and any other materials used in polyester resin operations.
- XX. Polyester Resin Operations: Production or rework of products by mixing, pouring, hand layup, impregnating, injecting, forming, winding, spraying, and/or curing with fiberglass, fillers, or any other reinforcement materials and associated cleanup.
- YY. Polymer: Chemical compound comprised of a large number of chemical units, formed by chemical linking of monomers.
- ZZ. Production Resin: General purpose resin material that is not especially corrosion resistant, fire retardant, high strength, or gel coats.
- AAA. Propellant: Gas, including air, in a pressure container utilized to expel the contents when the pressure is released.
- BBB. Repair Cleaning: Solvent cleaning operation or activity carried out during a repair process.
- CCC. Repair Process: Process of returning a damaged or not operating properly object to good condition.
- DDD. Research and Development: Facility or part of a facility used to development 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 production manufacturing operations.
- EEE. Resin: Class of natural or synthetic organic polymers used to encapsulate and bind together reinforcement fibers in the construction of fiberglass parts.
- FFF. Resin and Gel Coat Operation: Operation in which resins or gel coats (including putties or polyputties) is combined with additives (including, but are not limited to, fillers, promoters, or catalysts).
- GGG. SCAQMD: South Coast Air Quality Management District.
- HHH. Skin Coat: Layer of resin and fibers applied over gel coat to protect the gel coat from deformation by the subsequent laminate layers.
- III. Small Job: Minor resin or gel coat application project which requires only a very limited amount of materials. Total material use for all small jobs at a facility shall not exceed two (2) gallons a day.

- JJJ. Solid Surface Resin: Resin, used without gel coats, to fabricate homogenous solid surface products.
- KKK. Solvent: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- LLL. Specialty Gel Coat: Gel coat used in conjunction with fire retardant, corrosion resistant or high-strength materials.
- MMM. Specialty Resin: 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: corrosive agents, caustic agents, acidic agents, or flame (heat).
- NNN. Stationary Source: As defined in Rule 210.1 (New and Modified Stationary Source Review Rule).
- OOO. Tooling Resin: Resins used to build or repair molds (tools) or prototypes (plugs) that comprise the molds.
- PPP. Tooling Gel Coat: Gel coat used to build or repair molds (tools) or prototypes (plugs) that comprise the molds.
- QQQ. Touch-up: Application of resin or gel coat to correct minor cosmetic imperfections that occur during fabrication or field installations.
- RRR. Tub/Shower Resin: Dicyclopentadiene (DCPD), orthophthalate and isophthalate resins, used to fabricate bath ware products.
- SSS. Vapor Suppressant: Substance added to resin to minimize the transfer of monomer vapor into the atmosphere.
- TTT. Vinylester Resin: Thermosetting resin containing esters of acrylic or methacrylic acids having a double-bond and ester linkage sites at the end of the resin molecules.
- UUU. Volatile Organic Compound (VOC): As defined in Rule 102, Definitions.
- VVV. Waste Materials: Materials including but not limited to paper or cloth used for cleaning operations, waste resins, or spent cleaning materials.

### III. Exemptions

- A. The provisions of this rule, excluding recordkeeping requirements of Section V.A, shall not apply to any polyester resin operation provided the volume of polyester resin materials used is less than 20 gallons per month.
- B. The solvent cleaning provisions of Section IV.D, Table 2 shall not apply to the following applications:
  1. Cleaning of solar cells, laser hardware, scientific instruments, or high precision optics.

2. Cleaning in laboratory tests and analyses, or bench scale or research and development projects.

#### **IV. Requirements**

##### **A. Polyester Resin Operation**

1. An operator of a polyester resin operation shall comply with the following process or control requirements:

Use materials in an open molding process that comply with the weighted average monomer VOC content 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 5 percent by weight of the resin or gel coat; or comply with Sections IV.A.2, IV.A.3, or IV.A.4.

**TABLE 1**  
**VOC CONTENT LIMITS FOR OPEN MOLDING RESIN AND GEL COAT**

<b>Compliant Materials Weighted Average Monomer</b>		
	<b>Material</b>	<b>Weight Percent Limit</b>
a.	General Purpose Resin	
	• Marble Resin	10% or 32%, as supplied, with no fillers
	• Solid Surface	17%
	• Tub/Shower Resin	24% or 35%, as supplied, with no fillers
	• Lamination Resin	31% or 35%, as supplied, with no fillers
b.	Tooling Resin	
	• Atomized (spray)	30%
	• Non-atomized	29%
c.	Specialty Resin	
	• Fire Retardant Resin	38%
	• High Strength Materials	40%
	• Corrosion Resistant Resin	48%
d.	All Other Resins	35%
e.	Tooling Gel Coat	40%
f.	Pigmented Gel Coat	
	• White and Off White	30%
	• Non-White	37%
	• Primer	28%
g.	Clear Gel Coat	
	• Marble Resin	40%
	• Other Resin	44%
h.	Specialty Gel Coat	48%



2. Use resin containing a vapor suppressant, such that the weight loss from the VOC emissions does not exceed 50 grams per square meter of exposed surface during resin polymerization;
3. Use a closed-mold system; or
4. Install and operate a VOC emissions control system which meets all of the requirements of Sections IV.A.4.a. through IV.A.4.c during periods of emission producing activities:
  - a. The VOC emission control system shall be approved, in writing, by the APCO.
  - b. The VOC emission control system shall have an overall capture and control efficiency of at least 90 percent by weight, demonstrated using the applicable test method(s) in Section V.B.
  - c. The VOC emission control system shall reduce VOC emissions, at all times, to a level that is not greater than the emission which would have been achieved through the use of compliant materials, compliant equipment, or compliant work practices, as applicable. 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:

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

Where:

CE	=	Minimum Required Overall Capture and Control Efficiency, percent.
$VOC_{LWc}$	=	VOC Limit, less water and exempt compounds.
$VOC_{LWn,Max}$	=	Maximum VOC content of noncompliant coating used in conjunction with a control device, less water and exempt compounds.
$D_{n,Max}$	=	Density of solvent, reducer, or thinner contained in the noncompliant coating, containing the maximum VOC content of the multi-component coating.
$D_c$	=	Density of corresponding solvent, reducer, or thinner used in the compliant coating system.

5. Resins and gel coats used for touch up, repair, or small jobs, may have a monomer content limit up to 10% more than the applicable limit set forth in Table 1. Such resins or gel coats shall only be applied by a hand-held atomized spray gun which has a container for the resin or gel coat as part of the gun. Resins or gels 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 a day.

- B. Spray application of polyester resin shall only be performed using airless, air assisted airless, high-volume, low-pressure (HVLP) spray equipment, or electrostatic spray equipment.
1. High-Volume, Low-Pressure (HVLP) spray equipment shall be operated in accordance with the manufacturer's recommendations.
  2. 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.
  3. 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 Section II.
- C. In lieu of complying with the applicable requirements of IV.B, an operator may install and maintain a VOC emission control system that meets the requirements of Section IV.A.4 around the coating application operation.
- D. Organic Solvent Cleaning Requirements
1. An operator shall not use organic solvents for cleaning operations that exceed the VOC content limits specified in Table 2.

**TABLE 2**  
**VOC CONTENT LIMITS FOR ORGANIC SOLVENTS**

Type of Solvent Cleaning Operation		VOC Content Limit Grams of VOC/liter of material (lb/gal)
a.	Product Cleaning During Manufacturing Process or Surface Preparation for Coating Application	25 (0.21)
b.	Repair and Maintenance Cleaning	25 (0.21)
c.	Cleaning of Polyester Resin Application Equipment	25 (0.21)

2. In lieu of complying with the VOC content limits in Table 2, an operator may control VOC emissions from cleaning operations with an APCO-approved VOC emission control system that meets the requirements of Section IV.A.4 for the solvent cleaning operations.
- E. Solvent Storage and Disposal

An owner or operator shall store or dispose of all uncured polyester resin materials, fresh or spent solvents, waste solvent cleaning materials such as cloth, paper, etc., coatings, adhesives, catalysts, and thinners in self-closing, non-absorbent 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.

## **V. Administrative Requirements**

### **A. Recordkeeping**

An operator subject to this rule shall maintain the following records:

1. Daily records of the type and quantity of all resins, gel coats, fillers, catalysts, and cleaning materials (including cleaning solvents) used in each operation. Records shall also indicate the amount used and VOC content, in weight percent, of all polyester resin and gel coat materials used for touch up, repair, and small jobs.
2. Records of the VOC content, in weight percent, of all polyester resin and gel coat, filler materials, including the weight percent of non-monomer VOC content of the resin and gel coat, used or stored at the stationary source.
3. Records of the VOC content of all cleaning materials used and stored at the stationary source as specified in Section IV.D.
4. Records showing the weight loss per square meter during resin polymerization for each vapor-suppressed resin.
5. VOC Emission Control System records an operator using a VOC emission control system pursuant to Section IV.A.4 to comply with this rule shall maintain daily records of key system operating parameters to demonstrate continuous operation and compliance of the VOC emission control system during periods of emission-producing activities. Key system operating parameters are those parameters necessary to ensure compliance, including, but not limited to, temperature, pressure drop, and air flow rate.
6. An operator claiming exemption under Section III shall maintain records of polyester materials usage to support the claim of exemption.
7. The operator shall retain the records specified in Sections V.A.1 through V.A.6, as applicable, on site for a period of five years, make the records available on site during normal business hours to the APCO, ARB, or EPA, and submit the records to the APCO, ARB, or EPA upon request.

### **B. Test Methods**

The analysis of cleaning materials, polyester resin materials and control efficiency shall be determined by the following methods:

1. The emission rate per square meter of exposed surface during polymerization of Polyester Resins is to be determined using: SCAQMD Method 309-91 (Static Method for Determination of Volatile Emissions from Polyester and Vinyl Resins Operations), February, 1993.

2. 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, or any other method approved by EPA, ARB, and the APCO.
  - 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:

$$CE_{\text{Capture and Control}} = \frac{[CE_{\text{Capture}} \times CE_{\text{Control}}]}{100}$$

Where:

$CE_{\text{Capture and Control}}$	=	Overall Capture and Control Efficiency, in percent.
$CE_{\text{Capture}}$	=	Capture Efficiency of the collection device, in percent.
$CE_{\text{Control}}$	=	Control Efficiency of the control device, in percent.

3. The monomer content of uncatalyzed resin materials is to be determined using ASTM D2369-87 (Standard Test Method for Volatile Content of Coatings) or SCAQMD Test Method 312-91 (Determination of Percent Monomer in Polyester Resins) April, 1996.
4. The VOC content of cleaning materials shall be determined using EPA Method 24 (40 CFR Part 60, Appendix A).
5. Determination of emissions of VOC from spray gun cleaning systems shall be made using SCAQMD "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.

### C. Multiple Test Methods

When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

## VI. Compliance Schedule

### A. New Sources

1. Owners or Operators of any facility proposing to install polyester resin operations and required to comply with Section IV of this rule shall obtain an Authority to Construct (ATC) in accordance with Rule 210.1 prior to installation or operation of any polyester resin operation.
2. Owners or Operators of any facility with polyester resin operations exempt by Section III.A of this rule shall maintain records of polyester resin use upon initial operations.

### B. Existing Sources

1. Owners or Operators of any facility with polyester resin operations required to comply with Section IV of this rule shall obtain a valid Permit to Operate (PTO) or an Authority to Construct (ATC), and shall apply for an ATC within 180-days from the adoption of this Rule.
2. Owners or Operators of any facility with polyester resin operations exempt by Section III.A of this rule shall commence maintaining records of polyester resin use within 180 days of this rule adoption.
3. Owners or operators with valid PTO(s), required to comply with Section IV of this rule shall obtain shall be in full compliance within 12 months after rule adoption.

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# REGULATION VI - AIR POLLUTION EMERGENCY CONTINGENCY PLAN

**RULE 601 General Statement** This emergency plan is to provide the basis for taking action to prevent air pollutant concentration from reaching levels which could endanger the public health or to abate such concentrations should they occur. The air quality in some areas frequently does not meet ambient air quality standards. While remote, the potential exists for air pollution in these areas to reach hazardous concentration. The Kern County Air Pollution Control District has the primary responsibility for taking necessary action to curtail polluting activities and should the episode become so severe that it is beyond the control capabilities of the local district, the State may be requested to take action to alleviate the condition.

**RULE 602 Applicable Areas** Notwithstanding any other provisions of these rules and regulations, the provisions of this regulation shall apply separately to each source area and receptor area in Kern County for the control of air contaminants during any Stage 1, Stage 2, and Stage 3 air pollution episode as provided herein.

For the purpose of this regulation, a source area is that area from which high concentrations of air pollutants are emitted. A receptor area is that area in which high concentrations of air pollutants are measured.

## ~~RULE 603 Episode Criteria Levels~~

	Averaging Time	Stage 1 (Health Advisory-Alert)	Stage 2 (Warning)	Stage 3 (Emergency)
Photochemical Oxidant (Including Ozone)	1 Hour	.20 ppm	.40 ppm	.60 ppm for 1 hr.*
Carbon Monoxide	1 Hour	40 ppm	75 ppm	100 ppm for 1 hr.*
	12 Hours	20 ppm	35 ppm	50 ppm
Sulfur Dioxide	1 Hour	0.5 ppm	1.0 ppm	2.0 ppm
	24 Hours	0.2 ppm	0.7 ppm	0.9 ppm

~~\*and predicted to persist for one additional hour.~~

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## REGULATION VI - AIR POLLUTION EMERGENCY CONTINGENCY PLAN

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## RULE 603 Episode Criteria Levels

	Averaging Time	Stage 1 (Health Advisory-Alert)	State 2 (Warning)	Stage 3 (Emergency)
Photochemical Oxidant (Including Ozone)	1 Hour	.20 ppm	0.35 ppm	0.50 ppm for 1 hr.*
Carbon Monoxide	1 Hour	40 ppm	75 ppm	100 ppm for 1 hr.*
	4 Hours	25 ppm	45 ppm	60 ppm
	12 Hours	20 ppm	35 ppm	50 ppm
	8 Hours	15 ppm	30 ppm	40 ppm
Sulfur Dioxide	1 Hour	0.5 ppm	1.0 ppm	2.0 ppm
	24 Hours	0.2 ppm	0.7 ppm	0.9 ppm
Particulate Matter	24 Hours	375 ug/m <sup>3</sup>	625 ug/m <sup>3</sup>	875 ug/m <sup>3</sup>

\*and predicted to persist for one additional hour.

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RULE 604. Episode Stages

Stage 1 (Health Advisory - Alert) A health advisory is issued when the concentration of the pollutants specified for this stage is predicted or reached.

Stage 2 (Warning) A warning is called when the concentration of pollutants specified for this stage is predicted or reached.

Stage 3 (Emergency) An emergency is called when the conditions specified for this stage are reached; and in the case of the one hour criteria for carbon monoxide or oxidants, are predicted to persist for one additional hour.

Episode Termination A stage is terminated whenever the concentration of the pollutant(s) which cause the declaration of the episode has been verified to have fallen below the criteria level for the declaration of the episode and meteorological data indicate that the pollutant concentration is expected to decrease.



RULE 605 Division of Responsibility

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- a. Prediction of Episode Conditions The Air Resources Board shall provide advisory notices of probable episodes. These notices will include air quality predictions based upon analysis of meteorological and ambient air quality data. The Kern County Air Pollution Control District may supplement this information with data from their own facilities or from contract services.
- b. Stage 1 (Health Advisory - Alert) The Air Pollution Control Officer shall notify persons with special health problems to take precautions against exposures. Schools shall be notified by the Air Pollution Control Officer so they can curtail students participation in strenuous activities. Abatement action for this stage will be voluntary.
- c. Stage 2 (Warning) The Air Pollution Control Officer shall implement both voluntary and mandatory abatement plans.
- d. Stage 3 (Emergency) The Air Pollution Control Officer shall take all actions within its authority to abate the emergency. If further abatement action is necessary, the Air Pollution Control Board may request the Governor to take action or the Governor may take action in accordance with the Emergency Services Act. The Air Resources Board should be consulted prior to submitting this request. If the Governor invokes the provisions of the Act, the Office of Emergency Services (OES) will implement the appropriate portion of the State Peacetime Emergency Plan, with the local district and the Air Resources Board assisting in the control action.
- e. Termination The Air Pollution Control Officer shall terminate Stage 1, Stage 2 and Stage 3 using the episode termination criteria. If the emergency stage is declared by the Governor it can only be terminated by the Governor or his authorized representative.

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- a. Sampling Stations There shall be at least one permanently located atmospheric sampling station equipped to monitor the contaminants covered by the plan. Sampling locations shall be designated by the Kern County Air Pollution Control Officer with the concurrence of the Air Resources Board. These stations shall consist of monitoring equipment operated in a manner that will provide for measurements of contaminant concentration in the range of values specified in the episode criteria. Additional temporary, fixed or mobile sampling stations may be maintained and activated as deemed necessary in the applicable areas. Analytical procedures shall be in conformance with Air Resources Board standards. The Air Resources Board shall provide calibration services as required.
- b. Meteorological Services When deemed necessary by the Air Resources Board, they shall provide for the acquisition of meteorological information in any area of the State. The Kern County Air Pollution Control District may provide such services in addition to the State services.
- c. Notification of Episode The Air Pollution Control Officer shall notify the following when an episode has been declared.

All Episodes

1. The Air Resources Board
2. Local public health officials and hospitals
3. School officials
4. The news, radio and television medias
5. Air Pollution Control District personnel

Episode - Stage 2 and 3

6. Appropriate elected officials
7. Local and State law enforcement agencies
8. Sources specified in the shutdown plans
9. Public safety personnel, who have responsibilities for or interests in air pollution control
10. Other Air Pollution Control Districts in the San Joaquin Valley Air Basin
11. The Emergency Action Committee (if one is appointed)

The "Notice of Declaration" of an episode shall include the following:

1. The specific level achieved or predicted.
2. The estimated geographic area affected or to be affected.
3. The pollutant for which the declaration is made.
4. The geographic location where the air contaminants were measured.

- d. Emergency Action Committee The Air Pollution Control Officer may appoint an Emergency Action Committee consisting of the Health Officer, Sheriff, County Counsel, Chairman of the Board, Emergency Services and other members and may include representatives of the Air Resources Board or the State Office of Emergency Service for liason purposes. The committee shall act in an advisory capacity to the Air Pollution Control Officer.
- e. Interdistrict Coordination Upon the request of an Air Pollution Control Officer who has declared an air pollution episode, adjacent air pollution control districts shall provide air pollutant and meteorological information so as to delineate source and receptor areas within the San Joaquin Valley.

Upon the request of an air pollution control district within the San Joaquin Valley Air Basin requesting action to abate an episode, the Air Pollution Control Officer will consult with the Air Pollution Control Board and the Emergency Action Committee (if one is appointed) to determine and to evaluate the source area and the nature and the extent of the control actions to be taken.

Each air pollution control district within the San Joaquin Valley Air Basin shall implement any action or combination of actions in the Stationary Source Curtailment and Episode Abatement Plans that will abate the episode.

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2. The estimated geographic area affected or to be affected.
  3. The pollutant for which the declaration is made.
  4. The geographic location where the air contaminants were measured.
- d. Emergency Action Committee The Air Pollution Control Officer may appoint an Emergency Action Committee consisting of the Health Officer, Sheriff, County Counsel, Chairman of the Board, Emergency Services and other members and may include representatives of the Air Resources Board or the State Office of Emergency Service for liason purposes. The committee shall act in an advisory capacity to the Air Pollution Control Officer.
- e. Interdistrict Coordination Upon the request of an Air Pollution Control Officer who has declared an air pollution episode, adjacent air pollution control districts shall provide air pollutant and meteorological information so as to delineate source and receptor areas within the San Joaquin Valley.

Upon the request of an air pollution control district within the San Joaquin Valley Air Basin requesting action to abate an episode, the Air Pollution Control Officer will consult with the Air Pollution Control Board and the Emergency Action Committee (if one is appointed) to determine and to evaluate the source area and the nature and the extent of the control actions to be taken.

Each air pollution control district within the San Joaquin Valley Air Basin shall implement any action or combination of actions in the Stationary Source Curtailment and Traffic Abatement Plans that will abate the episode.

RULE 607 Advisory of High Air Pollution Potential Upon the determination that a high potential for deteriorating air quality exists in an area as a result of either an Air Resources Board analysis or the advice of a local district's staff, the Air Resources Board shall inform all affected local districts of this condition. The operators of the monitoring stations shall be alerted to the potential by the appropriate local district.

RULE 608 Declaration of Episode The Air Pollution Control Officer shall declare an "Health Advisory-Alert," "Warning" or "Emergency" in the control district whenever the concentration of the pollutant(s) is predicted or has reached the concentrations set forth in RULE 603.

~~RULE 609 Episode Action Stage 1 (Health Advisory-Alert) Upon the declaration of this stage the Air Pollution Control Officer shall take the following general action:~~

~~a. The notifications required by RULE 606 c.~~

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- d. ~~Emergency Action Committee~~ The Air Pollution Control Officer may appoint an Emergency Action Committee consisting of the Health Officer, Sheriff, County Counsel, Chairman of the Board, Emergency Services and other members and may include representatives of the Air Resources Board or the State Office of Emergency Service for liason purposes. The committee shall act in an advisory capacity to the Air Pollution Control Officer.
- e. Interdistrict Coordination Upon the request of an Air Pollution Control Officer who has declared an air pollution episode, adjacent air pollution control districts shall provide air pollutant and meteorological information so as to delineate source and receptor areas within the San Joaquin Valley.

Upon the request of an air pollution control district within the San Joaquin Valley Air Basin requesting action to abate an episode, the Air Pollution Control Officer will consult with the Air Pollution Control Board and the Emergency Action Committee (if one is appointed) to determine and to evaluate the source area and the nature and the extent of the control actions to be taken.

Each air pollution control district within the San Joaquin Valley Air Basin shall implement any action or combination of actions in the Stationary Source Curtailment and Episode Abatement Plans that will abate the episode.

RULE 607 Advisory of High Air Pollution Potential Upon the determination that a high potential for deteriorating air quality exists in an area as a result of either an Air Resources Board analysis or the advice of a local district's staff, the Air Resources Board shall inform all affected local districts of this condition. The operators of the monitoring stations shall be alerted to the potential by the appropriate local district.

RULE 608 Declaration of Episode The Air Pollution Control Officer shall declare an "Health Advisory-Alert," "Warning" or "Emergency" in the control district whenever the concentration of the pollutant(s) is predicted or has reached the concentrations set forth in Rule 603.

RULE 609 Episode Action Stage 1 (Health Advisory-Alert) Upon the declaration of this stage the Air Pollution Control Officer shall take the following general action:

- a. The notifications required by Rule 606c.
- b. Kern County Communications shall be requested to broadcast the "Notice of Declaration" over the School Alert System, Sigalert System and Law Enforcement Communication System.
- c. Request the public to stop all unnecessary driving in the source and receptor air basins.

- d. Request the public to operate all privately-owned vehicles on a pool basis in the affected source and receptor areas.
- e. Request all employers to encourage employee car pools.
- f. Prohibit the burning of a combustible refuse and agricultural waste within the air basin.
- g. Persons operating any facility named in Rule 613 shall implement the appropriate plans submitted in accordance with Rule 613.

✓ RULE 610 Episode Action Stage 2 (Warning) Upon the declaration of this stage, the Air Pollution Control Officer shall take the following actions or any combination of actions in the source and receptor areas:

- a. The notifications required by Rule 606c.
- b. Kern County Communications shall be requested to broadcast the "Notice of Declaration" over the School Alert System, Sigalert System and Law Enforcement Communication System.
- c. The Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) shall be called into session to study the pertinent information relating to the concentration of air contaminants and to recommend to the Air Pollution Control Officer actions to be taken. Those actions may include, but are not limited to Stationary Source Curtailment and Episode Abatement Plans or any portion thereof.
- d. Carbon Monoxide - If the occurrence of Stage 2 for carbon monoxide is determined to have been due to traffic congestion in a specific area, measures shall be taken to reduce the traffic congestion in that area.
- e. The Air Resources Board shall be notified at each quarter of the concentration difference between Stages 2 and 3.
- f. The Executive Officer of the Air Resources Board shall activate the Air Resources Board emergency action staff and notify the Office of Emergency Service upon notification by the Air Pollution Control Officer that the pollutant(s) concentration has reached Stage 2.
- g. Whenever the Air Pollution Control Officer determines is necessary, the Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) may take any action required by this rule with less than a quorum present. A majority of the members present is required for any such action.
- h. The Air Pollution Control Officer shall implement the actions recommended by the Air Pollution Control Board, County Counsel and Emergency Action Committee (if one is appointed).
- i. Persons operating any facility named in Rule 613 shall implement the appropriate plans submitted in accordance with Rule 613.

RULE 611 Episode Action Stage 3 (Emergency) Upon the declaration of this stage, the Air Pollution Control Officer shall take the following actions or any combination of actions in the source and receptor areas:

- a. The notification required by Rule 606c.
- b. Kern County Communications shall be requested to broadcast the "Notice of Declaration" over the School Alert System, Sigalert System and Law Enforcement Communication System.
- c. The Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) shall be called into session to study the pertinent information relating to the concentration of air contaminants and to recommend to the Air Pollution Control Officer actions to be taken. Those actions may include, but are not limited to Stationary Source Curtailment and Episode Abatement Plans or any portion thereof.
- d. Whenever the Air Pollution Control Officer determines it necessary, the Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) may take any action required by this rule with less than a quorum present. A majority of the members present is required for such action.
- e. Review abatement action and determine if curtailment plan should include additional industrial sources and the closing of all but essential business where continued operation would result in emissions that contribute to the episode.
- f. The Air Pollution Control Officer shall implement the actions recommended by the Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed.)
- g. If it appears that the steps taken by the Air Pollution Control Officer will be inadequate to cope with the emergency, the Air Pollution Control Board shall request action of the Executive Officer of the Air Resources Board.
  1. The Office of Emergency Service and the Air Resources Board shall evaluate actions that have been taken and jointly advise the Governor of the conditions and shall recommend to the Governor whether or not further actions under the Emergency Service Act should be taken.
  2. If it is determined that further action is necessary, the Office of Emergency Service shall activate its predetermined procedures in accordance with the applicable portion of the State Peacetime Emergency Plan developed pursuant to the Emergency Services Act.
- h. Persons operating any facility named in Rule 613 shall implement the appropriate plans submitted in accordance with Rule 613.
- i. The general public, schools, industrial, business, commercial, and governmental activities throughout Kern County shall operate as though the day were a major national holiday.

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- ~~2. If it is determined that further action is necessary, the Office of Emergency Service shall activate its predetermined procedures in accordance with the applicable portion of the State Peace-time Emergency Plan developed pursuant to the Emergency Services Act.~~

RULE 612 Episode Termination The Air Pollution Control Officer shall declare the termination of the appropriate episode whenever the concentration of an air contaminant which caused the declaration of such episode has been verified to be below the levels set forth in RULE 603 for the calling of such episode and the available scientific and meteorological data indicate that the concentration of such air contaminant will not immediately increase again so as to reach the levels set forth for such episode in RULE 603. The Air Pollution Control Officer shall immediately notify those required by RULE 606 c of the declaration of the termination of the episode. The Kern County Communications shall be requested to broadcast the "Termination" over the School Alert System, Sigalert System and the Law Enforcement Communication System.

~~RULE 613 Stationary Source Curtailment Upon the request of the Air Pollution Control Officer, all industries, business, commercial establishments or other establishments that may emit 100 tons/year or more of hydrocarbons or any pollutant included in this plan shall prepare plans for immediate curtailment of emissions. The plans shall be made available to the Air Pollution Control District and shall contain the following information:~~

- ~~a. Name or identification of the sources,~~
- ~~b. Location of the sources,~~
- ~~c. Information on estimated emissions in terms of both quantity and nature of each pollutant,~~
- ~~d. The number of fleet vehicles,~~
- ~~e. Name of the person to contact in case curtailment is necessary and~~
- ~~f. Shutdown procedures including the time required to effect the shutdown.~~

~~RULE 614 Episode Abatement Plan The Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) after study of all pertinent information relating to the concentration of air contaminants shall recommend to the Air Pollution Control Officer the following Episode Abatement Plan, any combination of the following plan or other traffic abatement strategy that will abate the air pollution episode.~~



7.30.81

**Rule 613 Stationary Source Curtailment Plans and Traffic Abatement Plans**

These plans shall be prepared by business, commercial, industrial, and governmental establishments in Kern County as follows:

- a. The owner or operator of any business, commercial, industrial, or governmental stationary source which can be expected to emit 100 tons per year or more of carbon monoxide, hydrocarbons, particulate, or oxides of nitrogen matter shall submit to the Air Pollution Control Officer plans to curtail or cease operations causing stationary source air contaminants in such activity:
  1. Each plan should include at least the following information for each location:
    - (a) Name and location of the facility.
    - (b) The number of employees at the facility during each shift on a normal weekday and on a major national holiday.
    - (c) The amount of energy (gas, fuel oil and electricity) used on a normal week and on a major national holiday.
    - (d) Type of equipment that emits air pollutants and number of units of each type.
    - (e) Total emissions of each pollutant in pounds per operating day from each type of equipment including any significant variations occurring seasonally or differences in emissions on weekends and holidays. If available, these data may be supplied from air pollution control district records.
    - (f) Procedures for briefing employees regarding the abatement plan requirements.
    - (g) Procedures for notifying employees and individuals responsible for emissions curtailment actions to be taken.
    - (h) Where applicable, a procedure for limiting strenuous activities by students.
    - (i) The names and telephone numbers of the episode action coordinator and alternate.
    - (j) The names of the official responsible for implementation of the plan.
    - (k) Identification of equipment for which emissions are to be curtailed at each episode stage and expected reduction of emissions of each pollutant in pounds per operating day.

- episode stage.
- (m) Reductions in fuel oil, gas and electrical consumption expected at each episode stage.
  - (n) For first stage episode, the measures to voluntarily curtail equipment operations that emit air pollutants specific to the type of episode, and in the case of oxidant episodes, the equipment operations that emit hydrocarbons and nitrogen oxides.
  - (o) For second-stage episodes:
    - 1. The measures to curtail as much as possible, equipment operations that emit air pollutants specific to type of episode and in the case of oxidant episodes, the equipment operations that emit hydrocarbons and nitrogen oxides.
    - 2. The measures to postpone operations which can be postponed until after the episode.
    - 3. For fossil fuel-fired combustion sources, including electric utilities, with a heat input greater than 50 million Btu/per hour the measures to burn natural gas.
    - 4. For electric utilities the measures, in addition to those in subparagraph(o),3, shift oil power generation to non source areas to the maximum extent consistent with the public health, safety, and welfare.
    - 5. For refineries and chemical plants, the measures to be taken to reduce emissions by 20 percent by curtailing equipment operations that emit air pollutants specific to the type of episode and in the case of oxidant episodes, the equipment operations that emit hydrocarbons and nitrogen oxides without jeopardizing the public health or safety, without causing an increase in the emission of other air contaminants without damaging the equipment or without reducing production more than 20%.
    - 6. The measures in subparagraph (n) of this Rule.
  - (p) For third-stage episodes:
    - 1. A list of equipment, with permit numbers if applicable, which can be shut down without jeopardizing the public health or safety, and an estimate of the resultant reductions in carbon monoxide, hydrocarbons, nitrogen oxides and particulate matter emissions.
    - 2. A list of all equipment, with permit numbers if applicable, which must be operated to protect the public health or safety, and an estimate of the carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter emissions from such equipment.
    - 3. The measures for chemical plants and petroleum refineries to reduce emissions by 33 percent by curtailing equipment operations that emit air pollutants specific to the type of episode and in the case of oxidant episodes the equipment operations that emit hydrocarbons and nitrogen oxides, without jeopardizing the public health and safety.

- Rule.
- b. The measures for stationary sources which emit 100-tons per year or more of air contaminants to eliminate emissions specific to the type of episode and in the case of oxidant episodes, the measures to eliminate hydrocarbons and nitrogen oxides by starting no new batches, by ceasing feed of new materials, and by phasing down as rapidly as possible without damage to the equipment.
  - b. The owner or operator of any industrial business, commercial, or governmental facility or activity employing more than 100 persons per shift at any one business address shall submit to the Air Pollution Control Officer plans to curtail or cease operations causing air contaminants from vehicle use:
    1. Each plan should include at least the following information for each location.
      - (a) Name and location of the facility.
      - (b) Number of employees.
      - (c) Employee vehicles.
        1. Number of gasoline or diesel
        2. Total average daily commute mileage.
      - (d) Fleet vehicles
        1. Number of gasoline or diesel
        2. Total average daily mileage of each type.
      - (e) Procedures for briefing employees regarding the abatement plan requirements.
      - (f) Procedures for notifying employees and individuals responsible for emissions curtailment actions to be taken.
      - (g) Where applicable, a procedure for limiting strenuous activities by students.
      - (h) The names and telephone numbers of the episode action coordinator and alternate.
      - (i) The name of the official responsible for implementation of the plan.
    2. Each plan should include at least the following information, where applicable, regarding emission abatement actions.
      - (a) The total number of employees at the facility during each shift.
      - (b) The total number of motor vehicles and vehicle miles traveled for motor vehicles operated:
        1. By the company on company business on a normal weekday and a major national holiday.
        2. By employees commuting between home to the place of business on a normal weekday and a major national holiday.
        3. The minimum number of motor vehicles to be operated that are necessary to protect public health or safety.
      - (c) Episodes
        1. First Stage Episodes  
The measures by which employers will encourage the utilization of car pools or otherwise reduce employee motor vehicle travel.

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2. ~~If it is determined that further action is necessary, the Office of Emergency Service shall activate its predetermined procedures in accordance with the applicable portion of the State Peacetime Emergency Plan developed pursuant to the Emergency Services Act.~~

~~RULE 612 Episode Termination The Air Pollution Control Officer shall declare the termination of the appropriate episode whenever the concentration of an air contaminant which caused the declaration of such episode has been verified to be below the levels set forth in RULE 603 for the calling of such episode and the available scientific and meteorological data indicate that the concentration of such air contaminant will not immediately increase again so as to reach the levels set forth for such episode in RULE 603. The Air Pollution Control Officer shall immediately notify those required by RULE 606 c of the declaration of the termination of the episode. The Kern County Communications shall be requested to broadcast the "Termination" over the School Alert System, Sigalert System and the Law Enforcement Communication System.~~

~~RULE 613 Stationary Source Curtailment Upon the request of the Air Pollution Control Officer, all industries, business, commercial establishments or other establishments that may emit 100 tons/year or more of hydrocarbons or any pollutant included in this plan shall prepare plans for immediate curtailment of emissions. The plans shall be made available to the Air Pollution Control District and shall contain the following information:~~

- ~~a. Name or identification of the sources,~~
- ~~b. Location of the sources,~~
- ~~c. Information on estimated emissions in terms of both quantity and nature of each pollutant,~~
- ~~d. The number of fleet vehicles,~~
- ~~e. Name of the person to contact in case curtailment is necessary and~~
- ~~f. Shutdown procedures including the time required to effect the shutdown.~~

~~RULE 614 Episode Abatement Plan The Air Pollution Control Board, County Counsel and the Emergency Action Committee (if one is appointed) after study of all pertinent information relating to the concentration of air contaminants shall recommend to the Air Pollution Control Officer the following Episode Abatement Plan, any combination of the following plan or other traffic abatement strategy that will abate the air pollution episode.~~

\* P R O P O S E D \*

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STRATEGY	EPISODE STAGE		
	1	2	3
Voluntary Reduction in Traffic	X	X	X
Ban Government Vehicles		X	X
Close Admission to Public Recreation Facilities		X	X
Close Government Offices		X	X
Ban Fleet Vehicles - Excluding Gaseous Fueled		X	X
Close Admission to Private Recreation Facilities		X	X
Close Admission to Regional Shopping Centers		X	X
Close Schools and Colleges		X	X
Close Admission to "Downtown" Retail and Service Business		X	X
Ban Delivery Service of all Non-Perishables		X	X
Stationary Source Curtailment		X	X
Ban Non-Essential Service Calls		X	X
Close Establishments with 100 or More Employees		X	X
Close Admission to all Other Retail and Service Business		X	X
Close Other Industrial and Large Emission Sources			X

RULE 615 Enforcement When an episode has been declared, the Air Pollution Control Officer, Sheriff, Fire Chief, their deputies and all other peace officers within the affected area(s) shall enforce the appropriate provisions of this regulation and all orders of the Air Pollution Control Board or the Air Pollution Control Officer made pursuant to this regulation, against any person who having knowledge of the declaration of an episode, refuses to comply with the rules set forth in this regulation or any order of the Air Pollution Control Board or the Air Pollution Control Officer made pursuant to this regulation.