

RULE 1.1 GENERAL PROVISIONS AND DEFINITIONS

ADOPTED October 1, 1971
REVISED December 8, 1993
REVISED August 13, 1997
REVISED December 14, 2005
REVISED May 14, 2008
REVISED May 8, 2013
REVISED July 8, 2015

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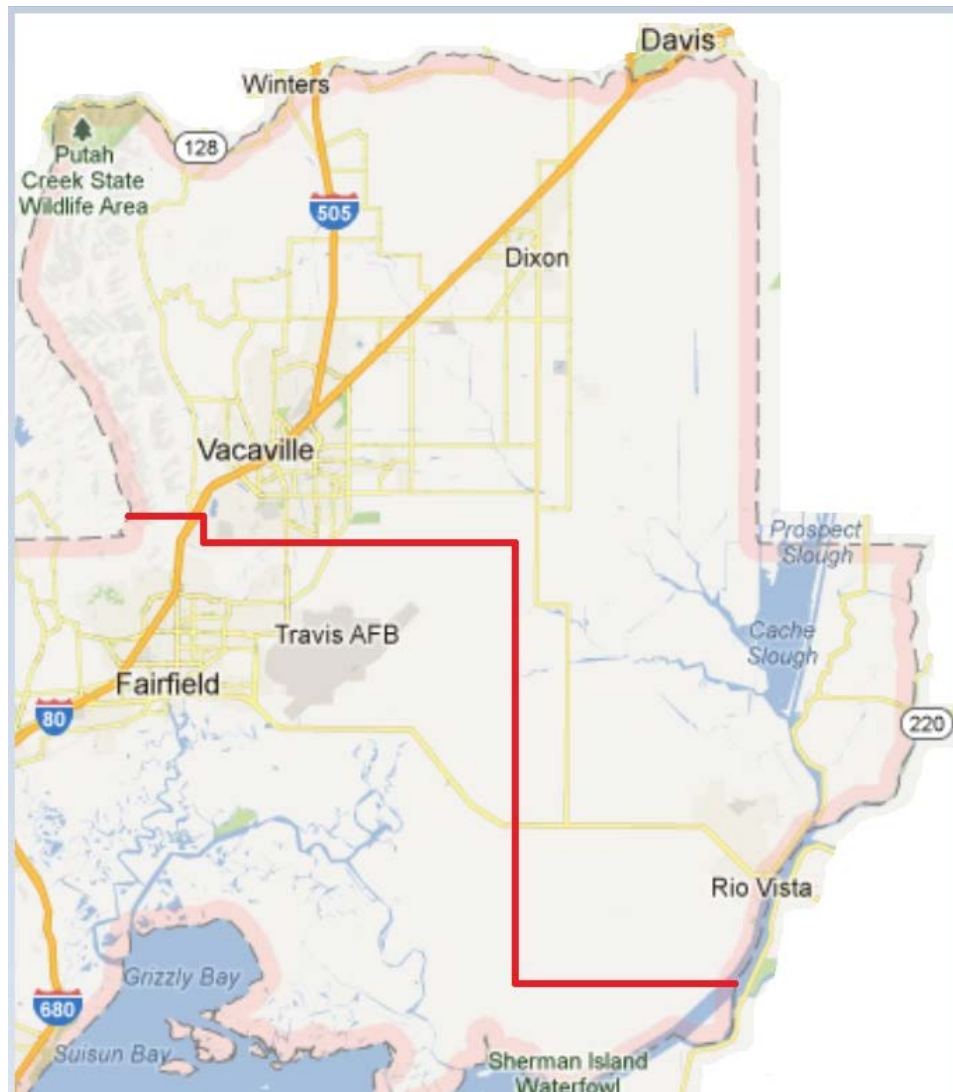
- 101 **TITLE:** These rules and regulations shall be known as the Rules and Regulations of the Yolo-Solano Air Quality Management District.
- 102 **DEFINITIONS REFERENCED:** Except as otherwise specifically provided in these rules and, except where the context otherwise indicates, words used in these rules are used in exactly the same sense as the same words are used in Chapter 2, Part 1, Division 26 of the Health and Safety Code.
- 103 **ENFORCEMENT:** These Rules and Regulations shall be enforced by the Air Pollution Control Officer under authority of Health and Safety Code Division 26, Part 4, and by all officers empowered by Section 40157.
- 104 **VALIDITY:** If any regulation, rule, subdivision, sentence, clause, or phrase of these Rules and Regulations is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of these Rules and Regulations. The Air Quality Management Board hereby declares that it would have adopted these Rules and Regulations and every regulation, rule, subdivision, sentence, clause, and phrase thereof irrespective of the fact that any one or more regulations, rules, subdivisions, sentences, clauses, or phrases be declared unconstitutional or invalid.

200 DEFINITIONS

- 201 **AGRICULTURAL BURNING:** Open outdoor fires used in the growing of crops; or raising of fowl or animals or for range improvement; or used in improvement of land for wildlife and game habitat; or for wildland vegetation management burning. "Agricultural Burning" also means open outdoor fires used in the operation or maintenance of a system for the delivery of water for these purposes.
- 202 **AIR CONTAMINANT:** Any discharge, release, or other propagation into the atmosphere directly or indirectly, caused by man and includes, but is not limited to smoke, charred paper, dust, soot, grime, carbon, noxious acids, fumes, gases, odors, or particulate matter or any combination thereof.
- 203 **AIR POLLUTION CONTROL OFFICER (APCO):** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District, or his or her designee.
- 204 **ASTM:** American Society of Testing and Materials
- 205 **ATMOSPHERE:** The air that envelopes or surrounds the earth. Where air pollutants are emitted into a building not designed specifically as a piece of air pollution control equipment, such emission into the building shall be considered an emission into the atmosphere.
- 206 **BOARD:** The Air Quality Management Board of the Yolo-Solano Air Quality

Management District.

- 207 **BRUSH TREATED:** The material to be burned has been felled, crushed, or uprooted with mechanical equipment, or has been desiccated with herbicides.
- 208 **CARB:** California Air Resources Board.
- 209 **CLERK OF THE HEARING BOARD:** The Clerk to the Board of Directors, who is ex officio Clerk of the Hearing Board.
- 210 **COMBUSTIBLE REFUSE:** Any solid or liquid combustible waste material containing carbon in a free or combined state.
- 211 **COMBUSTION CONTAMINANTS:** Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.
- 212 **CONDENSED FUMES:** Minute, solid particles generated by the condensation of vapors from solid matter after volatilization from the molten state, or may be generated by sublimation, distillation, calcination, or chemical reaction when these processes create air-borne particles.
- 213 **CONTROL OFFICER:** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District.
- 214 **DESIGNATED AGENCY:** Any agency designated by the California Air Resources Board as having authority to issue agricultural burning permits. The U. S. Forest Service and the California Division of Forestry are so designated within their areas of jurisdiction.
- 215 **DISTRICT:** The Yolo-Solano Air Quality Management District.
- 216 **DISTRICT JURISDICTION:** The jurisdiction of the Yolo-Solano Air Quality Management District includes:
- 216.1 All of Yolo County
- 216.2 That portion of Solano County which lies north and east of a line described as follows: Beginning at the intersection of the westerly boundary of Solano County and the 1/4 section line running east and west through the center of Section 34, T6N, R2W, M.D.B. & M., thence east along said 1/4 section line to the east boundary of Section 36, T6N, R2W, thence south 1/2 mile and east 2.0 miles, more or less, along the west and south boundary of Los Putos Rancho to the northwest corner of Section 4, T5N, R1W, thence east along a line common to T5N and T6N to the northeast corner of Section 3, T5N, R1E, thence south along section lines to the southeast corner of Section 10, T3N, R1E, thence east along section lines to the south 1/4 corner of Section 8, T3N, R2E, thence east to the boundary between Solano and Sacramento Counties.



- 217 **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.
- 218 **EPA:** United States Environmental Protection Agency.
- 219 **EXEMPT COMPOUNDS:** The following compounds are exempt from the definition of Volatile Organic Compounds (VOC) in Section 238:
- 219.1 Acetone;
 - 219.2 Ammonium carbonate;
 - 219.3 Carbon monoxide;
 - 219.4 Carbon dioxide;
 - 219.5 Carbonic acid;
 - 219.6 Dimethyl carbonate (DMC);
 - 219.7 Ethane;
 - 219.8 Metallic carbides or carbonates;
 - 219.9 Methane;

- 219.10 Methyl acetate;
- 219.11 Methyl formate (HCOOCH₃);
- 219.12 Methylene chloride (dichloromethane);
- 219.13 Methyl chloroform (1,1,1-trichloroethane);
- 219.14 Parachlorobenzotrifluoride (PCBTF) (1-chloro-4-trifluoromethyl benzene);
- 219.15 Perchloroethylene (tetrachloroethylene);
- 219.16 Propylene carbonate;
- 219.17 Tertiary-butyl acetate (T-butyl acetate, TBAC, TBAC)*;
- 219.18 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OCH₃);
- 219.19 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OC₂H₅);
- 219.20 The following chlorofluorocarbons (CFCs);
- Trichlorofluoromethane (CFC-11);
 - Dichlorodifluoromethane (CFC-12);
 - 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
 - 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
 - Chloropentafluoroethane (CFC-115);
- 219.21 The following hydrochlorofluorocarbons (HCFCs);
- Chlorodifluoromethane (HCFC-22);
 - Chlorofluoromethane (HCFC-31);
 - 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123);
 - 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
 - 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
 - 1,1-dichloro-1-fluoroethane (HCFC-141b);
 - 1-chloro-1,1-difluoroethane (HCFC-142b);
 - 1-chloro-1-fluoroethane (HCFC-151a);
 - 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
 - 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
- 219.22 The following hydrofluorocarbons (HFCs);
- Trifluoromethane (HFC-23);
 - Difluoromethane (HFC-32);
 - 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
 - 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);
 - Ethylfluoride (HFC-161);
 - 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea);
 - 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
 - 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);
 - 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
- 219.23 The following hydrofluoroethers (HFEs);

- a. $\text{HCF}_2\text{OCF}_2\text{H}$ (HFE 134);
 - b. $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$ (HFE-236cal2);
 - c. $\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (HFE-338pcc13);
 - d. $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180));
 - e. 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane ($\text{n-C}_3\text{F}_7\text{OCH}_3$, HFE-7000);
 - f. 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($\text{C}_4\text{F}_9\text{OCH}_3$ or HFE-7100);
 - g. 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($\text{C}_4\text{F}_9\text{OC}_2\text{H}_5$ or HFE-7200);
 - h. (1)
1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);
 - i. 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE 7500);
- 219.24 The following Hydrofluoroolefins (HFOs):
- a. Trans -1,3,3,3-tetrafluoropropene (HFO-1234ze);
 - b. 2,3,3,3-tetrafluoropropene (HFO-1234yf);
 - c. Trans-1-chloro-3,3,3-trifluoroprop-1-ene (HFO-1233zd(E));
- 219.25 2-Amino-2-methyl-1-propanol (AMP);
- 219.26 Cyclic, branched, or linear completely methylated siloxanes;
- 219.27 The following four classes of perfluorocarbon compounds:
- a. Cyclic, branched, or linear, completely fluorinated alkanes;
 - b. Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations;
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds only to carbon and fluorine;

* T-butyl acetate shall be considered exempt as a VOC only for purposes of VOC emissions limitations or VOC content requirements, but will continue to be a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling, and inventory requirements which apply to VOCs.

220 **FORMULATION DATA:** The actual product recipe which itemizes all the ingredients contained in a product including VOCs and the quantities thereof used by the manufacturer to create the product. Material Safety Data Sheets (MSDS) are not considered formulation data.

221 **HEARING BOARD:** The Hearing Board of the Yolo-Solano Air Quality Management District.

222 **IMPLEMENT OF HUSBANDRY:** A vehicle which is used exclusively in the conduct of agricultural operations.

223 **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. The refractories shall have a Pyrometric Cone equivalent of at least 17, tested according to the method described in the ASTM Method C-24.

224 **NO-BURN DAY:** Any day on which the California Air Resources Board or the Yolo-Solano Air Quality Management District prohibits agricultural burning.

225 **OPEN BURNING FOR AGRICULTURAL OPERATIONS IN THE GROWING OF CROPS OR RAISING OF FOWL OR ANIMALS:**

225.1 The burning in the open of materials produced wholly from operations in the growing and harvesting of crops or raising of fowls or animals for the primary purpose of making a profit, of providing a livelihood, or of conducting agricultural research or instruction by an educational institution, and,

225.2 In connection with the operations qualifying under section 225.1:

- (a) The burning of grass and weeds in or adjacent to fields in cultivation or being prepared for cultivation and;
- (b) The burning of material not produced wholly from such operations, but which are intimately related to the growing or harvesting of crops and which are used in the field, except as prohibited by District regulations. An example is empty sacks which contained pesticides, burned in the field where the substances were applied.

226 **OPEN BURNING FOR RANGE IMPROVEMENT:** The use of open fires to remove vegetation for a wildlife, game or livestock habitat or for the initial establishment of an agricultural practice on previously uncultivated land.

227 **OPEN OUTDOOR FIRE:** The combustion of any combustible refuse or other material of any type outdoors in the open air not in any enclosure, where the products of combustion are not directed through a flue.

228 **ORCHARD OR CITRUS GROVE HEATER:** "Orchard or Citrus Grove Heater" means any article, machine, equipment or other contrivance, burning any type of fuel or material capable of emitting air contaminants, used or capable of being used for the purpose of giving protection from frost damage.

229 **PARTICULATE MATTER:** Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

230 **PERSON:**

230.1 Any person, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, user or owner or any state or local government agency, or public district, or any officer or

employee thereof, and;

230.2 The United States or its agencies, to the extent authorized by federal law.

231 **PROCESS WEIGHT PER HOUR:** The total weight of all materials introduced into any specific process which process may cause any discharge into the atmosphere. Solid Fuels charged will 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 complete cycle from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.

232 **PUBLIC RECORDS:** The following are public records:

232.1 All information, analyses, plans or specifications that disclose the nature, extent, quantity or degree of air contaminants which any article, machine, equipment or other contrivance will produce, which the Air Quality Management District requires any applicant to provide before such applicant builds, erects, alters, replaces, operates or uses such article, machine, equipment or other contrivance.

232.2 All air monitoring data, including data compiled from stationary sources.

232.3 Except as otherwise provided in Section 232.4 of this rule, trade secrets are not public records under this rule.

232.4 Notwithstanding any other provision of law, all air pollution emission data, including those emission data which constitute trade secrets as defined in Section 237 of this rule, are public records. Data used to calculate emission data are not emission data for the purposes of this rule and data which constitute trade secrets and which are used to calculate emission data are not public records.

233 **REGULATION:** One of the major subdivisions of the rules of the Yolo-Solano Air Quality Management District.

234 **RULE:** A rule of the Yolo-Solano Air Quality Management District.

235 **SECTION:** A section of the Health and Safety Code of the State of California unless some other statute is specifically mentioned.

236 **STANDARD CONDITIONS:** As used in these regulations, a gas temperature of 68 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute. Result of all analyses and tests shall be calculated or reported at this gas temperature and pressure. Where the use of U.S. EPA Test Methods are required in these Rules and Regulations, then Standard Conditions are those specified in that Test Method.

237 **TRADE SECRETS:** "Trade secrets", as used in this rule, 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.

238 **VOLATILE ORGANIC COMPOUND (VOC):** Any compound containing carbon except exempt compounds as defined in Section 219. Volatile organic compounds may also be referred to as reactive organic compounds (ROC).

239 **WILDLAND VEGETATION MANAGEMENT BURNING:** The use of prescribed burning conducted by a public agency to burn land predominantly covered with chaparral, trees, grass, or standing brush.

300 STANDARDS

301 **AUTHORITY TO ARREST:** The Air Pollution Control Officer is hereby authorized pursuant to Penal Code Section 836.5 to arrest a person without a warrant whenever he has reasonable cause to believe that the person to be arrested has committed a misdemeanor in his presence which is a violation of these Rules and Regulations.

302 DISCLOSURE OF DATA:

302.1 The Air Pollution Control Officer shall, upon due notice, make public records available for examination and provide copies thereof where appropriate.

302.2 Trade secrets may be released:

- a. To the ARB, which protects trade secrets as provided in Section 6254.7 of the Government Code and Sections 91000 to 91022 of the California Administrative Code, Title 17; or
- b. To the Federal Environmental Protection Agency, which protects trade secrets as provided in Section 114C of the Clean Air Act and in 40 CFR, Chapter 1, Part 2.

302.3 Data required to be submitted to the District under the Air Toxics “Hot Spots” Information and Assessment Act, and which the operator believes to be a trade secret, shall be protected from disclosure in accordance with the provisions of Health and Safety Code Section 44346.

400 ADMINISTRATIVE REQUIREMENTS

401 **ADMINISTRATIVE SETTLEMENT PROCEDURE FOR CIVIL PENALTIES:**

- 401.1 Civil penalties shall be assessed according to Health and Safety Code, Division 26, Part 4, Chapter 4, Article 3, beginning with Section 42400.
- 401.2 The Air Pollution Control Officer after consultation with District Counsel shall give notice to a person who is charged with committing a violation of an applicable State law or District Rules and Regulations that an administrative settlement is being sought.
- 401.3 The Air Pollution Control Officer with advice of District Counsel is authorized as the District's agent to settle any administrative penalty claim for the District under this rule.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.1. Control of Emissions. The emission of material which may be the cause of air pollution shall be controlled by the contents of this regulation.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.2. Alteration of Permit.

No person shall willfully deface, alter, forge, counterfeit, or falsify any permit issued under these Rules and Regulations.

RULE 2.3 RINGELMANN CHART

Adopted January 21, 1972

Revised January 13, 2010

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emissions of visible air contaminants to the atmosphere.
- 102 **APPLICABILITY:** The provisions of this rule apply to any source operation which emits or may emit air contaminants.
- 110 **EXEMPTIONS - GENERAL:** The provisions of this rule shall not apply to the following:
- 110.1 Smoke from fires set by or permitted by any public officer, when such fire is, in his or her opinion, necessary for any of the following purposes:
 - a. The prevention of a fire hazard which cannot be abated by any other means.
 - b. The instruction of public employees in the methods of fighting fires.
 - c. The instruction of employees in methods of fighting fire, when such fire is set, pursuant to permit, on property used for industrial purposes.
 - d. Disease or pest prevention, where there is an immediate need for and no reasonable alternative to burning.
 - e. The remediation of an oil spill pursuant to Section 8670.7 of the Government Code.
 - 110.2 The use of orchard and citrus grove heaters that do not produce more than one gram per minute of unconsumed solid carbonaceous material.
 - 110.3 Agricultural operations necessary for the growing of crops or raising of fowl or animals.
 - 110.4 The use of other equipment in agricultural operations necessary for the growing of crops or raising of fowl or animals.
 - 110.5 Other open outdoor fires set or permitted in accordance with Rule 2.8 or Rule 6.1.
 - 110.6 Use of any aircraft to distribute seed, fertilizer, insecticides, or other agricultural aids over land devoted to the growing of crops or raising of fowl or animals.
 - 110.7 Open outdoor fires used only for cooking of food for human beings or for recreational purposes.

- 110.8 Emissions from vessels using steam boilers during emergency boiler shutdowns for safety reasons, safety and operational tests required by governmental agencies, and where maneuvering is required to avoid hazards.
- 110.9 Emissions from vessels during a breakdown condition, as long as the discharge is reported in accordance with district requirements.
- 110.10 The use of visible emission generating equipment in training sessions conducted by governmental agencies necessary for certifying persons to evaluate visible emissions for compliance with Section 41701 of the California Health and Safety Code or applicable district rules and regulations.
- 110.11 In accordance with Section 41704 of the California Health and Safety Code, smoke emissions from burners used to produce energy and fired by (or teepee burners used for the disposal of) forestry and agricultural residues with or without supplementary fossil fuels when:
- a. The emissions result from the startup or shutdown of the combustion process or from the malfunction of the emission control equipment.
 - b. The emissions do not exceed a period or periods of time aggregating more than 30 minutes in any 24 hour period.
 - c. The emissions do not result from the failure to operate and maintain in good working order any emission control equipment.
- 110.12 The use of an obscurant for the purpose of training military personnel and the testing of military equipment by the United States Department of Defense on any military reservation.

111 **EXEMPTIONS - LIMITED:** The requirement of subsection 301.2 of this rule shall not apply to the following:

- 111.1 Abrasive blasting operations conducted outside of a permanent building.
- 111.2 Pile-driving hammers for no more than four minutes during the driving of a single pile.
- 111.3 Diesel auxiliary engines or generators used exclusively to operate a drinking water system, when operated under emergency circumstances, or operated no more than 30 minutes each week, or two hours each month, under non-emergency circumstances.

200 DEFINITIONS

201 **ABRASIVE BLASTING:** Propelling abrasive material against a surface with

sufficient velocity to remove coatings and promote a uniform surface texture.

202 **CARBONACEOUS MATERIAL:** Substances composed of or containing carbon or carbon compounds.

203 **OBSCURANT:** A chemical discharged with the specific intent to hinder viewing of terrain or objects.

204 **OPACITY:** The degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

205 **TEEPEE BURNER:** A free-standing conical metal structure used for the disposal of forestry and agricultural waste material.

206 **VISIBLE AIR CONTAMINANT:** Pollutants discharged into the atmosphere in the form of dust, smoke, or fumes.

300 **STANDARDS**

301 **REQUIREMENTS**

301.1 A person shall not discharge into the atmosphere from any single source of emission listed under section 111 of this rule, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) 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 301.1 a. of this rule.

301.2 Effective 6 months after the adoption of the revisions of this rule, a person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) 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 301.2 a. of this rule.

400 MONITORING

- 401 **TEST METHOD:** The opacity of visible emission shall be determined in accordance with EPA Test Method 9.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.5. Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

RULE 2.6. Additional Exception.

The provisions of Rule 2.5. do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowl, animals, or bees.

7/25/73

Rule 2.0 Open Burning, General

a. Prohibition. Except as set forth in this Rule, no person shall set or permit an open outdoor fire within the boundaries of the YOLO - SOLANO AIR POLLUTION CONTROL DISTRICT.

b. Exceptions, Permissive Burn Days. On permissive burn days only, the provisions of Paragraph a. of this Rule do not apply to the following fires:

1. For a fire set or for which permission for such fire is given in performance of the official duty of any public officer, and such fire in the opinion of such officer is necessary

a) For the purpose of the prevention of a fire or health hazard which cannot be abated by any other means; or

b) Set pursuant to permit on property used for industrial purposes for the purpose of instruction of employees in the method of fighting fires.

12/17/79

- b. 2. For right-of-way clearing by a public entity or utility, or for levee, reservoir, and ditch maintenance when the material has been prepared by stacking, drying, or other methods to promote combustion as specified by the Air Pollution Control Officer. Any such burning near populated areas shall be done in accordance with the requirements given in Regulation VI Agricultural Burning.

7/25/73

3. For agricultural burning permitted by law.

c. Exceptions, All Days. On all days the provisions of Paragraph a. of this Rule do not apply to the following fires:

1. For a fire set or for which 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

a) For the instruction of public or industrial employees in methods of fighting fire where a permit has been issued by the Air Pollution Control Officer

b) To set or cause to be set backfires necessary to save life or valuable property pursuant to Section 4426 of the Public Resources Code.

6/22/78

- c. 2. To abate fires pursuant to Chapter 2 (commencing with Section 13055) of Part 1 of Division 12 of the California Health & Safety Code.

7/25/73

3. Fires for recreational use and cooking of foods.

RULE 2.9. Open Burning, Certain Materials.

Notwithstanding any other provision of these Rules and Regulations, no person shall use open outdoor fires for the purpose of disposal of petroleum waste, demolition debris, construction debris, tires or other rubber materials, materials containing tar, or for metal salvage or burning of vehicle bodies.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.10. Incinerator Burning.

No person shall burn any combustible refuse except that which may be burned in an open outdoor fire, in any incinerator within the boundaries of the Yolo-Solano Air Pollution Control District except in a multiple-chamber incinerator or in equipment found by the Air Pollution Control Officer to be equally effective for the purpose of air pollution control.

RULE 2.11 PARTICULATE MATTER CONCENTRATION

Adopted June 19, 1974
Revised January 13, 2010

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100 GENERAL

101 **PURPOSE:** The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard.

102 **APPLICABILITY:** This rule applies to any source operation which emits, or may emit dust, fumes, or total suspended particulate matter

200 DEFINITIONS

201 **PARTICULATE MATTER:** Any material which is emitted as liquid or solid particles, or gaseous material which becomes liquid or solid particles when collected at standard conditions.

300 STANDARD

301 **REQUIREMENT:** A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

400 MONITORING

401 TEST METHODS:

401.1 The exhaust stack gas velocity shall be determined in accordance with EPA or CARB Test Method 2.

401.2 The exhaust stack gas moisture content shall be determined in accordance with EPA or CARB Test Method 4.

401.3 Determination of particulate matter emissions shall be conducted in accordance with EPA or CARB Test Method 5.

RULE 2.12 SPECIFIC CONTAMINANTS

Adopted January 21, 1972

Revised January 13, 2010

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to protect the ambient air quality by establishing particulate matter combustion contaminants and sulfur compound emission standards.
- 102 **APPLICABILITY:** This rule applies to any source operation which emits, or may emit sulfur gaseous emissions and particulate matter combustion contaminants
- 110 **EXEMPTIONS:** The provisions of this rule shall not apply during the start of an operation or change in energy source, during the time necessary to bring the combustion process up to operating level.

200 DEFINITIONS

- 201 **COMBUSTION CONTAMINANTS:** Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.

300 STANDARD

- 301 **REQUIREMENT:** A person shall not discharge into the atmosphere from any single source of emission whatsoever, any one or more of the following contaminants, in any state or combination thereof, in excess of the following concentrations at the point of discharge:
- a. Sulfur compounds calculated as sulfur dioxide (SO₂) 0.2%, by volume at standard conditions.
 - b. Combustion Contaminants: 0.31 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions.

400 MONITORING

- 401 **COMPLIANCE DETERMINATION:** In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the carbon dioxide (CO₂) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 percent of carbon dioxide (CO₂).
- 402 **TEST METHODS:**
- 402.1 The exhaust stack gas velocity shall be determined in accordance with EPA or CARB Test Method 2.

- 402.2 The exhaust stack gas moisture content shall be determined in accordance with EPA or CARB Test Method 4.
- 402.3 Determination of particulate matter emissions shall be conducted in accordance with EPA or CARB Test Method 5.
- 402.4 Sulfur compound emissions shall be determined in accordance with EPA or CARB Test Method 8.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.13 ORGANIC SOLVENTS

REVISED May 25, 1994

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100 GENERAL

101 **PURPOSE:** The purpose of this Rule is to limit the emissions of organic solvents into the atmosphere that may

result from the use of organic solvents.

102 **APPLICABILITY:** The provisions of this Rule apply to any person that uses organic solvents except as provided by Section 110 of this Rule.

110 **EXEMPTIONS:** The provisions of this Rule shall not apply to:

110.1 The manufacture of organic solvents or the transport or storage of organic solvents or materials containing organic solvents.

110.2 The use of equipment for which other requirements are specified by these Regulations or which are exempt from air pollution control requirements by said Rules.

110.3 The spraying or other employment of insecticides, pesticides, or herbicides.

110.4 The employment, application, evaporation, or drying of saturated halogenated organic solvents or perchloroethylene.

110.5 The use of any material in any article, machine, equipment, or other contrivance described in Sections 301, 302, 303, or 304 of this Rule, if:

- a. The volatile content of such material consists only of water and organic solvents;
- b. The organic solvents comprise not more than 20 percent of said volatile content;
- c. The volatile content is not photochemically reactive as defined in Section 203 of this Rule; and
- d. The material does not come into contact with flame.

200 DEFINITIONS

201 **ORGANIC MATERIALS:** Chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

202 **ORGANIC SOLVENTS:** 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 which exhibit a boiling point higher than 220°F (104.4°C) 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 (104.4°C).

203 **PHOTOCHEMICALLY REACTIVE SOLVENT:** Any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

203.1 A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;

203.2 A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;

203.3 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 percent of the total volume of solvents.

300 STANDARDS

301 **ORGANIC MATERIALS:** A person shall not discharge into the atmosphere more than 15 pounds of organic

materials in any one day, nor more than 3 pounds in any one hour, 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 an overall control and capture efficiency of at least 85 percent on a mass basis by air pollution control equipment. Those portions of any similar or identical series of articles, machines, equipment, or other contrivances used for processing identically continuous web, strip, or wire, and which emit organic materials and which use operations described in this section shall be collectively subject to compliance with this section.

- 302 **PHOTOCHEMICALLY REACTIVE SOLVENTS:** A person shall not discharge into the atmosphere more than 40 pounds of organic materials in any one day, nor more than 8 pounds in any one hour, from any article, machine, equipment, or other contrivance used under conditions other than described in Section 301 of this Rule, for employing or applying any photochemically reactive solvent, as defined in Section 203 of this Rule, or material containing such photochemically reactive solvent, unless said discharge has been reduced by an overall control and capture efficiency of at least 85 percent on a mass basis by air pollution control equipment. 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 Section 301 of this Rule shall be excluded from determination of compliance with this section. Those portions of any similar or identical series of articles, machines, equipment, or other contrivances used for processing identically continuous web, strip, or wire, and which emit organic materials and which use operations described in this section shall be collectively subject to compliance with this section.
- 303 **NON-PHOTOCHEMICALLY REACTIVE SOLVENTS:** A person shall not discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, nor more than 450 pounds in any one hour, from any article, machine, equipment, or other contrivance in which any non-photochemically reactive organic solvent or any material containing such solvent is employed or applied, unless said discharge has been reduced by an overall control and capture efficiency of at least 85 percent on a mass basis by air pollution control equipment. Emissions of organic material 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 Section 301 of this Rule shall be excluded from determination of compliance with this section. Those portions of any similar or identical series of articles, machines, equipment, or other contrivances used for processing identically continuous web, strip, or wire, and which emit organic materials and which use operations described in this Section shall be collectively subject to compliance with this section.
- 304 **CLEANUP:** Emissions of organic materials to the atmosphere from the cleanup with photochemically reactive solvent, as defined in Section 203 of this Rule, of any article, machine, equipment, or other contrivance described in Sections 301, 302, or 303 of this Rule, shall be included with the other emissions of organic materials from that article, machine, equipment, or other contrivance for determining compliance with this Rule.
- 305 **SOLVENT DISPOSAL:** A person shall not during any one day dispose of a total of more than 1 1/2 gallons of any photochemically reactive solvent, as defined in Section 203 of this Rule, or of any material containing more than 1 1/2 gallons of photochemically reactive organic solvents, as designated in Section 203 of this Rule, by any means which will permit the evaporation of such organic solvents into the atmosphere.
- 306 **EQUIPMENT MAINTENANCE:** A person incinerating, adsorbing, 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.

500 MONITORING AND RECORDS

- 501 **RECORDS:** 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 the Officer, written evidence of the chemical composition, physical properties, and amount consumed for each organic solvent used.
- 502 **TEST METHODS:**

502.1 Absolute Vapor Pressure: Absolute vapor pressure of solvents shall be determined in accordance with ASTM Test Method D 2879-86.

502.2 Chemical Composition: The chemical composition of organic solvents shall be determined in accordance with ASTM Test Methods E 168-67, E 169-87, or E 260-85, as appropriate.

502.3 Control Efficiency: The determination of control efficiency shall be conducted in accordance with EPA Test Method 25A.

502.4 Capture Efficiency: The measurement of capture efficiency shall be determined in accordance with 40 CFR 52.741, Appendix B, "VOM Measurement Techniques for Capture Efficiency".

502.5 Exhaust Flow Rate: The determination of the exhaust flow rate for control devices shall be conducted in accordance with EPA Test Methods 2 and 2A.

RULE 2.14 ARCHITECTURAL COATINGS

Revised November 14, 2001

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APPENDIX A MANUFACTURER-S VOC AVERAGING PROGRAM

100 GENERAL

- 101 **PURPOSE:** To limit the quantity of volatile organic compounds (VOC) in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the Yolo-Solano Air Quality Management District (District).
- 102 **APPLICABILITY:** Except as provided in Section 110, this rule is applicable to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the District, as well as any person who applies or solicits the application of any architectural coating within the District.
- 110 **EXEMPTIONS:** The provisions of this rule shall not apply to the following:
- 110.1 Any architectural coating that is sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
 - 110.2 Any aerosol coating product.
 - 110.3 Any architectural coating that is sold in a container with a volume of one (1) liter (1.057 quart) or less.

200 DEFINITIONS

- 201 **ADHESIVE:** Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.
- 202 **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.
- 203 **ANTENNA COATING:** A coating labeled and formulated exclusively for application to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.
- 204 **ANTIFOULING COATING:** A coating labeled and formulated for application to submerged stationary structures and

their appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling coating, the coating must be registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136, et seq.) and with the California Department of Pesticide Regulation.

- 205 **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 down spouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.
- 206 **ARCHITECTURAL COATING:** A coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purposes of this rule.
- 207 **BITUMENS:** Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.
- 208 **BITUMINOUS ROOF COATING:** A coating which incorporates bitumens that is labeled and formulated exclusively for roofing.
- 209 **BITUMINOUS ROOF PRIMER:** A primer which incorporates bitumens that is labeled and formulated exclusively for roofing.
- 210 **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.

- 211 **CLEAR BRUSHING LACQUERS:** Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush, and which are labeled as specified in subsection 401.5.
- 212 **CLEAR WOOD COATINGS:** Clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.
- 213 **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.
- 214 **COLORANT:** A concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.
- 215 **CONCRETE CURING COMPOUND:** A coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water.
- 216 **DRY FOG COATING:** A coating labeled and formulated only for spray application such that over spray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.
- 217 **EXEMPT COMPOUND:** For the purposes of this rule, Aexempt compound@ has the same meaning as Rule 1.1, GENERAL PROVISIONS AND DEFINITIONS. Exempt compounds content of a coating shall be determined by South Coast Air Quality Management District Method 303-91 (Revised August 1996), incorporated by reference in subsection 605.10.
- 218 **FAUX FINISHING COATING:** A coating labeled and formulated as a stain or glaze to create artistic

effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.

- 219 **FIRE-RESISTIVE COATING:** An opaque coating labeled and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing assemblies of structural materials into compliance with federal, state, and local building code requirements. The fire-resistive coating and the testing agency must be approved by building code officials. The fire-resistive coating shall be tested in accordance with ASTM Designation E 119-98, incorporated by reference in subsection 605.2.
- 220 **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 84-99, incorporated by reference in subsection 605.1.
- 221 **FLAT COATING:** A coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than five (5) on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in subsection 605.3.
- 222 **FLOOR COATING:** An opaque coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces which may be subject to foot traffic.
- 223 **FLOW COATING:** A coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective coating systems present on utility transformer units.

- 224 **FORM-RELEASE COMPOUND:** A coating labeled and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.
- 225 **GRAPHIC ARTS COATING OR SIGN PAINT:** A coating labeled and formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.
- 226 **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).
- 227 **INDUSTRIAL MAINTENANCE COATING:** A high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates exposed to one or more of the following extreme environmental conditions listed in subsections 227.1 through 227.5, and labeled as specified in subsection 401.4:
- 227.1 Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
 - 227.2 Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
 - 227.3 Repeated exposure to temperatures above 121 degrees Celsius (250 degrees Fahrenheit);
 - 227.4 Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or
 - 227.5 Exterior exposure of metal structures and structural components.
- 228 **LACQUER:** A clear or opaque wood coating, including clear lacquer sanding sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid,

protective film.

- 229 **LOW SOLIDS COATING:** A coating containing 0.12 kilogram or less of solids per liter (one (1) pound or less of solids per gallon) of coating material.
- 230 **MAGNESITE CEMENT COATING:** A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- 231 **MASTIC TEXTURE COATING:** A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least ten (10) mils (0.010 inch) dry film thickness.
- 232 **METALLIC PIGMENTED COATING:** A coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon), when tested in accordance with South Coast Air Quality District Method 318-95, incorporated by reference in subsection 605.4.
- 233 **MULTI-COLOR COATING:** A coating that is packaged in a single container and that exhibits more than one color when applied in a single coat.
- 234 **NONFLAT COATING:** A coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter and 5 or greater on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in subsection 605.3.
- 235 **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 605.3.
- 236 **NONINDUSTRIAL USE:** Nonindustrial use means any use of architectural coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and

utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.

- 237 **POST-CONSUMER COATING:** A finished coating that would have been disposed of in a landfill, having completed its usefulness to a consumer, and does not include manufacturing wastes.
- 238 **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 1613-96, incorporated by reference in subsection 605.5, that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.
- 239 **PRIMER:** A coating labeled and formulated for application to a substrate to provide a firm bond between the substrate and subsequent coats.
- 240 **QUICK-DRY ENAMEL:** A nonflat coating that is labeled as specified in subsection 401.8 and that is formulated to have the following characteristics:
- 240.1 Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16 and 27 degrees Celsius (60 and 80 degrees Fahrenheit);
 - 240.2 When tested in accordance with ASTM Designation D 1640-95, incorporated by reference in subsection 605.6, sets to touch in 2 hours or less, is tack free in four (4) hours or less, and dries hard in eight (8) hours or less by the mechanical test method; and
 - 240.3 Has a dried film gloss of 70 or above on a 60 degree meter.
- 241 **QUICK-DRY PRIMER, SEALER, AND UNDERCOATER:** A primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be re-coated in two (2) hours when tested in accordance with ASTM Designation D 1640-95, incorporated by reference in subsection 605.6.
- 242 **RECYCLED COATING:** An architectural coating formulated

such that not less than 50 percent of the total weight consists of secondary and post-consumer coating, with not less than ten (10) percent of the total weight consisting of post-consumer coating.

- 243 **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.
- 244 **ROOF COATING:** A non-bituminous coating labeled and formulated exclusively for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation. Metallic pigmented roof coatings which qualify as Metallic Pigmented Coatings shall not be considered to be in this category, but shall be considered to be in the Metallic Pigmented Coating category.
- 245 **RUST PREVENTATIVE COATING:** A coating formulated exclusively for nonindustrial use to prevent the corrosion of metal surfaces and labeled as specified in subsection 401.6.
- 246 **SANDING SEALER:** A clear or semi-transparent wood coating labeled and formulated for application to bare wood to seal the wood and to provide a coat that can be abraded to create a smooth surface for subsequent applications of coatings. A sanding sealer that also meets the definition of a lacquer is not included in this category, but is included in the lacquer category.
- 247 **SEALER:** A coating labeled and formulated for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.
- 248 **SECONDARY COATING (REWORK):** A fragment of a finished coating or a finished coating from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.

- 249 **SHELLAC:** A clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Lacifffer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.
- 250 **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).
- 251 **SOLICIT:** To require for use or to specify, by written or oral contract.
- 252 **SPECIALTY PRIMER, SEALER, AND UNDERCOATER:** A coating labeled as specified in subsection 401.7 and that is formulated for application to a substrate to seal fire, smoke or water damage; to condition excessively chalky surfaces, or to block stains. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-98, incorporated by reference in subsection 605.7.
- 253 **STAIN:** A clear, semitransparent, or opaque coating labeled and formulated to change the color of a surface but not conceal the grain pattern or texture.
- 254 **SWIMMING POOL COATING:** A coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals.
- 255 **SWIMMING POOL REPAIR AND MAINTENANCE COATING:** A rubber based coating labeled and formulated to be used over existing rubber based coatings for the repair and maintenance of swimming pools.
- 256 **TEMPERATURE-INDICATOR SAFETY COATING:** A coating labeled and formulated as a color-changing indicator coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204 degrees Celsius (400 degrees Fahrenheit).

- 257 **TINT BASE:** An architectural coating to which colorant is added after packaging in sale units to produce a desired color.
- 258 **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.
- 259 **UNDERCOATER:** A coating labeled and formulated to provide a smooth surface for subsequent coatings.
- 260 **VARNISH:** A clear or semi-transparent wood coating, excluding lacquers and shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.
- 261 **VOLATILE ORGANIC COMPOUND (VOC):** For the purposes of this rule, Avolatile organic compound@ has the same meaning as in Rule 1.1, GENERAL PROVISIONS AND DEFINITIONS.
- 262 **VOC CONTENT:** The weight of VOC per volume of coating, calculated according to the procedures specified in Section 601.
- 263 **WATERPROOFING SEALER:** A coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.
- 264 **WATERPROOFING CONCRETE/MASONRY SEALER:** A clear or pigmented film-forming coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining.
- 265 **WOOD PRESERVATIVE:** A coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, et seq.) and with the California Department of Pesticide Regulation.

300 STANDARDS

301 **VOC CONTENT LIMITS:** Except as provided in subsections 302, 303, 308, and 309 no person shall: (i) manufacture, blend, or repackage for sale within the District; (ii) supply, sell, or offer for sale within the District; or (iii) solicit for application or apply within the District, any architectural coating with a VOC content in excess of the corresponding limit specified in the Table 1, after the specified effective dates.

The limits are expressed in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases. A manufacturer's maximum recommendation means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

TABLE 1 VOC LIMITS				
Coating Category	Effective 11/14/2001	Effective 3/12/2002	Effective 1/1/2003	Effective 1/1/2004
Flat Coatings	250		100	
Nonflat Coatings	250		150	
Nonflat-High Gloss Coatings	250			
Specialty Coatings:				
Antenna Coatings	530			
Antifouling Coatings	400			
Bituminous Roof Coatings	300			
Bituminous Roof Primers	350			
Bond Breakers	350			
Clear Wood Coatings:				
Clear Brushing Lacquers	680			
Lacquers (including lacquer sanding sealers)	680		550	
Sanding Seals (other than lacquer sanding sealers)				
	350			
Varnishes	350			
Concrete Curing Compounds	350			
Dry Fog Coatings	400			

TABLE 1 VOC LIMITS				
Coating Category	Effective 11/14/2001	Effective 3/12/2002	Effective 1/1/2003	Effective 1/1/2004
Faux Finishing Coatings	350			
Fire Resistive Coatings	350			
Clear Fire-Retardant Coatings	650			
Opaque Fire-Retardant Coatings	350			
Floor Coatings	400	250		
Flow Coatings	420			
Form-Release Compounds	250			
Graphic Arts Coatings (Sign Paints)	500			
High Temperature Coatings	420			
Industrial Maintenance Coatings	420			250
Low Solids Coatings ¹	120			
Magnesite Cement Coatings	450			
Mastic Texture Coatings	300			
Metallic Pigmented Coatings	500			
Multi-Color Coatings	420		250	
Pre-Treatment Wash Primers	420			
Primers, Sealers, & Undercoaters	350		200	
Quick-Dry Enamels	400		250	
Quick-Dry Primers, Sealers & Undercoaters	450		200	
Recycled Coatings	250			
Roof Coatings	250			
Rust Preventative Coatings	400			
Clear Shellacs	730			
Opaque Shellacs	550			
Specialty Primers/Sealers & Undercoaters	350			
Stains	350		250	
Swimming Pool Coatings	340			
Swimming Pool Repair & Maintenance	340			
Temperature-Indicator Safety Coatings	550			

TABLE 1 VOC LIMITS				
Coating Category	Effective 11/14/2001	Effective 3/12/2002	Effective 1/1/2003	Effective 1/1/2004
Traffic Marking Coatings	150			
Waterproofing Sealers	400		250	
Waterproofing Concrete/Masonry Sealers	400			
Wood Preservatives	350			

¹ Units are grams of VOC per liter of coating, including water and exempt compounds.

The specified limits in column 1 (Effective 11/14/2001) remain in effect unless revised limits are listed in subsequent columns in the table.

Conversion factor: one (1) pound VOC per gallon (U.S.) = 119.95 grams VOC per liter.

302 **MOST RESTRICTIVE VOC LIMIT:** If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on its behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in TABLE 1, then the most restrictive VOC content limit shall apply. This provision does not apply to the coating categories specified in subsections 302.1 through 302.15.

- 302.1 Lacquer coatings (including lacquer sanding sealers).
- 302.2 Metallic pigmented coatings.
- 302.3 Shellacs.
- 302.4 Fire-retardant coatings.
- 302.5 Pretreatment wash primers.
- 302.6 Industrial maintenance coatings.
- 302.7 Low-solids coatings.
- 302.8 Wood preservatives.
- 302.9 High temperature coatings.
- 302.10 Temperature-indicator safety coatings.
- 302.11 Antenna coatings.
- 302.12 Antifouling coatings.
- 302.13 Flow coatings.
- 302.14 Bituminous roof primers.
- 302.15 Specialty primers, sealers, and undercoaters.

303 **SELL-THROUGH OF COATINGS:**

303.1 A coating manufactured prior to the January 1, 2003, or January 1, 2004, effective date specified for that coating in TABLE 1 may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in TABLE 1 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This subsection 303 does not apply to any coating that complies with the future effective dates of January 1, 2003, or January 1, 2004, or that does not display the date or date-code required by subsection 401.1.

303.2 A coating included in an approved Averaging Program that does not comply with the specified limit in TABLE 1 may be sold, supplied, or offered for sale for up to three (3) years after the end of the compliance period specified in the approved Averaging Program. In addition, such a coating may be applied at any time, both during and after the compliance period. This subsection 303.2 does not apply to any coating that does not display on the container either the statement: ~~A~~This product is subject to architectural coatings averaging provisions in California® or a substitute symbol specified by the Executive Officer of the California Air Resources Board. This subsection 303.2 shall remain in effect until January 1, 2008.

304 **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. These 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.

- 305 **THINNING:** No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in TABLE 1.
- 306 **RUST PREVENTATIVE COATINGS:** Effective January 1, 2004, no person shall apply or solicit the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coating VOC limit specified in TABLE 1.
- 307 **COATINGS NOT LISTED IN TABLE 1:** For any coating that does not meet any of the definitions for the specialty coatings categories listed in TABLE 1, the VOC content limit shall be determined by classifying the coating as a flat coating, a nonflat coating, or a nonflat-high gloss coating, based on its gloss, as defined in subsections 221, 234, and 235 and the corresponding flat, nonflat, or nonflat-high gloss VOC limit shall apply.
- 308 **LACQUERS:** Notwithstanding the provisions of Sections 301 and 305, a person or facility may add up to 10 percent by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70 percent and temperature below 65 degrees Fahrenheit, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.
- 309 **AVERAGING COMPLIANCE OPTION:** On or after January 1, 2003, in lieu of compliance with the specified limits in TABLE 1 for: floor coatings; industrial maintenance coatings; primers, sealers, and undercoaters; quick-dry primers, sealers, and undercoaters; quick-dry enamels; roof coatings; bituminous roof coatings; rust preventative coatings; stains; waterproofing sealers, as well as flats and non-flats (excluding recycled coatings), manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to

the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year. Such manufacturers must also comply with the averaging provisions contained in Appendix A, as well as maintain and make available for inspection records for at least three (3) years after the end of the compliance period. This subsection 309 and Appendix A shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.

400 ADMINISTRATIVE REQUIREMENTS

401 CONTAINER LABELING REQUIREMENTS: Each manufacturer of any architectural coating subject to this rule shall display the information listed in subsections 401.1 through 401.9 on the coating container (or label) in which the coating is sold or distributed.

401.1 Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the California Air Resources Board (ARB).

401.2 Thinning Recommendations: A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.

401.3 VOC Content: Each container of any coating subject to this rule shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content

displayed shall be calculated using product formulation data, or shall be determined using the test methods in Section 602. The equations in Section 601 shall be used to calculate VOC content.

- 401.4 **Industrial Maintenance Coatings:** In addition to the information specified in subsections 401.1, 401.2, and 401.3, each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the descriptions listed in subsections 401.4.a through 401.4.c.
- a. AFor industrial use only.@"
 - b. AFor professional use only.@"
 - c. ANot for residential use@" or ANot intended for residential use.@"
- 401.5 **Clear Brushing Lacquers:** Effective January 1, 2003, the labels of all clear brushing lacquers shall prominently display the statements AFor brush application only@", and AThis product must not be thinned or sprayed.@"
- 401.6 **Rust Preventative Coatings:** Effective January 1, 2003, the labels of all rust preventative coatings shall prominently display the statement AFor Metal Substrates Only.@"
- 401.7 **Specialty Primers, Sealers, and Undercoaters:** Effective January 1, 2003, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed in Subsection 401.7.a through 401.7.e.
- a. For blocking stains.
 - b. For fire-damaged substrates.
 - c. For smoke-damaged substrates.
 - d. For water-damaged substrates.
 - e. For excessively chalky substrates.
- 401.8 **Quick Dry Enamels:** Effective January 1, 2003, the labels of all quick dry enamels shall

prominently display the words **AQuick Dry®** and the dry hard time.

401.9 **Nonflat-High Gloss Coatings:** Effective January 1, 2003, the labels of all nonflat-high gloss coatings shall prominently display the words **AHigh Gloss.®**

402 **CALCULATION OF VOC CONTENT:** For the purpose of determining compliance with the VOC content limits in TABLE 1, the VOC content of a coating shall be determined by using the procedures described in subsection 402.1 or 402.2, as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

402.1 With the exception of low solids coatings, determine the VOC content in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and exempt compounds. Determine the VOC content using the following equation:

where:

VOC content = grams of VOC per liter of coating

W_S = weight of volatiles, in grams

W_W = weight of water, in grams

W_{EC} = weight of exempt compounds, in grams

V_M = volume of coating, in liters

V_W = volume of water, in liters

V_{EC} = volume of exempt compounds, in liters.

402.2 For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds. Determine the VOC content using the following equation:

where:

VOC content_{LS} = the VOC content of a low solids coating in grams of VOC per liter of coating

W_S = weight of volatiles, in grams

W_W = weight of water, in grams

W_{EC} = weight of exempt compounds, in grams

V_M = volume of coating, in liters.

500 MONITORING AND RECORDS

501 REPORTING REQUIREMENTS

- 501.1 **CLEAR BRUSHING LACQUERS:** Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the California Air Resources Board (ARB). The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.
- 501.2 **RUST PREVENTATIVE COATINGS:** Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.
- 501.3 **SPECIALTY PRIMERS, SEALERS, AND UNDERCOATERS:** Each manufacturer of specialty primers, sealers, and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers, and undercoaters sold in the State during the

preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

- 501.4 **TOXIC EXEMPT COMPOUNDS:** For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, report to the Executive Officer of the ARB the following information for products sold in California during the preceding year:
- 501.4.a the product brand name and a copy of the product label with legible usage instructions;
 - 501.4.b the product category listed in TABLE 1 to which the coating belongs;
 - 501.4.c the total sales in California during the calendar year to the nearest gallon;
 - 501.4.d the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.
- 501.5 **RECYCLED COATINGS:** Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.
- 501.6 **BITUMINOUS COATINGS:** Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004,

submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

502 TESTING PROCEDURE

502.1 **VOC CONTENT OF COATINGS:** To determine the physical properties of a coating in order to perform the calculations in Section 402, the reference method for VOC content is U.S. EPA Method 24, incorporated by reference in subsection 502.4.k., except as provided in subsections 502.2 and 502.3. An alternative method to determine the VOC content of coatings is South Coast Air Quality Management District (SCAQMD) Method 304-91 (Revised February 1996), incorporated by reference in subsection 502.4.l. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in subsection 502.4.j.

To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Section 502.2, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping).

However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when an alternative method is approved as specified in Section 502.2. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.

- 502.2 **ALTERNATIVE TEST METHODS:** Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with Section 502.1, after review and approved in writing by the staffs of the District, the ARB, and the U.S. EPA, may also be used.
- 502.3 **METHACRYLATE TRAFFIC MARKING COATINGS:** Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (title 40 CFR 59, subpart D, appendix A), incorporated by reference in subsection 502.4.m. This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.
- 502.4 **TEST METHODS:** The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this rule:
- a. **Flame Spread Index:** The flame spread index of a fire-retardant coating shall be determined by ASTM Designation E 84-99, Standard Test Method for Surface Burning Characteristics of Building Materials (see Section 220, Fire-Retardant Coating).
 - b. **Fire Resistance Rating:** The fire resistance rating of a fire-resistive coating shall be determined by ASTM Designation E 119-98, Standard Test Methods for Fire Tests of Building Construction Materials (see Section 219, Fire-Resistive Coating).
 - c. **Gloss Determination:** The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999), Standard Test Method for Specular Gloss (see Sections 221, 234, 235 and 240, Flat Coating, Nonflat Coating, Nonflat-High

- Gloss Coating, and Quick-Dry Enamel).
- d. **Metal Content of Coatings:** The metallic content of a coating shall be determined by South Coast Air Quality Management District Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction, *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples* (see Section 232, Metallic Pigmented Coating).
 - e. **Acid Content of Coatings:** The acid content of a coating shall be determined by ASTM Designation D 1613-96, Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products (see Section 238, Pre-treatment Wash Primer).
 - f. **Drying Times:** The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature (see Section 240 and 241, Quick-Dry Enamel and Quick-Dry Primer, Sealer, and Undercoater). The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640-95.
 - g. **Surface Chalkiness:** The chalkiness of a surface shall be determined by ASTM Designation D 4214-98, Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films (see Section 252, Specialty Primer, Sealer, and Undercoater).
 - h. **Exempt Compounds-Siloxanes:** Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with section 502 by Bay

Area Air Quality Management District (BAAQMD) Method 43, Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials, *BAAQMD Manual of Procedures*, Volume III, adopted November 6, 1996 (see Section 261, Volatile Organic Compound, and Section 502.1).

- i. **Exempt Compounds-Parachlorobenzotrifluoride (PCBTF):** The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with section 502 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 December 20, 1995 (see Section 261, Volatile Organic Compound, and Section 502.1).
- j. **Exempt Compounds:** The content of compounds exempt under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1996), Determination of Exempt Compounds, *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Section 561, Volatile Organic Compound and Section 502.1).
- k. **VOC Content of Coatings:** The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in title 40 CFR part 60, appendix A, Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings (see Section 502.1).
- l. **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 Section

502.1).

- m. **Methacrylate Traffic Marking Coatings:**
The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in title 40 CFR part 59, subpart D, appendix A, Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings (September 11, 1998) (see Section 502.1).

APPENDIX A

MANUFACTURER-S STATEWIDE VOC AVERAGING PROGRAM

A. Averaging Provisions

A.1 The manufacturer shall demonstrate that the actual emissions from the coatings being averaged are less than or equal to the allowable emissions, for the specified compliance period using the following equation:

where:

G_i = total gallons of product(i) subject to averaging

M_i = material VOC content of product(i) in pounds per gallon

V_i = percent by volume solids and VOC in product(i)

Where W_s , W_w , W_{ec} , V_m , V_w , and V_{ec} are defined in Section 402, except that in this Appendix A, weights are stated in pounds and volumes are stated in gallons.

For non-zero VOC coatings:

where:

For zero-VOC coatings:

V_i = percent solids by volume

L_i = regulatory VOC content limit for product(i) in pounds per gallon as specified in TABLE 1.

The averaging is limited to coatings that are designated by the manufacturer. Any coating not designated in the averaging program (Program) shall comply with the VOC limit in TABLE 1. The manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in California, if statewide coatings data are used. If District-specific coatings data are used, the manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in the District.

A.1.1 In addition, to the requirements specified in Section A.1, manufacturers shall not include in a Program any coating with a VOC content in excess of the following maximum VOC content, for the applicable categories.

Table 2 AVERAGING CATEGORIES AND VOC CEILING LIMITS		
Coating Category	Rule VOC Limit (In effect or effective on 1/1/2003 or 1/1/2004)	Averaging VOC Ceiling (Maximum VOC Allowed)
Flat Coating	100	250
Nonflat Coating	150	250
Floor Coatings	250	400
Industrial Maintenance Coatings	250	420
Primers, Sealers, and Undercoaters	200	350
Quick-Dry Primers, Sealers, and Undercoaters	200	450
Quick-Dry Enamels	250	400
Roof Coatings	250	250
Bituminous Roof Coatings	300	300
Rust Preventative Coatings	400	400
Stains	250	350
Waterproofing Sealers	250	400

A.2 Averaging Program (Program)

At least six (6) months prior to the start of the compliance period, manufacturers shall submit an averaging program (Program) to the Executive Officer of the California Air Resources Board (ARB). As used in this Appendix A, Executive Officer means the Executive Officer of the ARB. Averaging may not be implemented until the Program is approved in writing by the Executive Officer.

Within 45 days of submittal of a complete Program, the Executive Officer shall either approve or disapprove the Program. The Program applicant and the Executive Officer may agree to an extension of time for the Executive Officer to take action on the Program.

A.3 General Requirements

The Program shall include all necessary information for the Executive Officer to make a determination as to whether the manufacturer may comply with the

averaging requirements over the specified compliance period in an enforceable manner. Such information shall include, but is not limited to, the following:

- 3.1 An identification of the contact persons, telephone numbers, and name of the manufacturer who is submitting the Program.
- 3.2 An identification of each coating that has been selected by the manufacturer for inclusion in this program that exceeds the applicable VOC limit in TABLE 1, its VOC content specified in units of both VOC actual and VOC regulatory, and the designation of the coating category.
- 3.3 A detailed demonstration showing that the projected actual emissions will not exceed the allowable emissions for a single compliance period that the Program will be in effect. In addition, the demonstration shall include VOC content information for each coating that is below the compliance limit in TABLE 1. The demonstration shall use the equation specified in subsection A.1 of this Appendix for projecting the actual emissions and allowable emissions during each compliance period. The demonstration shall also include all VOC content levels and projected volume sold within the State for each coating listed in the Program during each compliance period. The requested data can be summarized in a matrix form.
- 3.4 A specification of the compliance period(s) and applicable reporting dates. The length of the compliance period shall not be more than one year or less than six months.
- 3.5 An identification and description of all records to be made available to the Executive Officer upon request, if different than those identified under subsection A.3.6.
- 3.6 An identification and description of specific records to be used in calculating emissions for the Program and subsequent reporting, and a detailed explanation as to how those records will be used by the manufacturer to verify compliance with the averaging requirements.

- 3.7 A statement, signed by a responsible party for the manufacturer, that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request.

A.4 Reporting Requirements

- 4.1 For every single compliance period, the manufacturer shall submit a mid-term report listing all coatings subject to averaging during the first half of the compliance period, detailed analysis of the actual and allowable emissions at the end of the mid-term, and an explanation as to how the manufacturer intends to achieve compliance by the end of the compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct. The mid-term report shall be submitted within 45 days after the midway date of the compliance period. A manufacturer may request, in writing, an extension of up to 15 days for submittal of the mid-term report.
- 4.2 Within 60 days after the end of the compliance period or upon termination of the Program, whichever is sooner, the manufacturer shall submit to the Executive Officer a report listing all coatings subject to averaging during the compliance period, providing a detailed demonstration of the balance between the actual and allowable emissions for the compliance period, any identification and description of specific records used by the manufacturer to verify compliance with the averaging requirements, and any other information requested by the Executive Officer to determine whether the manufacturer complied with the averaging requirements over the specified compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request. A manufacturer may request, in writing, an extension of up to 30 days for submittal of the final report.

A.5 Renewal of a Program

A Program automatically expires at the end of the compliance period. The manufacturer may request a renewal of the Program by submitting a renewal request that shall include an updated Program, meeting all applicable Program requirements. The renewal request will be considered conditionally approved until the Executive Officer makes a final decision to deny or approve the renewal request based on a determination of whether the manufacturer is likely to comply with the averaging requirements. The Executive Officer shall base such determination on all available information, including but not limited to, the mid-term and the final reports of the preceding compliance period. The Executive Officer shall make a decision to deny or approve a renewal request no later than 45 days from the date of the final report submittal, unless the manufacturer and the Executive Officer agree to an extension of time for the Executive Officer to take action on the renewal request.

A.6 Modification of a Program

A manufacturer may request a modification of the Program at any time prior to the end of the compliance period. The Executive Officer shall take action to approve or disapprove the modification request no longer than 45 days from the date of its submittal. No modification of the compliance period shall be allowed. A Program need not be modified to specify additional coatings to be averaged that are below the applicable VOC limits.

A.7 Termination of a Program

7.1 A manufacturer may terminate its Program at any time by filing a written notification to the Executive Officer. The filing date shall be considered the effective date of the termination, and all other provisions of this rule including the VOC limits shall immediately thereafter apply. The manufacturer shall also submit a final report 60 days after the termination date. Any exceedance of the actual emissions over the allowable emissions over the period that the Program was in effect shall constitute a separate violation for each day of the entire compliance period.

7.2 The Executive Officer may terminate a Program if

any of the following circumstances occur:

7.2.1 The manufacturer violates the requirements of the approved Program, and at the end of the compliance period, the actual emissions exceed the allowable emissions.

7.2.2 The manufacturer demonstrates a recurring pattern of violations and has consistently failed to take the necessary steps to correct those violations.

A.8 Change in VOC Limits

If the VOC limits of a coating listed in the Program are amended such that its effective date is less than one (1) year from the date of adoption, the affected manufacturer may base its averaging on the prior limits of that coating until the end of the compliance period immediately following the date of adoption.

A.9 Labeling

Each container of any coating that is included in the Program, and that exceeds the applicable VOC limit in TABLE 1 shall display the following statement: "This product is subject to architectural coatings averaging provisions in California.@ A symbol specified by the Executive Officer may be used as a substitute.

A.10 Violations

The exceedance of the allowable emissions for any compliance period shall constitute a separate violation for each day of the compliance period. However, any violation of the requirements of the Program of this rule, which the violator can demonstrate, to the Executive Officer, did not cause or allow the emission of an air contaminant and was not the result of negligent or knowing activity may be considered a minor violation.

A.11 Sunset of Averaging Provision

The averaging provision set forth in Appendix A shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.

6/22/78

RULE 2.15 Disposal and Evaporation of Solvents. A

person shall not during any one day dispose of a total of more than $1\frac{1}{2}$ gallons of any photochemically reactive solvent, as defined in Rule 2.13.j, or of any material containing more than $1\frac{1}{2}$ gallons of photochemically reactive organic solvents, as designated in Rule 2.13.j, by any means which will permit the evaporation of such organic solvents into the atmosphere.

2/21/72

RULE 2.16 Fuel Burning Equipment.

A person shall not build, erect, install or expand any non-mobile fuel burning equipment unit unless the discharge into the atmosphere of contaminants will not and does not exceed any one or more of the following rates:

- a. 200 pounds per hour of sulphur compounds, calculated as sulphur dioxide (SO_2);
- b. 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO_2);
- c. 10 pounds per hour of combustion contaminants derived from the fuel.

For the purpose of this Rule, a fuel burning equipment unit shall be comprised of the minimum number of boilers, furnaces, jet engines or other fuel burning equipment, the simultaneous operations of which are required for the production of useful heat or power.

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

Nothing in this Rule shall be construed as preventing the maintenance or preventing the alteration or modification, of an existing fuel burning equipment unit which will reduce its mass rate of air contaminant emissions.

This Rule shall not apply to any processing operation in which a flame directly contacts the material being processed, until such time as Federal standards (Health, Education and Welfare) are completed.

RULE 2.17. Circumvention.

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 or conceals an emission which would otherwise constitute a violation of Division 26, Part 3 and Part 4 of the Health and Safety Code of the State of California or of these Rules and Regulations. This section 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.

7/19/74

Rule 2.19 Particulate Matter Process Emission Rate.

No person shall discharge in any one hour from any process unit except for motor vehicles and implements of husbandry particulate matter of a weight in excess of the amount shown for the corresponding process weight per hour in the following table. Use the process weight per hour as defined in Rule 1.2.y to find the corresponding allowable process emission rate..

TABLE

PROCESS WEIGHT VS ALLOWABLE EMISSION RATE PER HOUR.

Process Weight		Allowable Emission Rate
More Than	To and Including	Lbs/Hr
0	400	1
400	800	2
800	1500	3
1500	2200	4
2200	2900	5
2900	4100	6
4100	5400	7
5400	7000	8
7000	8500	9
8500	10000	10
10000	11600	11
11600	13200	12
13200	14800	13
14800	16400	14
16400	18000	15
18000	19600	16
19600	21300	17
21300	23000	18
23000	24700	19
24700	26500	20
26500	28300	21
28300	30000	22
30000	31700	23
31700	33300	24
33300	35000	25

TABLE--PROCESS WEIGHT VS ALLOWABLE EMISSION RATE PER HOUR (Cont'd)

More Than	To and Including	Lbs/Hr
35000	36700	26
36700	38300	27
38300	40000	28
40000	41700	29
41700	43300	30
43300	45000	31
45000	46700	32
46700	48300	33
48300	50000	34
50000	51700	35
51700	53300	36
53300	55000	37
55000	56700	38
56700	58300	39
58300		40

RULE 2.20. Orchard Heaters.

No new orchard or citrus heater produced or manufactured shall be sold for use in this District against frost damage unless it has been approved by the State Air Resources Board in accordance with Section 31860 of the Health and Safety Code. No person shall use any orchard or citrus heater after May 1st, 1974 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.

RULE 2.21
ORGANIC LIQUID STORAGE AND TRANSFER

ADOPTED March 23, 1994

REVISED June 12, 2002

REVISED September 14, 2005

REVISED March 12, 2014

REVISED September 14, 2016

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100 GENERAL

- 101 **PURPOSE:** To limit emissions of volatile organic compounds from the storage and transfer of organic liquids.
- 102 **APPLICABILITY:** This rule applies to any above ground stationary storage tank with a capacity of greater than 250 gallons, any gasoline bulk plant, any terminal, or any transport vessel that stores or transfers an organic liquid with a true vapor pressure of 0.5 psia or greater. For the purposes of this rule, the organic liquid's true vapor pressure may be obtained from Table 1, provided that the actual storage temperature of the organic liquid does not exceed the corresponding maximum temperature specified, or may be determined according to the test method specified in Section 602, under actual storage conditions.
- 110 **EXEMPTION - SMALL CAPACITY STORAGE TANKS:** The provisions of this rule do not apply to stationary storage tanks having a capacity of equal to or less than 250 gallons.
- 111 **LIMITED EXEMPTION - PREVENTATIVE MAINTENANCE:** The provisions of sections 302, 303, 304, 305, 306, and 307 shall not apply to tanks undergoing preventative maintenance provided all of the following conditions are met:
- 111.1 The operator shall notify the APCO prior to performing preventative maintenance. In this notification, the operator shall identify the affected tank, list the requirement(s) the operator wishes to exempt, explain how the maintenance will prevent compliance with the requirement(s), specify the expected duration of maintenance, describe the measure(s) the operator will take to minimize emissions as much as practicable during maintenance, and explain the anticipated effect of not performing the maintenance.
 - 111.2 The tank is in compliance with all District regulations prior to undergoing preventative maintenance.
 - 111.3 Replacement of any tank seal section must comply with the applicable provisions of this rule and the District must receive written notification of the tank permit number and seal type at least three days prior to installation. Replacement of seal sections having a cumulative length greater than 20% of the tank circumference would be subject to the permitting provisions in Rule 3.1.
 - 111.4 The tanks shall not receive or empty product while undergoing preventative maintenance.

100 GENERAL

101 **PURPOSE:** To limit emissions of volatile organic compounds from the storage and transfer of organic liquids.

102 **APPLICABILITY:** This rule applies to any storage tank with a capacity of greater than 250 gallons, any gasoline bulk plant, any terminal, or any transport vessel that stores or transfers an organic liquid with a true vapor pressure of 0.5 psia or greater. For the purposes of this rule, the organic liquid's true vapor pressure may be obtained from Table 1, provided that the actual storage temperature of the organic liquid does not exceed the corresponding maximum temperature specified or, may be determined according to the test method specified in Section 602, under actual storage conditions.

110 **EXEMPTION - SMALL CAPACITY STORAGE TANKS:** The provisions of this rule do not apply to stationary storage tanks having a capacity of equal to or less than 250 gallons.

111 **LIMITED EXEMPTION - PREVENTATIVE MAINTENANCE:**
The provisions of sections 302,303,304,305, 306, and 307 shall not apply to tanks undergoing preventative maintenance provided all of the following conditions are met:

111.1The operator shall notify the APCO prior to performing preventative maintenance. In this notification, the operator shall identify the affected tank, list the requirement(s) the operator wishes to exempt, explain how the maintenance will prevent compliance with the requirement(s), specify the expected duration of maintenance, describe the measure(s) the operator will take to minimize emissions as much as practicable during maintenance, and explain the anticipated effect of not performing the maintenance.

111.2The tank is in compliance with all District regulations prior to undergoing preventative maintenance.

111.3Replacement of any tank seal section must comply with the applicable provisions of this rule and the District must receive written notification of the tank permit number and seal type at least three days prior to installation. Replacement of seal sections having a

cumulative length greater than 20% of the tank circumference would be subject to the permitting provisions in Rule 3.1.

111.4 The tanks shall not receive or empty product while undergoing preventative maintenance.

111.5 Emissions shall be minimized to the maximum extent practicable during preventative maintenance. Any mitigation measure(s) shall be implemented immediately.

111.6 All preventative maintenance shall be accomplished as expeditiously as practicable and in no case exceed 72 hours per event. The time allowed under this exemption shall not exceed 12 days annually per tank.

111.7 Records of the preventative maintenance shall be kept in accordance with Sections 503.4, and 504 of this rule.

112 **EXEMPTION - SUBMERGED FILL PIPE:** Storage tanks having a vapor control system as specified in Sections 302 or 303 are exempt from the requirement for a submerged fill pipe.

113 **EXEMPTION - PHARMACEUTICAL MANUFACTURING OPERATIONS:** The provisions of this rule shall not apply to pharmaceutical manufacturing operations applicable to Rule 2.35.

200 DEFINITIONS

201 **AIR POLLUTION CONTROL OFFICER (APCO):** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District.

202 **DECK FITTING:** Any functional or operational device attached to an external or internal floating roof including but not limited to an access hatch, fixed roof support column and well, gauge float, gauge hatch, sample well, guidepole, ladder and well, rim vent, roof drain, roof leg, or vacuum breaker.

203 **EXTERNAL FLOATING ROOF TANK:** A storage tank equipped with a floating roof exposed to the atmosphere that floats on the surface of the stored liquid. The floating roof is equipped with deck fittings, a primary seal, and a secondary seal.

- 204 **FIXED ROOF TANK:** A storage tank with a roof that is permanently affixed to the shell of the storage tank.
- 205 **GAS LEAK:** A reading in excess of 1,000 ppmv, above background, on a portable hydrocarbon analyzer that is calibrated with methane as determined in accordance with the test method specified in Section 605.
- 206 **GAS TIGHT:** A condition without a gas leak.
- 207 **GASOLINE:** Any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 4.0 pounds per square inch or greater, determined in accordance with the test method specified in Section 601, and used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline.
- 208 **GASOLINE BULK PLANT:** Any gasoline loading facility where primary delivery of gasoline to a storage tank is other than by pipeline.
- 209 **GAUGE FLOAT:** A device to indicate the level of the liquid within a storage tank. The float rests on the liquid surface inside a gauge well in the storage tank.
- 210 **GAUGE HATCH/SAMPLE WELL (PORTS):** Consists of a pipe sleeve equipped with a self-closing gasketed cover and allows hand-gauging or sampling of the stored liquid. The gauge hatch/sample port is usually located beneath the gauger's platform, which is mounted on top of the tank shell. A cord may be attached to the self-closing gasketed cover so that the cover can be opened from the platform.
- 211 **GUIDEPOLE:** An anti-rotational device that is fixed to the top and bottom of a storage tank, passing through a well in a floating roof. A guidepole may be solid or be equipped with slots or holes for gauging purposes.
- 212 **INTERNAL FLOATING ROOF TANK:** A storage tank equipped with a fixed roof and a floating roof that floats on the surface of the liquid being contained (but not necessarily in complete contact with it). The floating roof is equipped with deck fittings, a primary seal, and a secondary seal.
- 213 **LEAK FREE:** A liquid leak of less than three drops per minute

from any single leak source other than the liquid fill line and vapor line disconnect operations.

- 214 **LIQUID MOUNTED SEAL:** A primary seal mounted in full contact with the liquid in the annular space between the tank shell and the floating roof.
- 215 **LOADING FACILITY:** Any organic liquid or gasoline loading rack or set of such racks that load organic liquid or gasoline into transport vessels, which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person or persons under common control.
- 216 **MECHANICAL SHOE SEAL:** A metallic sheet (the shoe) that is held vertically against the vertical tank wall. The shoe is connected by braces to the floating roof and is held tightly against the wall by springs or weighted levers. A flexible coated fabric (envelope) is suspended from the shoe seal to the floating roof to form a vapor barrier over the annular space between the roof and the primary seal.
- 217 **ORGANIC LIQUID:** Any liquid which contains any volatile organic compound or mixtures of volatile organic compounds with a true vapor pressure of 0.5 psia or greater under actual storage or loading conditions except liquefied petroleum gases.
- 218 **PRESSURE TANK:** A storage tank that maintains working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere, except under emergency conditions.
- 219 **PRESSURE-VACUUM VALVE:** A valve for relieving any pressure or vacuum exceeding acceptable limits.
- 220 **PREVENTATIVE MAINTENANCE:** Tightening, adjusting, repairing, or replacing a component of a vapor control device, tank roof, roof fitting, or tank seal that has become worn due to normal use. The purpose of preventative maintenance is to prevent equipment breakdowns and to minimize emissions, as much as practicable, over the useful life of the component.
- 221 **REID VAPOR PRESSURE:** The absolute vapor pressure of an

organic liquids except liquified petroleum gases, as determined in accordance with the test method specified in Section 601.

222 **RESILIENT TOROID SEAL:** A core of open-cell foam encapsulated in a coated fabric that is attached to a mounting on the deck perimeter, and is continuous around the floating roof circumference.

223 **RIM VENT:** Rim vents are used on storage tanks equipped with a seal design that creates a vapor pocket in the seal and rim area, such as a mechanical shoe seal. The vent is used to release excess pressure or vacuum that is present in the vapor space bounded by the primary-seal shoe, the floating roof rim, the primary seal fabric, and the liquid level. Rim vents usually consists of weighted pallets that rest on a gasketed cover.

224 **ROOF DRAIN:** A drain on the roof of an external floating roof tank that is used to remove rainwater from the floating roof. A closed roof drain removes the rainwater from the surface of the roof through a flexible hose through the stored liquid prior to exiting the tank. With a closed roof drain, the rainwater does not come in contact with the liquid stored in the tank. An open roof drain is any drain other than the closed roof drain. An open roof drain is typically used only during an emergency.

225 **ROOF LEG:** An adjustable or fixed leg that is attached to the floating roof deck to support or hold the floating roof deck at a predetermined distance off the storage tank bottom to prevent damage to the fittings located underneath the deck and to allow for storage tank cleaning or repair. For adjustable legs, the load-carrying element passes through a well or sleeve in the deck.

226 **STORAGE TANK:** Any above-ground stationary container designed and equipped for storage of an organic liquid.

227 **SUBMERGED FILL PIPE:** Any discharge pipe or nozzle which meets either of the following conditions:

227.1 Where the tank is filled from the top, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 6 inches from the bottom of the tank.

- 227.2 Where the tank is filled from the side, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 24 inches from the bottom of the tank.
- 228 **SWITCH LOADING:** Loading diesel fuel into a delivery vessel or storage tank whose previous load was gasoline; or loading any organic liquid not subject to this rule into a delivery vessel or storage tank whose previous load was an organic liquid subject to this rule.
- 229 **TERMINAL:** Any loading facility where delivery of an organic liquid to a storage tank is primarily by pipeline. In the event the pipeline is not operational, delivery of an organic liquid to the storage tanks may be by transport vessel. If other organic liquids are added to the stock organic liquid, such additives are primarily delivered by transport vessel.
- 230 **TRANSFER EQUIPMENT:** All components of the liquid loading line between the liquid pump and the transporting vessel, and the vapor return line from the transporting vessel to the storage tank, or to and including the vapor recovery system.
- 231 **TRANSPORT VESSEL:** Any cargo tank, tank truck, trailer, or railroad tank car that is designed and equipped to receive and transport organic liquid.
- 232 **TRUE VAPOR PRESSURE:** The equilibrium partial pressure exerted by a organic liquid as determined in accordance with the test method specified in Section 602.
- 233 **VACUUM BREAKER:** A device that equalizes the pressure of the vapor space across the floating roof deck as the deck is either being landed on or off its legs. A vacuum breaker consists of a well with a cover. Attached to the underside of the cover is a guided leg long enough to contact the tank bottom as the floating deck approaches. When in contact with the tank bottom, the guide leg mechanically opens the breaker by lifting the cover off the well; otherwise the cover closes the well. Because the purpose of the vacuum breaker is to allow for the free exchange of air and/or vapor, the well does not extend appreciably below the deck.
- 234 **VAPOR RECOVERY SYSTEM:** Any vapor gathering system which is

capable of collecting and returning discharged VOC vapors and gases during loading of organic liquids into cargo tanks or transport vessels, back to a stationary storage tank, or into an enclosed process system.

235 **VIEWPORT:** An accessible opening in the fixed roof of an internal floating roof tank that measures at least 30 inches on each side or at least 30 inches in diameter.

236 **VISIBLE GAP:** An opening which exceeds 1/8 inch.

237 **VOLATILE ORGANIC COMPOUND (VOC):** For the purposes of this rule, has the same meaning as in Rule 1.1, General Provisions and Definitions.

300 STANDARDS

301 **STORAGE TANK GREATER THAN 40,000 GALLONS CAPACITY:** A person shall not store organic liquid in any stationary storage tank of more than 40,000 gallons capacity, unless such storage tank is a pressure tank or is designed and equipped with one of the vapor loss control devices specified in Sections 302, 303, or 304. The owner or operator of any storage tank subject to the requirements of Sections 302 or 303 shall meet the following requirements:

301.1 The true vapor pressure of the organic liquid stored in the tank is less than 11.0 psia under actual storage conditions as determined in accordance with the test method specified in Section 602.

301.2 The organic liquid is not visible above the floating roof.

301.3 The floating roof is in contact with the liquid contents (but not necessarily in complete contact with it) at all times except when the storage tank is completely emptied, and subsequently refilled. During this period, emptying or refilling shall be a continuous process.

301.4 Written notification shall be provided to the APCO at least 7 days prior to landing a floating roof on its legs.

301.5After June 12, 2002, the installation of a new or replacement primary seal shall be a mechanical shoe seal or liquid mounted seal. For existing resilient toroid seals, replacement means adding, replacing, or altering more than 5% of the seal foam or cover material.

302 **EXTERNAL FLOATING ROOF TANK:** If the vapor loss control device used to comply with Section 301 is an external floating roof tank, the closure device shall meet the following requirements:

302.1Consist of two seals, one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred to as the secondary seal. The primary and secondary seal shall comply with the requirements specified in Sections 306 and 307, as applicable. Deck fittings shall comply with the requirements specified in Section 305.

303 **INTERNAL FLOATING ROOF TANK:** If the vapor loss control device used to comply with Section 301 is an internal floating roof tank, the closure device shall meet the following requirements:

303.1Consist of two seals, one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred to as the secondary seal. The primary and secondary seal shall comply with the requirements specified in Sections 306 and 307, as applicable. Deck fittings shall comply with the requirements specified in Section 305.

303.2Vapor concentrations above an internal floating roof shall not exceed 30% of its lower explosive limit (LEL).

303.3Effective March 23, 1995, all internal floating roof tanks subject to the provisions of this rule that have been degassed shall be equipped with at least 3 viewing ports. The viewports shall be installed on the fixed roof an equidistance apart and in such a manner so that each viewport provides a unobstructed view of the tank wall and roof seal. An alternate number or size of viewports may be approved at the discretion of the

APCO.

304 **VAPOR RECOVERY SYSTEM:** If the vapor loss control device used to comply with Section 301 is a vapor recovery system, such system shall collect and process all organic vapors and gases and meet the following requirements:

304.1The system shall have an abatement efficiency of at least 95% by weight as determined annually in accordance with the test methods specified in Section 603 and Sections 604 and 606, as applicable.

304.2Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times, except during gauging or sampling.

304.3All piping, fittings, and pressure-vacuum relief valves associated with the fixed roof tank and the vapor recovery system shall be constructed and maintained in a gas-tight condition unless the pressure within the fixed roof tank exceeds the valve setting pressure.

305 **DECK FITTING:**

305.1Internal Floating Roof Tank

- a. Fixed roof support columns and wells shall be equipped with a sliding gasketed cover or with a flexible fabric sleeve.
- b. Ladder wells shall be equipped with a gasketed cover. The cover shall be closed at all times, with no visible gaps, except when the well must be opened for access.
- c. Slotted and solid guidepoles shall comply with the requirements specified in Section 305.2.h.
- d. Other deck fittings shall comply with the requirements specified in Sections 305.2.b, 305.2.c, and 305.2.g.

305.2External Floating Roof Tank

- a. Except for slotted or solid guidepoles, vacuum breakers, rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or

- lid that shall be maintained in a closed position at all times, with no visible gaps, except when the device is in actual use.
- b. Vacuum breakers shall be equipped with a gasket, with no visible gaps, and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
 - c. Rim vents shall be equipped with a gasket, with no visible gaps, and shall be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
 - d. Each roof drain that is an open-type roof drain shall be equipped with a slotted membrane fabric cover that covers at least 90% of the area opening. The fabric cover must be impermeable if the liquid is drained into the contents of the tank.
 - e. External floating roof legs shall be equipped with vapor socks or vapor barriers and be maintained in a gas-tight condition.
 - f. Each opening in a floating roof except for vacuum breakers and rim vents shall provide a projection below the liquid surface.
 - g. Each access hatch and gauge float well shall be equipped with a cover that is gasketed and bolted. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.
 - h. Acceptable controls for slotted or solid guidepoles are one of the following:
 - (i) Pole Float System
Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper and pole float. The deck cover shall also be equipped with a gasket between the cover and deck. The wiper or seal of the pole float shall be at or above the height of the pole wiper.
 - (ii) Pole Sleeve System

Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper and pole sleeve. The deck cover shall be equipped with a gasket between the cover and deck. The sleeve extends into the stored liquid.

(iii) Internal Sleeve Emission Control System

An internal guidepole sleeve that eliminates the hydrocarbon vapor emission pathway from inside the tank through the guidepole slots to the outside is a guidepole cover at the top of the guidepole, and a well cover positioned at the top of the guidepole well. The well cover seals any opening between the well cover and the guidepole (e.g. pole wiper), any opening between the well cover and any other object that passes through the well cover, or any other opening in the top of the guidepole well.

(iv) Solid Guidepole System

A solid guidepole system includes, a guidepole cover at the top of the guidepole, and a well cover positioned at the top of the guidepole well. The well cover shall seal any opening between the well cover and the guidepole, any opening between the well cover and any other object that passes through the well cover, or any other opening in the top of the guidepole well.

(v) Flexible Enclosure System

A flexible device that completely encloses the slotted guidepole and eliminates the hydrocarbon vapor emission pathway from

inside the tank through the guidepole slots to the outside air includes a guidepole cover at the top of the guidepole, and a well cover positioned at the top of the guidepole well. The well cover shall seal any opening between the well cover and the guidepole, any opening between the well cover and any object that passes through the well cover, or any other opening in the top of the guidepole well.

306 **MECHANICAL SHOE SEAL AND SECONDARY SEAL:** Any storage tank that is equipped with a mechanical shoe seal shall meet the following requirements:

306.1 There shall be no holes, tears, or openings which allow the emission of organic vapors through the secondary seal. There shall be no holes, tears, or openings in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric.

306.2 Any external floating roof tank where a mechanical shoe seal was installed on or after September 1, 1978, shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface.

306.3 The geometry of the shoe shall be such that the gap between the shoe and the tank shell shall not exceed twice the seal gap criteria for a vertical length greater than 18 inches.

306.4 No gap between the tank shell and the primary seal shall exceed:

- a. 1-1/2 inch.
- b. 1/2 inch for a cumulative length greater than 10% of the circumference of the tank.
- c. 1/8 inch for a continuous length of more than 10% of the circumference of the tank.
- d. 1/8 inch for a cumulative length greater

than 30% of the circumference of the tank.

306.5 Any secondary seal shall extend from the floating roof to the storage tank shell and shall not be attached to the primary seal. For secondary seals installed after March 23, 1995, no gap between the tank shell and the seal shall exceed:

- a. 0.06 inch.
- b. 0.02 inch for a cumulative length greater than 5% of the circumference of the tank excluding gaps less than 1.79 inches from vertical weld seams.

306.6 No gap between the tank shell and the secondary seal shall exceed:

- a. 1/2 inch.
- b. 1/8 inch for a cumulative length greater than 5% of the circumference of the tank.

306.7. The secondary seal shall allow easy insertion of probes up to 1-1/2 inch in width in order to measure gaps in the primary seal.

307 **RESILIENT TOROID OR LIQUID MOUNTED SEAL AND SECONDARY SEAL:**
For any storage tank that is equipped with a resilient toroid seal or a liquid mounted seal shall meet the following requirements:

307.1 There shall be no holes, tears, or openings which allow the emission of organic vapors through the secondary seal. There shall be no holes, tears, or openings in the primary seal.

307.2 For primary seals, no gap between the storage tank shell and the seal shall exceed:

- a. 1/2 inch.
- b. 1/8 inch for a cumulative length greater than 5% of the circumference of the storage tank.

307.3 Any secondary seal shall extend from the floating roof to the storage tank shell and shall not be attached to the primary seal. For secondary seals installed after March 23, 1995, no gap between the tank shell and the seal shall exceed:

- a. 0.06 inch.
- b. 0.02 inch for a cumulative length greater than 5% of the circumference of the tank excluding gaps less than 1.79 inches from vertical weld seams.

307.4 For secondary seals, no gap between the storage tank shell and the secondary seal shall exceed:

- a. 1/2 inch.
- b. 1/8 inch for a cumulative length greater than 5% of the circumference of the storage tank.

307.5 The secondary seal shall allow easy insertion of probes up to 1/2 inch in width in order to measure gaps in the primary seal.

308 **TERMINAL LOADING:** The owner or operator of any terminal shall not transfer or permit to be transferred organic liquid into any transport vessel unless such terminal is equipped with a CARB certified vapor recovery system pursuant to Section 41954 of the California Health and Safety Code that is operated and maintained in compliance with the requirements of such certification or, shall be a District-approved vapor recovery system only when such system does not require CARB certification pursuant to Section 41954 of the California Health and Safety Code.

308.1 A person shall not transfer or permit to be transferred organic liquid into any transport vessel unless the VOC emissions to the atmosphere do not exceed 0.08 pounds per 1,000 gallons of organic liquid transferred.

308.2 All organic liquid loading equipment shall be maintained to be leak free, gas tight, and in good working order.

308.3 During transfer operations, the allowed drainage during disconnect of any transport vessels shall be no more than ten milliliters liquid, averaged over three disconnects.

308.4 All transport vessel loading operations shall be accomplished by bottom loading.

309 **GASOLINE BULK PLANT LOADING:** The owner or operator of any gasoline bulk plant shall not transfer or permit to be transferred organic liquid into any transport vessel unless such gasoline bulk plant is equipped with a CARB certified vapor recovery system pursuant to Section 41954 of the California Health and Safety Code that is operated and maintained in compliance with the requirements of such certification or, shall be a District-approved vapor recovery system only when such system does not require CARB certification pursuant to Section 41954 of the California Health and Safety Code.

309.1All loading facilities transferring organic liquid into transport vessels shall be equipped with a certified vapor recovery system which prevents at least 95% by weight of VOC vapors displaced from entering the atmosphere.

309.2All organic liquid transfer equipment shall be maintained leak free, gas tight, and in good working order.

309.3All transport vessel loading shall be accomplished by bottom loading.

310 **TRANSPORT VESSEL:** No person shall use or operate any transport vessel required to be licensed for use on any street or highway unless such transport vessel has a valid CARB certification pursuant to Section 41962 of the California Health and Safety Code. Each transport vessel shall be operated and maintained in compliance with the requirements of such certification and shall be connected to the loading facility vapor recovery system before organic liquid is transferred.

311 **GASOLINE LOADING OTHER THAN TERMINAL OR GASOLINE BULK PLANT:** Except for equipment subject to Sections 308 or 309, no person shall transfer or permit the transfer of gasoline into any storage tank with a capacity of more than 250 gallons and equal to or less than 40,000 gallons unless the following conditions are met:

311.1Such transfer is made employing a CARB certified vapor recovery system that prevents the release to the atmosphere of not less than 95% by weight of the

organic vapors displaced;

311.2Such transfer is made employing a CARB certified submerged fill pipe; and

311.3The vapor recovery system shall be maintained and operated according to the manufacturer's specifications and as per the most recent applicable CARB Executive Order.

312 **OTHER ORGANIC LIQUID LOADING:** Except for equipment subject to sections 308, 309, or 310, no person shall transfer or permit the transfer of organic liquid with a true vapor pressure greater than 1.5 psia into any storage tank with a capacity of more than 250 gallons and equal to or less than 40,000 gallons unless the following conditions are met:

312.1Such transfer is made employing a vapor control system that prevents the release to the atmosphere of not less than 95% by weight of the organic vapors displaced; and

312.2Such transfer is made employing a submerged fill pipe.

313 **SWITCH LOADING:** Switch loading shall be subject to the requirements of Sections 308, 309, 310, 311 and 312, as applicable.

314 **OPERATING PRACTICES:** Organic liquids subject to this rule shall not be discarded to public sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere.

315 **STORAGE TANK CLEANING:** The emissions of organic compounds resulting from degassing a storage tank subject to the requirements of Section 301 of this rule shall be controlled by a system which collects and processes all organic vapors and gases and has an abatement efficiency of at least 90% by weight. The system shall be operated until the concentration of volatile organic compounds in the tank is less than 10,000 ppm expressed as methane as determined in accordance with the test method specified in Section 605.

500 MAINTENANCE, MONITORING, REPORTING, AND RECORD KEEPING

501 **MAINTENANCE:** The owner or operator of tanks subject to

Section 301, shall submit a maintenance plan to the APCO at least 7 days prior to performing maintenance on any equipment subject to the requirements of this rule. The plan shall state the equipment Permit to Operate number, a detailed description of the maintenance to be performed, the expected duration of the maintenance, the reason that the maintenance is necessary, emission control measures that will be employed, and the effect of not performing the maintenance.

- 502 **MONITORING:** The owner or operator shall submit written notification to the APCO at least 7 days prior to performing monitoring on equipment subject to the requirements of this rule and meet the following:

502.1 To demonstrate compliance with Section 302, the owner or operator shall conduct the following in accordance with the District-approved report format:

- a. Perform complete gap measurements of the primary and secondary seals every 12 months and each time the tank is emptied and degassed.
- b. Perform complete gap measurements of all deck fittings every 12 months and each time the tank is emptied and degassed.

502.2 To demonstrate compliance with Section 303, the owner or operator shall conduct the following in accordance with the District-approved report format:

- a. Visually inspect the secondary seal, floating roof, and deck fittings. Use an explosimeter that is calibrated in accordance with the manufacturer's specifications to measure the lower explosive limit (LEL). Compliance shall be verified every 3 months at a distance of no less than 4 feet from the viewport or access hatch.
- b. After March 23, 1995, perform complete gap measurements of the primary and secondary seals every 10 years and each time the tank is emptied and degassed.
- c. After March 23, 1995, perform complete gap measurements of all deck fittings every 10 years and each time the tank is emptied and

degassed.

502.3 To demonstrate compliance with Section 308, the owner or operator shall conduct the following in accordance with the District-approved report format:

- a. Measure the vapor recovery system emission rate at least once every 12 months in accordance with the test method specified in Section 607 and the terminal operating conditions shall correspond to those established during the testing conducted for the initial certification criterion.

502.4 To demonstrate compliance with section 311, the owner or operator shall conduct and successfully pass the applicable source test using the most recent applicable CARB Executive Orders, in accordance with the test methods and procedures as specified in Section 608 annually. The person conducting the performance or re-verification test shall comply with the following:

- a. Conduct tests in accordance with the applicable test methods specified in Section 608 and other CARB testing procedures. Tests shall be conducted using calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer.
- b. Provide notification to the District at least 3 days prior to testing.
- c. Conduct the tests any time Monday through Friday from 9:00 a.m. through 4:00 p.m.

503 **REPORTING:** The owner or operator subject to the requirements of this rule shall meet the following requirements:

503.1 All reports specified in Section 502 shall include sufficient detail to verify compliance with all applicable rule requirements and shall be submitted to the APCO within 45 calendar days after the monitoring work is completed.

503.2 All source tests performed shall be documented in a report in accordance with the test methods and procedures specified in Section 600. The report shall include sufficient detail to verify compliance with all

applicable rule requirements and shall be submitted to the APCO within 45 calendar days after the completion of the test. The source test report shall include the date of test and names and titles of personnel performing the test.

503.3 For storage tanks, gasoline bulk plants, and terminals, submit throughput reports to the APCO no later than March 31 for the previous calendar year. Storage tank throughput reports shall include the actual quarterly volume of organic liquid transferred into each tank. Gasoline bulk plant and terminal throughput reports shall include the actual quarterly volume of organic liquid transferred.

503.4 All sources claiming the exemption in Section 111 for preventative maintenance shall send to the District a report including an identification of the tank the maintenance was performed on, a description of the maintenance performed, the day(s) the maintenance was performed, and exact time the exemption was claimed.

504 **RECORD KEEPING:** The owner or operator subject to the requirements of this rule shall maintain accurate records to demonstrate compliance in accordance with the requirements of Sections 501, 502, and 503 on site for a period of at least 5 years and make such records available to the APCO upon request.

600 **TEST METHODS:** A result by any of the test methods or test procedures listed below, or any amendments and successors thereto, which shows non-compliance with any provision of this rule shall constitute a violation of this rule.

601 **ASTM METHOD D-323-99a:** Reid vapor pressure shall be determined in accordance with American Society of Testing and Materials D-323-99a, Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).

602 **ASTM METHOD D-2879-97(2002)(e1):** True vapor pressure shall be determined in accordance with American Society of Testing and Materials D-2879-97(2002)(e1), Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.

- 603 **EPA METHODS 2A OR 2B:** The gas flow rate shall be determined in accordance with EPA Method 2A, Direct Measurement of Gas Volume Through Pipes and Small Ducts; or EPA Method 2B, Determination of Exhaust Gas volume flow rate From Gasoline Vapor Incinerators, as applicable.
- 604 **EPA METHOD 18:** Exempt compounds shall be determined in accordance with EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography.
- 605 **EPA METHOD 21:** The gas tight condition shall be determined in accordance with EPA Method 21, Determination of Volatile Organic Compound Leaks, using a portable analyzer calibrated with methane gas.
- 606 **EPA METHODS 25A OR 25B:** VOC emissions shall be determined in accordance with EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer, calibrated with methane gas; or EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, calibrated with methane gas, as applicable.
- 607 **CARB TEST PROCEDURE TP-203.1:** The terminal vapor recovery system efficiency shall be determined in accordance with CARB Vapor Recovery Test Procedure TP-203.1, Determination of Emission Factor of Vapor Recovery Systems of Terminals.
- 608 **CARB TEST PROCEDURES TP-201.1B, TP-201.1C, TP-201.1D, TP-201.1E, TP-201.3, TP-201.3B :** The vapor recovery system efficiency shall be determined in accordance with any of the CARB Vapor Recovery Test Procedures listed above, or the most current CARB Executive Orders as listed on the Permit to Operate.
- 609 **ALTERNATIVE TEST METHODS:** Other test methods demonstrated to provide results that are acceptable for determining Reid or true vapor pressure for purposes of demonstrating compliance with Rule 2.21, after review and approval in writing by the District, the ARB, and the U.S. EPA, may also be used.
- 610 **MULTIPLE TEST METHODS:** When more than one test method 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.

TABLE 1. STORAGE TEMPERATURE VERSUS PRODUCT TRUE VAPOR PRESSURE

Organic Liquid	Reference Properties			Not to Exceed Max. Temperature °F	
	Density lb/gal	Gravity °API	Initial Point °F	0.5 psia	1.5 psia
Kerosene	---	42.5	350	195	250
Diesel	---	36.4	372	230	290
Gas Oil	---	26.2	390	249	310
Stove Oil	---	23.0	421	275	340
Jet Fuel JP-1	---	43.1	330	165	230
Jet Fuel JP-3	---	54.7	110	---	25
Jet Fuel JP-4	---	51.5	150	20	68
Jet Fuel JP-5	---	39.6	355	205	260
Jet Fuel JP-7	---	44-50	360	205	260
Fuel Oil No. 1	---	42.5	350	195	250
Fuel Oil No. 2	---	36.4	372	230	290
Fuel Oil No. 3	---	26.2	390	249	310
Fuel Oil No. 4	---	23.0	421	275	340
Fuel Oil No. 5	---	19.9	560	380	465
Residual Fuel Oil	---	19-27	---	405	---
Fuel Oil No. 6	---	16.2	625	450	---
Asphalt 60-100 pen.	---	---	---	490	550
Asphalt 120-150 pen.	---	---	---	450	500
Asphalt 200-300 pen.	---	---	---	360	420
Acrylonitrile	6.8	41.8	173	30	62
Benzene	7.4	27.7	176	34	70
Carbon Disulfide	10.6	22.1	116	---	10
Carbon Tetrachloride	13.4	---	170	20	63
Chloroform	12.5	---	142	---	40
Cyclohexane	6.5	49.7	177	30	65
1,2 Dichloroethane	10.5	---	180	35	75
Ethyl Acetate	7.5	23.6	171	38	70
Ethyl Alcohol	6.6	47.0	173	55	85
Isopropyl Alcohol	6.6	47.0	181	62	95
Methyl Alcohol	6.6	47.0	148	30	62
Methyl Ethyl Ketone	6.7	44.3	175	30	70
Toluene	7.3	30.0	231	75	120
Vinyl Acetate	7.8	19.6	163	30	65

RULE 2.22
GASOLINE DISPENSING FACILITIES

ADOPTED February 27, 1974

REVISED January 22, 1975

REVISED January 11, 1995

REVISED June 12, 2002

REVISED January 14, 2015

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit displaced gasoline vapors from storage tanks, transport vessels, and motor vehicle fuel tanks using CARB certified Phase I and II vapor recovery systems.
- 102 **APPLICABILITY:** This rule applies to the transfer of gasoline from any transport vessel into any stationary storage tank, and dispensing from any stationary storage tank located at a gasoline dispensing facility into any motor vehicle fuel tank.
- 110 **EXEMPTION:** The provisions of this rule shall not apply to:
- 110.1 Stationary storage tanks that are used exclusively for the fueling of implements of husbandry.
 - 110.2 Dispensing systems of 250 gallons capacity or less.
 - 110.3 Vehicle to vehicle refueling.
 - 110.4 Facilities which exclusively refuel aircraft.
 - 110.5 Facilities which exclusively refuel motor vehicle tanks with a capacity of 5 gallons or less.
- 111 **EXEMPTION – FACILITY THROUGHPUT LESS THAN 24,000 GALLONS PER YEAR:** The provisions of Section 305 shall not apply to any existing facility with a Permit to Operate throughput limit of less than or equal to 24,000 gallons of gasoline per year, provided the facility was in operation prior to January 11, 1995.
- 112 **EXEMPTION – E85:** The provisions of Section 305 shall not apply to the dispensing of E85 into a vehicle fuel tank.
- 113 **EXEMPTION – ONBOARD REFUELING VAPOR RECOVERY:** The provisions of Section 305 shall not apply to non-retail gasoline dispensing facilities where 95% of the vehicles being refueled are equipped with onboard refueling vapor recovery (ORVR) systems.
- 114 **EXEMPTION – GASOLINE BULK PLANT:** The provisions of this rule shall not apply to storage tanks subject to Rule 2.21 located at gasoline bulk plants.
- 115 **EXEMPTION – PHASE I EVR:** The provisions of Section 304.1 shall not apply to any aboveground storage tank used at a gasoline dispensing facility that meets the following requirements:
- 115.1 Such aboveground storage tank is equipped with a Phase I vapor recovery system that meets all of the following requirements:
 - a. The vapor recovery system was CARB certified to achieve a minimum vapor recovery efficiency of 95% by weight.

- b. The vapor recovery system was CARB certified before June 1, 2001.
- c. The aboveground storage tank was installed and in operation before July 1, 2010.

115.2 Such aboveground storage tank has a permitted throughput limit of less than or equal to 60,000 gallons per year, or is found by CARB and the District to be physically incompatible with all certified Phase I EVR systems.

116 **EXEMPTION – PHASE II EVR:** The provisions of Section 305.1 shall not apply to any dispensing unit used on any aboveground storage tank at a gasoline dispensing facility that meets the following requirements:

116.1 The dispensing unit is equipped with a Phase II vapor recovery system that meets all of the following requirements:

- a. The vapor recovery system was CARB certified to recover or process displaced gasoline vapor by at least 95% by weight.
- b. The vapor recovery system was CARB certified before June 1, 2001.

200 **DEFINITIONS**

201 **ALTERED FACILITY:** A gasoline dispensing facility where:

201.1 The removal or addition of storage tank(s), or changes in the number of fueling positions; or

201.2 The replacement of storage tank(s), dispensing nozzle(s) or other equipment with different characteristics or descriptions from those specified on the existing Permit to Operate.

202 **AS-IS-CONDITION:** The unadjusted condition of any gasoline dispensing facility that exists on the day of the test, prior to conducting the test.

203 **BACKFILLING:** The covering of the storage tank, piping or any associated components with soil, aggregate, or other materials prior to laying the finished surface.

204 **BELLOWS-LESS NOZZLE:** Any nozzle that incorporates an aspirator or vacuum assist system and a gasoline vapor capture mechanism at the motor vehicle filler neck, such that the vapors are collected at the vehicle filler neck without the need for an interfacing flexible bellows.

205 **BREAKAWAY COUPLING:** A component attached to the coaxial hose, which allows the safe separation of the hose from the dispenser or the hose from the nozzle in the event of a forced removal such as in the case of a "driveoff."

- 206 **CARB CERTIFIED:** A Phase I or Phase II vapor recovery system, equipment, or any component thereof, for which the California Air Resources Board (CARB) has evaluated its performance and issued a valid Executive Order pursuant to Health and Safety Code Section 41954. Each component of a system is a separate CARB certified item and cannot be replaced with a non-certified item or other items that are not certified for use with the particular system. Except for qualified repairs, a CARB certified component shall be as supplied by the qualified manufacturer. A rebuilt component shall not be deemed as CARB certified unless the person who rebuilds the component is authorized by CARB to rebuild the designated CARB certified component.
- 207 **CLEARLY AND PERMANENTLY MARKED:** An identification of the manufacturer's name, model number, and other required information on a vapor recovery system component that is legible, and the identification is either directly stamped on or attached to the component using methods or materials that would endure constant long term use.
- 208 **COAXIAL FILL TUBE:** A submerged fill tube that contains two passages, one within the other. The center passage transfers gasoline liquid to the storage tank and the outer passage carries the gasoline vapors to the transport vessel.
- 209 **COAXIAL HOSE:** A hose that contains two passages one, within the other. One of the passages dispenses the liquid gasoline into the vehicle fuel tank while the other passage carries the displaced gasoline vapors from the vehicle fuel tank to the storage tank.
- 210 **DISPENSER:** A gasoline dispensing unit used for housing the above ground gasoline and vapor recovery piping, the gasoline meters, and hanger for the gasoline-dispensing nozzles when they are not in use.
- 211 **DRY BREAK OR POPPETED DRY BREAK:** A Phase I vapor recovery component that opens only by connection to a mating device to ensure that no gasoline vapors escape from the underground storage tank before the vapor return line is connected and sealed.
- 212 **E85:** Any alternative vehicle fuel with a nominal 85 percent ethanol composition, having a Reid vapor pressure of 4.0 pounds per square inch or greater and meeting the specifications of Title 13, California Code of Regulations, Section 2292.4.
- 213 **ENHANCED VAPOR RECOVERY (EVR):** Performance standards and specifications set forth in the CARB CP-201 (Certification Procedure for Vapor Recovery Systems at gasoline dispensing facilities) Sections 3 through 9 or in CARB CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) Sections 3 through 10.
- 214 **FUELING POSITION:** A fuel dispensing unit consisting of nozzle(s) and meter(s) with the capability to deliver only one fuel product at one time.

- 215 **GASOLINE:** Any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 4.0 pounds per square inch or greater, determined in accordance with ASTM Test Method D-323-99a, and used as a motor vehicle fuel, or any fuel which is commonly or commercially known or sold as gasoline.
- 216 **GASOLINE BULK PLANT:** Any gasoline loading facility where primary delivery of gasoline to a storage tank is other than by pipeline.
- 217 **GASOLINE DISPENSING FACILITY:** Any stationary facility which receives gasoline from transport vessels and dispenses gasoline directly into the fuel tanks of motor vehicles.
- 218 **GASOLINE VAPORS:** The organic compounds in vapor form displaced during gasoline transfer and dispensing operations, and includes entrained liquid gasoline.
- 219 **IN-STATION DIAGNOSTICS (ISD):** CARB certified equipment that provides continuous real-time monitoring of critical emission related vapor recovery system parameters and components, and alerts the station operator when a failure mode is detected so that corrective action is taken.
- 220 **INSERTION INTERLOCK MECHANISM:** Any CARB certified mechanism that ensures a tight fit at the nozzle fill pipe interface and prohibits the dispensing of gasoline unless the bellows is compressed.
- 221 **LIQUID TIGHT:** A liquid leak rate of no more than 3 drops per minute.
- 222 **LIQUID REMOVAL DEVICE:** A device designed specifically to remove trapped liquid from the vapor return portion of a coaxial hose.
- 223 **MAJOR DEFECT:** A defect in the vapor recovery system or its component, as listed in California Code of Regulations, Title 17, Part III, Chapter 1, Subchapter 8, Section 94006.
- 224 **MINOR DEFECT:** A defect in any gasoline dispensing equipment, which renders the equipment out of good working order but which does not constitute a major defect.
- 225 **MOTOR VEHICLE:** Any self-propelled vehicle as defined in Section 415 of the California Vehicle Code.
- 226 **OWNER/OPERATOR:** Any person who owns, leases, or operates a gasoline dispensing facility.
- 227 **ONBOARD REFUELING VAPOR RECOVERY (ORVR):** A vehicle-based vapor recovery system required by Title 13, California Code of Regulations, Section 1978, or Title 40, Code of Federal Regulations, Part 86.

- 228 **PHASE I:** A gasoline vapor recovery system or equipment that recovers the vapors generated during the transfer of gasoline from transport vessels into storage tanks.
- 229 **PHASE II:** A gasoline vapor recovery system or equipment that recovers the vapors generated during the fueling from storage tanks. A Phase II vapor recovery system may be one of the following:
- 229.1 A balance system, which operates on the principle of vapor displacement;
- 229.2 A vacuum-assist system, which uses a mechanical vacuum-producing device to create a vacuum, or
- 229.3 An aspirator-assist system, which uses an aspirator or eductor to create a vacuum during gasoline dispensing to capture gasoline vapors.
- 230 **PRESSURE/VACUUM RELIEF VALVE:** A valve that is installed on the vent pipes of the gasoline storage tank to relieve pressure or vacuum build-up at preset values of pressure or vacuum within the tank.
- 231 **QUALIFIED MANUFACTURER:** The original equipment manufacturer of the CARB certified vapor recovery system or component, or a rebuilder who is authorized by CARB to rebuild the designated CARB certified component.
- 232 **QUALIFIED REPAIR:** A repair or maintenance of the gasoline dispensing equipment or vapor recovery system component that would restore the function or performance of such equipment/component following the qualified manufacturer's instructions and using only the applicable CARB certified parts supplied by the qualified manufacturer. Unless otherwise authorized by CARB, a repair or maintenance shall not be considered a qualified repair if the action changes the size, shape, or materials of construction of any gasoline vapor passage, or if it may otherwise obstruct, hinder, or reduce the recovery of gasoline vapors during operation.
- 233 **REBUILD:** An action that repairs, replaces, or reconstructs any part of a component of a vapor recovery system that forms the gasoline vapor passage of the component, or that comes in contact with the recovered gasoline vapors in the component. Rebuild does not include the replacement of a complete component with another CARB certified complete component; nor does it include the replacement of a spout, bellows, or vapor guard of a CARB certified nozzle. The new part shall be CARB certified and as supplied by the qualified manufacturer specifically for the CARB certified nozzle.
- 234 **RETAIL GASOLINE DISPENSING FACILITY:** Any gasoline dispensing facility subject to the payment of California sales tax for the sale of gasoline to the public.

- 235 **SPILL BOX:** An enclosed container around a Phase I fill pipe that is designed to collect gasoline spillage resulting from disconnection between the liquid gasoline delivery hose and the fill pipe.
- 236 **STANDING LOSS CONTROL:** A system designed to control vapors from aboveground storage tanks when no Phase I or Phase II gasoline transfers are occurring, and meets the performance standards and specifications set forth in the CARB CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) Section 3.
- 237 **STORAGE TANK:** Any container designed and equipped for storage of an organic liquid.
- 238 **SUBMERGED FILL TUBE:** Any storage tank fill tube with the highest level of the discharge opening entirely submerged, when the liquid level above the bottom of the tank is:
238.1 6 inches, for tanks filled from the top; or
238.2 18 inches for tanks filled from the side.
- 239 **TRANSPORT VESSEL:** Any cargo tank, tank truck, trailer, or railroad tank car that is designed and equipped to receive and transport organic liquid.
- 240 **TOPPING OFF:** To attempt to dispense gasoline to a motor vehicle or utility equipment fuel tank after the vapor recovery dispensing nozzle primary shutoff mechanism has engaged. The filling of those vehicle tanks which, because of the nature and configuration of the fill pipe, causes premature shut off of the dispensing nozzle, and which are filled only after the seal between the fill pipe and the nozzle is broken, shall not be considered topping off.
- 241 **VAPOR CHECK VALVE:** A valve that opens and closes the vapor passage to the storage tank to prevent gasoline vapors from escaping when the nozzle is not in use.
- 242 **VAPOR RECOVERY SYSTEM:** A system installed at a gasoline dispensing facility for collection and recovery of gasoline vapors displaced or emitted from the storage tanks (Phase I) and during refueling of motor vehicle fuel tanks (Phase II).
- 243 **VAPOR TIGHT:** A vapor leak of less than 10,000 ppm hydrocarbon concentration, as determined by EPA Reference Method 21, using an appropriate analyzer calibrated with methane.

300 STANDARDS

- 301 **OPERATING PRACTICES:** A person shall not store gasoline in open container(s) of any size or handle gasoline in any manner (spillage, spraying, etc.) that allows gasoline liquid or gasoline vapors to enter the atmosphere, contaminate the ground, or the public sewer system.

- 302 **CERTIFICATION REQUIREMENTS:** A person shall not offer for sale, sell, or install within the District any vapor recovery equipment unless such equipment is CARB certified. In addition, all new or rebuilt vapor recovery equipment shall be clearly identified or marked by the certified manufacturing company and/or the certified rebuilding company.
- 303 **TOPPING OFF:** A person shall not top off motor vehicle fuel tanks.
- 304 **GASOLINE TRANSFER INTO STORAGE TANKS (PHASE I):** A person shall not transfer, allow the transfer or provide equipment for the transfer of gasoline from any transport vessel into any storage tank with a capacity of 251 gallons or more unless all of the following conditions are met:
- 304.1 Such storage tank is equipped with a CARB certified Phase I enhanced vapor recovery system.
- 304.2 The vapor recovery system shall be maintained and operated according to the manufacturer's specifications and as per the most recent applicable CARB Executive Orders.
- 304.3 All vapor return lines are connected between the transport vessel and the storage tank while gasoline is transferred, and all associated hoses, fittings, and couplings are maintained in a liquid tight and vapor tight condition.
- 304.4 Such storage tank is equipped with a CARB certified submerged fill tube.
- 304.5 The fill tube shall be maintained liquid tight, vapor tight, and free of air ingestion. A fill tube that is free of air ingestion is determined by observing the gasoline stream as clear and free of air bubbles through the sight windows on the fill tube, except during the initial and final 60 seconds of gasoline transfer.
- 304.6 The following equipment shall be installed, operated and maintained as specified below:
- a. All fill tubes are equipped with vapor tight caps;
 - b. All dry breaks are equipped with vapor tight seals and vapor tight caps;
 - c. All CARB certified coaxial fill tubes are spring-loaded and operated so that the vapor passage from the storage tank back to the transport vessel is not obstructed;
 - d. The fill tube assembly, including fill tube, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the vapor recovery system;
 - e. All storage tank vapor return lines without dry breaks are equipped with vapor tight caps;
 - f. Each vapor tight cap is in a closed position except when the fill tube or dry break it serves is actively in use; and
 - g. Each gasoline delivery elbow is equipped with sight windows.

- 304.7 Any time an underground storage tank is installed or replaced at any gasoline dispensing facility, a CARB certified spill box shall be installed. The spill box shall be maintained free of standing liquid, debris, and other foreign matter and equipped with an integral drain valve or any other CARB certified device that returns spilled gasoline to the underground storage tank. The drain valve shall be maintained closed and free of vapor emissions at all times except when the valve is actively in use.
- 304.8 The hatch on any transport vessel shall be equipped and operated with a vapor tight cover during gasoline transfer and pumping. The hatch shall not be opened except for visual inspection, which may be performed after at least 3 minutes following the completion of the gasoline transfer or pumping. Except otherwise specified by CARB, visual inspection shall be completed in 3 minutes or less.
- 304.9 All open pipe vents on stationary tanks at gasoline dispensing facilities shall be equipped with a pressure-vacuum relief valve. Unless otherwise specified in the most recent applicable CARB Executive Orders, the pressure relief for an underground storage tank shall be set for pressure relief at 3 ± 0.5 inches water column and vacuum relief at 8 ± 0.5 inches water column. For the purpose of this section, vent pipes of storage tanks may be manifolded according to the most recent applicable CARB Executive Order.
- 304.10 The vent pipe opening on underground tanks shall be at least 12 feet above surface grade.
- 304.11 Such aboveground storage tank is equipped with CARB Certified Standing Loss Control.
- 305 **GASOLINE DISPENSING INTO MOTOR VEHICLE FUEL TANKS (PHASE II):** A person shall not dispense or allow the dispensing or provide equipment for the dispensing of gasoline to a motor vehicle fuel tank with a capacity of greater than 5 gallons from a gasoline dispensing system unless all of the following requirements are met.
- 305.1 The transfer is made with a dispensing unit that is equipped with a CARB certified Phase II enhanced vapor recovery system.
- 305.2 The vapor recovery system and associated components shall be operated and maintained in a manner in accordance with the manufacturer's specifications and as per the most recent applicable CARB Executive Orders.
- 305.3 The vapor recovery system and associated components shall be operated and maintained free of major defects and in a vapor and liquid tight condition at all times.

- 305.4 Where District personnel determine that any vapor recovery component contains a minor defect, District personnel shall provide the owner/operator with a notice of correction specifying the basis on which the component is deemed defective. The owner/operator shall repair or replace such component and provide the District with adequate evidence that the component is in good working order within 7 days of receiving the notice. Furthermore, if the APCO makes a determination that any vapor recovery component may not be in compliance with any provision of this rule, the APCO may require the owner/operator to conduct and successfully pass an applicable test in accordance with the test methods and procedures specified in Section 600 to verify compliance.
- 305.5 In the event of a separation of a hose from the dispenser or a hose from the nozzle (i.e., "driveoff"), the owner/operator shall complete one of the following and document the repair activities as specified in Section 502:
- a. Conduct a visual inspection of the affected equipment and perform qualified repairs on any damaged components before placing any affected equipment back in service. In addition, the affected equipment shall be tested in accordance to applicable test methods as specified in the applicable CARB Executive Orders and the corresponding CARB approved Installation, Operation and Maintenance manual and successfully passed prior to the affected equipment dispensing gasoline into any vehicle; or
 - b. Conduct a visual inspection of the affected equipment and replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are CARB certified before placing any affected equipped back in service.
- 305.6 The owner/operator shall have all storage tank installations and the associated piping configuration inspected by District personnel prior to backfilling to verify that all underground equipment is properly installed in accordance with the requirements specified in the most recent applicable CARB Executive Orders. The owner/operator shall notify the District at least 3 days prior to the backfilling.
- 305.7 An owner/operator subject to Phase II enhanced vapor recovery under Section 305.1 shall install and maintain an in-station diagnostics system in accordance with and to the extent required by the most recent applicable CARB Executive Orders.

306 SELF-COMPLIANCE PROGRAM:

- 306.1 The owner/operator of any retail gasoline dispensing facility (GDF) shall implement a self-compliance program as follows:
- a. Inspection and maintenance procedures shall be conducted daily in accordance with the protocol specified in Section 307 and CARB

Executive Orders, as applicable, to ensure proper operating conditions of all components of the vapor recovery systems.

- b. Inspection procedures shall be conducted at least once every 12 months in accordance with the protocol specified in Section 308 and CARB Executive Orders, as applicable, to verify the compliance with all applicable District rules and regulations, as well as all permit conditions.

306.2 The owner/operator of any non-retail (GDF) shall implement a self-compliance program as follows:

- a. Inspection and maintenance procedures shall be conducted at least once every 3 months in accordance with the protocol specified in Section 307 and CARB Executive Orders, as applicable, to ensure proper operating conditions of all components of the vapor recovery systems.
- b. Inspection procedures shall be conducted at least once every 12 months in accordance with the protocol specified in Section 308 and CARB Executive Orders, as applicable, to verify the compliance with all applicable District rules and regulations, as well as all permit conditions.

307 **DAILY MAINTENANCE INSPECTION PROTOCOL:** The owner/operator of a retail gasoline dispensing facility shall at minimum verify the following and record the results in the District-approved report format during the daily maintenance inspection:

307.1 Phase I Vapor Recovery System

- a. The spill container is clean and does not contain gasoline.
- b. The fill caps are not missing, damaged, or loose.
- c. If applicable:
 - (i) the spring-loaded submerged fill tube seals properly against the coaxial fitting;
 - (ii) the dry break (poppet valve) is not missing or damaged.
- d. The submerged fill tube is not missing or damaged.

307.2 Phase II Vapor Recovery System

- a. The fueling instructions are clearly displayed.
- b. The hoses are not torn, flattened, or crimped.
- c. The vapor recovery hoses are the required size and length.
- d. The hoses with retractors are adjusted to maintain a proper loop, and the bottom of the loop is within the distance from the island surface certified by the most recent applicable CARB Executive Orders for that particular dispensing configuration.
- e. The following nozzle components are in place and in good condition, as specified in the most recent applicable CARB Executive Orders:
 - (i) bellows
 - (ii) latching device spring

- (iii) vapor check valve
 - (iv) spout (proper diameter/vapor collection holes)
 - (v) insertion interlock mechanism
 - (vi) automatic shut-off mechanism
 - (vii) hold open latch
 - (viii) face plate/face cone, vapor splash guard, fill guard, efficiency compliance device.
- f. For vacuum-assist systems, the vapor processing unit and burner are functioning properly.

307.3 In-Station Diagnostics:

- a. System status, including any system alarms.
- b. In the event of an ISD fuel system shut-down alarm, the owner/operator shall not reset the ISD system to allow gasoline dispensing, unless:
 - (i) All required repairs to correct the ISD alarm have been completed.
 - (ii) The dispenser(s) associated with the ISD alarm is isolated, removed from service, and not operated until all required repairs to correct the ISD alarm have been completed.

307.4 Any equipment not meeting the requirements specified above, or any equipment with major defect(s) which are identified during the inspection procedures, shall be isolated, removed from service, repaired, brought into compliance, and duly entered into the repair logs in accordance with the requirements specified in Section 502 before being returned to service. Major defect(s) discovered during self inspection and that are repaired shall not constitute a violation of District Rule 2.22.

308 **PERIODIC INSPECTION PROTOCOL:** The owner/operator of a retail gasoline dispensing facility shall at minimum verify the following and record the results in the District-approved report format during the periodic compliance inspections:

308.1 General Inspection

- a. The District permit is current.
- b. The equipment and District Permit to Operate description match.
- c. The facility complies with all permit conditions.
- d. The required sign is properly posted and the sign contains all the necessary information.

308.2 Phase I Vapor Recovery System Inspection

- a. The distance between the highest level of the discharge opening of the submerged fill tube and the bottom of the storage tank does not exceed 6 inches.
- b. The Phase I vapor recovery system complies with required CARB certification and is properly installed.

- c. The spill box complies with required CARB certification and is properly installed.
- d. The vent pipes are equipped with the required pressure/vacuum relief valves.

308.3 Phase II Vapor Recovery System Inspection

- a. Each nozzle is the current CARB certified model.
- b. Each nozzle is installed in accordance with the most recent applicable CARB Executive Orders.
- c. The bellows-equipped vapor recovery nozzles are equipped with CARB certified insertion interlock mechanisms.
- d. If required, the flow limiter is not missing and is installed properly.
- e. The swivels are not missing, defective, or leaking, and the dispenser-end swivels, if applicable, are Fire-Marshall approved with 90-degree stops.
- f. If required, the liquid removal devices comply with required CARB certifications and are properly installed.
- g. For bellows-less nozzles, the hoses are inverted coaxial type except for Hirt systems, and the vapor collection holes are not obstructed.
- h. For aspirator-assist systems, the major components (i.e., aspirator or jet pump, modulating valve, and vapor check valve) are present inside each dispenser. For aspirator-assist systems with certification-required calibration stickers, the current calibration sticker is present.

309 **SOURCE TESTING:**

309.1 Within 45 calendar days of the initial operation of a new or altered gasoline dispensing facility, the owner/operator shall conduct and successfully pass the source tests in accordance with the test methods specified in Section 600, and any additional tests required by the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual and District Permits, to verify the proper installation and operation of Phase I and Phase II vapor recovery systems.

309.2 The owner/operator shall conduct and successfully pass the reverification tests in accordance with the test methods specified in Section 600, and any additional tests required by the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual and District Permits, to verify the proper operation of the vapor recovery systems. The owner/operator of a gasoline dispensing facility with a Permit to Operate throughput limit of 4,000,000 gallons per year or greater shall complete the reverification test semiannually. Each semiannual test shall be completed within 6 months of the previous successful test. No adjustments to the gasoline dispensing facility shall be made the day of the test and the test shall be conducted in an as-is-condition. Once non-compliance with a performance standard has

been determined and documented, the facility may make the necessary adjustments to bring the facility back into compliance.

- 309.3 The owner/operator of a gasoline dispensing facility with a Permit to Operate throughput limit less than 4,000,000 gallons per year shall complete the reverification annually. Each annual test shall be completed within 12 months of the previous successful test. No adjustments to the gasoline dispensing facility shall be made the day of the test and the test shall be conducted in an as-is-condition. Once non-compliance with a performance standard has been determined and documented, the facility may make the necessary adjustments to bring the facility back into compliance.
- 309.4 A person who conducts performance or reverification tests shall comply with all of the following:
- a. Conduct tests in accordance with the applicable test methods specified in Section 600 and other CARB testing procedures. Tests shall be conducted using calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer.
 - b. Provide notification to the District at least 3 days prior to testing except for reverification tests conducted after a driveoff, provided that the person conducting the tests complies with all other applicable provisions of the rule.
 - c. Conduct the tests any time Monday through Friday from 9:00 a.m. through 4:00 p.m.
 - d. Submit a copy of the test report in District-approved format to the APCO within 30 days after each test is conducted. The test report shall include all the required records of tests, test data, a statement whether the system or component tested meets or fails to meet the required standards, and the name and signature of the person responsible for conducting the tests.
- 309.5 Notwithstanding Section 309.5.b, the owner/operator that has failed a reverification test or portions thereof may retest the facility prior to resuming operation provided that the person conducting the tests has complied with one of the following:
- a. Notify the District at least 12 hours prior to retesting; or
 - b. When all necessary repairs are performed during the same day the facility has failed, the owner/operator may retest the facility on the same day without re-notification, provided that the reasons for the test failure and any repairs performed are properly documented in the test reports and the repair logs pursuant to Sections 502.2 and 502.3.
- 309.6 The owner/operator shall not operate or resume operation of a gasoline dispensing facility, unless the facility has successfully passed the applicable performance or reverification tests. Notwithstanding the above,

when a dispenser associated with any equipment that has failed a reverification test is isolated and shut down, the owner/operator may continue operation or resume operation of the remaining equipment at the facility, provided that test results demonstrate that the remaining equipment is in good operating condition. All test results and the method of isolating the defective equipment shall be documented in the test reports to be submitted to the APCO pursuant Section 502.3.

310 **PROHIBITION OF USE:** Whenever the Air Pollution Control Officer determines that a Phase II vapor recovery system, or any component thereof, contains a defect specified by the California Air Resources Board pursuant to Section 41960.2(c) of the California Health and Safety Code, the Air Pollution Control Officer shall mark such a system or component "Out of Order." No person shall use or permit the use of such marked component or system until it has been repaired, replaced, or adjusted, as necessary, and the APCO has reinspected it or has authorized its use pending reinspection.

311 **POSTING OF OPERATING INSTRUCTIONS:** The owner/operator of each retail gasoline dispensing facility utilizing a Phase II system shall conspicuously post operating instructions for the system in the gasoline dispensing area. The instructions shall clearly describe how to fuel motor vehicles correctly with vapor recovery nozzles, and shall include a warning that topping off may result in spillage or recirculation of gasoline and is prohibited. Additionally the instructions shall include prominent display of the Yolo-Solano Air Quality Management District's or the California Air Resources Board's toll free telephone number for complaints. A dispenser that is never used to fuel motor vehicles shall have a sign posted on it restricting its use for motor vehicles. All required signs shall conform to the following:

311.1 Each decal sign shall be visible from all fueling positions it serves that shall be readable from a distance of at least 3 feet.

311.2 Each pump toppers shall be equipped with one double-back sign per island; each dispenser shall be equipped with two permanent (non-decal) signs, two single-sided or one double-sided sign(s); and all signs shall be readable from a distance of at least 6 feet.

400 ADMINISTRATIVE REQUIREMENTS

401 **VIOLATIONS:** Any equipment subject to the provisions of this rule that fails to meet the requirements contained in Section 305 shall be tagged "Out of Order." Such failures shall constitute a violation of this rule. Except during repair activity, the "Out of Order" tag shall not be removed and the tagged equipment shall not be used, permitted to be used, or provided for use unless all of the following conditions are met:

401.1 The tagged equipment has been repaired, replaced, or adjusted, as necessary;

- 401.2 The District has been notified of the repairs by completing and signing the form supplied by the District; and
- 401.3 The tagged equipment has be reinspected and/or authorized for use by the APCO.

Failure of any of the test methods specified in Section 600 shall constitute a violation of this rule.

500 MONITORING AND RECORDS

- 501 **PREVENTATIVE MAINTENANCE PROGRAM:** The owner/operator of each gasoline dispensing facility shall implement a maintenance program and document the program in a preventative maintenance (PM) manual for the Phase II vapor recovery system. The PM manual shall be kept at the facility and made available to any person who operates, inspects, maintains, repairs, or tests any part of the vapor recovery system. The PM manual shall be made available to District personnel upon request. The PM manual shall contain detailed instructions to assure proper operation and maintenance of the vapor recovery system and its components. The PM manual shall include the following current information:

501.1 A copy of all applicable CARB Executive Orders, Approval Letters, and valid District Permits.

501.2 A copy of the manufacturer's specifications and instructions for installation, operation, repair and maintenance required pursuant to CARB Certification Procedure CP-201, Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities, and any additional instructions provided by the manufacturer.

501.3 System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests specified in Section 600. The owner/operator may include any non-CARB required diagnostic and other tests as part of the testing requirements.

501.4 Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, CARB Executive Orders and District Permit to Operate conditions, including replacement schedules for failure or wear prone components.

- 502 **RECORD KEEPING:** A person who performs self-compliance inspections, repairs or testing at any gasoline dispensing facility, including, but not limited to, the activities for normal operation and maintenance, performance testing, reverification testing and those following a "drive-off", shall provide to the owner/operator all records listed below, as applicable, at the end of each day when the service is provided. The owner/operator shall maintain all records listed below on site and any other test results or maintenance records that are required to demonstrate compliance for a period of at least 2 years. Records for non-retail gasoline dispensing facilities that are unmanned may be kept off site provided that

the records are made available to District personnel within 72 hours. All records required by this section shall be made available to the District personnel upon request both on site during inspections and offsite as specified.

502.1 Records of all defective components identified or repaired during self-compliance inspections.

502.2 Repair logs shall include at a minimum:

- a. Date and time of repair.
- b. The name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer.
- c. Description of service performed.
- d. Each component that was repaired, serviced, or removed, including the required component identification information.
- e. Each component that was installed as replacement, if applicable, including the required component identification information.
- f. Receipts for parts used in the repair and, if applicable, work orders, which shall include the name and signature of the person responsible for performing the repairs.

502.3 Records of tests, which shall include:

- a. Date and time of each test.
- b. Name, affiliation, address and phone number of the person(s) who performed the test.
- c. Test data and calibration data for all equipment used.
- d. Date and time each test is completed and the facility owner/operator is notified of the results. For a test that fails, a description of the reasons for the test failure shall also be included.
- e. For a retest following a failed performance or reverification test, description of repairs performed.
- f. Copies of the test reports in District-approved format.

502.4 Records of all ISD system alarms and associated repairs.

600 TEST METHODS AND PROCEDURES

All required tests shall be conducted in accordance with the most recently CARB approved version of CARB test methods or as stated in the applicable CARB Executive Orders including the corresponding Installation, Operation and Maintenance Manual test procedures or any other test methods approved in writing by the USEPA, CARB, or the District.

RULE 2.23 FUGITIVE HYDROCARBON EMISSIONS

ADOPTED March 23, 1994

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to control fugitive emissions of hydrocarbons from oil and gas production and processing facilities, refineries, chemical plants, gasoline terminals, and pipeline transfer stations in conformance with RACT determinations approved by the California Air Resources Board (CARB) to meet the requirements of the California Clean Air Act.
- 102 **APPLICABILITY:** This rule is applicable to refineries, chemical plants, oil and gas production fields, natural gas processing plants, gasoline terminals, and pipeline transfer stations to limit fugitive emissions of volatile organic compounds from components such as valves and flanges, fittings, pumps, compressors, pressure relief devices, diaphragms, hatches, sightglasses, and meters.
- 110 **EXEMPTION - INSPECTION REQUIREMENTS:** The provisions of Section 301 of this rule shall not apply to the following cases, where the person seeking the exemption shall supply the proof of the applicable criteria to the satisfaction of the Air Pollution Control Officer:
- 110.1 Components buried below ground.
- 110.2 Components, except those at natural gas processing plants, exclusively handling fluids with a volatile organic compound concentration of 10 percent by weight or less, as determined according to test methods specified in Section 504 of this rule; or components exclusively handling liquids, if the weight percent evaporated is 10 percent or less at 150°C (302°F), as determined by ASTM Method D86-82.
- 111 **EXEMPTION - STORAGE TANKS:** The requirements of Section 305.1 shall not apply to any pressure relief device on external floating roof tanks storing material with a true vapor pressure of less than 11 psig.
- 112 **EXEMPTION - GASOLINE TERMINALS:** Until January 1, 1998, the requirements of Section 305 shall not apply to pressure relief devices at Gasoline Terminals.
- 113 **EXEMPTION - LOW VAPOR PRESSURE:** The provisions of Section 305 shall not apply to pressure relief devices which handle only

organic liquids with a true vapor pressure less than 2.6 mm Hg (0.05 psia) or exhibit a 10% evaporation point greater than 150°C (302°F) as determined ASTM Method D86-82.

200 DEFINITIONS

- 201 **BACKGROUND:** A reading expressed as methane on a portable hydrocarbon detection instrument which is taken at least three meters (10 feet) upwind from any components to be inspected and which is not influenced by any specific emission point.
- 202 **CHEMICAL PLANT:** Any facility engaged in producing organic or inorganic chemicals, and/or manufacturing products by chemical processes. Any facility that has 282 as the first three digits in its Standard Industrial Classification Code as defined in the Standard Industrial Classification Manual is included. Chemical plants may include, but are not limited to the manufacture of: industrial inorganic and organic chemicals,; plastic and synthetic resins, synthetic rubber, synthetic and other man-made fibers; drugs; soap, detergents and cleaning preparations, perfumes, cosmetics, and other toilet preparations; paints, varnishes, lacquers, enamels, and allied products; agricultural chemicals; safflower and sunflower oil extracts; and re-refining.
- 203 **COMPONENT:** Any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sightglass, or meter. They are further classified as:
- 203.1 A major component is any 4-inch or larger valve, any 5-hp or larger pump, any compressor, and any 4-inch or larger pressure relief device.
- 203.2 A minor component is any component not specified in Section 203.1.
- 203.3 A critical component is any component which would result in the automatic shutdown of the process unit if these components were shutdown. These components shall be identified by the source and approved by the Air Pollution Control Officer.
- 204 **COMPRESSOR:** A device used to compress gases and/or vapors by the addition of energy, and includes all associated components used for connecting and sealing purposes.

205 **EXEMPT COMPOUNDS:** The following compounds are exempt from the definition of Volatile Organic Compounds in Section 227 of this Rule:

- 205.1 Methane
- 205.2 Carbon Dioxide
- 205.3 Carbon Monoxide
- 205.4 Carbonic Acid
- 205.5 Metallic Carbides or Carbonates
- 205.6 Ammonium Carbonate
- 205.7 1,1,1-Trichloroethane
- 205.8 Methylene Chloride
- 205.9 Dichlorotrifluoroethane (HCFC-123)
- 205.10 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
- 205.11 Trichlorofluoromethane (CFC-11)
- 205.12 Dichlorodifluoromethane (CFC-12)
- 205.13 Trichlorotrifluoroethane (CFC-113)
- 205.14 Dichlorotetrafluoroethane (CFC-114)
- 205.15 Chloropentafluoroethane (CFC-115)
- 205.16 Pentafluoroethane (HFC-125)
- 205.17 1,1,2,2-Tetrafluoroethane (HFC-134)
- 205.18 Tetrafluoroethane (HFC-134a)
- 205.19 Dichlorofluoroethane (HCFC-141b)
- 205.20 Chlorodifluoroethane (HCFC-142b)
- 205.21 1,1,1-Trifluoroethane (HFC-143a)
- 205.22 Chlorodifluoromethane (HCFC-22)
- 205.23 Trifluoromethane (HFC-23)
- 205.24 1,1-Difluoroethane (HFC-152a)
- 205.25 The following four classes of perfluorocarbon compounds:
 - a. Cyclic, branched, or linear, completely fluorinated alkanes.
 - b. Cyclic, branched, or linear, completely fluorinated ethers, with no unsaturations.
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines, with no unsaturations.
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer

or facility operator identifies the specific compounds and the amounts present in the product or process and provides a validated test method which can be used to quantify the identified compounds.

- 206 **FITTING:** A component used to attach or connect pipes or piping details, including but not limited to flanges and threaded connections.
- 207 **GASOLINE TERMINAL:** A gasoline distribution facility that dispenses more than 20,000 gallons per day consisting of gasoline loading facilities where delivery to the facility's storage containers is by means other than truck.
- 208 **HATCH:** Any covered opening system that provides access to a tank or container.
- 209 **INACCESSIBLE COMPONENT:** Any component located over fifteen (15) feet above ground when access is required from the ground; or any component located over six (6) feet away from a platform when access is required from that platform.
- 210 **LIQUID LEAK:** A visible mist or dripping of liquid volatile organic compounds at the rate of more than three drops per minute. A major liquid leak is a visible mist or continuous flow of liquid VOC. A minor leak is any liquid VOC leak that is not a major leak and drips liquid at a rate of more than three drops per minute.
- 211 **MAJOR GAS LEAK:** For any component is the detection of total gaseous hydrocarbons in excess of 10,000 ppm as methane above background measured according to the test methods specified in Section 504 of this rule.
- 212 **MINOR GAS LEAK:** For any component is the detection of total gaseous hydrocarbons in excess of 1,000 ppm but not more than 10,000 ppm as methane above background measured according to the test methods specified in Section 504 of this rule.
- 213 **NATURAL GAS:** A mixture of gaseous hydrocarbons, with at least 80 percent methane, and less than 1 percent, on a weight basis, of volatile organic compounds, excluding ethane, determined according to test methods specified in Section 504 of this rule.
- 214 **NATURAL GAS PROCESSING PLANT:** A facility engaged in the separation of liquids from field gas and/or fractionation of the liquids into gaseous products, such as ethane, propane, butanes,

and natural gasoline. Excluded from this definition are compressor stations, dehydration units, sweetening units, field treatment, underground storage facilities, liquified natural gas units, and field gas gathering systems unless these facilities are located at a natural gas processing plant.

- 215 **OIL AND GAS PRODUCTION FIELD:** A facility on which crude petroleum and/or natural gas production and handling are conducted, as defined in the Standard Industrial Classification Manual as Industry No. 1311, Crude Petroleum and Natural Gas. This definition shall also include injection facilities for disposal of water or brine produced in oil and gas production fields.
- 216 **PIPELINE TRANSFER STATION:** A facility which handles the transfer and storage of petroleum products or crude petroleum in pipelines.
- 217 **PLATFORM:** Any raised, permanent, horizontal surface that provides access to components.
- 218 **PRESSURE RELIEF DEVICE (PRD):** A pressure relief valve or a rupture disc.
- 219 **PRESSURE RELIEF VALVE:** A valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.
- 220 **PUMP:** A device used to transport fluids by the addition of energy, and includes all associated components used for connecting or sealing purposes.
- 221 **REFINERY:** A facility engaged in producing gasoline, kerosine, distillate fuel oils, residual fuel oils, lubricants or other products through the distillation of petroleum or through redistillation, cracking, rearrangement, or reforming of unfinished petroleum derivatives, defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.
- 222 **REPAIR:** Any corrective action for the purpose of eliminating leaks.
- 223 **RUPTURE DISC:** A thin metal diaphragm held between flanges for the purpose of isolating a volatile organic compound from the atmosphere or from a downstream pressure relief valve.
- 224 **STUFFING BOX:** A packing gland, a chamber, or a "box" to hold packing material compressed around a moving pump rod or valve

stem by a "follower" to prevent the escape of gases or liquids. For the purpose of this rule, stuffing box seals are considered as part of the pump seals.

225 **TURNAROUND:** A scheduled shutdown for maintenance and repair work of a manufacturing process that is independent of other processes in the facility.

226 **VALVE:** A device that regulates or isolates the fluid flow in a pipe, tube, or conduit by means of an external actuator; including flanges, flange seals, and other components used for attachment or sealing.

227 **VOLATILE ORGANIC COMPOUNDS:** Any compound containing at least one atom of carbon except exempt compounds as defined in Section 205 of this rule.†

300 **STANDARDS**

301 **INSPECTION FREQUENCIES:**

301.1 a. All pump seals, compressor seals, and pressure relief devices shall be inspected for leaks once during every manned operating shift or every eight-hour period except for components at oil and gas production fields and pipeline transfer stations which shall be inspected for leaks once per day. A leak identified by this Section shall be any liquid leak, a visual vapor leak, audible leaks, the presence of bubbles using soap solutions, or a leak identified by a vapor analyzer. All pumps, compressors, and pressure relief devices at manned oil and gas production fields and pipeline transfer stations shall be inspected for leaks once per day and components located at unmanned facilities shall be inspected once per week.

 b. Any leak which is identified during the inspection of components shall be measured to quantify emission concentrations according to EPA Reference Method 21.

301.2 All components shall be inspected quarterly according to EPA Reference Method 21 except as provided in Sections 301.3 and 301.5 of this rule.

301.3 a. All inaccessible components shall be inspected annually according to EPA Reference Method 21.

- b. All threaded connections and flanges shall be inspected for leaks according to EPA Reference Method 21 immediately after being placed in service and annually thereafter.
- 301.4 A pressure relief device shall be inspected according to EPA Reference Method 21 within three (3) calendar days after every pressure relief.
- 301.5 The inspection frequency for components, except pump seals and compressor seals, as required in Section 301.2 of this rule, may change from quarterly to annually, provided that all of the following conditions are met:
 - a. All components at the facility have been successfully operated and maintained with no liquid leaks and no major gas leaks exceeding 0.5 percent of the total components inspected per inspection period for twelve consecutive months, and
 - b. The above is substantiated by documentation and written approval obtained from the Air Pollution Control Officer.
- 301.6 Any annual inspection frequency approved in Section 301.5, shall revert to quarterly, should any liquid leak or major gas leak exceeding 0.5 percent of the total components inspected per inspection period for twelve consecutive months.
- 301.7 All leaking components shall be affixed with brightly colored, weatherproof tags showing the date of leak detection. These tags shall remain in place until the components are repaired and reinspected.
- 301.8 Any annual inspection frequency approved in Sections 301.6 of this Rule shall revert to the inspection frequencies specified in Sections 301.2 and 301.3 should liquid leaks or major gas leaks exceed 0.5 percent of the total components inspected per inspection period.

- 302.1 a. All noncritical components shall be successfully repaired or replaced within the following time periods after detection of the leak according to **Table 1**, Repair Periods, except where otherwise specified in Section 305.
- b. Leaks from components shall be immediately minimized to stop or reduce leakage to the atmosphere.
- c. All leaks from critical components shall be minimized to the extent possible and shall be replaced with Best Available Control Technology equipment as determined in accordance with District Rule 3.4, NEW SOURCE REVIEW, during the next process unit turnaround.

TABLE 1 REPAIR PERIODS	
Type of Leak	Time Period ¹
Minor Gas Leak	14 Days
Major Gas Leak	5 Days
Major Gas Leak over 50,000 ppm	1 Day ^{2, 3}
Major Liquid Leak	1 Day ^{2, 3}
Minor Liquid Leak	2 Days ²

1. DAY MEANS A 24 HOUR PERIOD FROM THE TIME OF LEAK DETECTION.
2. UNLESS PROHIBITED BY CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (CAL OSHA) STANDARDS.
3. COMPONENTS LOCATED AT OIL AND GAS PRODUCTION FACILITIES OR PIPELINE TRANSFER STATIONS SHALL BE REPAIRED WITHIN TWO DAYS.

302.2 The repaired or replaced component shall be re-inspected per EPA Reference Method 21 by the operator within 30 days of the repair or replacement.

302.3 A component or parts which incur five repair actions for a liquid or major gas leak within a continuous twelve-month period shall be replaced with Best Available Control Technology equipment as determined in accordance with District Rule 3.4, NEW SOURCE REVIEW.

303 OPEN-ENDED LINES AND VALVES: Open-ended lines and valves located at the end of lines shall be sealed with a blind flange, plug, cap, or a second closed valve at all times except during operations. Operations include draining or degassing operations, connection of

temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs.

304 **HATCHES:** Hatches shall be closed at all times except during sampling, adding process materials, or attended maintenance operations.

305 **PRESSURE RELIEF DEVICES:** The following requirements shall apply to pressure relief devices in addition to the requirements specified in Sections 301, 302 and 303 of this rule:

- 305.1 **Pressure Relief Valves:** Until the next process unit turnaround or January 1, 1998, whichever date is earlier, a person shall not use a pressure relief valve on any equipment if the concentration of volatile organic compounds in such a valve, exceeds 10,000 ppm (expressed as methane) above background, unless:
- a. The emission is vented to a vapor recovery or disposal system that is at least 95% efficient as determined per Section 504.6 of this rule; or
 - b. The pressure relief valve is protected by a rupture disc located upstream of the pressure relief device. Ruptured rupture discs shall be replaced within 7 days after a release on valves protected by a rupture disc.

The above noted exceptions only apply to this Section.

305.2 **Leak Standard:** After the next process unit turnaround or January 1, 1998, whichever date is earlier, a person shall not use a pressure relief device on any equipment if the concentration of volatile organic compounds in such a device, exceeds 100 ppm (expressed as methane) above background. Effective January 1, 1998, the concentration of both volatile organic compounds and methane shall not exceed 100 ppm (expressed as methane) above background.

305.3 **Non-repairable Pressure Relief Devices:** Effective September 23, 1994, during the next process unit turnaround, a person shall replace a non-repairable pressure relief device with a device that meets the requirements of Section 305.2. For the purposes of this Section, a non-repairable pressure relief device is any such device that cannot be taken out of service without shutting

down the process which it serves.

- 305.4 **Inaccessible Pressure Relief Devices:** Effective September 23, 1994, during the next process unit turnaround, a person shall replace an inaccessible pressure relief device with a device that meets the requirements of Section 305.2.

400 ADMINISTRATIVE REQUIREMENTS

401 EQUIPMENT IDENTIFICATION:

- 401.1 All major components and critical components shall be clearly and visibly physically identified for inspection, repair, replacement, and recordkeeping purposes.
- 401.2 All major, critical, and inaccessible components except flanges and threaded connections shall be clearly identified in diagrams for inspection, repair, replacement, and recordkeeping purposes as approved by the Air Pollution Control Officer.
- 401.3 The information required for component identification in Sections 401.1 and 401.2 of this rule shall be initially submitted to the Air Pollution Control Officer by September 23, 1994 for approval and thereafter upon request.
- 401.4 The Air Pollution Control Officer shall be notified in writing of any change in the identification of a major component.

- 402 **COMPLIANCE SCHEDULE:** Effective March 23, 1995, any person who operates a facility subject to this Rule shall comply with all the requirements of Sections 301, 302, 303, and 304 of this rule.

500 MONITORING AND RECORDS

- 501 **RECORDS:** All records of operator inspection and repair shall be maintained at the facility for the previous five (5) year period and made available at the time of District inspection.
- 502 **INSPECTION LOGS:** Each facility operator shall maintain an

inspection log, containing at a minimum, the following:

502.1 Name, location, type of components, and description of any unit where leaking components are found;

502.2 Date of leak detection, emission level (ppm) of leak, and method of leak detection;

502.3 Date and emission level (ppm) of recheck after leak is repaired; and

502.4 Total number of components inspected and a total number and percentage of leaking components found by component types.

503 **LEAKS DETECTED:** Records of leaks detected by a quarterly or annual operator inspection, and each subsequent repair and reinspection, shall be submitted to the Air Pollution Control Officer upon request.

504 **TEST METHODS:**

504.1 Measurements of total gaseous hydrocarbon leak concentrations shall be conducted according to EPA Reference Method 21. The analyzer used shall be calibrated with methane.

504.2 The volatile organic compound content of fluids shall be determined using ASTM Methods E-168-88, E-169-87, or E-260-85.

504.3 Determination of exempt compounds shall be performed in accordance with ASTM Method D-4457-85.

504.4 Determination of evaporated compounds of liquids shall be performed in accordance with ASTM Method D-86-82.

504.5 Determination of true vapor pressure of organic compounds shall be performed in accordance with the applicable procedures set forth in Section 12.3, Compilation of Air Pollutant Emission Factors, Vol. I, AP-42, U.S. EPA. True vapor pressures for organic liquids shall be determined from Table 12.3-3. True vapor pressures for crude oils shall be determined by using Figures 12.3-1A and 12.3-1B. For refined petroleum stocks, Table 12.3-2 shall be used.

504.6 Control efficiency and emission rates of control devices shall be determined by EPA Method 25. Collection efficiency shall be determined according to "VOM Measurement for Capture Efficiency", 40 CFR 52.741, Appendix B.

RULE 2.24 Solvent Cleaning Operations (Degreasing).

- a. This rule shall not supersede Rule 2.13, Organic Solvents. This rule shall apply to operations which use organic solvents for cleaning of metal and non-metallic parts only. There shall be no solvent cleaning of porous or absorbent materials (e.g. cloth, leather, wood, rope, etc.) in any degreasing operation.
- b. Definitions
 1. "Cold Cleaner" means any batch loaded, non-boiling solvent degreaser.
 2. "Coinveyorized Degreaser" means any continuously loaded, conveyorized solvent degreaser, either boiling or non-boiling.
 3. "Freeboard Height"
 - a. For cold cleaning tanks, freeboard height means the distance from the top of the solvent or solvent drain to the top of the tank.
 - b. For vapor degreasing tanks, freeboard height means the distance from the solvent vapor-air interface to the top of the degreaser.
 4. "Freeboard Ratio" is defined as the freeboard height divided by the width of the degreaser.
 5. "Make-up Solvent" is defined as a solvent lost through evaporation, carryout, splashing, leakage, or disposal.
 6. "Open-top Vapor Degreaser" means any batch loaded, boiling degreaser.
 7. "Refrigerated Freeboard Chiller" is defined as any equipment mounted above the condenser equipment which carries a refrigerant (Typically in the range -30 to 5°C) to provide a chilled air blanket above the solvent vapor, to reduce emissions from a vapor degreaser.
 8. "Remote Reservoir" is defined as a liquid solvent container which is completely enclosed except for a drain opening which allows used non-boiling solvent to drain into it from a separate solvent sink or work area and which is not accessible for immersing parts.
 9. "Solvent" is defined as any organic compound or combination of organic compounds used for the purpose of dissolving oils, grease, waxes, tars, or other substances.
 10. "Ultrasonics" means enhancement of the cleaning process by vibrating the solvent with high frequency sound waves, causing the implosion of microscopic vapor cavities within the liquid solvent.
 11. "VOC" Volatile Organic Compound is any volatile compound which contains the element carbon; excluding compounds exempted under Section 214 of Rule 1.1, General Provisions and Definitions.
 12. "Wipe Cleaning" is defined as that method of cleaning which utilizes a material such as a rag wetted with a solvent, coupled with a physical rubbing process to remove contaminants from metals surfaces.
- c. Exemptions
 1. The provisions do not apply to:
 - a. Wipe cleaning,
 - b. Cold solvent cleaners having reservoir capacities of 5.0 gallons or less or have an evaporative area of less than 1.0 ft² (0.09 M²) as long as reservoir is covered when not processing work.
 2. Open-top vapor degreasers which have an air-vapor interface area less than 1.0 m² (10.7 ft²) are exempt from Section d.6.b.
 3. Conveyorized degreasers which have an air-vapor interface area less than 1.0 m² (10.7 ft²) are exempt from Section d.6.c.
- d. Any person who employs solvent cleaning (degreasing), shall utilize, unless otherwise exempted by this rule, a device for such cleaning, which includes the following:
 1. A container (degreaser) for the solvent and the articles being cleaned.
 2. An apparatus or cover which prevents the solvent from evaporating when not processing work in the degreaser.
 - a. For cold solvent cleaning, if the initial boiling point of the solvent as defined by ASTM D-1078-78 is

less than 248 F (120 C) or if the solvent is heated, or if the solvent is agitated, then the cover must be designed so that it can be opened and closed easily with one hand.

- b. For open-top vapor degreasers, the cover shall be designed such that it can be opened and closed easily without disturbing the vapor zone.
- c. For conveyorized degreasers, covers shall be provided for closing off the entrance and exit during shutdown hours.
3. A facility for draining cleaned parts such that the drained solvent is returned to the container.
4. A permanent conspicuous label, which lists the appropriate operating requirements contained in Section e.
5. For cold solvent cleaning, if the initial boiling point of the solvent as defined by ASTM D-1078-78 is less than 248°F (120°C) or if the solvent is heated above 50°C, then one of the following control devices shall be used:
 - a. A freeboard such that the freeboard ratio is greater than or equal to 0.75;
 - b. A water cover if the solvent is insoluble in and heavier than water;
 - c. For cold cleaning degreasing, if the solvent initial boiling point as defined by ASTM D-1078-78 is less than 248°F (120°C) then the drainage facility must be internal so that the parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit the cleaning system.
 - d. Remote reservoir cold cleaners shall be equipped with the following devices:
 1. A tank or sink-like work area which is sloped sufficiently to preclude pooling of solvent; and
 2. A single drain hole, less than 100 square centimeters (15.5 square inches) in area, for the solvent to flow from the sink into the enclosed reservoir; and
 3. A freeboard height of at least six inches (14 cm); and
 4. A cover for the drain when no work is being processed in the degreaser.
 - e. If open-top vapor degreasing or conveyorized degreasing are employed, then the following equipment shall be utilized:
 1. All of the following safety devices:
 1. A device which shuts off the sump heat if either the condenser coolant stops circulating or becomes warmer than specified and an operating temperature indicator;
 2. For degreasers of the spray type, a device which prevents spray pump operation unless the solvent vapor level is at the designed operating level; and
 3. A device (of the manual reset type) which shuts off the sump heat if the solvent vapor level rises above the designed operating level.
 2. One of the following or a combination of the following major control devices:
 1. A freeboard such that the freeboard ratio is greater than or equal to 0.75; and
 2. A freeboard chiller where the chilled air blanket temperature measured in degrees F at the coldest point on the vertical axis in the center of the solvent cleaner shall be no greater than 30% of the initial boiling point of the solvent or 41°F (5°C); or
 3. A carbon adsorption system which ventilates the air vapor interface at a minimum rate of 15 m³/min/m², but not greater than 20 m³/min/m², and with a solvent vapor concentration exiting the exhaust duct of the carbon absorber less than 25 ppm solvent average over one complete adsorption cycle;
 4. Where add-on control equipment is utilized collection efficiency shall be determined by the EPA document "Guidelines for Developing Capture Efficiency Protocols", dated June 145, 1989.
 3. For conveyorized degreasers, both of the following devices:
 1. Either a drying tunnel, or another means such as a rotating basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor, and
 2. Minimized opening: entrances and exits should silhouette work loads so that the average clearance between parts and the edge of the degreaser opening is either less than 10 cm or less than 10 percent of the width of the opening.
 4. Workplace fans shall not be used so that air/vapor interface is disturbed.
 - e. Any person who employs solvent metal cleaning (degreasing) must conform, unless otherwise exempted by this

rule to the following operating requirements:

1. Operate and maintain the degreasing equipment and emission control equipment in proper working order.
2. Do not allow any solvent to leak from any portion of the degreasing equipment. Liquid solvent leaks shall be repaired immediately or the equipment shall be shut down.
3. Do not store or dispose of any solvent, including waste solvent, in such a manner as will cause or allow its evaporation into the atmosphere.
4. Do not remove or open any device designed to close the degreaser unless processing work in the degreaser or performing maintenance on the degreaser.
5. Drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases. (Cold solvent cleaning only)
6. If using a solvent flow, use only a continuous, fluid stream (not a fine, atomized, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.
7. Perform solvent agitation, where necessary, through pump recirculation, ultrasonics, or by means of a mixer. Do not use air agitation of the solvent bath.
8. For open-top vapor degreasers:
 - a. Rack parts to facilitate drainage,
 - b. Move parts in and out of the degreaser at less than 3.3 m/min.,
 - c. Degrease the work load in the vapor zone at least 30 seconds or until condensation ceases,
 - d. Allow parts to dry within the degreaser until visually dry. Minimize carryout in open-top vapor degreasers by tipping out any pools of solvent on the cleaned parts before removal,
 - e. Work loads shall not occupy more than half of the degreasers open-top area,
 - f. All solvent spraying shall be done at least 4 inches (10 cm) below the top of the vapor level, and
 - g. The vapor level shall not drop more than 10 cm (4 inches) when a work load enters the vapor zone.
9. For conveyorized degreasers:
 - a. Rack parts to facilitate drainage,
 - b. Maintain vertical conveyor speed at less than 3.3 m/min.
 - c. For conveyorized degreasers, the down-time cover must be placed over entrances and exits immediately after the conveyor and exhaust are shut down and removed immediately before they are started up.
10. For both open-top vapor and conveyorized degreasers: water shall not be visibly detected in solvent exiting the water separator.

f. Recordkeeping and Test Methods

1. Any facility or operator subject to the requirements of this rule shall keep records on a facility-wide, quarterly basis showing the types and total amount of solvent used in all solvent cleaning operations. Records shall be maintained and available for APCD inspection, for two years.
2. Test Methods
 1. The efficiency of carbon adsorption systems or alternative control systems shall be determined by EPA Reference Method 25.
 2. The volatile organic compound content of solvents used, less water, shall be determined by the following methods:
 1. Measuring the volatile content of the solvent shall be determined by the procedures outlined in ASTM D-86.
 2. Calculation of the volatile organic compound per liter of solvent shall be by the procedures outlined in ASTM D 3960, Section 8.2.4.
 3. Initial boiling points of solvents shall be determined by ASTM D-1078-78.
 4. Ventilation rates shall be determined by one of the following methods, as appropriate:
 1. EPA Reference Method 2
 2. EPA Reference Method 2A
 3. EPA Reference Method 2C
 4. EPA Reference Method 2D

RULE 2.25 METAL PARTS AND PRODUCTS COATING OPERATIONS

REVISED April 27, 1994

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emission of volatile organic compounds in metal parts and products coating operations.
- 102 **APPLICABILITY:** Except as otherwise provided in Sections 110, 111, 112, 113, and 114 the provisions of this rule are applicable to the surface coating of metal parts and products.
- 110 **EXEMPTION - LOW USAGE OF NON-COMPLIANT COATINGS:** The provisions of Section 301 shall not apply to coatings used in volumes of less than 50 gallons per year.
- 111 **EXEMPTION - SPECIFIC COATINGS:** The provisions of Section 300 shall not apply to the following:
- 111.1 Stencil coatings;
 - 111.2 Safety-temperature indicating coatings;
 - 111.3 Powder coatings; and
 - 111.4 Adhesive coatings upon the effective compliance dates of Rule 2.31, ADHESIVES.
- 112 **EXEMPTION - SPECIFIC COATING OPERATIONS:** The provisions of Section 302 shall not apply to the application of touch-up coatings, repair coatings, textured finish coatings, metallic coatings which have a metallic content of more than 30 grams per liter, mold-seal coatings, and to facilities that use less than one (1) gallon of coating per day, as applied, including any VOC-containing materials added to the original coating as supplied by the manufacturer.
- 113 **EXEMPTION - PERFORMANCE TESTING:** The provisions of Sections 301 and 302 shall not apply to the application of coatings while conducting performance tests on the coatings at paint manufacturing facilities provided that written prior approval has been obtained from the Air Pollution Control Officer.
- 114 **EXEMPTION - AUTOMOTIVE AND TRUCK REFINISHING:** The provisions of this rule shall not apply to coating operations subject to the provisions of Rule 2.26, MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS, upon its effective compliance dates.

200 DEFINITIONS

- 201 **ADHESIVE:** Any substance that is used to bond surfaces together by attachment.
- 202 **AIR-DRIED COATING:** A coating that is cured at a temperature below 90°C (194°F).
- 203 **BAKED COATING:** A coating that is cured at a temperature at or above 90°C (194°F).
- 204 **CAMOUFLAGE COATINGS:** A coating used, principally by the military, to conceal equipment from detection.
- 205 **COATING:** A material which is applied to a surface and which forms a continuous film in order to beautify and/or protect such surface.
- 206 **ENCLOSED GUN WASHER:** A spray gun washing system that has an enclosed solvent container, and uses non-atomized solvent flow to flush the spray equipment and collects and returns the discharged solvent to the enclosed container.
- 207 **ETCHING FILLER:** A coating that contains at least 0.5 percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.
- 208 **EXEMPT COMPOUNDS:** The following compounds are exempt from the definition of VOC in Section 230:
- 208.1 Methane
- 208.2 Carbon Dioxide
- 208.3 Carbon Monoxide
- 208.4 Carbonic Acid
- 208.5 Metallic Carbides or Carbonates
- 208.6 Ammonium Carbonate
- 208.7 1,1,1-Trichloroethane
- 208.8 Methylene Chloride
- 208.9 Dichlorotrifluoroethane (HCFC-123)
- 208.10 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
- 208.11 Trichlorofluoromethane (CFC-11)
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- 208.13 Trichlorotrifluoroethane (CFC-113)
- 208.14 Dichlorotetrafluoroethane (CFC-114)
- 208.15 Chloropentafluoroethane (CFC-115)

- 208.16 Pentafluoroethane (HFC-125)
- 208.17 1,1,2,2-Tetrafluoroethane (HFC-134)
- 208.18 Tetrafluoroethane (HFC-134a)
- 208.19 Dichlorofluoroethane (HCFC-141b)
- 208.20 Chlorodifluoroethane (HCFC-142b)
- 208.21 1,1,1-Trifluoroethane (HFC-143a)
- 208.22 Chlorodifluoromethane (HCFC-22)
- 208.23 Trifluoromethane (HFC-23)
- 208.24 1,1-Difluoroethane (HFC-152a)
- 208.25 The following four classes of perfluorocarbon compounds:
 - a. Cyclic, branched, or linear, completely fluorinated alkanes.
 - b. Cyclic, branched, or linear, completely fluorinated ethers, with no unsaturations.
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines, with no unsaturations.
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific compounds and the amounts present in the product or process and provides a validated test method which can be used to quantify the identified compounds.

209 **EXTREME PERFORMANCE COATING:** A coating used on a metal surface where the coated surface, in its intended use, is frequently or chronically exposed to:

- 209.1 Corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution;
- 209.2 Repeated exposure to temperatures in excess of 250⁰F; or
- 209.3 Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

210 **HAND COAT:** The application of coatings by manually held nonmechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe

daubers, and sponges.

- 211 **HEAT-RESISTANT COATING:** A coating applied to a substrate that must withstand a temperature of at least 204⁰C (400⁰F) during normal use.
- 212 **HIGH GLOSS COATING:** A coating which, when tested in accordance with ASTM Test Method D-523-1989, has a reflectance of 85 percent or more on a 60⁰ meter.
- 213 **HIGH PERFORMANCE ARCHITECTURAL COATING:** A coating used to protect architectural subsections and which is required to meet the specifications of the Architectural Aluminum Manufacturer Association's publication number AAMA 605.2-1980.
- 214 **HIGH TEMPERATURE COATING:** A coating applied to a substrate that must withstand a temperature of 538⁰C (1000⁰F) during normal use.
- 215 **HIGH-VOLUME, LOW-PRESSURE (HVLP) SYSTEM:** A coating application system which is operated on a delivered air pressure between 0.1 and 10 psig.
- 216 **METAL PARTS AND PRODUCTS:** Any components or complete units fabricated from metal, except those subject to the provisions of other District source specific rules.
- 217 **METALLIC TOP COATING:** A coating which contains more than 5 grams of metal per liter of coating, as applied, where such particles are visible in the dried film.
- 218 **MOLD-SEAL COATING:** The initial coating applied to a new mold or repaired mold and associated tooling to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold or to the tooling.
- 219 **PAN BACKING COATING:** A coating applied to the surface of pots, or other cooking implements that are exposed directly to a flame or other heating elements.
- 220 **POWDER COATING:** Any coating applied as a dry (without solvent or other carrier) finely divided solid, which when melted and fused, adheres to the substrate as a paint film.

- 221 **PRETREATMENT WASH PRIMER:** A coating which contains no more than 12 percent solids by weight, at least 0.5 percent acid by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.
- 222 **REPAIR COATING:** A coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.
- 223 **SAFETY-TEMPERATURE INDICATING COATING:** A coating which changes physical characteristics, such as color, to indicate unsafe conditions.
- 224 **SILICONE RELEASE COATING:** Any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.
- 225 **SOLAR-ABSORBANT COATING:** A coating which has as its prime purpose the absorption of solar radiation.
- 226 **STENCIL COATING:** A coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to metal parts and products.
- 227 **TEXTURED FINISH:** A rough surface produced by spraying large drops of coating onto a previously applied coating.
- 228 **VACUUM-METALIZING COATING:** The undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.
- 229 **VOLATILE ORGANIC COMPOUND:** Any compound containing at least one atom of carbon, except exempt compounds defined in Section 208.

300 **STANDARDS**

- 301 **COATING LIMITS:** Except as indicated, effective April 27, 1994, a person shall not apply to metal parts and products any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits in **Table 1**.

TABLE 1	

Grams of VOC per Liter (or Pounds of VOC per Gallon) of Coating Less Water, and Less Exempt Compounds		
<u>VOC CONTENT G/L(LBS/GAL)</u>		
COATING CATEGORY	BAKED	AIR DRIED
General Coatings	275 (2.3)	340 (2.8)
Specialty Coatings: Etching Filler	420 (3.5)	420 (3.5)
Solar-Absorbent	360 (3.0)	420 (3.5)
Heat-Resistant	360 (3.0)	420 (3.5)
High Gloss	360 (3.0)	420 (3.5)
Metallic	360 (3.0)	420 (3.5)
Extreme Performance	420 (3.5)	420 (3.5)
Silicone Release	420 (3.5)	420 (3.5)
High Performance Architectural	420 (3.5)	420 (3.5)
Camouflage	360 (3.0)	420 (3.5)
Vacuum-Metalizing	420 (3.5)	420 (3.5)
Mold-Seal	420 (3.5)	420 (3.5)
High Temperature	420 (3.5)	420 (3.5)
Pan Backing	420 (3.5)	420 (3.5)
Pretreatment Wash Primer*	420 (3.5)	420 (3.5)

* No maximum solids content restriction.

302 **APPLICATION METHODS:** Effective April 27, 1995 a person shall not apply coatings to metal parts and products subject to the provisions of this rule unless the coatings are applied using properly operated equipment, and by using one of the following application methods or other high transfer efficiency application equipment which has been approved, in writing, by the Air Pollution Control Officer:

- 302.1 Electrostatic attraction operated in accordance with manufacturer's recommendations;
- 302.2 High-Volume, Low-Pressure (HVLV) spray system operated in accordance with manufacturer's recommendations;
- 302.3 Flow coat;
- 302.4 Dip coat;
- 302.5 Hand coat; or
- 302.6 Roll coat.

303 **ADD-ON CONTROLS:** Alternatively, a person may comply with the provisions of Section 301 by using air pollution control equipment, provided that the overall efficiency (capture efficiency multiplied by destruction efficiency) of the system shall not be less than 85 percent by weight in reducing volatile organic compounds. The emission control system, as well as the operational and maintenance plan necessary to compliance on an on-going basis, shall be approved in writing by the Air Pollution Control Officer.

304 **SURFACE PREPARATION AND CLEAN-UP SOLVENTS:**

304.1 Effective April 27, 1995 a person shall not use materials which have a VOC content in excess of 200 grams per liter of material for surface preparation unless such material has an initial boiling point of greater than 190°C as determined by the method specified in Section 501.6.

304.2 A person shall not use VOC-containing materials for the clean-up of equipment used in coating operations unless:

- a. Such material is collected in a container which is closed when not in use; and
- b. The spray equipment is disassembled and cleaned in an enclosed gun washer or other low emission washing system that has been demonstrated to be at least equivalent to an enclosed system. The alternative low emission washing system must have approval in writing by the Air Pollution Control Officer.

304.3 A person shall use closed containers for the disposal of cloth, paper, or other materials including solvent and spent solvent used for surface preparation, clean-up, and paint removal.

400 ADMINISTRATIVE REQUIREMENTS

401 **PROHIBITION OF SPECIFICATION:** A person shall not specify the use of any coating to be applied to any metal parts and products subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule. The requirements of this Section shall apply to all written or oral contracts.

402 **QUALIFICATION FOR CLASSIFICATION AS EXTREME PERFORMANCE COATING:** A person shall apply to the Air Pollution Control Officer to have a coating classified as an extreme performance coating prior to application of such coating. The Air Pollution Control Officer may classify a coating as an extreme performance coating provided that the petitioner demonstrates that the intended use of each coated object would require an extreme performance coating and has successfully demonstrated that general compliant coatings are unsuitable.

403 **COMPLIANCE STATEMENT REQUIREMENT:** Effective April 27, 1994, manufacturers of coatings subject to this rule shall provide on coating containers or on separate data sheets the designation of VOC content (as supplied) including any recommended thinning ratio. The VOC content shall be expressed as grams per liter of coating less water and less exempt compounds.

404 **CALCULATION FOR DETERMINATION OF VOC CONTENT PER VOLUME OF COATING:** The VOC content per volume of coating shall be calculated less water and less exempt compounds as follows:

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

where:

W_s	=	Weight of volatile compounds in grams
W_w	=	Weight of water in grams
W_{es}	=	Weight of exempt compounds in grams
V_m	=	Volume of coating materials in liters
V_w	=	Volume of water in liters
V_{es}	=	Volume of exempt compounds in liters

405 **CALCULATION FOR DETERMINATION OF VOC CONTENT PER VOLUME OF SURFACE PREPARATION OR CLEANUP MATERIAL:**

The VOC content per volume of surface preparation and cleanup materials is calculated using the following equation:

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

where:

W_s	=	Weight of volatile compounds in grams
W_w	=	Weight of water in grams

W_{es} = Weight of exempt compounds in grams
 V_m = Volume of material in liters

500 MONITORING AND RECORDS

501 RECORDS:

501.1 **Coating and Solvent Records:** Any person subject to the requirements of Section 300 of this Rule shall maintain:

- a. A current list of coatings and solvents in use, which includes the following information:
 - (i) Name and manufacturer information;
 - (ii) Mixing instructions;
 - (iii) VOC content of coatings and surface preparation and cleanup solvents as applied;
 - (iv) Weight percent water;
 - (v) Weight percent exempt solvent; and
 - (vi) Thinning solvent composition and density
- b. The amounts of coatings and VOCs used according to the following schedule:
 - (i) Monthly records showing the types and amounts of coatings used that meet the coating standard contained in Section 301; and
 - (ii) Daily records showing the types and amounts of coatings used that do not meet the requirements of Section 301, and whether such usage was in conjunction with emission control equipment.
- c. Usage records of coatings that are exempt from the requirements of this rule by Section 110 can be kept on a quarterly basis.
- d. Usage records of coatings shall be kept on a daily basis by those facilities, using less than one gallon per day, exempted under Section 112.
- e. Monthly records showing the types and amounts of solvents used for surface preparation and cleanup.

501.2 **Emission Control Equipment Records:** Any person complying with the provisions of Section 301 by using air pollution control equipment shall maintain daily records of key

system operating parameters, such as temperatures, pressures, and/or flowrates, for the emission control equipment which will demonstrate continuous operation and compliance of the equipment during periods of emission producing activity.

- 501.3 **Record Retention:** All records maintained pursuant to this Section shall be retained for the previous two calendar years, and shall be made available to the Air Pollution Control Officer upon request.

502 **TESTING PROCEDURES:**

- 502.1 **VOC Content:** The Volatile organic compound content of coatings and solvents subject to the provisions of this rule excluding exempt compounds shall be determined by procedures contained in EPA Reference Test Method 24 (40 CFR 60, Appendix A).
- 502.2 **Exempt Compounds:** Measurement of exempt compounds shall be conducted and reported in accordance with ASTM Test Method D 4457-85. For exempt compounds where no reference test method is available, a facility requesting the exemption shall provide appropriated test methods approved by the Air Pollution Control Officer and approvable by EPA.
- 502.3 **Acid Content:** Measurement of acid content shall be conducted and reported in accordance with ASTM Test Method D 1613-85.
- 502.4 **Metal Content:** Measurement of metal content shall be conducted and reported in accordance with the South Coast Air Quality Management District's Spectrographic Method 311.
- 502.5 **Capture Efficiency:** The measurement of capture efficiency of an emission control system shall be determined by and reported in accordance with 40 CFR 52.741, Appendix B, "VOM Measurement Techniques for Capture Efficiency".
- 502.6 **Boiling Range of Liquid Containing VOC:** Determinations of the initial boiling point of a liquid containing VOC shall be performed in accordance with ASTM Test Method D

1078-86.

- 502.7 **Control Efficiency:** Determination of control efficiency shall be conducted and reported in accordance with EPA Method 25A.
- 502.8 **Solids Content:** Measurement of solids content shall be conducted and reported in accordance with EPA Reference Test Method 24.
- 502.9 **Transfer Efficiency:** The transfer efficiency for alternative coating applications methods described in Section 302 of this Rule shall be determined in accordance with the South Coast Air Quality Management District "Procedure for Testing Spray Equipment Transfer Efficiency (TE)".
- 502.10 **Spray Gun Cleaning Systems:** The determination of emissions of VOC 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" dated October 3, 1989.

RULE 2.26
MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

ADOPTED April 27, 1994
REVISED November 9, 1994
REVISED August 13, 1997
REVISED May 14, 2008
REVISED December 10, 2008

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emission of volatile organic compounds (VOCs) from coating operations associated with motor vehicles, mobile equipment, and associated parts and components.
- 102 **APPLICABILITY:** The provisions of this rule are applicable to any person who uses, applies or solicits the use or application of any coating on motor vehicles or mobile equipment, and their parts and components, or any person who supplies, sells, offers for sale, manufactures or distributes within the District, any material subject to the provisions of this rule.
- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section or part of this rule for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of the rule.
- 110 **EXEMPTION - GENERAL:** The provisions of this rule, except for Section 503, Burden of Proof, shall not apply to the following:
- 110.1 Application of aerosol coating products.
- 110.2 Any automotive coating that is sold, supplied, or offered for sale in 0.5 fluid ounce or smaller containers intended to be used by the general public to repair tiny surface imperfections.
- 110.3 Any coating applied to motor vehicles or mobile equipment, or their associated parts and components during manufacture on an assembly line.
- 110.4 Any automotive coating that is offered for sale, sold or manufactured for use outside of the District.
- 111 **EXEMPTION - PROHIBITION OF SALE OR MANUFACTURE:** The provisions of Section 403 shall not apply to any automotive coating that is offered for sale, sold or shipped for reformulation or repackaging, or any coating whose emissions to the atmosphere are controlled by an emission control system that meets the requirements of Section 305.
- 112 **EXEMPTION - APPLICATION REQUIREMENTS:** The provisions of Section 304 of this Rule shall not apply to the application of underbody coatings, graphic design applications, truck bed liner coatings, or any coating use of less than one (1) fluid ounce (29.6 milliliters).

200 DEFINITIONS

- 201 **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.
- 202 **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.

- 203 **ANTI GLARE/SAFETY COATING:** A coating which minimizes light reflection for safety purposes.
- 204 **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.
- 205 **ASSOCIATED PARTS AND COMPONENTS:** Any 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.
- 206 **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.
- 207 **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.
- 208 **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.
- 209 **CATALYST:** A substance whose presence initiates the reaction between chemical compounds.
- 210 **CLEAR COATING:** Any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.
- 211 **COATING:** A material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.
- 212 **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.

- 213 **CONTROL DEVICE:** Equipment such as an incinerator or adsorber used to prevent air pollutants from reaching the ambient air.
- 214 **COLOR MATCH:** The ability of a repair coating to blend into an existing coating so that color difference is not visible.
- 215 **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.
- 216 **EMISSION CONTROL SYSTEM:** A control device and its associated collection system.
- 217 **EXEMPT COMPOUNDS:** As defined in District Rule 1.1, General Provisions and Definitions.
- 218 **GRAPHIC DESIGN APPLICATION:** The application of logos, letters, numbers and graphics to a painted surface, with or without the use of a template by brush, roller, or airbrush.
- 219 **GROUP I VEHICLES:** Passenger cars, large/heavy duty truck cabs and chassis, light and medium duty trucks and vans, and motorcycles.
- 220 **GROUP II VEHICLES AND EQUIPMENT:** Public transit buses and mobile equipment.
- 221 **HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY EQUIPMENT:** Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.
- 222 **LARGE/HEAVY DUTY TRUCKS:** Any truck having a manufacturer's gross vehicle weight rating of over 30,000 pounds.
- 223 **LIGHT AND MEDIUM DUTY TRUCKS AND VANS:** Any truck or van having a manufacturer's gross vehicle weight rating of 30,000 pounds or less.
- 224 **METALLIC/IRIDESCENT TOPCOAT:** Any coating which contains more than 5 g/l (0.042 lb/gal) of metal or iridescent particles, as applied, where such particles are visible in the dried film.
- 225 **MOBILE EQUIPMENT:** Any equipment which may be drawn or is capable of being driven on rails or on a roadway, including, but not limited to, trains, railcars, truck bodies, truck trailers, camper shells, mobile cranes, bulldozers, street cleaners, golf carts and implements of husbandry or agriculture.
- 226 **MOTOR VEHICLE:** Any self-propelled vehicle, including but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.

- 227 **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.
- 228 **MULTI-STAGE TOPCOAT SYSTEM:** A topcoat system composed of either a basecoat / clearcoat (2 stage), a basecoat / midcoat / clearcoat (3 stage), or a groundcoat / basecoat / midcoat / clearcoat (4 stage).
- 229 **PRECOAT:** Any coating which is applied to bare metal primarily to deactivate the metal surface prior to application of a subsequent water-base primer surfacer. A precoat shall be a coating that dries by oxidation or chemical polymerization.
- 230 **PRETREATMENT COATING:** Any coating which contains a minimum of one half (0.5) percent acid by weight and not more than 16 percent solids by weight necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.
- 231 **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.
- 232 **PRIMER SEALER:** Any coating which is labeled and formulated for application prior to the application of a color coating for the purpose of color uniformity, or to promote the ability of the underlying coating to resist penetration by the color coating.
- 233 **PRIMER SURFACER:** Any coating applied prior to the application of a topcoat for the purpose of corrosion resistance, adhesion of the topcoat, and which promotes a uniform surface by filling in surface imperfections.
- 234 **REDUCER:** The solvent used to thin enamel.
- 235 **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.
- 236 **SOLVENT:** A VOC-containing fluid used to perform surface preparation and cleaning operations.
- 237 **SPECIALTY COATINGS:** Unique coatings and compliant coatings with additives which are necessary due to unusual job performance requirements. Said coatings include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric materials, gloss flatteners, bright metal trim repair, and anti-glare/safety coatings.
- 238 **SPOT REPAIR:** Repair of an area on a motor vehicle, piece of mobile equipment, or associated parts or components of less than 1 square foot (929 square centimeters).

- 239 **SURFACE PREPARATION AND CLEANUP:** The removal of contaminants such as dust, soil, oil, grease, etc., prior to any step in a manufacturing process from parts, products, tools, machinery, equipment, and general work areas.
- 240 **TEMPORARY PROTECTIVE COATING:** Any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- 241 **TOPCOAT:** Any coating applied over a primer, primer system, or an original OEM finish for the purpose of protection or appearance. For the purposes of this Rule, solid color and metallic/iridescent topcoats are single stage applications, the VOC_{AVERAGE} of a multi stage topcoat system will determine compliance with the VOC standards in Section 301 of this Rule.
- 242 **TRANSFER EFFICIENCY:** The ratio of the amount of coating solids adhering to the object being coated to the total amount of coating solids sprayed, expressed as a percentage.
- 243 **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.
- 244 **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.
- 245 **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.
- 246 **VOLATILE ORGANIC COMPOUNDS(VOC):** As defined in Rule 1.1, General Provisions and Definitions.
- 247 **VOLATILE ORGANIC COMPOUND (VOC) CONTENT:** Weight of VOC per volume of material as calculated pursuant to the applicable Sections of 600.

300 STANDARDS

- 301 **COATING LIMITS:** Until July 1, 2009, any person who applies coatings to Group I or II vehicles, mobile equipment, their parts and components, shall comply with Sections 301.1 or 301.2 of this Rule.

- 301.1 **Group I Vehicles.** A person shall not refinish Group I vehicles, their parts and components, or Group II vehicles and mobile equipment where color match is required, using any coating with a regulatory VOC content in excess of the following limits, expressed as grams of VOC per liter (or pounds per gallon) of coating applied, excluding water and exempt compounds

COATING	REGULATORY VOC CONTENT
Pretreatment Coating	780 g/l (6.5 lbs/gal)
Precoat	600 g/l (5.0 lbs/gal)
Primer/Primer surfacer	250 g/l (2.1 lbs/gal)
Primer Sealer	420 g/l (3.5 lbs/gal)
Solid Color Topcoat	420 g/l (3.5 lbs/gal)
Metallic/Iridescent Topcoat	520 g/l (4.3 lbs/gal)
Multi Stage Topcoat System	540 g/l (4.5 lbs/gal)
Specialty Coating	840 g/l (7.0 lbs/gal)
Temporary Protective Coating	60 g/l (0.5 lbs/gal)

- 301.2 **Group II Vehicles and Mobile Equipment.** A person shall not finish or refinish Group II vehicles and equipment or their parts and components where color match is not required, using any coating with a regulatory VOC content in excess of the following limits, expressed as grams of VOC per liter (or pounds per gallon) of coating applied, excluding water and exempt compounds.

COATING	REGULATORY VOC CONTENT
Pretreatment Coating	780 g/l (6.5 lbs/gal)
Precoat	600 g/l (5.0 lbs/gal)
Primer	250 g/l (2.1 lbs/gal)
Primer Sealer	340 g/l (2.8 lbs/gal)
Topcoat	420 g/l (3.5 lbs/gal)
Metallic/Iridescent Topcoat	420 g/l (3.5 lbs/gal)
Specialty Coating	840 g/l (7.0 lbs/gal)
Temporary Protective Coating	60 g/l (0.5 lbs/gal)

- 302 **COATING LIMITS:** Effective July 1, 2009, no person shall apply to any motor vehicle, mobile equipment, or associated parts and components, any coating with a VOC regulatory content, as calculated pursuant to section 605, in excess of the following limits, except as provided in Section 305:

COATING CATEGORY	REGULATORY VOC CONTENT grams/liter (pounds/gallon)	
	Effective 7/1/2009	Effective 7/1/2010
Adhesion Promoter	840 (7.0)	540 (4.5)
Clear Coating	250 (2.1)	250 (2.1)
Color Coating	420 (3.5)	420 (3.5)
Multi-Color Coating	680 (5.7)	680 (5.7)
Pretreatment Coating	660 (5.5)	660 (5.5)
Primer	250 (2.1)	250 (2.1)
Primer Sealer	340 (2.8)	250 (2.1)
Single-Stage Coating	420 (3.5)	340 (2.8)
Temporary Protective Coating	60 (0.5)	60 (0.5)
Truck Bed Liner Coating	310 (2.6)	310 (2.6)
Underbody Coating	430 (3.6)	430 (3.6)
Uniform Finish Coating	540 (4.5)	540 (4.5)
Any Other Coating Type	250 (2.1)	250 (2.1)

- 303 **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 section 302, then the lowest VOC content limit shall apply.
- 304 **APPLICATION REQUIREMENTS:** 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:
- 304.1 Brush, dip, or roller;
 - 304.2 Electrostatic spray;
 - 304.3 HVLP spray equipment;
 - 304.4 Use of a spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section 221 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.

- 304.5 Any alternative method that achieves a transfer efficiency equivalent to, or higher than, the application methods listed in sections 304.1, 304.2 or 304.3 as determined per section 608. Written approval from the Executive Officer or Air Pollution Control Officer of the District shall be obtained for each alternative method prior to use.
- 305 **EMISSION CONTROL SYSTEM:** In lieu of complying with the VOC content limits of Section 301 or 302, a person may use a VOC emission control system that controls emissions from the source operation provided the following conditions are met:
- 305.1 The VOC emission control system shall be approved in writing by the APCO,
- 305.2 The VOC emission control system shall be operated with an overall capture and control efficiency of at least 85 percent by weight during periods of emission producing activity.
- 306 **STORAGE AND DISPOSAL - GENERAL:** All VOC-containing materials, whether in its form for intended use or as a waste or used product, including items such as cloth or paper laden with VOC containing materials, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the facility.
- 307 **REQUIREMENTS FOR SURFACE PREPARATION AND CLEANUP MATERIALS:** Any solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in surface preparation and cleanup operations shall be carried out pursuant to Rule 2.31, Surface Preparation and Cleanup.
- 308 **SPECIALTY COATINGS:** Until July 1, 2009, use of all specialty coatings except antiglare/safety coatings shall not exceed 5.0 percent of all coatings applied, on a monthly basis. The application of topcoats with a specialty coating used as an additive shall be subject to the topcoat limits in Sections 301.1 and 301.2 of this Rule.
- 309 **PRECOAT LIMITATION:** Until July 1, 2009, a person shall not use precoat in excess of 25 %, by volume, of the amount of primer surfacer used on a monthly basis. Purchase invoices to verify this limitation shall be presented to the Air Pollution Control Officer upon request.
- 308 **TOXIC AIR CONTAMINANT:** No person shall apply a coating to any motor vehicle, mobile equipment, or associated parts and components, containing cadmium or hexavalent chromium.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **PROHIBITION OF POSSESSION:** Effective 7/1/2009, no person shall possess at any automotive refinishing facility, any automotive coating that is not in compliance with section 302 or 305, as applicable.

- 402 **PROHIBITION OF SPECIFICATION:** No person shall specify the use of any coating to be applied to a motor vehicle, mobile equipment, or part or component subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule. The requirements of this Section shall apply to all written or oral contracts, including, but not limited to, job orders, under the terms of which any coating or solvent that is subject to the provisions of this rule is to be used or applied.
- 403 **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 if such product is prohibited by any of the provisions of this Rule.
- 404 **COMPLIANCE STATEMENT REQUIREMENT:** The manufacturer or repacker of coatings subject to this Rule shall provide the following:
- 404.1 Until July 1, 2009, separate data sheets designating the VOC content (as supplied) including any recommended thinning ratio. The VOC content shall be expressed as grams per liter of coating less water and less exempt compounds and may be determined by either calculation or analysis.
- 404.2 Effective July 1, 2009, product data sheets or an equivalent medium containing the following information:
- a. The actual VOC content and the regulatory VOC content 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.
- 405 **LABELING REQUIREMENTS:** Effective July 1, 2009, the manufacturer and repacker 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.
- 406 **HVLP MARKING:** A person shall not sell, offer for sale, or distribute for use within the District any HVLP gun without a permanent marking, or accurate information provided on company letterhead or in the form of technical literature clearly identifying the spray gun manufacturer, salesperson or distributor, denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section 221 of this Rule.
- 407 **OPERATION AND MAINTENANCE PLAN (O&M Plan):** Any person using an emission control device pursuant to Section 305 of this Rule, as a means of complying with this rule, must submit with the application for Authority to Construct, pursuant to Rule 3.1, GENERAL PERMIT REQUIREMENTS, an O&M Plan for the emission control device to the APCO for approval. The O&M Plan shall specify operation and maintenance procedures which will demonstrate continuous operation of the control device during periods of emission producing operations. The O&M Plan shall also specify which records must be kept to document these operation and maintenance procedures. These records shall comply with the requirements of Sections 501 and 502 of this Rule. Any person using an emission control device must

fully comply with all O&M Plans submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the APCO.

500 MONITORING AND RECORDS

501 **RECORD KEEPING - GENERAL:** Any person using coatings subject to Section 300 of this Rule shall maintain and have available at all time on site the following:

501.1 A current list of all coatings and additives used subject to this rule, including the following:

- a. Material name and manufacturer;
- b. Application method;
- c. Coating category and mix ratio specific to the coating; and
- d. Actual VOC content for coatings and the regulatory VOC content for coatings, as applied.

501.2 Current manufacturer specification sheets, material data sheets, technical data sheets, or air quality data sheets, which list the actual VOC content for coatings and regulatory VOC content for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive coating components, and the VOC content of each solvent.

501.3 The person shall maintain records on a daily basis including the following information:

- a. Coating and mix ratio of components in the coating used.
- b. Quantity of each coating applied.

501.4 Purchase records identifying the coating type, name, and volume of coating.

502 **RECORD KEEPING - EMISSION CONTROL SYSTEMS:** If compliance with this rule is achieved through the use of an emission control system, in addition to the provisions of Section 501, the owner or operator shall maintain:

502.1 Daily usage records of all materials used such as coatings, catalysts, additives, and reducers.

502.2 Daily records of key operating parameters such as temperatures, pressures, flowrates, and hours of operation of the control device to verify compliance of the capture and control device.

502.3 Maintenance work which interferes with the operation of the control device.

503 **RECORD KEEPING - PROHIBITION OF SALE OR MANUFACTURE:** Any person claiming an exemption under Section 111 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:

503.1 The quantity manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed, including size and number of containers;

503.2 The regulatory VOC content for coatings;

503.3 The actual VOC content for coatings;

503.4 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, retail tax license number, and valid District permit number; and

503.5 The specific exemption being utilized under Section 111.

504 **BURDEN OF PROOF:** Any person claiming an exemption pursuant to Section 110 or 111 shall have information available such as product data or material safety data sheets or records that would allow the APCO to verify the eligibility of the exemption.

505 **REPORTING:** All records required by this Rule shall be maintained on site for a period of two years and made available to the APCO upon request.

600 TEST METHODS AND CALCULATIONS

601 **GENERAL:** For the purposes of this Rule, the following test methods or calculation methods shall be used. Other test methods determined to be equivalent and approved in writing by the District and the EPA may also be used. VOC emissions or other parameters determined to exceed any limits established by this Rule through the use of any of the following test methods or calculations shall constitute a violation of this Rule.

602 **VOC CONTENT:** The VOC content of coatings, subject to the provisions of this Rule, shall be determined by procedures contained in EPA Reference Test Method 24 (40 CFR 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings").

603 **EXEMPT COMPOUNDS:** Measurement of exempt compounds shall be determined by using ARB Method 432, "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings," September 12, 1998; ARB Method 422 "Determination of Volatile Organic Compounds in Emission from Stationary Sources," January 22, 1987; or South Coast Air Quality Management District (SCAQMD) Method 303-91 "Determination of Exempt Compounds," February 1993.

604 **EXEMPT COMPOUNDS -METHYL ACETATE, ACETONE, T-BUTYL ACETATE, AND PARACHLOROBENZOTRIFLUORIDE (PCBTF):** Measurement of methyl acetate, acetone t-butyl acetate and PCBTF, shall be determined by using ASTM D6133-02, "Standard Test Method for Acetone, p-Chlorobenzotrifluoride, Methyl Acetate or t-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw Materials by Direct Injection Into a Gas Chromatograph".

605 **CALCULATION OF VOC CONTENT:** The VOC content per volume of coating shall be calculated as follows:

605.1 The regulatory VOC content per volume of coating shall be calculated less water and less exempt compounds as follows:

$$\text{VOC}_{\text{con}} = \frac{W_s - W_w - W_{\text{ec}}}{V_m - V_w - V_{\text{ec}}}$$

Where:

- VOC_{con} = Grams of VOC per liter of material
- W_s = Weight of volatile compounds in grams
- W_w = Weight of water in grams
- W_{ec} = Weight of exempt compounds in grams
- V_m = Volume of coating materials in liters
- V_w = Volume of water in liters
- V_{ec} = Volume of exempt compounds in liters

605.2 The actual VOC content per volume of coating shall be calculated by the following equation:

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

Where:

- VOC_{con} = Grams of VOC per liter of material
- W_s = Weight of volatile compounds in grams
- W_w = Weight of water in grams
- W_{ec} = Weight of exempt compounds in grams
- V_m = Volume of material in liters

606 **CALCULATION OF VOC CONTENT OF COATING SYSTEM:** Until July 1, 2009, the VOC content of a basecoat/clearcoat coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{BC}} + 2\text{VOC}_{\text{CC}}}{3}$$

The VOC content of a three stage coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{BC}} + \text{VOC}_{\text{MC}} + 2\text{VOC}_{\text{CC}}}{4}$$

The VOC content of a four stage coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{GC}} + \text{VOC}_{\text{BC}} + \text{VOC}_{\text{MC}} + 2\text{VOC}_{\text{CC}}}{5}$$

Where:

VOC_{AVERAGE}	=	The average of the VOC content, as applied, and used to determine compliance with the standards in Section 301 of this Rule.
VOC_{GC}	=	The VOC content, as applied, of a pigmented groundcoat or tinted primer sealer.
VOC_{BC}	=	The VOC content, as applied, of a pigmented basecoat.
VOC_{MC}	=	The VOC content, as applied, of a translucent midcoat.
$2VOC_{\text{CC}}$	=	The VOC content, as applied, of a transparent clearcoat.

607 **TRANSFER EFFICIENCY:** Transfer efficiency as required by Section 303 of this Rule shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

608 **HVLP EQUIVALENCY:** Spray equipment HVLP equivalency shall be determined by using South Coast Air Quality Management District "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" September 26, 2002.

609 **CAPTURE EFFICIENCY:** The capture efficiency of a VOC emission control system's collection device 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.

610 **CONTROL EFFICIENCY:** The control efficiency of a VOC emission control system's collection device shall be determined by using EPA Methods 2, 2A, or 2D for measuring flow rates and EPA Method 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 or CARB Method 422 shall be used to determine the emissions of exempt compounds.

611 **OVERALL CAPTURE AND CONTROL EFFICIENCY:** For VOC emission control systems that consist of a single VOC emission control device, the overall capture and control efficiency shall be calculated by using the following equation:

$$CE_{\text{overall}} = [CE_{\text{capture}} \times CE_{\text{control}}] / 100\%$$

Where: CE_{overall} = Overall Capture and Control Efficiency
 CE_{capture} = Capture Efficiency of the collection device*
 CE_{control} = Control Efficiency of the collection device**

*As determined in Section 609

**As determined in Section 610

612 **IRIDESCENT PARTICLES IN METALLIC/IRIDESCENT TOPCOAT:** Iridescent particles in metallic/iridescent topcoat as defined, in Section 224 of this Rule shall be determined by the SCAQMD Method 318 "Determination of Weight Percent Elemental Metal in Coatings by x-Ray Diffraction."

- 613 **ACID CONCENTRATION IN PRETREATMENT WASH PRIMER:** Acid concentration in pretreatment coating as defined in Section 230 of this Rule shall be determined by using ASTM D1613-06 “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products”.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

**RULE 2.27 INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS,
STEAM GENERATORS, AND PROCESS HEATERS**

ADOPTED October 27, 1993

REVISED August 14, 1996

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100 GENERAL

101PURPOSE: To provide a control measure to limit emissions of NO_x from industrial, institutional, and commercial boilers, steam generators and process heaters in conformance with BARCT determinations approved by the California Air Resources Board to meet the requirements of the California Clean Air Act.

102 APPLICABILITY: This rule applies to boilers, steam generators, and process heaters with rated heat inputs of greater than or equal to 5 million BTU per hour, used in all industrial, institutional, and commercial operations.

110 EXEMPTION, NONGASEOUS FUELS: If gas is unavailable for purchase, units which normally burn only gas and are subject to the requirements of Section 301 of this rule shall comply with a NO_x emission limit not to exceed 0.6 lbs/mmbtu when burning nongaseous fuel according to the following equation:

$$(X)*(Y) < 36.12, \text{ where:}$$

X = lbs/mmbtu NO_x emission rate, and

Y = hours of operation per calendar year.

36.12 = Regulatory constant

The hours of operation limit in this exemption shall not include equipment testing and emissions testing time of less than 48 hours per calendar year.

111 EXEMPTION, ELECTRIC UTILITY BOILERS: The provisions of this rule do not apply to boilers used by electric utilities to generate electricity.

112 EXEMPTION, WASTE HEAT RECOVERY BOILERS: The provisions of this rule do not apply to waste heat recovery boilers that are used to recover sensible heat from the exhaust of combustion turbines.

113 EXEMPTION, DRYERS: The provisions of this rule do not apply to units in which a material is being dried while in direct contact with the products of combustion.

114 EXEMPTION, CEMENT AND LIME KILNS, GLASS MELTING FURNACES, AND SMELTERS: The provisions of this rule do not apply to cement and lime kilns, glass melting furnaces and smelters.

115 EXEMPTION, LOW-USE PROCESS HEATERS: Section 300 of this rule does not apply to process heaters used less than 250 hours per calendar year.

200 DEFINITIONS

201 ANNUAL HEAT INPUT: The total heat input of fuels burned by a unit in a calendar year, as determined from the HHV and cumulative annual usage of each fuel.

202 BARCT: "Best Available Retrofit Control Technology" as defined in section 40406 of the California Health and Safety Code as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source".

203 BOILER OR STEAM GENERATOR: Any combustion equipment fired with any fuel and used to produce steam that is not used exclusively to produce electricity for sale. This definition does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine.

204 BRITISH THERMAL UNIT (BTU): The amount of heat required to raise the temperature of one pound of water from 59°F to 60°F at one atmosphere.

205 FLUE-GAS NO_x REDUCING TECHNOLOGY: Engineering controls of NO_x emissions employed after combustion but prior to release from the exhaust stack.

206 GAS: Any fuel which is a gas at standard conditions.

207 HEAT INPUT: The chemical heat released due to fuel combustion in a unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.

208 HIGHER HEATING VALUE (HHV): The total heat liberated per mass of fuel burned (BTU per pound), when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to their standard states at standard conditions. HHV shall be determined by one of the following test methods:

208.1 ASTM D 2015-85 for solid fuels; or

208.2 ASTM D 240-87 or ASTM D 2382-88 for liquid hydrocarbon fuels; or

208.3 ASTM D 1826-88 or ASTM D 1945-81 in conjunction with ASTM D 3588-89 for gaseous fuels.

209 NO_x EMISSIONS (NO_x): The sum of nitric oxides and nitrogen dioxide in the flue gas.

210 NONGASEOUS FUEL: Any fuel which is not a gas at standard conditions.

211 PARTS PER MILLION (BY VOLUME) (ppmv): The ratio of the number of gas molecules of a given species, or group of species, to the number of millions of total gas molecules.

212 PROCESS HEATER: Any combustion equipment fired with any fuel, and which transfers heat from combustion gases to water or process streams. This definition does not include any dryers in which the material being dried is in direct contact with the products of combustion, cement or lime kilns, glass melting furnaces, and smelters.

213 RATED HEAT INPUT: The heat input capacity, in million BTU per hour, specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the maximum heat input shall be considered as the rated heat input.

214 SHUT-DOWN: The period of time a unit is cooled from its operating temperature to ambient temperature, or the time specified by the unit manufacturer.

215 STANDARD CONDITIONS: 68°F and one atmosphere.

216 START-UP: The period of time a unit is heated from ambient temperature to its operating temperature, or the time specified by the unit manufacturer.

217 THERM: One hundred thousand (100,000) BTU.

218 THREE PREVIOUS CALENDAR YEARS: The three consecutive years immediately preceding the year in which final compliance is required by this rule, or the three consecutive years immediately preceding each calendar year of compliance thereafter.

219 UNIT: Any boiler, steam generator or process heater as defined in Sections 203 and 212 of this rule.

300 STANDARDS

301 ANNUAL HEAT INPUTS 90,000 THERMS: For units with rated heat inputs of greater than or equal to 5 million BTU per hour and annual heat inputs of greater than or equal to 90,000 therms for any single calendar year of the three previous calendar years, NO_x emissions shall not exceed the following levels:

301.1 30 parts per million by volume (ppmv), or 0.036 pound per million BTU of heat input when operated on gas; or

301.2 40 parts per million by volume (ppmv), or 0.052 pound per million BTU of heat input, when operated on nongaseous fuel; or

301.3 the heat-input weighted average of the limits specified in 301.1 and 301.2, above, when operated on

combinations of gas and nongaseous fuels.

Emissions from units subject to this Section shall not exceed a carbon monoxide concentration of 400 parts per million by volume (ppmv).

302 ANNUAL HEAT INPUTS < 90,000 THERMS: Units with rated heat inputs of greater than or equal to 5 million BTU per hour and annual heat inputs of less than 90,000 therms for each of the three previous calendar years or units with rated heat inputs of greater than or equal to 5 million BTU per hour and not subject to the provisions of Section 301 shall:

302.1 Be operated in a manner that maintains stack-gas oxygen concentrations at less than or equal to 3.00 percent by volume on a dry basis during normal, steady state operation (or maintain oxygen concentrations at the optimum O₂ level as specified by the manufacturer); or

302.2 Be tuned not less than once every twelve months by a technician that is qualified to perform a tune-up in accordance with Section 600 of this rule; or

302.3 Be operated in compliance with the applicable emission levels specified in Section 301 of this rule.

303 EQUIPMENT REQUIREMENTS

303.1 Owners or operators of units which simultaneously fire combinations of gaseous and nongaseous fuels, and are subject to the requirements of Section 301 (annual heat inputs greater than or equal to 90,000 therms), shall install mass flow rate meters in each fuel line. Alternatively, volumetric flow rate meters may be installed in conjunction with temperature and pressure meters in each fuel line. All volumetric and mass flow meters required by this section must be non-resettable, totalizing meters.

303.2 Owners or operators of units which employ flue-gas NO_x reducing technology and are subject to the requirements of Section 301 of this rule, shall, through yearly testing or by installing data collection devices, collect sufficient data consistent with determining compliance with this rule. Such measurements may include, but are not limited to, the oxygen concentration, CO concentration, stack-gas temperatures, and/or any other data necessary to accurately assess the effectiveness of the NO_x reduction equipment.

400 ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE: The owner or operator of units subject to this rule shall fulfill the following increments of progress:

401.1 Submit, by October 27, 1995, a plan containing the following:

- a. A list of all units with their rated heat inputs and anticipated annual heat inputs.
- b. For owners or operators of units subject to Section 301 (annual heat inputs greater than or equal to 90,000 therms), for each unit listed, the selected method of achieving the applicable standard or standards of Section 301.
- c. For owners or operators of units subject to Section 302, for each unit listed, a selection of one of the options specified in Section 302 to achieve compliance with this rule.

401.2 By October 27, 1995, all owners or operators subject to the provisions of this rule shall submit an application for Authority to Construct for any modifications required to achieve compliance with the requirements of this rule.

401.3 By June 1, 1998, all owners or operators subject to this rule shall demonstrate final compliance with all applicable standards and requirements of this rule.

402 COMPLIANCE DETERMINATION:

402.1 An owner or operator of any unit(s) shall have the option of complying with either the pounds-per-million-BTU emission rates or the parts-per-million-by-volume emission limits specified in Section 301.

402.2 All emission determinations shall be made in the as-found operating condition, except that emission determinations shall include at a minimum at least one source test conducted at the maximum firing rate allowed by the District permit, and no compliance determination shall be established within two hours after a continuous period in which fuel flow to the unit is zero, or shut off, for thirty minutes or longer.

402.3 All ppmv emission limits specified in Sections 110 and 301 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:

$$[\text{ppm NO}_x]_{\text{corrected}} = \frac{20.95\% - 3.00\%}{20.95\% - [\% \text{O}_2]_{\text{measured}}} * [\text{ppm NO}_x]_{\text{measured}}$$

$$[\text{ppm CO}]_{\text{corrected}} = \frac{20.95\% - 3.00\%}{20.95\% - [\% \text{O}_2]_{\text{measured}}} * [\text{ppm CO}]_{\text{measured}}$$

402.4 All pounds-per-million-BTU emission rates shall be calculated as pounds of nitrogen dioxide (N₂) per million BTU of heat input.

402.5 All emission concentrations and emission rates shall be based on 15-consecutive-minute averages. These averages shall be calculated from no less than five data sets, recorded from sampling on intervals of no greater than three minutes.

402.6 All operators of units covered under Sections 301 and 302 shall conduct source tests to demonstrate initial compliance with the requirements of this rule. For units subject to Section 301, operating parameters shall be established during the initial source tests in order to allow future compliance monitoring from tune-up data. Such parameters may include, but are not limited to, the gas flow rate, steam flow rate, steam pressure, excess oxygen levels, CO levels, stack-gas temperatures, or any other parameters that the Air Pollution Control Officer deems necessary to ensure compliance. These operational parameters must be submitted to the District with the initial source test report. Additional source testing may be required by the Air Pollution Control Officer as necessary to ensure compliance with the standards set forth in Sections 301 and 302 of this Rule.

402.7 Sources subject to Section 301 shall perform annual source tests in accordance with Section 502 or tune-ups in accordance with Section 600 to demonstrate compliance with this rule. If annual tune-ups are used to certify compliance, then the tune-up data demonstrating the equipment is operating within the parameters established during the initial source test must be submitted to the District. The Air Pollution Control Officer shall require additional source testing if the tune-up data indicates a deviation from the parameters established in the initial source test.

402.8 Failure to comply with all of the provisions of an approved plan under Section 401.1 shall constitute a violation of this rule.

402.9 The cumulative annual usage of each fuel shall be monitored from utility service meters, purchase, or tank fill records, or by any other acceptable methods approved by the Air Pollution Control Officer.

403 TEST REPORTS: The owners or operators of units subject to Section 301 of this rule shall, at least every twelve months, submit either source or tune-up test reports on each unit for each fuel burned, including any fuels which may be burned in accordance with Section 110. For units complying with Section 302.2, tune-up verification reports shall also be submitted not less than once every twelve months. Test reports shall include the operational characteristics of all

flue-gas NO_x reduction equipment that were monitored as required by Section 303.2. The first test or tune-up report, for each unit subject to Section 300 of this rule shall be submitted by June 1, 1998.

500 MONITORING AND RECORDS

501 FUEL USAGE AND OPERATING HOURS: The owners or operators of units subject to Section 300 of this rule shall monitor and record for each unit the HHV and cumulative annual usage of each fuel and the cumulative annual hours of operation during shut-down and start-up procedures as defined in Sections 214 and 216. The owners and operators of units exempt from Section 301 in accordance with Section 110 shall monitor and record for each unit the cumulative hours of operation on each nongaseous fuel. Owners and operators of units exempt from Section 300 in accordance with Section 115 shall monitor and record for each unit the cumulative hours of operation per year. The records shall be updated weekly and made available to the District upon request. Historical annual data for the five previous calendar years shall be kept and made available to the District upon request.

502 TEST METHODS:

502.1 Compliance with N_x emission requirements and the stack-gas carbon monoxide and oxygen requirements of Section 300 shall be determined using the following test methods:

- a. Oxides of Nitrogen - ARB Method 100.
- b. Carbon Monoxide - ARB Method 100.
- c. Stack-Gas Oxygen - ARB Method 100.
- d. NO_x Emission Rate (Heat Input Basis) - EPA Method 19.

502.2 Test methods other than those specified in Section 502.1 for oxides of nitrogen, stack-gas oxygen, and stack-gas carbon monoxide, may be used to determine compliance so long as they are functionally equivalent and approved by the Air Pollution Control Officer, the California Air Resources Board, and the U.S. EPA.

600 TUNING PROCEDURE

601 GENERAL: Nothing in these tuning procedures⁽¹⁾ 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.

602 PROCEDURES FOR TUNING MECHANICAL DRAFT BOILERS, STEAM GENERATORS, AND PROCESS HEATERS:

602.1 Operate the unit at the firing rate most typical of normal operation. If the unit experiences significant load variations during normal operations, operate the unit at its average firing rate.

602.2 At the firing rate established in Section 602.1, record stack-gas temperatures, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number⁽²⁾ (for liquid fuels), and observe flame conditions after unit operation stabilizes at the selected firing rate. If the excess oxygen in the stack-gas is at the lower end of the range of typical minimum values⁽³⁾, and if CO emissions are low and there is no smoke, the unit is probably operating at near optimum efficiency - at this particular firing rate. However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical.

¹ This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for the EPA.

² The smoke-spot number can be determined with ASTM test method D-2156 or with the Bacharach method. This Bacharach method is included in a tune-up kit that can be purchased from the Bacharach company.

³ Typical minimum oxygen levels for units at high firing rates are:

- A. For natural gas: 0.5 - 3%
- B. For liquid fuels: 2 - 4%

602.3 Increase combustion air flow until the stack-gas oxygen levels increase by one or two percent over the level measured in Section 602.2. As in Section 602.2, record the stack-gas temperature, CO concentration (for gaseous fuels) or smoke-spot number (for liquid fuels), and observe flame conditions for these higher oxygen levels after unit operation stabilizes.

602.4 Decrease combustion air flow until the stack-gas oxygen is at the level measured in Section 602.2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack-gas temperature, oxygen concentration, CO concentration (for gaseous fuels), and smoke-spot number (for liquid fuels). Also, observe the flame and record any changes in its condition.

602.5 Continue to reduce combustion air flow stepwise, until one of the following limits is reached:

- a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability;
- b. Stack-gas CO concentrations greater than 400 ppm;
- c. Smoking at stack;
- d. equipment-related limitations - such as low windbox/furnace pressure differential, built-in air-flow limits, etc.

602.6 Develop an O_2/CO curve (for gaseous fuels) or $O_2/smoke$ curve (for liquid fuels) similar to those shown in Figures 1 and 2 using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.



602.7 From the curves prepared in Section 602.6, find the stack-gas oxygen levels where the CO emissions or smoke-spot number equal the following values:

Fuel	Measurement	Value
Gaseous	CO Emissions	400 PPM
#1 & #2 Oils	Smoke Spot Number	Number 1
#4 Oil	Smoke Spot Number	Number 2
#5 Oil	Smoke Spot Number	Number 3
Other Oils	Smoke Spot Number	Number 4

The above conditions are referred to as the CO or smoke-spot thresholds, or as the minimum excess oxygen levels. Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the manufacturer, burner adjustments can probably be made to improve fuel and air mix, thereby allowing operations with less air.

602.8 Add 0.5 to 2.0 percent to the minimum excess oxygen level found in Section 602.7 and reset burner controls to operate automatically at this higher stack-gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or play in automatic controls.

602.9 If the load of the combustion unit varies significantly during normal operation, repeat Sections 602.1-602.8 for the firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give the best performance over the range of the firing rates. If one firing rate predominates, the setting should optimize the conditions at that rate.

602.10 Verify that the new settings can accommodate the sudden load changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in Section 602.5 result, reset the combustion controls to provide a

slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.

603 PROCEDURES FOR TUNING NATURAL AND INDUCED DRAFT BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

603.1 Preliminary Analysis

- a. Check the Operating Pressure or Temperature. Operate the boiler, steam generator, or process heater at the lowest acceptable pressure or temperature that will satisfy the load demand. This will minimize heat and radiation losses. Determine the pressure or temperature that will be used as a basis for comparative combustion analysis before and after tuneup.
- b. Check Operating Hours. Plan the workload so that the boiler, steam generator, or process heater operates only the minimum hours and days necessary to perform the work required. Fewer operating hours will reduce fuel use and emissions.
- c. Check Air Supply. Sufficient fresh air supply is essential to ensure optimum combustion and the area of air supply openings must be in compliance with applicable codes and regulations. Air openings must be kept wide open when the burner is firing and clear from restriction to flow.
- d. Check Vent. Proper venting is essential to assure efficient combustion. Insufficient draft or overdraft promotes hazards and inefficient burning. Check to be sure that vent is in good condition, sized properly and with no obstructions.
- e. Check Thermal Insulation. Check condition of, or absence of, appropriate insulation on all steam, hot water or process pipes, return tank, heat exchangers, storage tanks, etc. Lack of adequate thermal insulation will significantly increase fuel usage.
- f. Combustion Analysis. Perform an "as is" flue gas analysis (O_2 , CO, CO_2 , etc.) with a warmed up boiler, steam generator, or heater at high and low fire. In addition to data obtained from combustion analysis, also record the following:
 1. Inlet fuel pressure at burner (at high and low fire)
 2. Draft above draft hood or barometric damper
 - i. Draft hood: high, medium, and low
 - ii. Barometric damper: high, medium, and low
 - iii. Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the boiler, steam generator, or process heater.
 - iv. Unit rate if meter is available.

With above conditions recorded, make the following checks and corrective actions as necessary:

603.2 Checks and Corrections

- a. Check burner Condition. Dirty burners or burner orifices will cause boiler, steam generator, or process heater output rate and thermal efficiency to decrease. Clean burners and burner orifices thoroughly. Also, ensure that fuel filters and moisture traps are in place, clean, and operating properly, to prevent plugging of gas orifices. Confirm proper location and orientation of burner diffuser spuds, gas canes, etc. Look for any burned-off or missing burner parts, and replace as needed.
- b. Check for Clean Boiler, Steam Generator, or Process Heater Tubes and Heat transfer Surfaces. External and internal build-up of sediment and scale of the heating surfaces creates an insulating effect that quickly reduces unit efficiency. Excessive fuel cost will result if units are not kept clean. Clean tube surfaces, remove scale and soot, and assure proper fluid and flue gas flow.
- c. Check Water Treatment & Blowdown Program. Soft water and the proper water or process fluid treatment must be uniformly used to minimize scale and corrosion. Timely flushing and periodic blowdown must be employed to eliminate sediment and scale build-up on a boiler, steam generator, or process heater.

- d. Check for Steam Hot Water or Process Fluid Leaks. Repair all leaks immediately since even small high pressure leaks quickly lead to considerable fuel, water and steam losses. Be sure there are no leaks through the blow-off drains, safety valve, by-pass lines or at the feed pump, if used.

603.3 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.
- e. Check pilot safety shut-off operation.

603.4 Adjustments

While taking combustion readings with a warmed up boiler, steam generator, or process heater at high fire, perform checks and adjustments as follows:

- a. Adjust unit to fire at rated capacity. Record fuel manifold pressure.
- b. Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at high, medium and low fire. Carbon monoxide value should always be below 400 ppm at 3% O₂. If CO is high, make necessary adjustments. Check to ensure boiler, steam generator, or process heater light offs are smooth and safe. A reduced fuel pressure test at both high and low fire should be conducted in accordance with the manufacturers instructions and maintenance manuals.
- c. Check and adjust operation of modulation controller. Ensure proper, efficient, and clean combustion through the range of firing rates. When above adjustments and corrections have been made, record all data.

603.5 Final Test

Perform a final combustion analysis with a warmed up boiler, steam generator, or process heater at high, medium, and low fire. In addition to data from combustion analysis, also check and record:

- a. Fuel pressure at burner (High, Medium, and Low).
- b. Draft above draft hood or barometric damper (High, Medium, and Low).
- c. Steam pressure or water temperature entering and leaving boiler, steam generator, or process heater.
- d. Unit rate if meter is available.

When the above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or process heater records indicating name and signature of person, title, company name, company address and date the tuneup was performed.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.28

CUTBACK AND EMULSIFIED ASPHALTS

ADOPTED May 25, 1994

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100 GENERAL

101 PURPOSE: The purpose of this Rule is to limit the emissions of organic compounds from the use of cutback and emulsified asphalts in paving materials, paving, and maintenance operations.

102 APPLICABILITY: The provisions of this Rule shall apply to all persons that manufacture, sell, mix, store, use, and apply cutback and emulsified asphalts.

110 EXEMPTIONS: The requirements of Section 302 of this Rule shall not apply to the following uses of medium cure cutback asphalts:

110.1 The manufacture of asphalt for long-period storage or stockpiling of patching mixes used in pavement maintenance, but not for general paving.

110.2 When the forecast of the high temperature for the 24-hour period following application is below 50°F (10°C), provided that the records of the high temperature are maintained, as specified in Section 501.2 of this Rule.

200 DEFINITIONS

201 ASPHALT: Dark brown to black cementitious material (solid or liquid) of which the main constituents are bitumens which occur naturally or as a residue of petroleum refining. Liquid asphalts are those asphalts which have been liquified by blending with petroleum solvents.

202 CUTBACK ASPHALT: Asphalt cement that has been cut back or blended with a diluent of petroleum solvents. The types of cutback asphalts are defined by American Society of Testing and Materials (ASTM) specifications as follows:

201.1 Slow cure type (Road Oils): ASTM D-2026-72

201.2 Medium cure type: ASTM D-2027-76

201.3 Rapid cure type: ASTM D-2028-76

203 DUST PALLIATIVE: Any light application of cutback asphalts for the express purpose of controlling loose dust.

204 EMULSIFIED ASPHALT: An emulsion of asphalt cement and water that contains a small amount of emulsifying agent. An inverted emulsified asphalt shall be considered a cutback asphalt if the liquid asphalt phase was a cutback asphalt.

205 PENETRATING PRIME COAT: Any application of asphalt to an absorptive surface to penetrate and bind the aggregate surface and promote adhesion between it and the new superimposed construction. Prime coats do not include dust palliatives or tack coats.

206 TACK COAT: Any application of asphalt applied to an existing surface to provide a bond between new surfacing and existing surfaces and to eliminate slippage planes where the new and existing surfaces meet.

300 STANDARDS

301 RAPID CURE ASPHALT: The use of rapid cure cutback asphalts for paving, road construction, road maintenance, penetrating prime coats, tack coats, or dust palliatives at any physical location within the District is

prohibited.

302 MEDIUM CURE ASPHALT: The use of medium cure cutback asphalts for paving, road construction, road maintenance, penetrating prime coats, tack coats, or dust palliatives at any physical location within the District is prohibited, except as specifically exempted in Section 110 of this Rule.

303 SLOW CURE ASPHALT: Slow cure cutback asphalts shall contain no more than 0.5 percent by volume of petroleum solvents which evaporate at 500°F (260°C) or lower as determined by the method specified in Section 502.1 of this Rule.

304 EMULSIFIED ASPHALT: No person shall use or manufacture any emulsified asphalt containing petroleum solvents that evaporate at 500°F (260°C) or lower in excess of three (3) percent by volume in paving material or in paving and maintenance operations. The petroleum solvent content shall be determined by the method specified in Section 502.2 of this Rule.

305 PROHIBITION OF MANUFACTURE AND SALE: No person shall manufacture, offer for sale or sell a liquid asphalt or emulsified asphalt product if the use of such product at any physical location within the District is prohibited by any provisions of this Rule. The records of manufacture, sale, and destination of asphalts shall be maintained according to the provisions of Section 501.1 of this Rule.

306 PROHIBITION OF SPECIFICATION: No person shall require for use or specify the application of a cutback asphalt or emulsified asphalt product if such product is prohibited by any provisions of this Rule. The prohibition of this Section shall apply to any written or oral contracts under the terms of which any cutback or emulsified asphalt product is to be applied at any physical location within the District.

500 MONITORING AND RECORDS

501 RECORDS: The following records shall be maintained for a period of two (2) years and shall be made available to the District upon request:

501.1 Any person who manufactures liquid asphalts or emulsified asphalts which contain organic solvents shall maintain records showing the following:

- a. The types and amounts of asphalts produced, including the percentages of petroleum solvent diluent used in each type;
- b. The dates of sale or use;
- c. The name of the purchaser or user; and
- d. The intended destination of the asphalt products.

501.2 Any person using medium cure cutback asphalt in accordance with the provisions of Section 110.2 of this Rule shall keep records of the official National Weather Service Forecast for the high temperature for the day following the application of the asphalt.

502 TEST METHODS: The analysis of cutback and emulsified asphalts shall be conducted by the following test methods, as appropriate:

502.1 The total distillate content of cutback asphalt shall be determined using ASTM Test Method D-402-76.

502.2 The petroleum solvent content of emulsified asphalt shall be determined using ASTM Test Method D-244-88.

RULE 2.29
GRAPHIC ARTS PRINTING OPERATIONS

ADOPTED May 25, 1994

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100 GENERAL

101 **PURPOSE:** To limit the emission of volatile organic compounds from graphic arts operations.

110 EXEMPTION - SMALL USER:

110.1 Until January 1, 1995, the requirements of this Rule shall not apply to any facility which conducts graphic arts operations which emits less than 30 pounds of volatile organic compounds per operating day (calculation of emissions shall not include surface preparation or cleanup solvent).

110.2 Effective January 1, 1995, the requirements of this Rule shall not apply to any facility that emits less than 400 pounds of volatile organic compounds in any month from graphic arts operations, including surface preparation and cleanup solvents. For the purpose of calculating exemption applicability, emissions of volatile organic compounds from the use of nonheatset lithographic ink shall be determined by the test methods specified in Sections 504.1 or 504.2 of this Rule.

110.3 Any person claiming an exemption under this Section shall have information available, such as purchase orders or hazardous waste manifests, that would allow the Air Pollution Control Officer to verify facility usage.

111 EXEMPTION - LABORATORY AND EXPERIMENTAL OPERATIONS:

The requirements of this Rule, with the exception of Section 501 of this Rule, shall not apply to graphic arts operations used exclusively for research, laboratory analysis or determination of product quality and commercial acceptance, such as proof presses or other proofing systems, provided that total VOC emissions from all such equipment does not exceed 300 pounds per calendar month per facility.

200 DEFINITIONS

201 **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 are considered to be performing a graphic arts operation.

202 **CONTROL DEVICE:** Equipment such as an incinerator or adsorber

used to prevent air pollutants from reaching the ambient air.

- 203 **CONVERTING OPERATION:** Coating, waxing, laminating, extrusion coating and printing, for fabrication of base materials. The base materials are then used to produce wraps, bags, and other preformed packages.
- 204 **DOCTOR BLADE:** A steel blade used to scrape excess ink from a printing plate.
- 205 **DRYING OVEN:** An oven used to hasten the process of drying printed or coated material.
- 206 **EXTREME PERFORMANCE INK/COATING:** An ink or coating used in screen printing on a non-porous substrate that is designed to withstand any of the following:
- 206.1 More than two years of outdoor exposure; or
- 206.2 Exposure to industrial-grade chemicals, solvents, acids
 detergents, oil products, cosmetics, temperatures
 exceeding 76⁰C (170⁰F), vacuum forming, embossing,
 or molding.
- 207 **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.
- 208 **FLEXOGRAPHIC PRINTING:** A printing operation in which words, designs, or pictures are applied to a substrate by means of a roll printing technique in which a raised pattern is applied to an image carrier made of rubber or other elastomeric materials mounted on a steel matting cylinder The image is then printed directly from the raised pattern to the substrate.
- 209 **FOUNTAIN SOLUTION:** The solution applied to the image plate to maintain the hydrophilic properties of the nonimage areas and to keep the nonimage area free from ink.
- 210 **FUGITIVE EMISSIONS:** Emissions of volatile organic compounds from any portion of the printing, coating, or lamination operation other than the drying oven.

- 211 **GRAPHIC ARTS OPERATIONS:** Publication gravure, packaging gravure, web-feed wallpaper screen printing, specialty gravure, flexographic printing operations, lithographic printing operations, letterpress printing operations, or any coating or laminating operation that manufacturers' flexible packaging material for the packaging industry. Coating operations which are performed by a machine having only coating units and no printing units are not graphic arts operations.
- 212 **GRAVURE PRINTING:** An intaglio printing operation in which the ink is transferred from minute etched wells which comprise the image on a plate to the substrate which is supported by an impression roller, with excess ink removed from the plate by a doctor blade.
- 213 **INTAGLIO PRINTING:** A printing operation done from a plate in which the image is etched or engraved into the surface.
- 214 **LAMINATING OPERATIONS:** A process of composing two or more layers of material to form a single multiple-layer sheet by using adhesive as the bonding agent.
- 215 **LETTERPRESS PRINTING:** A printing operation in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface.
- 216 **LINE:** The minimum equipment which is required for the application and/or curing of inks and/or coatings on a substrate, including the ink and/or coating applicators and heating oven(s) and associated ink and coating mixing equipment.
- 217 **LITHOGRAPHIC PRINTING:** A printing operation in which the image and nonimage areas exist in the same plane. The nonimage area is treated chemically so that the image areas will be printed onto the substrate.
- 218 **MAKEUP SOLVENT:** That solvent which is added to printing inks to reduce viscosity.
- 219 **METALLIC INK:** An ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.
- 220 **NONHEATSET INK:** An ink which dries primarily by oxidation and absorption into the substrate without the use of heat from dryers or ovens, used primarily in lithographic and letterpress printing.

- 221 **NONPOROUS SUBSTRATE:** Any substrate 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.
- 222 **OFFSET PRINTING:** A lithographic printing operation in which the image area is transferred, or offset, to another surface, and then printed onto the substrate.
- 223 **PACKAGING GRAVURE PRINTING:** A gravure printing operation on paper, paperboard, foil, film or other substrates which are to be used to produce containers or packages.
- 224 **POROUS SUBSTRATE:** Paper or paperboard.
- 225 **PRODUCTION UNIT:** A ream of paper, consisting of 500 sheets of paper.
- 226 **PUBLICATION GRAVURE PRINTING:** A gravure printing operation on paper which is subsequently formed into books, magazines, catalogs, brochures, directories, newspaper supplements or other publication material.
- 227 **SCREEN PRINTING:** A printing operation in which the printing ink passes through a refined form of stencil to a web or fabric. The stencil openings determine the form and dimension of the imprint.
- 228 **SIGN INK/COATING:** An ink or coating used in screen printing indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.
- 229 **SOLVENT:** Organic compounds which are used as diluents, thinners, dissolvers, viscosity reducers, cleaning agents, or for other similar uses.
- 230 **SPECIALTY GRAVURE PRINTING:** A gravure printing operation for production of wall and floor covering, decorated household paper products such as towels and tissues, cigarette filter tips, vinyl upholstery, gift wrap, and woodgrains.
- 231 **VOLATILE ORGANIC COMPOUNDS (VOC):** Compounds which contain at least one atom of carbon, except for the following compounds considered exempt from the definition of VOC, whose

presence shall be determined in accordance with Section 504 of this Rule:

- 231.1 Methane
 - 231.2 Carbon dioxide
 - 231.3 Carbon monoxide
 - 231.4 Carbonic acid
 - 231.5 Metallic carbides or carbonates
 - 231.6 Ammonium carbonate
 - 231.7 1,1,1-Trichloroethane
 - 231.8 Methylene chloride
 - 231.9 Trichlorofluoromethane (CFC-11)
 - 231.10 Dichlorodifluoromethane (CFC-12)
 - 231.11 Chlorodifluoromethane (CFC-22)
 - 231.12 Trifluoromethane (HFC-23)
 - 231.13 Trichlorotrifluoroethane (CFC-113)
 - 231.14 Dichlorotetrafluoroethane (CFC-114)
 - 231.15 Chloropentafluoroethane (CFC-115)
 - 231.16 Dichlorotrifluoroethane (HCFC-123)
 - 231.17 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
 - 231.18 Pentafluoroethane (HFC-125)
 - 231.19 1,1,2,2-Tetrafluoroethane (HFC-134)
 - 231.20 Tetrafluoroethane (HFC-134a)
 - 231.21 Dichlorofluoroethane (HCFC-141b)
 - 231.22 Chlorodifluoroethane (HCFC-142b)
 - 231.23 1,1,1-Trifluoroethane (HFC-143a)
 - 231.24 1,1-Difluoroethane (HFC-152a)
 - 231.25 The following classes of perfluorocarbon compounds:
 - a. Cyclic, branched, or linear, completely fluorinated alkanes,
 - b. Cyclic, branched, or linear, completely fluorinated ethers, with no unsaturations,
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines, with no unsaturations,
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- Perchlorofluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific compounds and the amounts present in the product or process and provides a validated test method which can be used to quantify the identified compounds.

printing presses.

233 **WEB-FEED:** An automatic system on a printing press which supplies a web substrate to the printing unit.

234 **WEB SPLICING ADHESIVE:** An adhesive used to join two continuous rolls of substrate.

300 STANDARDS

301 **PUBLICATION GRAVURE REQUIREMENTS:** A person shall not operate a publication gravure process unless one of the following conditions is satisfied:

301.1 The process uses ink and coating that contains less than 300 grams of volatile organic compounds per liter of product (2.5 lb/gal), less water and exempt compounds, or

301.2 Emissions of volatile organic compounds from the printing and drying operation are controlled by an emissions control system which has an overall collection and control efficiency of at least 85 percent on a mass basis.

302 **FLEXOGRAPHIC, GRAVURE, LETTERPRESS, AND LITHOGRAPHIC REQUIREMENTS:** Effective January 1, 1995, except as provided in Section 304 of this Rule, a person shall not operate a flexographic, gravure, letterpress, lithographic, related printing or coating operation unless the product limits shown in **Table 1**, expressed in grams of volatile organic compounds per liter (lbs/gal) of product as applied, less water and exempt compounds are met.

Table 1	
Product	Limits Grams VOC/Liter of Product as applied, less water and exempt compounds (lbs/gal)
Ink	300 (2.5)
Coating	300 (2.5)
Adhesive	150 (1.25)
Web Splicing Adhesive	300 (2.5)

Effective January 1, 1995, a person shall not use in any flexographic, gravure, letterpress, lithographic, related printing or coating

operation any fountain solution which contains a total VOC in excess of 100 grams per liter (0.83 lbs/gal) of material, as applied.

- 303 **SCREEN PRINTING REQUIREMENTS:** Effective January 1, 1995, except as provided in Section 304 of this Rule, a person shall not operate a screen printing operation, unless the product limits as shown in **Table 2**, expressed in grams of volatile organic compounds per liter (lbs/gal) as applied, less water and exempt compounds are met.

Table 2	
Product	Limits Grams VOC/Liter of Product as applied, less water and exempt compounds (lbs/gal)
	Effective January 1, 1995
Ink	400(3.3)
Coating	400(3.3)
Adhesive	150(1.25)
Extreme Performance Ink/Coating	400(3.3)
Metallic Ink	400(3.3)
Sign Ink/Coating	400(3.3)

- 304 **EMISSION CONTROL SYSTEM REQUIREMENTS:** The limits in Sections 302 and 303 of this Rule shall not apply when emissions of volatile organic compounds to the atmosphere from the printing, coating, or laminating and drying operations are controlled by an emission control device that is approved by the Air Pollution Control Officer and has an overall collection and control efficiency of at least 75 percent on a mass basis.

- 305 **SOLVENT EVAPORATIVE LOSS MINIMIZATION:** The following requirements shall apply to any person using solvent for surface preparation and cleanup and to any person using, mixing, storing, or disposing of ink, coating, or adhesive:

305.1 A person shall not use open containers for the storage or disposal of cloth or paper impregnated with organic compounds that is used for surface preparation, cleanup, or ink, coating, or adhesive removal.

305.2 A person shall not store spent or fresh organic compounds to

be used for surface preparation, cleanup, or ink, coating, or adhesive removal, in open containers.

305.3 A person shall not leave containers of ink, coating, adhesive, or fountain solution open when not in use.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **OPERATION AND MAINTENANCE PLAN:** Any person using an approved emission control device pursuant to Sections 301.2 or 304 of this Rule as a means with complying with this rule must submit, with the application for Authority to Construct, pursuant to Rule 3.1, GENERAL PERMIT REQUIREMENTS, an Operation and Maintenance Plan for the emission control device to the Air Pollution Control Officer for approval. Plans for emission control devices installed as of May 25, 1994, if not previously submitted, must be submitted by November 25, 1994 and receive approval of the Air Pollution Control Officer. The plan shall specify operation and maintenance procedures which will demonstrate continuous operation of the control device during periods of emission-producing operations. The plan shall also specify which records must be kept to document these operation and maintenance procedures. These records shall comply with the requirements of Sections 501.4 and 501.5 of this Rule. The plan shall be implemented upon approval of the Air Pollution Control Officer.
- 402 **COMPLIANCE STATEMENT REQUIREMENT:** The manufacturer or distributor of all inks, coatings, adhesives, fountain solutions, makeup solvents, and surface preparation and cleanup solvents which are sold for use in graphic arts operations within the District shall include on product data sheets a designation of both the as-supplied VOC content, less water, except for fountain solutions, (prior to any recommended dilution) and the as-applied VOC content (based on any recommended dilution) of each material. Fountain solution VOC content shall be expressed in grams per liter of material or pounds per gallon of material. The VOC content shall be expressed in grams per liter or pounds per gallon and may be either by calculation or analysis.

500 MONITORING AND RECORDS

- 501 **RECORDS:** Any person subject to the provisions of Sections 111, 301.1, 302, and 303 of this Rule shall:
- 501.1 Maintain a current list of inks, coatings, adhesives, fountain

solutions and makeup solvent in use which states the VOC content of each.

- 501.2 Record on a monthly basis the type and amount of all using one of the following methods:
- a. Group the quantity of all inks used and used identify the maximum VOC content and use the minimum density of 1.01 kg/l (8.44 lb/gal).
 - b. Report process inks and pantone colors separately and use the specific VOC content and density value for each process ink and the highest volatile organic compound and 1.01 kg/l (8.44 lb/gal) for pantone inks.
 - c. Report process inks and pantone colors separately using the maximum VOC content and minimum density for both process and pantone inks or use the density of 1.01 kg/l (8.44 lb/gal).
 - d. Itemize each ink and pantone color and use the specific VOC content and density value for each.

- 501.3 Record on a monthly basis the type and amount of each coating, adhesive, fountain solution; and makeup, surface preparation, and cleanup solvent used.

- 501.4 Retain and have such records available for inspection by the Air Pollution Control Officer for the previous 24 month period.

- 501.5 Maintain Operation and Maintenance Plan records required by the provisions of Section 401 of this Rule on a daily basis.

502 **EMISSION CONTROL SYSTEM RECORDS:** Any person subject to the provisions of Sections 301.2 or 304 of this Rule shall:

- 502.1 Maintain a current list of inks, coatings, adhesives, fountain solutions, and makeup solvent in use which states the VOC content of each.

- 502.2 Record on a daily basis the type and amount of all ink, coating adhesive, fountain solution; and makeup, surface preparation, and cleanup solvent used.

- 502.3 Record on a daily basis all key system operating parameters, such as temperature, flow rates, and pressure, where applicable.
- 502.4 Retain and have such records available for inspection by the Air Pollution Control Officer for the previous 24 month period.

503 **EMISSION CONTROL SYSTEM MONITORING:** Any person who uses a emission control system which is subject to the provisions of Sections 301.2 and 304 of this Rule shall install a readily visible temperature gauge which monitors the operating temperature of the emission control system at all times during operation.

504 **TEST METHODS:**

- 504.1 **Analysis of Samples:** Measurement of the volatile content of adhesives, coatings, fountain solutions, makeup solvents, surface preparation and cleanup solvents, and all inks (except as provided for in Section 502.2 of this Rule) shall be made in accordance with EPA Method 24 and 24A.
- 504.2 **Analysis of Samples, Nonheatset Polymerizing Lithographic or Letterpress Inks:** Measurement of the volatile content shall be made in accordance with EPA Method 24 and 24A. All components of the sample must be weighed in the proper proportion into the analysis container and mixed together, with the mixture then being allowed to stand for at least one hour, but no more than 24 hours, prior to being oven-dried at 110°C for 1 hour.
- 504.3 **Determination of Exempt Compounds:** Compounds considered exempt from the definition of Volatile Organic Compound, as listed in Section 225 of this Rule, shall be determined in accordance with ASTM D 4457-85 or ARB Method 432. If any of the perfluorocarbons are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the EPA-approved test method used to make the determination of these compounds.
- 504.4 **Determination of Control Efficiency:** Control Efficiency of control equipment shall be determined in accordance

with EPA Method 25.

- 504.5 **Determination of Collection System Efficiency:** Collection efficiency of the collection system shall be determined by and reported in accordance with 40 CFR 52.741, Appendix B, "VOM Measurement Techniques for Capture Efficiency".
- 504.6 **Determination of Metal Content:** The measurement of metal content shall be determined in accordance with South Coast Air Quality Management District's Spectrographic Method 311.

RULE 2.30 POLYESTER RESIN OPERATIONS

ADOPTED August 25, 1993

REVISED August 13, 1997

REVISED April 14, 1999

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100

GENERAL

- 101 **PURPOSE:** The purpose of this rule is to control Volatile Organic Compound (VOC) emissions from polyester resin operations.
- 102 **APPLICABILITY:** This rule is applicable to all commercial and industrial stationary sources performing polyester resin operations.
- 110 **EXEMPTION, TOUCH-UP AND REPAIR:** The provisions of Section 300 shall not apply to touch-up and repair.

200

DEFINITIONS

- 201 **AIRLESS SPRAY:** A coating spray application system using high fluid pressure to atomize the coating without compressed air.
- 202 **AIR-ASSISTED AIRLESS SPRAY:** A coating spray application using fluid pressure to atomize the coating and lower pressure air to adjust the shape of the spray pattern.
- 203 **CATALYST:** A substance added to the resin to initiate polymerization.
- 204 **CLEANING MATERIALS:** Materials used for cleaning, including but not limited to: hands, tools, molds, application equipment, and work areas.
- 205 **CLOSED MOLD SYSTEM:** A method of forming an object from polyester resins by placing the material in a confining mold cavity and applying pressure and/or heat.
- 206 **CONTROL SYSTEM:** A control device and its associated collection system.
- 207 **CORROSION-RESISTANT MATERIALS:** Materials that are halogenated, furan, bisphenol A, vinyl ester, or isophthalic resins that are used to make products for corrosive or fire retardant applications.
- 208 **CROSS-LINKING:** The chemical process of chemically bonding two or more polymer chains together.

- 209 **CURE:** To polymerize, e.g., to transform from a liquid to a solid or semi-solid state to achieve desired product physical properties, including hardness.
- 210 **ELECTROSTATIC SPRAY:** The spray application of coatings whereby an electrostatic potential is created between the part to be coated and the coating particles.
- 211 **FIBERGLASS:** A fiber similar in appearance to wool or cotton fiber but made from glass.
- 212 **GEL COAT:** A polyester resin topcoat that provides a cosmetic enhancement and improves resistance to degradation from exposure to the environment.
- 213 **GRAMS OF VOC PER LITER OF MATERIAL:** The weight of VOC per volume of material as calculated by the following equation:

$$D = \frac{(W_s - W_w - W_{es})}{V_m}$$

where:

D	=	Grams of VOC per liter of material
W_s	=	Weight of volatile materials in grams
W_w	=	Weight of water in grams
W_{es}	=	Weight of exempt compounds in grams
V_m	=	Volume of materials in liters.

- 214 **HIGH VOLUME-LOW PRESSURE:** Spray equipment used to apply coatings by means of a gun which operates between 0.1 and 10 psi air pressure.
- 215 **INHIBITOR:** A substance used to slow down or prevent a chemical reaction.
- 216 **LOW-VOC EMISSIONS RESIN SYSTEMS:** Polyester resin materials which contain vapor suppressants to reduce monomer evaporation loss.
- 217 **MONOMER:** A relatively low-molecular-weight organic compound that combines with itself, or other similar compounds to become a cured thermosetting resin.

- 218 **POLYESTER:** A complex polymeric ester containing difunctional acids and alcohols dissolved in a monomer.
- 219 **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 VOC- containing materials used in polyester resin operations.
- 220 **POLYESTER RESIN OPERATIONS:** Methods used for the production or rework of products by mixing, pouring, hand lay-up, impregnating, injecting, forming, winding, spraying, and/or curing unsaturated polyester resin materials with fiberglass, fillers, or any other reinforcement materials and associated cleanup.
- 221 **POLYMER:** A chemical compound comprised of a large number of chemical units and which is formed by the chemical linking of monomers.
- 222 **REPAIR:** The part of the fabrication process that requires the addition of polyester resin material to portions of a previously fabricated product in order to mend structural damage.
- 223 **RESIN:** Any of a class of organic polymers of natural or synthetic origin used in reinforced products to surround and hold fibers, and is solid or semi-solid in the cured state.
- 224 **SPECIALTY RESIN:** Any halogenated, furan, bisphenol-A, vinyl ester, or isophthalic resin used to make products for exposure to one or more of the following extreme environmental conditions: acute or chronic exposure to corrosive, caustic or acidic agents, or flame.
- 225 **TOUCH-UP:** The portion of the fabrication process that is necessary to cover minor imperfections.
- 226 **VOLATILE ORGANIC COMPOUND (VOC):** Any compound containing at least one atom of carbon, except those compounds exempted under Section 214 of Rule 1.1, General Provisions and Definitions.
- 227 **VAPOR SUPPRESSANT:** A substance added to a resin to minimize the outward diffusion of monomer vapor into the atmosphere.

228 **WASTE MATERIALS:** Those materials that include, but are not limited to: scraps resulting from cutting and grinding operations, any paper or cloth used for cleaning operations, waste resins, and any spent cleaning materials.

300

STANDARDS

- 301 **REQUIREMENTS:** Any person operating a polyester resin operation shall comply with one or more of the following, as applicable:
- 301.1 The use of polyester resin material with a monomer content of no more than 35 percent by weight and low VOC gel coat with a monomer content of no more than 45 percent by weight and low VOC specialty resins and clear gel coat with a monomer content of no more than 50 percent by weight, as applied and as determined by the manufacturer's specification;
 - 301.2 The use of a resin containing a vapor suppressant, such as that weight loss from VOC emissions does not exceed 60 grams per square meter of exposed surface area during resin polymerization; as determined by Section 501.1;
 - 301.3 The use of a closed-mold system;
 - 301.4 Polyester resin operations shall install and operate an emissions control system which is designed and operated for the collection of fugitive emissions from polyester resin material and which system is approved by the District, and has a control device with a overall control and capture efficiency of 85 percent or more on a mass basis as determined by Sections 501.2 and 501.7; and
 - 301.5 Only airless, air-assisted airless, high volume-low pressure, or electrostatic spray equipment shall be used for the application of polyester resin materials in spraying operations.
- 302 **CLEANING MATERIAL REQUIREMENTS:** Where the use of cleaning materials containing more than 1.7 pounds per gallon of VOC material as applied and as determined by Section

501.3 or having a initial boiling point less than 190°C, as determined by Section 501.4, exceeds four (4) gallons per day, a cleaning material reclamation system shall be used. Such a reclamation system shall operate at least 80 percent efficiency. Solvent residues for on-site reclamation systems shall not contain more than 20 percent VOC by weight as determined by Section 501.5.

303 **STORAGE AND DISPOSAL REQUIREMENTS:**

- 303.1 Closed containers shall be used for the storage of all polyester resin materials, cleaning materials, and any unused VOC-containing materials except when being accessed for use.
- 303.2 Self-closing containers shall be used in such a manner to effectively control VOC emissions to the atmosphere for the disposal of all polyester resin materials, cleaning materials, waste materials, and any unused VOC-containing materials.

304 **COMPLIANCE DATES:**

- 304.1 Any person subject to the requirements of this rule shall be in compliance by (six months from date of adoption).
- 304.2 Facilities operating prior to (date of adoption) and which elect to install and operate an emission control system pursuant to the requirements of Section 301.2 shall have the control system installed and operating by (18 months from date of adoption).

400 ADMINISTRATIVE REQUIREMENTS

- 401 **PROHIBITION OF SPECIFICATION:** A person shall not specify the use of any gel coat or polyester resin material subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule. The requirements of this Section shall apply to all written or oral contracts.

- 402 **PROHIBITION OF SALE:** A person shall not sell or offer for

sale any gel coat or polyester resin material subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule.

500

MONITORING AND RECORDKEEPING

501 **TEST METHODS:** The analysis of cleaning materials, polyester resin materials, and control/collection efficiency shall be determined by the appropriate test methods as follows:

501.1 Laboratory Static Test for Polyester Resin Materials:

- a. Principle:
A weighed amount of polyester resin material is reacted with a methyl ethyl ketone peroxide (MEKP) catalyst to form a 14.5 cm diameter casting. The volatility loss is determined at room temperature ($77 \pm 3^{\circ}\text{F}$) and 56 percent room humidity over a specified time period. This method is applicable only to polyester resin materials and does not simulate spray booth operations.
- b. Apparatus:
 1. Analytical Balance, top-loading, capable of measuring up to 0.01 gram.
 2. Gallon can lid or equivalent. The lid should be 14.5 cm inside diameter (165.13 cm^2). Different size lids should be measured prior to testing.
 3. Paper clip, bent to 90° .
 4. Clock or timer capable of reporting time to a precision of 0.01 minute.
 5. Constant temperature and humidity room, as described above. If a constant temperature room is not available, measure temperature and humidity prior to each weight measurement or test procedure.
- c. Determination of VOC Loss:
 1. Place the bent paper clip on a gallon can lid, or equivalent.
 2. Tare weight to $\pm 0.01\text{g}$ the gallon can

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- lid and clip. Record the weight as W_1 .
3. Catalyze 200 grams of polyester resin material with the recommended type and amount of catalyst and promoter. Ensure that the resin temperature is 77°F at catalyzation.
 4. Add 100g (" 0.05g) of catalyzed polyester resin material to the gallon can lid. Record the weight of the lid plus the polyester resin material to " 0.01g as W_2 . Start timer.
 5. At five (5) minute intervals, record the gross weight loss to " 0.01g as W_t and check the catalyzed resin for gel point. Gelling has occurred when either the resin tears or the can lid raises when the paper clip is lifted. Record gel time to the nearest one (1) minute.
 6. To include both gel and cure time of the resin rate loss in the calculations, it is recommended that weight measurements continue at fifteen (15) minute intervals for sixty (60) minutes after the gel point.
 7. At sixty (60) minutes after the gel point (or constant weight), record the final weight of the lid plus the polyester resin material to " 0.01g as W_f .
- d. Calculations: Determine VOC loss per square meter as follows:
- $$\text{Loss} = (W_2 - W_f) \times 60.56$$
- where:
- $$A = \frac{60.56}{1/A}$$
- A = The area of the gallon can lid in square meters
- $$= \frac{[(d/2)^2 \times 3.14159]}{(10,000 \text{ cm/m})}$$
- where d is in cm.
- $$W_1 = \text{Tare weight of the gallon can lid (plus paper clip if$$

used).

W_2 = Initial weight = W_1 plus the polyester resin material and catalyst (if used).

W_t = Sample weight after (t) minutes have elapsed.

W_f = Sample weight at final measurement.

e. Reporting:

1. Product tested and catalyst system.
2. Room temperature and relative humidity (for each reading if necessary).
3. All Recorded weights (W_1 , W_2 , W_t , W_f), gel time, and amount of catalyst used.

- 501.2 a. EPA Method 25A, "Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer".
- b. EPA Method 18, "Measurement of Gaseous Organic Compound Emissions by Gas Chromatography".
- 501.3 ASTM D3960-81, "Determining Volatile Organic Content (VOC) of Paints and Related Coatings".
- 501.4 ASTM D1078-86, "Distillation Range of Volatile Organic Liquids".
- 501.5 California Air Resources Board Method 401, "Gravimetric Purge and Trap".
- 501.6 EPA Method 24, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings".
- 501.7 40 CFR 52.741, Appendix B, "VOM Measurement Techniques for Capture Efficiency".
- 501.8 South Coast Air Quality Management District Method 312-91, "Determination of Percent Monomer in Polyester Resins@

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502 **RECORDS:** Any person subject to this rule shall comply with the following requirements:

- 502.1 A person shall maintain, or have available, a current list of polyester resins and cleaning materials in use which provides all of the data necessary to evaluate compliance, including the following information:
- a. Polyester resin, catalyst, and cleaning materials used;
 - b. The weight percent of VOC in each of the polyester resin materials, and the grams of VOC per liter for the cleaning materials;
 - c. For approved vapor suppressed resins, the weight loss (grams per square meter) during resin polymerization, the monomer percentage, and the gel time for each resin;
 - d. The amount of each of the polyester resin materials and cleaning materials used during each day of operations;
 - e. The volume of polyester resin materials and cleaning materials used for touch-up and repair during each day of operation; and
 - f. Records of hours of operation and key operating parameters for any emissions control system.

502.2 All records required by this rule shall be retained and made available for inspection by the Air Pollution Control Officer for the previous 24 month period.

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RULE 2.31 SOLVENT CLEANING AND DEGREASING

ADOPTED April 27, 1994

REVISED August 13, 1997

REVISED May 14, 2008

REVISED May 8, 2013

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100 GENERAL

- 101 **PURPOSE:** The purpose of this Rule is to limit the emissions of volatile organic compounds (VOC) from solvent cleaning operations and solvent degreasing operations, and from the storage and disposal of materials used for such operations.
- 102 **APPLICABILITY:** The provisions of this Rule applies to any owner or operator of any facility that uses VOC-containing materials for solvent cleaning or solvent degreasing, or any person who sells or distributes any solvent subject to the provisions of this rule.
- 110 **EXEMPTION - GENERAL:** The provisions of this rule, except for Section 503, Burden of Proof, shall not apply to the following:
- 110.1 Dry cleaning operations.
 - 110.2 Cleaning operations using a solvent containing no more than 25 grams of VOC per liter of material.
 - 110.3 Janitorial cleaning.
 - 110.4 Stripping of cured coatings, cured adhesives, and cured inks.
 - 110.5 Degreasers with an open top surface area of 1.0 square foot or less or with a capacity of 1.0 gallons or less, using unheated nonhalogenated solvent exclusively, where the reservoir is covered when not processing work.
 - 110.6 Any solvent degreasing operations that are subject to the NESHAP requirements of 40 CFR Part 63 Subpart T- National Emission Standards for Halogenated Solvent Cleaning.
 - 110.7 Cleaning operations in printing pre-press or graphic arts pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning.
- 111 **EXEMPTION - SOLVENT REQUIREMENTS:** The provisions of Section 301 shall not apply to any of the following applications, provided that the facility has obtained either a District permit, or written exemption from the APCO:
- 111.1 Wipe cleaning of solar cells, laser hardware, and high precision optics.
 - 111.2 Wipe cleaning for performance laboratory tests on coatings, adhesives or inks, research and development programs, and laboratory tests in quality assurance laboratories.
 - 111.3 Wipe cleaning of polycarbonate plastics.
 - 111.4 Cleaning of cotton swabs to remove cottonseed oil before cleaning of high precision optics.

- 111.5 Facilities using 10 gallons or less of solvents (total of compliant and noncompliant) in any one calendar year provided the daily use does not exceed one liter in any one day.
- 111.6 Cleaning of paper-based gaskets, and clutch assemblies where rubber is bonded to metal by means of an adhesive.
- 111.7 Cleaning of sterilization ink indicating equipment provided that the solvent usage is less than 1.5 gallons per day.
- 111.8 Cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery product using less than 3.0 gallons per day of ethyl acetate, averaged over a calendar month period.
- 112 **EXEMPTION - GENERAL PROHIBITION:** The provisions of Section 301.4 shall not apply to any of the following applications:
- 112.1 Internal cleaning of the tips of automated spray equipment systems, except for robotic systems.
- 112.2 Spray bottles or containers described in Section 301.2.b. of this rule.
- 112.3 Printing operations where the roller or blanket wash is applied automatically.
- 113 **EXEMPTION - LIMITED AEROSOL:** The provisions of Sections 301 shall not apply to cleaning with aerosol products if 160 ounces or less are used per day per facility and the facility has obtained either a District permit, or a written exemption from the APCO. The products used shall comply with California Air Resources Board (ARB) regulations.
- 114 **EXEMPTIONS – AEROSPACE VEHICLE OR COMPONENTS:**
- 114.1 The provisions of section 307 shall not apply to cotton-tipped swabs used for very small cleaning operations nor to aqueous cleaning solvents.
- 114.2 The provisions of section 301 shall not apply to the following:
- Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;
 - Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, hydrazine);
 - Cleaning and surface activation prior to adhesive bonding;
 - Cleaning of electronics and assemblies containing electronics;
 - Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;
 - Cleaning of fuel cells, fuel tanks, and confined spaces;
 - Surface cleaning of solar cells, coated optics, and thermal control surfaces;
 - Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the aircraft;

- i. Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;
- j. Cleaning of aircraft transparencies, polycarbonate, or glass substrates;
- k. Cleaning and solvent usage associated with research and development, quality control, or laboratory testing;
- l. Cleaning operations using nonflammable liquids conducted within 5 feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and
- m. Cleaning operations identified in essential uses Montreal Protocol for which the Administrator has allocated essential use allowance exemptions in 40 CFR 82.4.

114.3 The provisions of section 301.2.c and 301.2.d. shall not apply to semiaqueous or aqueous cleaning solvents.

200 DEFINITIONS

- 201 **AEROSOL PRODUCT:** A hand-held, non-refillable container which expels pressurized product ingredients by means of a manual propellant-induced force.
- 202 **AEROSPACE VEHICLE OR COMPONENTS:** Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft, including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.
- 203 **AIRLESS CLEANING SYSTEM:** A degreaser that is automatically operated and seals at an absolute internal pressure of 0.02 psia or less, prior to the introduction of solvent vapor into the cleaning chamber, and maintains differential pressure under vacuum during all cleaning and drying cycles.
- 204 **AIRTIGHT CLEANING SYSTEM:** A degreaser that is automatically operated and seals at a differential pressure no greater than 0.5 psig during all cleaning and drying operations.
- 205 **AIR SOLVENT INTERFACE:** The point of contact between the exposed solvent and air.
- 206 **APPLICATION EQUIPMENT:** A device used to apply adhesive, coating, ink, or polyester resin material, such as but not limited to brushes, rollers and spray guns.
- 207 **APPURTENANCES:** Accessories to an architectural structure, including, but not limited to: Hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment, large fixed stationary tools and concrete forms.
- 208 **ARCHITECTURAL COATINGS:** Any coatings applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.

- 209 **AQUEOUS CLEANING SOLVENT:** A solvent in which water is at least 80 percent of the solvent as applied.
- 210 **BATCH CLEANING MACHINE:** A solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning machine, such as a ferris wheel or a cross-rod degreaser, that clean multiple batch loads simultaneously and are manually loaded are batch cleaning machines.
- 211 **COLD CLEANING MACHINE:** Any device or piece of equipment that contains and/or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to dry the parts. Cleaning machines that contain and use heated, nonboiling solvent to clean the parts are classified as cold cleaning machines.
- 212 **CONTROL DEVICE:** Equipment such as an incinerator or adsorber used to prevent air pollutants from reaching the ambient air.
- 213 **CURED COATINGS, CURED INKS, AND CURED ADHESIVES:** Coatings, inks, and adhesives which are dry to the touch.
- 214 **DEGREASER:** A tank, tray, drum, or other container in which objects to be cleaned are placed in to be 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.
- 215 **DOCTOR BLADE:** A blade used to scrape excess ink from a printing plate.
- 216 **ELECTRICAL APPARATUS COMPONENT:** An internal component such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in an apparatus that generates or transmits electrical energy including, but not limited to: alternators, generators, transformers, electric motors, cables, and circuit breakers, except for the actual cabinet in which the components are housed. Electrical components of graphic arts application equipment and hot-line tools are also included in this category.
- 217 **ELECTRONIC COMPONENT:** The portion of an assembly, including circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinet in which the components are housed.
- 218 **EMISSION CONTROL SYSTEM:** A control device and its associated collection system.
- 219 **EXEMPT COMPOUNDS:** As defined in Rule 1.1, General Provisions and Definitions.
- 220 **FACILITY:** A business or businesses engaged in surface preparation and clean up activities which are owned or operated by the same person or persons and are located on the same or contiguous parcels.

- 221 **FLEXOGRAPHIC PRINTING:** A letterpress method utilizing flexible rubber or other elastomeric plate and rapid drying liquid inks.
- 222 **FREEBOARD HEIGHT:** The distance from the top of the solvent or solvent drain to the top of the tank for batch loaded cold cleaners.
- 223 **FREEBOARD RATIO:** The freeboard height divided by the width of the degreaser.
- 224 **GENERAL WORK SURFACE:** An area of a medical device or pharmaceutical facility where solvent cleaning is performed on work surfaces including, but not limited to, tables, countertops, and laboratory benches. General work surfaces shall not include items defined under janitorial cleaning.
- 225 **GRAPHIC ARTS:** All screen, gravure, letterpress, flexographic, and lithographic printing processes.
- 226 **GRAVURE PRINTING:** An intaglio printing process in which the ink is carried in minute etched or engraved wells on a roll or cylinder. The excess ink is removed from the surface by a doctor blade.
- 227 **HIGH PRECISION OPTICS:** An optical element used in an electro-optical device that is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.
- 228 **INTAGLIO PRINTING:** A printing operation done from a plate in which the image is etched or engraved into the surface.
- 229 **JANITORIAL CLEANING:** The cleaning of building or facility components, such as the floor, ceiling, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment. The cleaning of work areas where manufacturing or repair activity is performed is excluded from this definition.
- 230 **LETTERPRESS PRINTING:** The method in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface.
- 231 **LITHOGRAPHIC PRINTING:** A printing operation in which the image and non-image areas exist in the same plane. The non-image area is treated chemically so that only the image area will be printed onto the substrate.
- 232 **LIQUID LEAK:** A visible liquid solvent leak from a container at a rate of more than three (3) drops per minute, or a visible liquid mist.
- 233 **MAINTENANCE CLEANING:** Surface preparation and cleanup, including sanitization, carried out to keep parts, products, tools, machinery, equipment, or general work areas in clean and good operational condition.
- 234 **MANUFACTURING PROCESS:** The process of making goods or articles by hand or by machinery.

- 235 **MEDICAL DEVICE:** Any instrument, apparatus, implement, machine contrivance, implant, in vitro reagent or other similar article, including any component or accessory, that meets one of the following conditions:
- 235.1 It is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease: or
- 235.2 It is intended to affect the structure or any function of the body; or
- 235.3 It is defined in the National Formulary or the United States Pharmacopia, or any supplement to them.
- 236 **NON-ABSORBENT CONTAINERS:** Containers made of nonporous material which do not allow the migration of the liquid solvent through them.
- 237 **NON-ATOMIZED SOLVENT FLOW:** The use of a solvent to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article in the form of a liquid stream without atomization.
- 238 **NON-LEAKING CONTAINERS:** Containers without liquid leaks.
- 239 **OPEN TOP VAPOR DEGREASER:** A batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean and/or dry parts.
- 240 **PHARMACEUTICAL MANUFACTURING PLANT:** Any plant producing or blending chemicals for use in pharmaceutical products and/or employing chemical processes in the manufacture of pharmaceutical products or medical devices. Any facility or operation that has 283 as the first three digits of their Standard Industrial Classification Code. Pharmaceutical manufacturing plants may include, but are not limited to, establishments primarily engaged in manufacturing, fabricating, or processing medicinal chemicals and pharmaceutical products for human or veterinary use.
- 241 **PHARMACEUTICAL PRODUCT:** A preparation or compound of medicinal drugs including, but not limited to, a prescription drug, analgesic, decongestant, antihistamine, cough suppressant, vitamin, mineral and herb, and is used by humans for consumption to enhance human health.
- 242 **PRINTING:** Any operation in the graphic arts that imparts color, design, alphabet, or numerals on a substrate.
- 243 **PRODUCT CLEANING:** The removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants such as dust, soil, oil, grease, etc., from the product or substrate during any manufacturing process, adhesive application, coating application or ink application.
- 244 **REMOTE RESERVOIR COLD CLEANER:** A cleaning device, such as a parts washer, in which liquid solvent is pumped from a solvent container to a sink-like work area and the solvent from the sink-like area drains into an enclosed solvent container while parts are being cleaned.

- 245 **REPAIR CLEANING:** Surface preparation and cleanup carried out during a repair process.
- 246 **REPAIR PROCESS:** The process of returning a damaged object or an object not operating properly to good condition.
- 247 **SCREEN PRINTING:** A process in which the printing ink passes through a web or fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.
- 248 **SEMIAQUEOUS CLEANING SOLVENT:** A solution in which water is a primary ingredient (≥ 60 percent of the solvent solution as applied must be water).
- 249 **SOLVENT:** Any liquid containing a volatile organic compound or combination of volatile organic compounds, which is used to as a diluent, thinner, dissolver, viscosity reducer, cleaning agent, or for other similar uses.
- 250 **SOLVENT CLEANING MACHINE:** Any device or piece of equipment that uses solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines. Buckets, pails, and beakers with capacities of 7.6 liters (2 gallons) or less are not considered solvent cleaning machines.
- 251 **SOLVENT CLEANING OPERATION:** An activity, or operation, or process, (including surface preparation, cleanup, or wipe cleaning), performed outside of a degreaser, that uses organic solvent to remove uncured adhesives, uncured coatings, uncured inks or other contaminants, including, but not limited to, dirt, soil, oil, lubricants, coolants, moisture, fingerprints, and grease, from parts, products, tools, machinery, application equipment and general work areas. Cleaning spray equipment used for the application of coatings, adhesives, or inks, is also considered to be solvent cleaning.
- 252 **SOLVENT CONTAINER:** That part of a cleaning device that holds the solvent.
- 253 **SOLVENT DEGREASING OPERATION:** Any cleaning activities which occur within a degreaser. Cleaning of ink, coating, or adhesive application equipment, and stripping of coatings are not considered solvent degreasing operations. Solvent degreasing operations and solvent cleaning operations are mutually exclusive.
- 254 **SOLVENT FLUSHING:** The use of solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing solvent through the equipment.
- 255 **STRIPPING:** The removal of cured inks, cured adhesives, and cured coatings.
- 256 **SURFACE PREPARATION AND CLEANUP:** The removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants such as dust, soil, oil, grease, etc., at any step in the production, repair, maintenance, or servicing of parts, products,

tools, machinery, equipment, or general work areas including the storage and disposal of VOC containing materials used.

- 257 **ULTRAVIOLET INKS:** Inks which dry by a polymerization reaction induced by ultraviolet radiation.
- 258 **VAPOR CLEANING MACHINE:** A batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.
- 259 **VOLATILE ORGANIC COMPOUND (VOC):** As defined in Rule 1.1, General Requirements.
- 260 **VOLATILE ORGANIC COMPOUND (VOC) COMPOSITE PARTIAL PRESSURE:** The sum of the partial pressures of the compounds defined as VOCs. VOC composite partial pressure is calculated according to Section 605.
- 261 **VOLATILE ORGANIC COMPOUND (VOC) CONTENT:** The weight of VOC per volume of material as calculated pursuant to the applicable Sections of 600.
- 262 **WIPE CLEANING:** The method of cleaning a surface by physically rubbing it with a material such as a rag, paper, or a cotton swab moistened with a solvent.

300 **STANDARDS**

- 301 **SOLVENT CLEANING OPERATIONS:** Any person performing solvent cleaning operations shall comply with all the following:
- 301.1 **VOC CONTENT LIMITS:** A person shall not use a solvent, or specify or require any person to use a solvent subject to the provisions of this Rule, unless the solvent complies with the applicable requirements set forth in Table 1.

TABLE 1. VOC CONTENT LIMITS

Category			VOC Content* Limit grams/liter (g/L)
Product Cleaning	Electrical Apparatus Components & Electronic Components		100
	Medical Devices and Pharmaceuticals		800
	Aerospace Vehicle or Component		200 g/L or 45 mmHg
	All other		25
Repair Cleaning & Maintenance Cleaning	General		25
	Electrical Apparatus Components & Electronic Components		100
	Aerospace Vehicle or Component		200 g/L or 45 mmHg
	Medical Devices and Pharmaceuticals	Tools, Equipment, Machinery	800
		General Work Surfaces	600
Cleaning of Application Equipment	Printing operations	Screen Printing	100
		Lithographic and Letterpress	238
		Ultraviolet (except screen printing)	238
		Specialty Flexographic	100
		Gravure (Publication)	100
		General	25
	Medical Devices and Pharmaceuticals		810
	Aerospace Vehicle or Component		200 g/L or 45 mmHg
	All other		25
General	Industries Not Specified Above		25

* For aerospace vehicle or components, the solvent must comply with either the VOC Content limit in grams/Liter (g/L) or the VOC Composite Partial Pressure limit in millimeters mercury (mmHg)

301.2 **CLEANING METHODS:** A person using a solvent above 25 grams/liter (in one of the above allowed categories) shall use one of the following cleaning devices or methods:

- a. Wipe cleaning;
- b. Spray bottles or closed containers with a maximum capacity of 16 fluid ounces from which solvents are applied without a propellant induced force;
- c. Non-atomized solvent flow method where the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
- d. Solvent flushing method where the cleaning solvent is discharged into a container which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the

container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping.

301.3 **APPLICATION EQUIPMENT CLEANUP:** A person shall not use solvent to clean application equipment unless an enclosed system (or equipment that is proven to be equally effective at controlling emissions) is used for cleaning. If an enclosed system is used, it must totally enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures, it must be used according to the manufacturer's recommendations, and it must be closed when not in use.

301.4 **GENERAL PROHIBITION:** A person shall not atomize any solvent into the open air.

302 **SOLVENT DEGREASING OPERATIONS:** Any person performing solvent degreasing operations shall comply with all of the following:

302.1 **GENERAL REQUIREMENTS:**

- a. An operator shall operate and maintain the degreaser equipment and emission control equipment in proper working order;
- b. An operator shall not remove or open any device designed to cover the solvent unless processing work in the degreaser or performing maintenance on the degreaser;
- c. An operator shall not degrease porous or absorbent materials such as cloth, leather, wood, or rope;
- d. An operator shall, upon detection of a solvent leak, repair the solvent leak immediately, or shut down and drain the degreaser;
- e. An operator shall use only a continuous fluid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container, if a solvent flow is utilized;
- f. An operator shall store or dispose of spent solvents, waste solvent cleaning materials such as cloth, paper, etc., in closed, 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;

302.2 **CLEANING METHOD:** Use one of the following;

- a. Use solvents < 25 grams/liter;
- b. A cold cleaner that meets the requirements of section 303;
- c. An open top vapor degreaser that meets the requirements of section 304;
- d. Airless/airtight cleaning equipment that meets the requirements of section 305; or
- e. A remote reservoir cold cleaner that meets the requirements of section 306

303 **COLD CLEANER REQUIREMENTS:** A cold cleaner shall meet all of the following:

- 303.1 An apparatus or cover must be used which prevents the solvent from evaporating when not processing work in the degreaser. The cover should be designed so that it can be opened and closed easily with one hand;
 - 303.2 If the solvent initial boiling point is less than 248EF and the solvent is heated above 122EF than the cold cleaner shall have
 - a. A freeboard ratio greater or equal to 0.75; or
 - b. A water cover if the solvent is insoluble in and heavier than water;
 - 303.3 If the solvent initial boiling point is less than 248EF then the drainage facility must be internal so that the parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit the cleaning system;
 - 303.4 A facility for draining cleaned parts such that the drained solvent is returned to the container. Drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases;
 - 303.5. If using a solvent flow use only a continuous, fluid stream (not a fine, atomized, or shower type spray) at a pressure which does not cause liquid solvent to splash outside the solvent container;
 - 303.6. Perform solvent agitation, where necessary, through pump re-circulation, ultrasonics, or by means of a mixer. Do not use agitation of the solvent bath;
 - 303.7. A permanent, conspicuous label posted on or near the degreaser which lists each of the operating requirements in Section 303; and
 - 303.8. A permanent conspicuous mark locating the maximum allowable solvent level that conforms to the freeboard requirement in Section 303.2.
- 304 **OPEN TOP VAPOR DEGREASER REQUIREMENTS:** An open top vapor degreaser shall meet all of the following requirements:
- 304.1 Workloads shall not occupy more than half of the degreaser's open top area;
 - 304.2 Solvent spraying shall be done at least four (4) inches below the top of the vapor layer, and solvent flow shall be directed downward to avoid turbulence at the air-vapor interface and to prevent liquid solvent from splashing out of the degrease;
 - 304.3 Water shall not be visually detectable in the solvent returning from the water separator to the solvent cleaner;
 - 304.4 For open-top vapor degreasers equipped with a lip exhaust, the exhaust shall be turned off when the degreaser is covered;
 - 304.5 If the unit is equipped with a refrigerated freeboard chiller, or a primary condenser, or both, the following procedures shall be followed:
 - a. When starting up the degreaser, the cooling system shall be turned on before, or simultaneously with, the sump heater; and

- b. When shutting down the degreaser, the sump heater shall be turned off before, or simultaneously with, the cooling system;
- 304.6 Exhaust ventilation should not exceed 65 cfm/ft² of degreaser open area, unless necessary to meet Occupational Safety & Health Administration (OSHA) requirements. Ventilation fans shall not be positioned in such a way to disturb the vapor zone;
- 304.7 The vertical speed of a powered hoist for an open-top vapor degreaser, shall be not more than 2.2 inches/sec when moving parts in and out of the degreaser; and
- 304.8 The work load shall be degreased in the vapor zone until condensation ceases.
- 304.9 Open-top vapor degreasers shall be equipped with a cover designed such that it can be opened and closed easily without disturbing the vapor zone.
- 304.10 Open-top vapor degreasers shall be equipped with:
- a. A freeboard with a freeboard ratio of at least 1.0.
 - b. A container (degreaser) for the solvent and the articles being cleaned;
 - c. An apparatus or cover which prevents the solvent from evaporating when not processing work in the degreaser;
 - d. A facility for draining cleaned parts such that the drained solvent is returned to the container;
 - e. A permanent, conspicuous label posted on or near the degreaser which lists each of the operating requirements in Section 302.1 and Section 304; and
 - f. A permanent conspicuous mark locating the maximum allowable solvent level, that conforms to the freeboard requirement in Section 301.10.a.
 - g. An automated parts handling system;
 - h. Primary condensing coils;
 - i. A perimeter trough;
 - j. A water separator;
 - k. A refrigerated freeboard chiller that is operated such that the chilled air blanket temperature measured at the center of the air blanket is no greater than 40 percent of the boiling point of the solvent, and;
 - l. A superheated vapor zone.
- 304.11 Open-top vapor degreasers shall not operate without one (1) of the following or a combination of the following major control devices:
- a. Condenser equipment where the chilled air blanket temperature measured in degrees F at the coldest point on the vertical axis in the center of the degreaser shall be either no greater than 30 percent of the initial boiling point, measured in degrees F, of the solvent used, or 41°F;
 - b. Enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser);
 - c. A carbon adsorption system which ventilates the air-vapor interface at a minimum rate of 50 cfm/ft² of degreaser opening, but not greater than 65 cfm/ft² of degreaser opening, unless required by OSHA standards, and exhausts less than 25 ppm of solvent by volume over a complete adsorption cycle, and with an overall capture and control efficiency of 85 percent; or

- d. Any other system of emission control demonstrated to have an overall capture and control efficiency of at least 85 percent.
- 304.12 Open-top vapor degreasers shall include all of the following safety switches:
- a. A vapor level control switch
 - b. A condenser flow switch with a solvent temperature indicator, except where non-water refrigerant is used. The switch shall shut off the sump heat if either the condenser coolant stops circulating or becomes warmer than specified;
 - c. A spray pump safety switch; and
 - d. A manual reset vapor level thermostat with a solvent temperature indicator.
- 305 **AIRLESS/AIRTIGHT CLEANING SYSTEM REQUIREMENTS:** An airless/airtight cleaning system shall meet all of the following requirements:
- 305.1 The equipment is operated in accordance with the manufacturer's specifications and operated with a door or other pressure sealing apparatus that is in place during all cleaning and drying cycles;
- 305.2 All associated pressure relief devices shall not allow liquid solvents to drain out. Spills during solvent transfer shall be wiped up immediately and handled in accordance with Section 307.
- 305.3 A differential pressure gauge shall be installed to indicate the sealed chamber pressure.
- 306 **REMOTE RESERVOIR COLD CLEANER REQUIREMENTS:** A remote reservoir cold cleaner shall meet all the following requirements:
- 306.1 Prevent solvent vapors from escaping from the solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;
- 306.2 Direct solvent flow in a manner that will prevent liquid solvent from splashing outside of the remote reservoir cold cleaner;
- 306.3 A tank or sink-like work area which is sloped sufficiently to preclude pooling of solvent;
- 306.4 A single drain hole, less than 100 square centimeters (15.5 square inches) in area, for the solvent to flow from the sink into the enclosed reservoir;
- 306.5 A freeboard ratio greater or equal to 0.75;
- 306.6 A cover for the drain when no work is processed.
- 307 **STORAGE AND DISPOSAL - GENERAL:** All solvents used, whether in its form for intended use or as a waste or used product, including items such as cloth or paper laden with VOC containing materials, shall be stored in non-absorbent, non-leaking containers

which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the facility.

308 **EMISSION CONTROL SYSTEM:** In lieu of complying with the requirements in Sections 301 through 306 of this Rule, an operator may comply by using collection and control systems provided that the system is approved in writing by the APCO and during emission producing activities, the system complies with either:

308.1 The VOC emission control system=s control device shall have a capture efficiency of at least 90 percent, by weight, of the emissions generated by surface preparation and cleanup and one of the following requirements:

- a. The control device has a control efficiency of at least 95 percent by weight, or
- b. The VOC emission control system has an output of less than 50 parts per million by weight (ppm) calculated as carbon with no dilution; or

308.2 The emission control system meets the requirements of the applicable source specific rule of the District=s Regulation II.

400 **ADMINISTRATIVE REQUIREMENTS**

401 **PROHIBITION OF SPECIFICATION:** A person shall not specify the use of any solvent used for surface preparation and cleanup subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule. The requirements of this Section shall apply to all written or oral contracts.

402 **COMPLIANCE STATEMENT REQUIREMENT:** Any person who sells or distributes any solvent subject to this rule shall make available to the purchaser at the time of sale the following information:

402.1 The name of the solvent;

402.2 The name of the manufacturer;

402.3 The maximum VOC content of the solvent as applied. The VOC content shall be expressed as grams of VOC per liter of solvent, or pounds of VOC per gallon of solvent as determined pursuant to Section 602;

402.4 Recommendations regarding thinning, reducing or mixing with any solvent, if applicable;

403 **OPERATION AND MAINTENANCE PLAN (O&M PLAN):** Any person using an emission control device pursuant to Section 308 of this Rule, as a means of complying with this rule, must submit with the application for Authority to Construct, pursuant to Rule 3.1, GENERAL PERMIT REQUIREMENTS, an O&M Plan for the emission control device to the APCO for approval. The O&M Plan shall specify operation and maintenance procedures which will demonstrate continuous operation of the control device during

periods of emission producing operations. The O&M Plan shall be maintained and re-submitted for approval by the APCO if changes to the control system require changing the plan. The O&M Plan shall also specify which records must be kept to document these operation and maintenance procedures. These records shall comply with the requirements of Section 502 of this Rule. Any person using an emission control device must fully comply with all O&M Plans submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the APCO.

500 MONITORING AND RECORDS

501 RECORD KEEPING - GENERAL: Any person using a solvent for all applications subject to this Rule, except those subject to Section 110 Exemption - General, shall maintain records in a current file that contains all the data necessary to verify compliance and shall include the following:

501.1 Identification of each process at the facility subject to this Rule. The identification shall include the following:

- a. The location of the unit(s);
- b. The permit number (if applicable);
- c. Description of the method of application and substrate type.

501.2 The amount and type of each solvent used at each process, on a monthly basis. The following information should be included;

- a. The name of the solvent;
- b. The name of the solvent manufacturer;
- c. The VOC content of the solvent expressed in grams/liter or lb/gallon;
- d. Solvent usage;
- e. The mix ratio for the cleaning solvent as applied.

501.3 A copy of the Manufacturer=s product data sheet or material safety data sheet of the solvent used.

501.4 Any other such records needed to verify compliance with this rule.

502 RECORD KEEPING - EMISSION CONTROL SYSTEMS: If compliance with this rule is achieved through the use of an emission control system, in addition to the provisions of Section 501, the owner or operator shall maintain:

502.1 Daily usage records of all solvents.

502.2 Daily records of key operating parameters such as temperatures, pressures, flowrates, and hours of operation of the control device to verify compliance of the capture and control device.

502.3 Maintenance work which interferes with the operation of the control device.

503 BURDEN OF PROOF: Any person claiming exemption pursuant to Section 110, 111, 112 or 113 shall have information available such as product data or material safety data sheets or records that would allow the APCO to verify the eligibility of the exemption.

504 **RECORD RETENTION:** All records required by Sections 501, 502, and 503 shall be maintained on site for a period of two years and made available to the APCO upon request.

600 **TEST METHODS AND CALCULATIONS**

601 **GENERAL:** For the purposes of this Rule, the following test methods or calculation methods shall be used. Other test methods determined to be equivalent and approved in writing by the District and the EPA may also be used. 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.

602 **VOC CONTENT:** The VOC content of organic solvents subject to the provisions of this rule shall be determined by:

602.1 procedures contained in EPA Reference Test Method 24 or 24A,

602.2 South Coast Air Quality Management District (SCAQMD) Method 304-91 "Determination of VOC in Various Materials", February 1996; or

602.3 by using the manufacturer's product formulation data and formula listed in Section 604.

603 **EXEMPT COMPOUNDS:** The content of exempt VOCs shall be determined by using CARB Method 432 ('Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings', or 'Exempt Halogenated VOC in Liquids') or SCAQMD Method 303-91 (Determination of Exempt Compounds).

604 **CALCULATION OF VOC CONTENT:** The VOC content per volume of solvent shall be calculated by the following equation:

$$VOC_{con} = \frac{(W_S - W_W - W_{ES})}{V_M}$$

where:

VOC_{con} = Grams of VOC per liter of material

W_S = Weight of volatile compounds in grams

W_W = Weight of water in grams

W_{ES} = Weight of exempt compounds in grams

V_M = Volume of material in liters

605 **CALCULATION OF VOC COMPOSITE PARTIAL PRESSURE:** The VOC composite partial pressure shall be calculated by the following equation:

$$PP_C = \sum_{i=1}^n \frac{\frac{(W_i)(VP_i)}{MW_i}}{\frac{W_W}{MW_W} + \frac{W_E}{MW_E} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

where:

PP_C = VOC composite partial pressure at 20°C, in mm Hg

VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg

W_i = Weight of the "i"th VOC compound, in grams
 W_W = Weight of water, in grams
 W_E = Weight of exempt compound, in grams
 MW_i = Molecular weight of the "i"th VOC compound, in g/(g-mole)
 MW_W = Molecular weight of water, in g/(g-mole)
 MW_E = Molecular weight of exempt compound, in g/(g-mole)

- 606 **CAPTURE EFFICIENCY:** The capture efficiency of a VOC emission control system=s collection device shall be determined according to EPA=s AGuidelines for Determining Capture Efficiency,@ January 9, 1995 and 40 CFR 51, Appendix M, Methods 204-204F, as applicable. If a permanent total enclosure is used, EPA Method 204 can also be used as an alternative method to determine capture efficiency.
- 607 **CONTROL EFFICIENCY:** The control efficiency a VOC emission control system=s collection **device** shall be determined by using EPA Methods 2, 2A, or 2D for measuring flow rates and EPA Method 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 or CARB Method 422 shall be used to determine the emissions of exempt compounds.
- 608 **SPRAY GUN CLEANING SYSTEMS:** The determination of emissions of VOC 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" dated October 3, 1989.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 2.32 -- STATIONARY INTERNAL COMBUSTION ENGINES

(Revised October 10, 2001)

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Yolo-Solano AQMD

Adopted August 10, 1994

Revised October 10, 2001

100 GENERAL

101 **PURPOSE:** The purpose of this Rule is to limit the emission of oxides of nitrogen (NO_x) and carbon monoxide (CO) from stationary internal combustion engines.

102 **APPLICABILITY:** This Rule applies to any stationary internal combustion engine rated at more than 50 brake horsepower, operated on any gaseous fuel, including liquid petroleum gas (LPG), or diesel fuel. This Rule shall not apply to engines used directly and exclusively for agricultural operations necessary for the growing of crops or the raising of fowl or animals.

110 **EXEMPTIONS:** The provisions of this Rule, except for Section 503, shall not apply to the operation of stationary internal combustion engines used under any the following conditions:

110.1 Engines rated 50 brake horsepower or less, or

110.2 Engines operated less than 200 hours per calendar year, or

110.3 Emergency standby engines operated either during an emergency or maintenance operation. Maintenance operation is limited to 50 hours per calendar year, or

110.4 Engines used in research or teaching programs, or

110.5 Engine test stands used for evaluating engine performance, or

110.6 Diesel engines with a permitted capacity factor of 15 percent or less, or

110.7 Diesel engines used to power cranes and

Yolo-Solano AQMD

Adopted August 10, 1994

Revised October 10, 2001

welding equipment.

200 DEFINITIONS

201 **DIESEL ENGINE:** A compression ignited two or four-stroke engine in which liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition.

202 **EMERGENCY STANDBY ENGINE:** An internal combustion engine used only as follows:

202.1 When normal power line or natural gas service fails.

202.2 For the emergency pumping of water for either fire protection or flood relief.

An emergency standby engine may not be operated to supplement a primary power source when the load capacity or rating of the primary power source has either been reached or exceeded.

203 **ENGINE RATING:** The rating of an engine as determined by the engine manufacturer and listed on the nameplate of the engine, regardless of any derating.

204 **LEAN-BURN ENGINE:** Any two or four-stroke spark-ignited engine where the manufacturer's original recommended air-to-fuel ratio operating range is fuel lean of stoichiometry, and the engine normally operates with an exhaust oxygen concentration of greater than 2 percent.

205 **MAINTENANCE OPERATION:** The use of an emergency standby engine and fuel system during testing, repair and routine maintenance to verify its readiness for emergency standby use.

206 **PERMITTED CAPACITY FACTOR:** The annual permitted fuel use divided by the product of the manufacturer's

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Adopted August 10, 1994

Revised October 10, 2001

specified maximum hourly fuel consumption times 8,760 hours per year.

207 **RICH-BURN ENGINE:** A two or four-stroke spark-ignited engine that is not a lean burn engine.

208 **STATIONARY INTERNAL COMBUSTION ENGINE:** Any internal combustion engine of the reciprocating type that is operated at a site for more than one year or is attached to a foundation, not including engines used for self-propulsion.

209 **STOICHIOMETRY:** The precise air/fuel ratio where all fuel and all oxygen in the air/fuel mixture will be consumed.

300 **STANDARDS**

301 **LIMITS:**

301.1 After the applicable compliance date specified in Section 401.1 of this Rule, the owner or operator of a stationary internal combustion engine to which this Rule is applicable shall limit the emissions from that engine to no more than the following:

- a. Rich-burn stationary internal combustion engine NO_x emissions shall not exceed 9.5 g/bhp-hr or 640 ppmv and CO emissions shall not exceed 2,000 ppmv.
- b. Lean-burn stationary internal combustion engine NO_x emissions shall not exceed 10.1 g/bhp-hr or 740 ppmv and CO emissions shall not exceed 2,000 ppmv.
- c. Diesel fired stationary internal combustion engine NO_x emissions shall not exceed 9.6 g/bhp-hr or 700 ppmv and CO emissions shall not exceed 2,000 ppmv.

where g/bhp-hr = grams per brake

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		horsepower hour
ppmv	=	parts per million volume at 15% oxygen on a dry basis
NO _x	=	oxides of nitrogen
CO	=	carbon monoxide

301.2 In lieu of compliance with the NO_x emission limits specified in Section 301.1 of this Rule, engines shall not exceed the following emission limits in accordance with the compliance schedule in Section 401.2 of this Rule:

- a. Rich-burn stationary internal combustion engine NO_x emissions shall not exceed 90 ppmv and CO emissions shall not exceed 2,000 ppmv.
- b. Lean-burn stationary internal combustion engine NO_x emissions shall not exceed 150 ppmv and CO emissions shall not exceed 2,000 ppmv.
- c. Diesel fired stationary internal combustion engine NO_x emissions shall not exceed 600 ppmv and CO emissions shall not exceed 2,000 ppmv.

where ppmv = parts per million volume at
15% oxygen on a dry basis
NO_x = oxides of nitrogen
CO = carbon monoxide

301.3 In lieu of the emission limits specified in Sections 301.1 or 301.2 of this Rule, an owner or operator of an internal combustion engine may elect to replace the unit with an electric motor or permanently remove the engine from service in accordance with the applicable compliance schedule specified in Section 401.3 of this Rule.

301.4 After the applicable compliance date specified in Section 401.4 of this Rule, the owner or operator of a stationary internal

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combustion engine to which this Rule is applicable shall limit the emissions from that engine to no more than the following:

- a. Rich-burn stationary internal combustion engine NO_x emissions shall not exceed 90 ppmv and CO emissions shall not exceed 2,000 ppmv.
- b. Lean-burn stationary internal combustion engine NO_x emissions shall not exceed 150 ppmv and CO emissions shall not exceed 2,000 ppmv if the engine rating is greater than 100 horsepower.
- c. Lean-burn stationary internal combustion engine NO_x emissions shall not exceed 300 ppmv and CO emissions shall not exceed 2,000 ppmv if the engine rating is less than or equal to 100 horsepower.
- d. Diesel fired stationary internal combustion engine NO_x emissions shall not exceed 600 ppmv and CO emissions shall not exceed 2,000 ppmv.

where ppmv = parts per million volume
at 15% oxygen on a dry basis
NO_x = oxides of nitrogen
CO = carbon monoxide

302 **ENGINE OPERATOR INSPECTION PLAN:** The operator of an engine subject to the provisions of Section 301 of this Rule shall submit to the Air Pollution Control Officer an Engine Operator Inspection Plan. The plan shall be approved by the Air Pollution Control Officer in writing. The plan shall be updated after any change in operation. For new engines and modifications to existing engines, the plan shall be submitted to and approved by the Air Pollution Control Officer prior to issuance of the Authority to Construct. The operator may request a change to the plan at any time. The plan shall include the following:

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- 302.1 The manufacturer, model number, rated horsepower, and combustion method (i.e., rich-burn, lean-burn, or diesel) of the engine.
- 302.2 A description of the NOx control system installed on the engine (if any), including type (e.g., nonselective catalyst, "clean-burn" combustion) and manufacturer, as well as a description of any ancillary equipment related to the control of emissions (e.g., automatic air/fuel ratio controller, fuel valves).
- 302.3 The company identification and location of the engine by a schematic of the affected facilities.
- 302.4 A specific emission inspection procedure to assure that the engine is operated in continual compliance with the provisions of this Rule. The procedure shall include an inspection schedule. Inspections shall be conducted every quarter or after every 2,000 hours of engine operation. In no event shall the frequency of inspection be less than once per year.
- 302.5 Each preventative or corrective maintenance procedure or practice that will be used to maintain the engine and NOx control system in continual compliance with the provisions of this Rule.

303 SOURCE TESTING:

- 303.1 Engines subject to the provisions of this rule shall be source tested using the methods specified in sections 502.1, 502.2, 502.3 and 502.5 at least once every 24 months.

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303.2 During any year which a source test is not performed, a screening analysis using the methods specified in sections 502.4 and 502.5 of the rule shall be performed. The screening analysis shall be performed for NOx and CO. A reading in excess of the emission standards shall not be considered a violation, so long as the engine is brought into compliance within 15 days of the initial reading, as verified with a subsequent screening analysis.

304 MONITORING EQUIPMENT:

304.1 An owner or operator of an engine subject to this rule shall install a non-resettable totalizing fuel meter and/or a non-resettable hour meter that measures elapsed operating time, as determined appropriate by the Air Pollution Control Officer.

400 ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE:

401.1 Owners or operators of existing engines shall comply with the applicable provisions of Section 301.1 of this Rule in accordance with the following schedule:

- a. No later than March 10, 1995, submit to the Air Pollution Control Officer:
 - (i) An Engine Operator Inspection Plan pursuant to Section 302 of this Rule and a complete application for an Authority to Construct, as necessary; or
 - (ii) Support documentation for each exempt engine, pursuant to Section 503 of this Rule.
- b. Demonstrate full compliance with all provisions of this Rule no later than

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May 31, 1995.

- 401.2 Owners or operators of existing engines shall comply with the applicable provisions of Section 301.2 of this Rule in accordance with the following schedule:
- a. No later than March 10, 1995, submit to the Air Pollution Control Officer:
 - (i) An Engine Operator Inspection Plan pursuant to Section 302 of this Rule; or
 - (ii) Support documentation for each exempt engine, pursuant to Section 503 of this Rule.
 - b. Submit a complete application for an Authority to Construct for all modifications no later than May 31, 1995.
 - c. Demonstrate full compliance with the applicable provisions of this Rule no later than May 31, 1997.
- 401.3 An owner or operator that elects to replace a stationary internal combustion engine with an electric motor as specified in Section 301.3 of this Rule or permanently removes the engine from service shall demonstrate compliance with all the applicable requirements of this Rule no later than May 15, 1999. The owner or operator shall submit a complete application for an Authority to Construct for conversion to electric power no later than January 1, 1997, and shall commence conversion of the unit no later than January 1, 1999 or permanently remove the engine from service by May 15, 1999.
- 401.4 Owners or operators of existing engines shall comply with the applicable provisions of Section 301.4 of this Rule in accordance with the following schedule:
- a. No later than March 8, 2002, submit to

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the Air Pollution Control Officer a complete application for an Authority to Construct, as necessary.

- b. Demonstrate full compliance with all provisions of this Rule, including source testing as required by Section 303.1 and monitoring equipment as required by Section 304, no later than March 7, 2003.

402 **REPORTING REQUIREMENTS:** Prior to renewal of any Permit to Operate, each operator subject to the provisions of this Rule shall provide the Air Pollution Control Officer with a report specifying the actual annual usage (e.g., fuel consumption, actual operating hours) of each affected engine. The report shall also include the engine manufacturer, model number, Permit number, and location of each affected engine, a summary of the maintenance and inspection events required in Section 302 of this Rule, and results from the annual emissions testing event.

403 **VIOLATIONS:**

403.1 Failure to comply with any provision of this Rule shall constitute a violation of this Rule.

403.2 It is the responsibility of the engine operator to demonstrate to the satisfaction of the Air Pollution Control Officer that an engine subject to the provisions of this Rule is being operated in continuous compliance with all applicable provisions of this Rule.

403.3 An engine shall be in violation if it is operated out of compliance with the operating parameters of an approved Engine Operator Inspection Plan. However, if data from a source test of the engine operating

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under identical conditions indicates that the engine is in compliance with the requirements of this Rule, then a violation will not have occurred. The source test shall be conducted at the engine operator's expense. The Engine Operator Inspection Plan shall be amended to reflect the information from this source test.

500 MONITORING AND RECORDS

501 **RECORDS:** The operator of any engine subject to the provisions of Section 301 of this Rule shall maintain an inspection log containing at a minimum, the following data:

- 501.1 Identification and location of each engine subject to the provisions of this Rule;
- 501.2 Date and results of each emission inspection;
- 501.3 The reading of the totalizing fuel meter or the non-resettable hour meter installed pursuant to Section 304.1.
- 501.4 A summary of any corrective emissions maintenance actions taken to ensure compliance with the emissions limits in Sections 301.1, 301.2 or 301.4 of this Rule; and
- 501.5 Any additional information required in the Engine Operator Inspection Plan.

The operator shall maintain the inspection log for a period of two years after the date of each entry. The log shall be available for inspection by the Air Pollution Control Officer upon request.

502 TEST METHODS:

- 502.1 Oxides of nitrogen emissions for compliance

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source tests shall be determined in accordance with EPA Method 7E or CARB Method 100.

502.2 Carbon Monoxide emissions for compliance source tests shall be determined in accordance with EPA Method 10 or CARB Method 100.

502.3 Oxygen content for compliance source tests shall be determined in accordance with EPA Method 3A or CARB Method 100.

502.4 Screening analyses shall be performed by using a portable analyzer approved in writing by the Air Pollution Control Officer.

502.5 NO_x emission limitations specified in Sections 301.1, 301.2 and 301.4 of this Rule shall be expressed as nitrogen dioxide. All ppmv emission limitations are referenced at 15 percent volume stack gas oxygen measured on a dry basis. Source test data point intervals shall be no greater than 5 minutes and data points shall be averaged over 15 consecutive minutes.

503 **EXEMPTION RECORDS:**

503.1 An owner or operator claiming an exemption under Sections 110.2 or 110.3 of this Rule shall maintain a log of operating hours for each engine. The log of operating hours shall be retained for two years and be made available to the Air Pollution Control Officer upon request.

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RULE 2.33 ADHESIVE OPERATIONS

REVISED March 12, 2003

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100 GENERAL

- 101 **PURPOSE:** To limit the emissions of volatile organic compounds (VOC) from the use of adhesives, sealants, adhesive primers, sealant primers, and from the related use of solvents in the application of adhesives.
- 102 **APPLICABILITY:** Except as provided in Sections 110, 111, 112, 113, or 114 the provisions of this rule shall apply to any person who manufactures, applies, solicits the application of, supplies, sells, or offers for sale any adhesive, sealant, adhesive primer, or sealant primer in the Yolo-Solano Air Quality Management District (District), and to any person who uses a solvent for surface preparation, cleaning or stripping in the application of adhesives.
- 110 **EXEMPTIONS - GENERAL:** The provisions of this rule shall not apply to the following:
- 110.1 Any stationary source where the total VOC emissions from all materials listed in TABLES 1 and/or 2 are less than 200 pounds per calendar year. Any person claiming this exemption shall maintain monthly usage records that can substantiate this claim. Such records shall be maintained on site for a period of at least 5 years from the date of entry and made available to District personnel upon request.
- 110.2 Any material listed in TABLES 1, 2, or 3 that contains less than 20 grams of VOC per liter, as applied.
- 110.3 Any material listed in TABLES 1 or 2 that is being tested or evaluated in any research and development, quality assurance, or analytical laboratory. A person seeking to claim this exemption shall notify the APCO in writing of his or her intention to make use of the exemption. Any person claiming this exemption shall maintain monthly usage records. Such records shall be maintained on site for a period of at least 5 years from the date of entry and made available to District personnel upon request.
- 110.4 Adhesives used in tire repair operations, provided that the manufacturer's label

contains the statement "For Tire Repair Only."

- 110.5 Any material listed in TABLES 1 or 2, except ABS welding adhesives, CPVC welding adhesives, PVC welding adhesives, other plastic cement welding adhesives, or plastic cement welding adhesive primers, that is sold or supplied by the manufacturer or supplier in containers having a capacity of 8 fluid ounces or less.
- 110.6 Adhesives and sealants subject to the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.
- 110.7 Adhesives or sealants used in graphic arts operations subject to the requirements of District Rule 2.29, Graphic Arts Printing Operations.
- 110.8 Solvent welding operations used in the manufacturing of medical devices, such as, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheotomy tubes, blood oxygenators, and cardiatory reservoirs.
- 110.9 Cyanoacrylate adhesives.
- 111 **EXEMPTION - ADHESIVE SUBSTRATE LIMITED USE:** The VOC content limits specified in TABLE 2 shall not apply to any stationary source that applies less than 55 gallons per calendar year, only if a complying material is not available. Any person seeking to claim this exemption shall notify the APCO in writing prior to the use of the material and shall maintain monthly usage records that can substantiate this claim. Such records shall be maintained on site for a period of at least 5 years from the date of entry and made available to District personnel upon request.
- 112 **EXEMPTION - CONTACT BOND ADHESIVES:** The provisions of Section 301 shall not apply to contact bond adhesives that are subject to the Consumer Product Safety Commission regulation in 16 CFR Part 1302, that have a flash point greater than 20 degrees Fahrenheit as determined pursuant to those regulations, that are sold in packages that contain 3.79 liters (1 gallon) or less, and that are used at a home, a construction site, or at any

location other than a stationary source.

113 **EXEMPTION - PROHIBITION OF SALE:** The provisions of Section 306 shall not apply to any manufacturer that meets all of the following:

113.1 The VOC content is displayed on the container or container label as determined in accordance with the procedures described in Section 403, as applicable.

113.2 The category information (as listed in TABLES 1 and 2) for such material is displayed on the container or container label.

113.3 The material is not sold directly to a user or a sales outlet located in the District, or the material was sold to an independent distributor located in the District that is not a subsidiary of, or under the direct control of the manufacturer.

114 **EXEMPTION - PROHIBITION OF SUPPLY OR SALE:** The provisions of Section 306 shall not apply to any person who distributes, supplies, sells, or offers for sale any material to a stationary source that operates a collection and control system in accordance with Section 305.

200 DEFINITIONS

201 **ABS WELDING ADHESIVE:** An adhesive that is used to weld acrylonitrile-butadiene-styrene (ABS) pipe. ABS pipe is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an ABS marking.

202 **ADHESIVE:** Any material that is used to bond one surface to another surface by attachment.

203 **ADHESIVE PRIMER:** Any material that is applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.

204 **AIR POLLUTION CONTROL OFFICER (APCO):** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District.

205 **ARCHITECTURAL SEALANT & SEALANT PRIMER:** Any sealant or

sealant primer intended by the manufacturer to be applied to a stationary structure, including mobile homes, and their appurtenances. For the purpose of this rule, appurtenances include but are not limited to, hand railings, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

- 206 **AUTOMOTIVE GLASS ADHESIVE PRIMER:** An adhesive primer that is applied to automotive glass prior to installation with an adhesive/sealant. This primer improves adhesion to the pinch weld and blocks ultraviolet light.
- 207 **CERAMIC TILE INSTALLATION ADHESIVE:** An adhesive that is used for the installation of ceramic tiles.
- 208 **CLEANUP:** To remove uncured adhesives, sealants, or primers from surfaces or to clean equipment used in applying a material.
- 209 **COMPUTER DISKETTE JACKET MANUFACTURING ADHESIVE:** An adhesive that is used to glue the fold-over flaps to the body of a vinyl computer diskette jacket.
- 210 **CONTACT BOND ADHESIVE:** An adhesive that forms an instantaneous bond that cannot be repositioned when substrates, on which the adhesive is applied and allowed to dry, are brought together using momentary pressure.
- 211 **CONTACT BOND ADHESIVE-SPECIAL SUBSTRATES:** An adhesive that is used for any of the following:
 - 211.1 The bonding of two nonporous substrates.
 - 211.2 The bonding of decorative laminate in postforming application.
 - 211.3 The bonding of decorative laminate to metal, melamine-covered board, or cured surfaces.
 - 211.4 The bonding of any substrate to metal, rubber, rigid plastic, or wood veneer not exceeding 1/16 inch in thickness.
- 212 **COVE BASE INSTALLATION ADHESIVE:** An adhesive used for the installation of cove (or wall base), which is generally made of vinyl or rubber, on a wall or vertical surface at floor level.
- 213 **CPVC WELDING ADHESIVE:** An adhesive used for the welding

of CPVC plastic pipe. Chlorinated polyvinyl chloride (CPVC) plastic is a polymer of the chlorinated polyvinyl monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.

- 214 **CURED:** Dry to the touch.
- 215 **CYANOACRYLATE ADHESIVE:** An adhesive with a cyanoacrylate content of at least 90 percent by weight.
- 216 **DRYWALL INSTALLATION:** The installation of gypsum dry wall to studs or solid surfaces.
- 217 **ENCLOSED GUN WASHER:** A device used to clean spray guns, pots, cups, or hoses, that has a closed solvent container that is not open to the ambient air when in use. The solvent may be flushed through the spray equipment by air, hydraulic pressure, or by pumping.
- 218 **EXEMPT COMPOUNDS:** For the purposes of this rule, "exempt compounds" has the same meaning as in the Definitions of District Rule 1.1, General Provisions and Definitions.
- 219 **FIBERGLASS:** A fiber made of fine filaments of glass.
- 220 **FLEXIBLE VINYL:** A nonrigid polyvinyl chloride (PVC) plastic with at least five (5) percent of plasticizer content by weight.
- 221 **HAND APPLICATION:** The application of a material by manual equipment. Manual equipment includes paint brushes, hand rollers, trowels, spatulas, daubers, rags, sponges, as well as mechanically or pneumatically driven syringes that do not atomize the applied materials.
- 222 **HIGH PRESSURE LAMINATE:** Sheets of materials, consisting of paper, fabric, or other core material, that have been laminated at temperatures exceeding 265 degrees Fahrenheit, and at pressures between 1000 and 1400 pounds per square inch.
- 223 **HVLP APPLICATION EQUIPMENT:** High volume low pressure (HVLP) spray equipment used to apply coatings by means of a spray gun which operates using air pressure between 0.1 and 10 pounds per square inch.
- 224 **INDOOR FLOOR COVERING INSTALLATION ADHESIVE:** An adhesive that is used for the installation in an enclosed area (not exposed to ambient weather conditions during normal

use), wood flooring, carpet, carpet pads, rubber flooring, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. Indoor floor covering installation does not include ceramic tile installation, the installation of perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, or subfloor installation.

- 225 **LAMINATE:** A product made by bonding together two or more layers of material.

- 226 **LOW-SOLIDS MATERIAL:** Any material listed in TABLES 1, 2, or 3 that contains 120 grams or less of solids per liter of material.

- 227 **MARINE DECK SEALANT & SEALANT PRIMER:** Any sealant or sealant primer intended by the manufacturer to be applied to the wooden deck of marine vessels.

- 228 **METAL TO URETHANE/RUBBER MOLDING OR CASTING ADHESIVE:** Any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heated molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

- 229 **MULTIPURPOSE CONSTRUCTION ADHESIVE:** Any adhesive intended by the manufacturer for the installation or repair of various construction materials, including but not limited to, drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile, and acoustical tile.

- 230 **NONMEMBRANE ROOF INSTALLATION OR REPAIR ADHESIVE & SEALANT:** Any adhesive or sealant intended by the manufacturer for the installation or repair of nonmembrane roofs and is not intended for the installation of prefabricated single-ply flexible roofing membrane. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

- 231 **OUTDOOR FLOOR COVERING INSTALLATION ADHESIVE:** Any adhesive intended by the manufacturer for the installation of floor covering that is not in an enclosure and exposed to ambient weather conditions during normal use.

- 232 **PANEL INSTALLATION:** The installation of plywood, pre-

decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

- 233 **PERIMETER BONDED SHEET VINYL FLOORING INSTALLATION:** The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet floor.
- 234 **PLASTIC:** Various synthetic materials chemically formed by the polymerization of organic (carbon-based) substances.
- 235 **PLASTIC CEMENT WELDING ADHESIVE PRIMER:** Any primer intended by the manufacturer to prepare plastic substrates prior to bonding or welding.
- 236 **PLASTIC FOAM:** A foam constructed of plastic material.
- 237 **PLASTICIZER:** A material, such as a high boiling point organic solvent, that is incorporated into an adhesive to increase its flexibility, workability, or distensibility.
- 238 **POROUS MATERIAL:** A material whose surface is permeable to liquids. Such materials include but are not limited to wood, paper, foam plastics, and cardboard.
- 239 **PVC WELDING ADHESIVE:** Any adhesive intended by the manufacturer for the welding of polyvinyl chloride (PVC) plastic pipe. PVC plastic is a polymer of the chlorinated polyvinyl monomer that contains 57 percent chlorine and is normally identified with a PVC marking.
- 240 **ROADWAY SEALANT:** Any sealant intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.
- 241 **SEALANT:** Any material with adhesive properties that is formulated primarily to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces.
- 242 **SEALANT PRIMER:** Any primer intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.
- 243 **SINGLE-PLY ROOF MEMBRANE ADHESIVE PRIMER:** Any primer intended by the manufacturer to clean and promote

adhesion of the single-ply roof membrane seams or splices prior to bonding.

- 244 **SINGLE-PLY ROOF MEMBRANE INSTALLATION & REPAIR ADHESIVE:** An adhesive intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane. Single-ply roofing membranes are field-applied using just one layer of membrane material. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashing to the vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of tears together, attaching a patch over a hole and reapplying flashings to vents, pipes or ducts installed through the membrane.
- 245 **SINGLE-PLY ROOFING MEMBRANE SEALANT:** A sealant intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane.
- 246 **SOLVENT:** A VOC-containing material which is used as a cleaning agent, stripper, diluent, thinner, dissolver, viscosity reducer, or for similar uses.
- 247 **SOLVENT WELDING:** The softening of the surfaces of two substrates by wetting them with solvents and/or adhesives, and joining them together with a chemical and/or physical reaction(s) to form a fused union.
- 248 **STATIONARY SOURCE:** For the purposes of this rule, "stationary source" has the same meaning as in the Definitions of District Rule 3.4, New Source Review.
- 249 **STRIPPER:** A VOC-containing material used to remove cured adhesives or cured sealants.
- 250 **STRUCTURAL GLAZING ADHESIVE:** Any adhesive intended by the manufacturer to be used to adhere glass, ceramic, metal, stone, or composite panels to the exterior of a building.
- 251 **SURFACE PREPARATION:** The removal of dust, dirt, soil, oil, grease, etc. from a substrate prior to the application of an adhesive, sealant, adhesive primer, or sealant primer.
- 252 **THIN METAL LAMINATING ADHESIVE:** Any adhesive intended by the manufacturer to bond multiple layers of metal to metal or metal to plastic in the production of electronic

or magnetic components in which the thickness of the bond line(s) is less than 0.25 millimeters.

- 253 **TIRE REPAIR:** The repair of a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive or sealant product and filling the hole or crevice with rubber.
- 254 **TIRE RETREAD:** The process of tire retreading where adhesives are applied to the back of precured tread rubber and to the casing and cushion rubber. It may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread
- 255 **TOP & TRIM INSTALLATION:** The installation of automotive, marine, or aeronautical trim, including, but not limited to, headliners, vinyl tops, vinyl trim, dash covering, door covering, floor covering, panel covering, and upholstery.
- 256 **TRAFFIC MARKING TAPE:** Any preformed reflective film intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways and parking lots.
- 257 **TRAFFIC MARKING TAPE ADHESIVE PRIMER:** Any primer intended by the manufacturer to be applied to surfaces prior to installation of traffic marking tape.
- 258 **UNDERSEA-BASED WEAPON SYSTEMS:** The fabricated part, assembly of parts or completed units of any portion of the missile launching system used on undersea ships.
- 259 **VOLATILE ORGANIC COMPOUNDS (VOC):** For purposes of this rule, has the same meaning as in Rule 1.1, General Provisions and Definitions.
- 260 **WATERPROOF RESORCINOL ADHESIVE:** A two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

300 STANDARDS

- 301 **MATERIAL VOC CONTENT:** No person shall apply any material in excess of the corresponding VOC content limits listed in TABLES 1 or 2 after the specified effective dates, as determined in accordance with the procedures described in Section 403, as applicable.

TABLE 1. MATERIAL VOC CONTENT LIMITS¹

Category:	VOC Limit g/l (lb/gal)	
	Effective² 1/1/97	Effective 1/1/04
Adhesives:		
ABS Welding		400 (3.3)
Ceramic Tile Installation	130 (1.1)	
Computer Diskette Jacket Manufacturing		850 (7.1)
Contact Bond		250 (2.1)
Contact Bond-Specialty Substrates		250 (2.1)
Cove Base Installation		150 (1.3)
CPVC Welding		490 (4.1)
Indoor Floor Covering Installation	150 (1.3)	
Metal to Urethane/Rubber Molding or Casting		250 (2.1)
Multipurpose Construction	200 (1.7)	
Nonmembrane Roof Installation or Repair		300 (2.5)
Other Plastic Cement Welding	450 (3.8)	
Outdoor Floor Covering Installation		250 (2.1)
Perimeter Bonded Sheet Vinyl Flooring Install.		660 (5.5)
PVC Welding		510 (4.3)
Single-ply Roof Membrane Installation & Repair	250 (2.1)	
Structural Glazing	100 (0.8)	
Thin Metal Laminating		780 (6.5)
Top & Trim Installation		540 (4.5)
Tire Retread		100 (0.8)
Waterproof Resorcinol		170 (1.4)
Sealants:		
Architectural		250 (2.1)
Marine Deck		760 (6.3)
Nonmembrane Roof Installation or Repair		300 (2.5)
Roadway		250 (2.1)
Single-ply Roof Membrane		450 (3.8)
Other Sealants Not Listed		420 (3.5)
Adhesive Primers:		
Automotive Glass		700 (5.8)
Plastic Cement Welding	450 (3.8)	
Single-ply Roof Membrane		250 (2.1)
Traffic Marking Tape		150 (1.3)
Other Adhesive Primers Not Listed	250 (2.1)	
Sealant Primers:		
Nonporous Architectural		250 (2.1)
Porous Architectural		775 (6.5)
Marine Deck		760 (6.3)
Other Sealant Primers Not Listed		750 (6.3)

1. Units in grams of VOC per liter of material (pounds per gallon).

2. The limits remain in effect unless revised limits are listed in subsequent columns.

TABLE 2. ADHESIVE SUBSTRATE VOC CONTENT LIMITS¹

Adhesive Application Onto Substrate Type³:	VOC Limit g/l (lb/gal)	
	Effective² 1/1/97	Effective 1/1/04

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Revised August 13, 1997

Revised March 12, 2003

Flexible Vinyl		250 (2.1)
Fiberglass		200 (1.7)
Metal to Metal	30 (0.3)	
Porous Material	150 (1.3)	120 (1.0)
Other Substrates Not Listed	250 (2.1)	

1. Units in grams of VOC per liter of material (pounds per gallon).

2. The limits remain in effect unless revised limits are listed in subsequent columns.

3. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content limit shall be allowed.

Conversion factor: 1 pound VOC per gallon = 119.95 grams VOC per liter.

- 302 **SOLVENT USE:** No person shall use a solvent for surface preparation, cleanup, or stripping that exceeds the VOC content limits and/or the composite vapor pressure limits listed in TABLE 3 after the specified effective date, as determined in accordance with the procedures described in Sections 403 or 404, as applicable.

TABLE 3. SOLVENT USE LIMITS¹

Application Use	Effective 1/1/2004		
	VOC Limit g/l (lb/gal)		Vapor Pressure ²
Surface Preparation:			
Electronic Components	900 (7.5)	And	33
Medical Devices	900 (7.5)	And	33
Single-ply Roof Membrane Installation & Repair	No Limit		45
Other Substrates Not Listed	70 (0.6)		No limit
Cleanup:			
Spray Application Equipment Using Enclosed Gun Washer	No Limit		45
Soaking Spray Application Equipment Using Closed Container	No Limit		9.5
Spray Application Equipment Not Using Closed Container or Enclosed Gun Washer	70 (0.6)		No Limit
Other Than Spray Application Equipment	No Limit		45
Stripping:			
Adhesive or Sealant Material on Wood	350 (2.9)	And	2.0
Adhesive or Sealant Material on All Other	No limit		9.5

1. Units in grams of VOC per liter of material (pounds per gallon).

2. Units in millimeters of mercury at 20 degrees Celsius.

Conversion factor: 1 pound VOC/gallon (U.S.) = 119.95 grams VOC/liter.

- 303 **STORAGE AND DISPOSAL:** Closed non-absorbent, nonleaking containers shall be used to store any VOC-containing material subject to this rule except when accessed for use. Self-closing, non-absorbent, and nonleaking containers shall be used for the disposal of all VOC-laden paper or cloth or similar material that is used for surface preparation, cleanup, or stripping operations.

- 304 **APPLICATION METHODS:** No person shall apply any material

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Adopted September 14, 1994

Revised August 13, 1997

Revised March 12, 2003

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listed in TABLES 1 or 2 except in the following manner:

- 304.1 Hand application.
 - 304.2 Dip coat.
 - 304.3 Flow coat.
 - 304.4 Brush or roll coat.
 - 304.5 Electrodeposition equipment operated in accordance with the manufacturer's specifications.
 - 304.6 Electrostatic spray equipment operated in accordance with the manufacturer's specifications.
 - 304.7 High-volume low-pressure (HVLP) application equipment operated in accordance with the manufacturer's specifications.
 - 304.8 Low-volume low-pressure (LVLP) application equipment operated in accordance with the manufacturer's specifications.
 - 304.9 Aerosol cans.
 - 304.10 For contact adhesives only: airless sprayer equipment, air-assisted airless sprayer equipment, or air-atomized sprayer equipment operated in accordance with the manufacturer's specifications.
 - 304.11 Any other equivalent application method approved in writing by the APCO and the U.S. Environmental Protection Agency.
- 305 **VOC COLLECTION AND CONTROL SYSTEM:** In lieu of complying with the provisions of Sections 301 and/or 302, VOC emissions may be controlled by a collection and control system that reduces VOC emissions to the atmosphere by at least 85 percent, by weight, as determined in accordance with the procedures described in Sections 405 and 406.
- 306 **PROHIBITION OF SUPPLY OR SALE:** No person shall distribute, supply, sell, or offer for sale, to any person within the District for use within the District, any material that exceeds the VOC content limits

specified in TABLES 1 or 2, after the specified effective dates.

- 307 **PROHIBITION OF SPECIFICATION:** No person shall solicit, require the use of, or specify the application of, any material for use in the District that exceeds the VOC content limits specified in TABLES 1 or 2 after the specified effective dates. This prohibition shall apply to any written or oral contracts.

400 **ADMINISTRATIVE REQUIREMENTS**

- 401 **COMPLIANCE DATE:** Any person subject to the provisions of this rule shall be in compliance by March 12, 2003.

- 402 **CONTAINER LABELING:** No later than January 1, 2004, each manufacturer of any material listed in TABLES 1 or 2 shall include a designation on the container or the container label which reports the VOC content as supplied, expressed in grams per liter or pounds per gallon, as determined in accordance with the procedures described in Section 403, as applicable. This designation shall include recommendations regarding thinning, reducing, or mixing with any other VOC-containing materials and shall include the maximum VOC content on an as-applied basis when used in accordance with the manufacturer's recommendations.

- 403 **CALCULATION OF VOC CONTENT AS APPLIED:** For the purpose of determining compliance with the corresponding VOC content limits specified in TABLES 1, 2, or 3, the VOC content of a material as applied shall be determined according to the following:

- 403.1 Except for low-solids materials and solvents, determine the VOC content as applied, excluding the volume of water and exempt compounds using the following equation:

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

where:

VOC content = Grams of VOC per liter of material.

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, in liters.

V_w = Volume of water, in liters.

V_{ec} = Volume of exempt compounds, in liters.

- 403.2 For low-solids materials and solvents, determine the VOC content, including the volume of water and exempt compounds using the following equation:

$$\text{VOC Content}_{1s} = \frac{W_v - W_w - W_{ec}}{V_m}$$

where:

VOC Content_{1s} = VOC content of a low-solids material in grams of VOC per liter of coating.

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, in liters.

- 403.3 If the VOC content of a material sample is measured directly, written notification shall be given to the APCO at least 30 days prior to conducting the compliance test, to afford the APCO the opportunity to have an observer present. Such notification shall include a test protocol that is approved in writing by the APCO prior to performing such compliance test.

- 404 **CALCULATION OF COMPOSITE VAPOR PRESSURE:** For the purpose of determining compliance with the corresponding vapor pressure limits specified in TABLE 3, the composite vapor pressure shall be determined according to the following equation:

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

where:

PP_c = VOC composite partial pressure, in millimeters of mercury at 20 degrees Celsius.

W_i = Weight of the "i"th VOC compound, in grams as determined by ASTM Method E-260-96.

W_w = Weight of water, in grams as determined by ASTM Method D-3792-99.

W_{ec} = Weight of "i"th exempt compounds, in grams as determined by ASTM Method E-260-96.

MW_i = Molecular weight of the "i"th VOC compound, in grams per gram-mole, as given in

chemical reference literature.

MW_w = Molecular weight of water, 18 grams per gram-mole.

MW_{ec} = Molecular weight of the "i"th exempt compound, in grams per gram-mole, as given in chemical reference literature.

VP_i = Vapor pressure of the "i"th VOC compound as determined according to Section 606, in millimeters of mercury at 20 degrees Celsius.

If the composite vapor pressure of a sample is measured directly, written notification shall be given to the APCO at least 30 days prior to conducting the compliance test, to afford the APCO the opportunity to have an observer present. Such notification shall include a test protocol that is approved in writing by the APCO prior to performing such compliance test.

405 **APPROVED COLLECTION AND CONTROL SYSTEM:** Any person who must install a collection and control system to meet the requirements of Section 305 shall obtain prior written approval from the APCO in the form of an Authority to Construct and Permit to Operate.

406 **CALCULATION OF COLLECTION AND CONTROL SYSTEM EFFICIENCY:** For the purpose of determining compliance with the percent VOC efficiency limit specified in Section 305, the overall VOC collection and control efficiency shall be determined at least once every 12 months using the equation:

$$CE_{overall} = \frac{(CE_{capture} \times CE_{control})}{100} \times 100$$

where:

$CE_{overall}$ = Overall collection and control system efficiency, in percentage.

$CE_{capture}$ = Capture efficiency of the collection system, as determined according to Section 603, in percentage.

$CE_{control}$ = Control efficiency of the control system, as determined according to Section 604, in percentage.

The owner or operator of such VOC collection and control system shall provide written notification to the APCO at least 30 days prior to conducting any compliance test, to afford the APCO the opportunity to have an observer present. Such notification shall include a test protocol

that is approved in writing by the APCO prior to performing such compliance test.

- 407 **VIOLATIONS:** Failure to comply with any provision of this rule shall constitute a violation of this rule.

500 RECORD KEEPING AND REPORTING

- 501 **RECORD KEEPING - GENERAL:** Any person subject to Sections 301, 302, or 305 shall maintain a current file that contains all of the data necessary to verify compliance and shall include the following:

- 501.1 Itemized list of each material used or stored on site that is listed in TABLES 1, 2, or 3 including diluents, catalysts, thinners, dissolvers, viscosity reducers or other VOC-containing materials and the mix ratio. The list shall include the category type, name of material, application method, and substrate types.
- 501.2 Such list shall include the VOC content limit and/or the composite partial pressure limit of the material specified in the rule and the actual VOC content and/or composite partial pressure of the material, as applied.
- 501.3 Monthly purchase, inventory, and usage records of each material recorded in Section 501.1, reported in pounds or gallons and the mix ratio, as applicable. A violation of any provision of Section 300 shall be presumed to be a violation for each day of the reporting period up to the day the violation is discovered. A person may rebut this presumption by presenting factual evidence that demonstrates the violation did not occur on each day of the reporting period.
- 501.4 An up-to-date copy of the material safety data sheet (MSDS) or technical data sheet of each material recorded in Section 501.1 that reports the VOC content in grams per liter or pounds per gallon and/or the composite vapor pressure in millimeters of mercury at 20 degrees Celsius, as supplied.

501.5 Results of performance tests using the approved test methods specified in Section 600.

502 **RECORD KEEPING - APPROVED COLLECTION AND CONTROL SYSTEM:**
In addition to provisions of Section 501, the owner or operator of a collection and control system shall maintain:

502.1 Daily usage records in pounds or gallons of all materials that exceed the corresponding limits specified in TABLES 1, 2, or 3.

502.2 Daily records of the key operating parameters and maintenance procedures that can demonstrate continuous operation and compliance of the collection and control system.

503 **REPORTING:** All records required by Sections 501 or 502 shall be retained on site for a period of at least 5 years from the date of entry and made available to District personnel upon request.

503.1 All performance tests used to demonstrate compliance with any provision of this rule shall be documented in a report that includes sufficient detail to verify compliance. The report shall be submitted to the APCO within 60 calendar days after the completion of the test and include the date of test, the name, address, and telephone number of the testing company, and the names and titles of personnel performing the test.

503.2 Any stationary source subject to the provisions of this rule shall submit an annual throughput report to the APCO no later than March 31 for the previous calendar year. The report shall certify quarterly usage totals for each material recorded in Section 501.3.

600 **TEST METHODS:** The test methods and procedures listed below are approved for use to demonstrate rule compliance. A person may petition the APCO in writing to use an alternative test method or procedure. However, the alternative test method or procedure shall be approved in writing by the APCO and the U.S. Environmental Protection Agency (EPA) prior to its use. Test results determined to exceed any limits specified by this

rule through the use of any test method or procedure listed below, or any alternate test method or procedure approved by the APCO and the US EPA, or any amendments and successors thereto, shall constitute a violation of this rule.

- 601 **DETERMINATION OF MATERIAL VOC CONTENT:** The VOC content of materials listed in TABLES 1, 2, or 3 shall be determined in accordance with U.S. EPA Method 24, Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings.
- 602 **DETERMINATION OF EXEMPT COMPOUNDS:** The content of exempt compounds contained in materials listed in TABLES 1, 2, or 3 shall be determined in accordance with American Society of Testing and Materials (ASTM) Method D-4457-91, Standard Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph.
- 603 **DETERMINATION OF CAPTURE EFFICIENCY:** The capture efficiency of the collection system shall be determined in accordance with U.S. EPA's Guidelines for Determining Capture Efficiency issued January 9, 1995, as applicable.
- 604 **DETERMINATION OF CONTROL EFFICIENCY:** The efficiency of the control system and VOC concentration measured and calculated as carbon shall be determined in accordance with U.S. EPA Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, U.S. EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Air Resources Board Method 100, Procedures for Continuous Gaseous Emission Stack Sampling, as applicable. Exempt compounds contained in the exhaust gas of the control system shall be determined in accordance with U.S. EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography or ARB Method 422, Exempt Halogenated VOCs in Gases, as applicable.
- 605 **DETERMINATION OF COMPOSITE VAPOR PRESSURE:** The composite vapor pressure of materials listed in TABLE 3 shall be determined by quantifying the amount of each compound in the blend in accordance with ASTM Method E-260-96, Standard Practice for Packed Column Gas Chromatography, for organics and ASTM Method D-3792-99, Standard Test Method for Water Content of Coatings by Direct Injection Into a Gas Chromatograph, for water content, as applicable, and the procedures specified in Sections 404 and 606, as applicable.

- 606 **DETERMINATION OF SINGLE COMPONENT COMPOUND VAPOR PRESSURE:** The vapor pressure of each single component compound shall be determined in accordance with ASTM Method D-2879-97, Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, or the most current edition of a published source, including, but not limited to: Boublik, T., V. Freid and E. Hala, *"The Vapor Pressure of Pure Substances"*, Elsevier Scientific Publishing Co., New York, *Perry's Chemical Engineer's Handbook*, McGraw-Hill Book Company, *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company, and *Lange's Handbook of Chemistry*, John A. Dean, editor, McGraw-Hill Book Company.
- 607 **DETERMINATION OF PLASTICIZER CONTENT:** The plasticizer content of flexible vinyls shall be determined in accordance with ASTM Method E-260-96.
- 608 **DETERMINATION OF THE VOC CONTENT OF PLASTIC WELDING CEMENT ADHESIVE OR PRIMER:** The VOC content of ABS, CPVC, PVC, or other plastic welding cement adhesive or primer shall be determined in accordance with South Coast Air Quality Management District's Method 316A, Determination of Volatile Organic Compounds in Materials Used for Pipes and Fittings.
- 609 **DETERMINATION OF THE VOC CONTENT OF MATERIALS CONTAINING CYANOACRYLATE:** The VOC content of cyanoacrylate shall be determined in accordance with South Coast Air Quality Management District's Method 316B, Determination of VOCs in Materials Containing Cyanoacrylates.

RULE 2.34 STATIONARY GAS TURBINES

ADOPTED July 13, 1994
REVISED November 12, 2014

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit NO_x emissions from stationary gas turbines.
- 102 **APPLICABILITY:** Except as provided in Sections 110 and 111, this rule shall apply to all stationary gas turbines, 0.3 megawatt (MW) and larger.
- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section or part of this rule for any reason is judged to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of the rule.
- 110 **EXEMPTION – LABORATORY, FIREFIGHTING/FLOOD CONTROL, AND CHEMICAL PROCESSING UNITS:** The provisions of this rule with the exception of Section 401 shall not apply to the operation of stationary gas turbines used under the following conditions:
- 110.1 Laboratory units used in research and testing for the advancement of gas turbine technology.
 - 110.2 Units operated exclusively for firefighting and/or flood control.
 - 110.3 Chemical processing gas turbine units.
- 111 **EXEMPTION – EMERGENCY STANDBY AND SMALL UNITS:** The provisions of this rule with the exception of Sections 401, 402, and 502.2 shall not apply to the operation of stationary gas turbines used under the following conditions:
- 111.1 Emergency standby units demonstrated to operate less than 200 hours per calendar year.
 - 111.2 Units of less than 4 MW operating less than 877 hours per calendar year.

200 DEFINITIONS

- 201 **AUTOMATIC GENERATION CONTROL:** Computer linked remote command of the electrical power output of the generating plant by the control area system operation.
- 202 **CHEMICAL PROCESSING GAS TURBINE UNIT:** A stationary gas turbine that vents its exhaust gases into the operating stream of a chemical process.

- 203 **COMBINED CYCLE:** Type of power plant in which electric generators are driven by both the expanding exhaust gases of fuel combustion in the gas turbine and by a steam turbine used to recover useful energy from the heat of a gas turbine exhaust.
- 204 **COMMISSIONING:** The period of initial equipment installation and tuning prior to the initial power deliveries to the electrical distribution grid.
- 205 **COMPLIANCE LIMIT:** Maximum allowable NO_x emissions expressed in parts per million by volume (ppmv).
- 206 **CONTROL AREA SYSTEM OPERATOR:** The authority which is responsible for electrical power distribution in the local area containing the stationary gas turbine.
- 207 **CONTROL SYSTEM OPERATING PARAMETERS:** Operating parameters that the Air Pollution Control Officer deems necessary to analyze when determining compliance, such as ammonia and exhaust flow rates and exhaust gas temperature for SCR; or humidity, water injection rate, exhaust gas flow rate, and temperature for water injection.
- 208 **EMERGENCY STANDBY UNIT:** A stationary gas turbine that operates only as a mechanical or electrical power source for a facility when the primary power source has been rendered inoperable due to a failure beyond the reasonable control of the operator, except due to power interruption pursuant to a voluntary interruptible power supply agreement. Electricity generated by such a unit cannot be sold.
- 209 **MEASURED NO_x EMISSIONS CONCENTRATION:** The concentration of NO_x emissions corrected to the International Standards Organization (ISO) standard conditions:

$$\text{NO}_x = (\text{NO}_{x_{\text{obs}}})(P_{\text{ref}}/P_{\text{obs}})^{0.5}(288^0/T_{\text{amb}})^{1.53}[e^{19(\text{H}_{\text{obs}}-0.00633)}]$$

Where:

NO _x	=	Emissions of NO _x at 15 percent oxygen and ISO standard conditions on a dry basis, ppm.
NO _{x_{obs}}	=	Measured NO _x emissions corrected to 15 percent oxygen on a dry basis, ppm.
P _{ref}	=	Standard reference pressure, 14.696 psia.
P _{obs}	=	Measured site ambient absolute pressure, psia.
H _{obs}	=	Measured humidity of ambient air, pounds water per pound dry air.
e	=	Transcendental constant (2.718)
T _{amb}	=	Measured temperature of ambient air, degrees K.

or an alternate correlation that corrects to ISO standard conditions and is approved by the Air Pollution Control Officer.

- 210 **NO_x EMISSIONS (NO_x):** The sum of nitric oxides and nitrogen dioxide in the exhaust gas stream.
- 211 **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.
- 212 **PUBLIC SERVICE UNIT:** A gas turbine used to generate electricity for sale or for use in serving the public.
- 213 **RAMP RATE:** The rate of change in the quantity of electric power generated from the stationary gas turbine.
- 214 **RATING:** The continuous megawatt (MW) rating or mechanical equivalent by a manufacturer for gas turbine(s) without power augmentation.
- 215 **SELECTIVE CATALYTIC REDUCTION (SCR):** A post combustion control technology that utilizes ammonia injected into the exhaust gas stream where it reduces NO_x to molecular nitrogen in the presence of a catalyst.
- 216 **SIMPLE CYCLE:** Type of power plant in which all electric generators are driven by the expanding exhaust gases of fuel combustion.
- 217 **SHORT-TERM EXCURSIONS:** Temporary departures from NO_x emission limit compliant operation of a stationary gas turbine with a rated output greater than 100 MW, which is part of a combined cycle process, due to:
 - 217.1 Turbine load changes in excess of the manufacturer's recommended ramp rate required by the control area system operator while the power plant is operating under automatic generation control, or due to safety or equipment protection considerations.
 - 217.2 Fuel pressure variations or automated modifications of the air/fuel mixture caused by safety or equipment protections systems.
 - 217.3 Activation or deactivation of evaporative coolers, inlet air chillers, inlet air misting systems, duct burners, or power augmentation water or steam injection.
 - 217.4 Other conditions identified by the operator and approved in writing by the Air Pollution Control Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

- 218 **SHUT-DOWN PERIOD:** The time necessary to cease operation of a gas turbine from operating under load conditions. This time shall not exceed one (1) hour.
- 219 **START-UP PERIOD:** The time necessary to bring operation of the gas turbine up to the designed rating. This 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.
- 220 **STATIONARY GAS TURBINE:** Any gas turbine system that is gas and/or liquid fueled with or without power augmentation. This unit is either attached to a foundation at a facility or is portable equipment operated at a specific facility for more than 90 days in any 12-month period. Two or more gas turbines powering one shaft shall be treated as one unit.

300 STANDARDS

- 301 **EMISSIONS LIMITS:** The owner or operator of any stationary gas turbine unit shall not operate such unit under conditions, excluding the start-up period, shut-down period, commissioning, or up to four (4) consecutive fifteen (15) minute periods during short-term excursions which result in the measured NO_x emissions concentration exceeding the compliance limit listed below, averaged over 15 minutes:

Unit Size Megawatt Rating (MW)	<u>Compliance Limit</u> NO _x , ppm @ 15% O ₂	
	Gas ^A	Liquid ^B
0.3 to Less Than 2.9 MW and Units Greater Than or Equal to 4 MW That Operate Less Than 877 Hour/Year	42	65
2.9 to Less Than 10 MW	25	65
10.0 MW and Over	9	25

A. GAS INCLUDES ONLY COMMERCIAL NATURAL AND LIQUIFIED PETROLEUM GASES.

B. LIQUID INCLUDES KEROSENE, JET, AND DISTILLATE. THE SULFUR CONTENT OF THE LIQUID SHALL BE LESS THAN 0.05%

- 301.1 The six (6) hour rolling average NO_x concentration for a period including a short-term excursion shall not exceed the applicable compliance limit.
- 301.2 The total of all fifteen (15) minute periods during short-term excursions when NO_x concentrations exceed the applicable compliance limit shall not exceed ten (10) hours in a year.
- 302 **START-UP/SHUT-DOWN:** The owner or operator of any stationary gas turbine shall operate such unit in accordance with good air pollution control practices at all times, including such periods containing start-up/shut-down events. Emissions shall not exceed an average value of 70 ppm @ 15% O₂ during the start-up period for turbines fired on gas fuels, or an average value of 226 ppm @ 15% O₂ for

turbines fired on liquid fuels. SCR control shall be initiated once the temperature of the catalyst media achieves the minimum control operation temperature established by manufacturer recommendation or source test data, which shall be no higher than 550°F. Other emissions control devices shall operate continuously during start-up and shut-down events.

- 303 **CONTINUOUS MONITORING:** The owner or operator of any stationary gas turbine subject to Section 301 shall install, operate, and maintain in calibration equipment, as approved by the Air Pollution Control Officer, that continuously measures and records the following:

303.1 Control system operating parameters.

303.2 Elapsed time of operation.

303.3 For units with a rating of 10 MW or greater, the exhaust gas NO_x concentrations corrected to ISO conditions at 15 percent oxygen on a dry basis. The NO_x monitoring system shall meet EPA requirements as specified in 40 CFR Part 60, Appendix B or other systems that are acceptable to the EPA.

- 304 **SOURCE TESTING:**

304.1 The owner/operator of an affected unit subject to Section 301 shall have the stationary gas turbine source tested using the methods specified in sections 601, 602, and 603 at least once every 12 calendar months.

304.2 The owner/operator of an affected unit with a rating of 10 MW or greater subject to the provisions of this rule shall perform a Relative Accuracy Test Audit (RATA) of the NO_x continuous emission monitoring system at least once every four (4) successive Quality Assurance (QA) operating quarters (as defined by 40 CFR Part 72.2) or at least once every twenty four (24) calendar months, whichever is more stringent. The RATA shall be performed in accordance with 40 CFR Part 75, Appendix B (Quality Assurance and Quality Control Procedures).

400 ADMINISTRATIVE REQUIREMENTS

- 401 **EXEMPTION APPLICABILITY:** The owner or operator of any existing stationary gas turbine shall submit to the Air Pollution Control Officer support documentation for any units exempt under the provisions of Sections 110 and 111.

- 402 **EMERGENCY STANDBY AND SMALL UNITS:** Exempt units shall comply with the following:

- 402.1 The owner or operator of any unit exempt under section 111 shall notify the Air Pollution Control Officer in writing 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 301 of this rule within two years. Included in this application, the owner or operator shall submit a schedule of increments of progress for the installation of the required control equipment. This schedule shall be subject to the review and approval of the Air Pollution Control Officer.
- 402.2 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.

500 REPORTING AND RECORDKEEPING

501 REPORTING:

- 501.1 Submit to the Air Pollution Control Officer information demonstrating that the continuous monitoring system has data gathering and retrieval capability.
- 501.2 Submit to the Air Pollution Control Officer, prior to issuance of a Permit to Operate, information correlating the control system operating parameters to the associated NO_x 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_x available or when the continuous emission monitoring system is not operating properly.
- 501.3 Provide source test information annually regarding the exhaust gas NO_x concentration at ISO conditions corrected to 15 percent oxygen on a dry basis.

502 RECORDKEEPING:

- 502.1 Maintain a gas turbine operating log that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation, type and quantity of fuel used (liquid/gas). This information shall be available for inspection at any time from the date of entry.

- 502.2 For units exempt under Section 111 maintain a gas turbine operating log that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation, and cumulative hours of operation to date for the calendar year. This information shall be submitted to the Air Pollution Control Officer at the end of each calendar year in a manner and form approved by the Air Pollution Control Officer.
- 502.3 All records shall be available for inspection at any time for a period of five years.

600 TEST METHODS:

- 601 **Oxides of Nitrogen (NO_x):** Oxides of Nitrogen (NO_x) emissions shall be determined in accordance with EPA Method 7E or EPA Method 20.
- 602 **Oxygen (O₂):** Oxygen (O₂) concentrations shall be determined in accordance with ARB Method 100 or EPA Method 3A.

RULE 2.35 PHARMACEUTICAL MANUFACTURING OPERATIONS

ADOPTED September 14, 1994

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100 GENERAL

- 101 **PURPOSE:** The purpose of this Rule is to limit the emissions of volatile organic compounds from the manufacture of pharmaceutical and cosmetic products or devices.
- 102 **APPLICABILITY:** The provisions of this Rule shall apply to the following:
- 102.1 The manufacture of pharmaceutical and cosmetic products by chemical processes.
- 102.2 The production and separation of medicinal chemicals such as antibiotics and vitamins from microorganisms.
- 102.3 The manufacture of botanical and biological products by the extraction of organic chemicals from vegetative materials or animal tissues.
- 102.4 The formulation of pharmaceuticals into various dosage forms such as tablets, capsules, injectable solutions, injectable solutions or ointments, or other means that can be taken by the patient immediately and in an accurate amount; and the formulation of cosmetics into configurations intended for consumer use.
- 110 **EXEMPTION - SMALL FACILITIES:** The requirements of Sections 301, 302, 303, 305, 306, 307, and 502 of this Rule shall not apply to facilities that emit, at the design production rating, less than 10 pounds per day of volatile organic compounds provided the requirements of Section 501 are met. (Calculations shall not include surface preparation and cleanup solvent).
- 111 **EXEMPTION - ETHYLENE OXIDE STERILIZERS:** Ethylene oxide sterilizers which are subject to the provisions of Rule 9.4, ETHYLENE OXIDE STERILIZERS AND AERATORS, are exempt from the provisions of Section 303.

200 DEFINITIONS

- 201 **COSMETICS MANUFACTURING PLANT:** Any plant producing or blending chemicals for use in cosmetic products and/or manufacturing cosmetics products. Any facility or operation that has 2844 as their Standard Industrial Classification Code. Cosmetic manufacturing plants may include, but are not limited to,

establishments primarily engaged in manufacturing perfumes (natural and synthetic), cosmetics, toilet preparations, shampoos and shaving products, and the blending and compounding of perfume bases.

202 **IN-PROCESS TANK:** Containers used for mixing, blending, heating, reacting, holding, crystallizing, evaporating, or cleaning operations in the manufacture of pharmaceuticals or cosmetics.

203 **OVERALL CONTROL EFFICIENCY:** The control efficiency multiplied by the capture efficiency.

204 **PHARMACEUTICAL MANUFACTURING PLANT:** Any plant producing or blending chemicals for use in pharmaceutical products and/or employing chemical processes in the manufacture of pharmaceutical products or medical devices. Any facility or operation that has 283 as the first three digits of their Standard Industrial Classification Code. Pharmaceutical manufacturing plants may include, but are not limited to, establishments primarily engaged in manufacturing, fabricating, or processing medicinal chemicals and pharmaceutical products for human or veterinary use.

205 **VOLATILE ORGANIC COMPOUND (VOC):** Any compound containing carbon except:

- 205.1 Methane
- 205.2 Carbon Dioxide
- 205.3 Carbon Monoxide
- 205.4 Carbonic Acid
- 205.5 Metallic Carbides or Carbonates
- 205.6 Ammonium Carbonate
- 205.7 1,1,1-Trichloroethane
- 205.8 Methylene Chloride
- 205.9 Dichlorotrifluoroethane (HCFC-123)
- 205.10 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
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- 205.23 Trifluoromethane (HFC-23)
- 205.24 1,1-Difluoroethane (HFC-152a)
- 205.25 The following four classes of perfluorocarbon compounds:
- a. Cyclic, branched, or linear, completely fluorinated alkanes.
 - b. Cyclic, branched, or linear, completely fluorinated ethers, with no unsaturations.
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines, with no unsaturations.
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies the specific compounds and the amounts present in the product or process and provides a validated test method which can be used to quantify the identified compounds.

300 STANDARDS

301 REACTORS, DISTILLATION COLUMNS, CRYSTALLIZERS, AND

CENTRIFUGES: A person shall not emit more than 10 pounds per day of volatile organic compounds from any reactor, distillation column, crystallizer, or centrifuge unless such emissions are reduced by one of the following:

- 301.1 An emissions control system with an overall control efficiency of 85% or more as determined by Sections 504.3 and 504.5 of this Rule.
- 301.2 Alternatively, surface condensers for the control of volatile organic compounds having the outlet gas temperature controlled as set forth in **Table 1**.

Table 1			
Vapor Pressure of Liquid Volatile Organic Compounds at 20 ⁰ C (68 ⁰ F)		Maximum Condenser Outlet Gas Temperature	
mm Hg	Psia	°C	°F
26 - 52	0.5 - 1.0	25	77
52 - 78	1.0 - 1.5	10	50
78 - 150	1.5 - 2.9	0	32
150 - 300	2.9 - 5.8	- 15	5
> 300	> 5.8	- 25	- 13

302 **SEPARATION OPERATIONS:** A person shall not emit more than 10 pounds per day of volatile organic compounds from any rotary vacuum filter or any other filter or separation device having an exposed liquid surface where the liquid contains volatile organic compounds with a combined vapor pressure of 26 mm Hg (0.5 psia) or more at 20⁰ C (68⁰ F) unless such emissions are reduced by an emissions control system with an overall control efficiency of 85% or more on a mass basis as determined per Sections 504.3 and 504.5 of this Rule.

303 **STERILIZERS:** A person shall not operate any chemical sterilizer using gaseous volatile organic compounds unless emissions of volatile organic compounds from any such sterilizer exceeding 10 pounds per day are reduced by an emissions control system with an overall control efficiency of 85% or more on a mass basis as determined per Sections 504.3 and 504.5 of this Rule.

304 **IN-PROCESS TANKS:** A person shall not use in-process tanks for material containing volatile organic compounds unless a cover is provided. These covers must remain closed unless production, sampling, maintenance, loading, or unloading operations require operator access.

305 **AIR DRYERS:** A person shall not emit more than 10 pounds per day of volatile organic compounds from any air dryer unless such emissions are reduced by at least by an emissions control system with an overall control efficiency of 85% or more on a mass basis as determined per Sections 504.3 and 504.5 of this Rule.

- 306 **BULK LOADING:** A person shall not transfer organic liquids having a vapor pressure greater than 212 mm Hg (4.1 psia) at 20⁰ C (68⁰ F) from any rail car or tank truck into any storage tanks with a capacity greater than 2,000 gallons unless volatile organic compound emissions during transfer are reduced by a vapor recovery system with an overall control efficiency of 90% or more on a mass basis as determined per Section 504.4 of this Rule.
- 307 **STORAGE TANKS:** All storage tanks that store organic liquids with a vapor pressure greater than 78 mm Hg (1.5 psia) at 20⁰ C (68⁰ F) shall be equipped with pressure/vacuum vents set at a minimum of \pm 2 mm Hg (\pm 0.03 psia).
- 308 **OPERATING REQUIREMENTS:** An operator shall repair all vapor and liquid leaks from which volatile organic compounds can be observed to be running or dripping. The repair shall be completed the first time the equipment is off-line for a period long enough to complete the repair, but not longer than 48 hours after detection of the vapor or liquid leak.
- 309 **SURFACE PREPARATION AND CLEANUP SOLVENT:** The requirements of this Section shall apply to any person using liquids containing volatile organic compounds for surface preparation and cleanup:
- 309.1 A person shall use closed containers for the storage or disposal of cloth or paper used for solvent surface preparation and cleanup.
- 309.2 A person shall store fresh or spent solvent in closed containers.
- 309.3 All solvent containers, including those containers with waste solvent and solvent residue, shall be labeled to indicate the type of solvent in the container.
- 309.4 The disposal of waste solvent and solvent residue shall be by one of the following methods:
- a. A commercial waste solvent reclamation service licensed by the State of California; or
 - b. A facility that is federally or state licensed to treat, store, and dispose of such waste; or
 - c. Recycling in conformance with Section 25143.2 of the California Health and Safety Code.

400 ADMINISTRATIVE REQUIREMENTS

401 **COMPLIANCE SCHEDULE:** Any person who must modify existing sources or equipment in order to comply with the requirements of Section 300 shall comply with the following increments of progress:

401.1 Submit an application for Authority to Construct to the District within one year of September 14, 1994.

401.2 Submit a status report to the District stating the progress of the modification within 18 months of September 14, 1994.

401.3 Be in compliance with all the requirements of this Rule within two years from September 14, 1994.

500 MONITORING AND RECORDS

501 **SMALL-USER RECORDS:** Any person seeking to satisfy the conditions of Section 110 shall comply with the following requirements:

501.1 The user shall keep records on a daily basis which show the types and amounts of volatile organic compounds used.

501.2 Such records shall be retained and available for inspection by the Air Pollution Control Officer for the previous two year period.

502 **ORGANIC COMPOUND PROCESSING RECORDS:** Any person subject to the requirements of Sections 301, 302, 303, or 305 shall keep records for each source that does not require air pollution abatement equipment. These records shall contain the following information:

502.1 A person shall maintain a current list of volatile organic compounds in use including the vapor pressure of each compound at 20⁰ C (68⁰ F).

502.2 A person shall keep records on a daily basis which show the types and amount of volatile organic compounds used.

502.3 Such records shall be retained and available for inspection by the Air Pollution Control Officer for the previous two year period.

- 503 **EMISSION CONTROL EQUIPMENT RECORDS:** Any person complying with the requirements of Section 300 by using air pollution control equipment shall maintain daily records of key system operating parameters, such as temperatures, pressures, and/or flow rates, for the emission control equipment. These records shall be retained and available for inspection by the Air Pollution Control Officer for the previous two year period.
- 504 **TEST METHODS:**
- 504.1 **VOC Content:** The volatile organic compound content of liquids and solvents subject to the provisions of this Rule, excluding exempt compounds, shall be determined by procedures contained in EPA Reference Test Method 24 (40 CFR 60, Appendix A).
- 504.2 **Exempt Compounds:** Measurement of exempt compounds shall be conducted and reported in accordance with ASTM Test Method D 4457-85.
- 504.3 **Control Efficiency:** The determination of control efficiency shall be determined in accordance with EPA Reference Test Methods 25, 25A, 25B, or California Air Resources Board Method 100, as applicable.
- 504.4 **Vapor Recovery System Efficiency:** The control efficiency of vapor recovery systems shall be determined in accordance with California Air Resources Board Method 202.
- 504.5 **Capture Efficiency:** Capture efficiency determinations for emissions control systems shall be in accordance with 40 CFR 52.741(a)(4)(iii).
- 504.6 **Solvent Composition:** The identity of components in liquids subject to the provisions of this Rule shall be determined by EPA Reference Test Method 18 (40 CFR 60, Appendix A), ASTM Method E168-67, ASTM Method E169-87, or ASTM Method E260-85, as applicable.
- 504.7 **Vapor Pressure:** The vapor pressure of liquids subject to the provisions of this Rule shall be determined by ASTM Test Method D2879-86 or may be obtained from a public source such as: Boublik, T., V. Freid and E. Hala, *"The Vapor Pressure of Pure Substances"*, Elsevier Scientific

Publishing Co., New York (1973), *Perry's Chemical Engineer's Handbook*, McGraw-Hill Book Company (1984), *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company (1986-87), and *Lange's Handbook of Chemistry*, John A. Dean, editor, McGraw-Hill Book Company (1985).

505 **SOLVENT WASTE/RESIDUE DISPOSAL RECORDS:** Any person subject to the requirements of Section 309.4 of this Rule shall maintain the following records concerning the disposal of solvent waste and solvent residue:

505.1 The date, type, and amount of solvent waste or residue removed; and

505.2 The identification of the licensed facility for each solvent waste or residue disposal.

505.3 Such records shall be retained and available for inspection by the Air Pollution Control Officer for the previous two year period.

RULE 2.37
NATURAL GAS-FIRED WATER HEATERS AND SMALL BOILERS

ADOPTED November 9, 1994
REVISED April 8, 2009

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100 GENERAL

- 101 **PURPOSE:** The purpose of this Rule is to limit the emissions of oxides of nitrogen (NO_x) from the use of natural gas-fired water heaters.
- 102 **APPLICABILITY:** The provisions of this Rule shall apply to any person that manufactures, offers for sale, sells, or installs any natural gas-fired water heater with a rated heat input capacity less than 1,000,000 British Thermal Units per hour (Btu/hr).
- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section or part of this rule for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of the rule.
- 110 **EXEMPTIONS:** The provisions of this Rule shall not apply to:
- 110.1 Water heaters with a rated heat input of 1,000,000 Btu/hr or greater.
- 110.2 Water heaters used in recreational vehicles.
- 110.3 Water heaters used to heat -pools/spas with a rated heat input capacity less than or equal to 400,000 Btu/hr.

200 DEFINITIONS

- 201 **BRITISH THERMAL UNIT (BTU):** The amount of heat required to raise the temperature of one pound of water from 59° F to 60° F at one atmosphere.
- 202 **HEAT INPUT:** The actual amount of heat released by natural gas burned in the water heater.
- 203 **HEAT OUTPUT:** The product obtained by multiplying the recovery efficiency, as defined by Title 10, of the Code of Federal Regulation, Section 6.1.3, Part 430, Subpart B, Appendix E₂ by the input rating of the water heater.
- 204 **LARGE WATER HEATER:** A natural gas-fired water heater with a rated heat input capacity ranging from 75,000 - 400,000 Btu/hour.
- 205 **MOBILE HOME WATER HEATER:** A natural gas-fired water heater manufactured exclusively for use in a mobile home.
- 206 **NATURAL GAS:** A mixture of gaseous hydrocarbons containing at least 80 percent methane by volume as determined according to ASTM Test Method D1945-03.
- 207 **POOL / SPA HEATER:** A device through which water is heated when pool or spa water circulates through a heat exchanger.
- 208 **RATED HEAT INPUT CAPACITY:** The heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been physically altered or modified such that its maximum heat input is different than the heat input capacity

specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.

- 209 **SMALL BOILER:** A natural gas-fired water heater with a rated heat input capacity greater than 400,000 but less than 1,000,000 Btu/hour (1 MM Btu/hr).
- 210 **SMALL WATER HEATER:** A natural gas-fired water heater with a rated heat input capacity less than 75,000 BTU/hour.
- 211 **TANKLESS WATER HEATER:** A water heating device that does not use a storage tank to hold heated water. An electric ignition source is used to initiate water heating and then natural gas is introduced to fuel further combustion using multiple modulating burners to heat water on demand.
- 212 **WATER HEATER:** A device that heats water at a thermostatically-controlled temperature including storage tank and tankless units.

300 STANDARDS

- 301 **PROHIBITIONS:** No person shall manufacture, offer for sale, sell, or install any natural gas fired water heater with oxides of nitrogen (NOx) emissions in excess of the limits set forth in the compliance schedule indicated below:

Category	Rated Heat Input Capacity (Btu/hour)	NOx Emission Limit Effective 5/31/1995 - 12/31/2009	NOx Emission Limit Effective 1/1/2010 - 12/31/2013	NOx Emission Limit Effective 1/1/2014
Small water heater	< 75,000	40ng/J	10ng/J or 15 ppm NOx @ 3% O ₂ dry	10ng/J or 15 ppm NOx @ 3% O ₂ dry
Large water heater	75,000 - 400,000	No present standard	40ng/J or 55 ppm NOx @ 3% O ₂ dry	14ng/J or 20 ppm NOx @ 3% O ₂ dry
Small boiler	> 400,000 - < 1,000,000	No present standard	20ng/J or 30 ppm NOx @ 3% O ₂ dry	14ng/J or 20 ppm NOx @ 3% O ₂ dry
Mobile home water heater	All	No present standard	40ng/J or 55 ppm NOx @ 3% O ₂ dry	40ng/J or 55 ppm NOx @ 3% O ₂ dry
Pool/spa heater	> 400,000 - < 1,000,000	No present standard	40ng/J or 55 ppm NOx @ 3% O ₂ dry	14ng/J or 20 ppm NOx @ 3% O ₂ dry

400 ADMINISTRATIVE REQUIREMENTS

401 **COMPLIANCE REPORT:** A manufacturer shall submit to the Air Pollution Control Officer a Compliance Report that demonstrates compliance with Section 301 of this Rule for each water heater model subject to the provisions of this Rule. A manufacturer shall submit a new compliance report for any water heater model whose design is changed in any manner which may alter NOx emissions. These Compliance Reports, for either new or altered models, shall be submitted to the District at least 30 days before the water heater model is offered for sale, sold, or installed within the District. The compliance Report shall contain all the following information:

401.1 **General Information:**

- a. Name and address of manufacturer;
- b. Brand name and model;
- c. Model number as it appears on the rating plate of each water heater;
- d. Description of each water heater model being certified; and
- e. Heat input rating.

401.2 **Test Report:**

- a. All compliance test procedures and results for each water heater model; and
- b. All calculations for determining compliance of each water heater model.
- c. The manufacturer may submit to the District an approved Bay Area AQMD Regulation 9 Rule 6 or South Coast AQMD Rule 1121 or 1146.2 certification in lieu of conducting duplicative compliance tests.

401.3 **Compliance Statement:** A signed and dated statement attesting to the accuracy of all statements and information in the Compliance Report.

402 **LABELING:** The manufacturer shall display the model number of the water heater complying with the requirements specified in Section 301 of this Rule on the water heater shipping carton and rating plate.

500 MONITORING AND RECORDS

501 **TEST METHODS:** The manufacturer shall have each water heater model tested in accordance with the following:

501.1 Each tested water heater shall be operated in accordance with Section 2.4 of the American National Standards Institute ANSI Z21.10.1, 1990 at normal test pressure, input rates, and with a five-foot exhaust stack installed during NOx emissions tests.

501.2 The measurement of NOx emissions shall be conducted in accordance with the EPA Reference Test Method 7E (40 CFR 60, Appendix A). The determination of CO₂ shall be conducted in accordance with EPA Reference Test Method 3A (40 CFR 60, Appendix A). Other methods require approval by the Air Pollution Control Officer and the U.S. EPA.

501.3 The following procedure shall be used to calculate the NOx emissions rate in ng/J (lb/BTU) of heat output:

$$N = \frac{4.566 \times 10^4 \times P \times U}{H \times C \times E}$$

where:

N	=	NOx emission rate in nanograms of NOx emitted per joule of heat output.
4.566×10^4	=	unit conversion factor (ppm to nanograms and Btu to joules)
P	=	Concentration of NOx in the flue gas in parts per million (volume)
U	=	Dry volume percent of CO ₂ in flue gas necessary for stoichiometric combustion
H	=	Gross heating value of the gas, Btu/ft ³ (at 60°F and 30 in Hg)
C	=	Dry volume percent of CO ₂ in flue gas
E	=	Recovery efficiency, percentage, as defined in Section 6.1.3 of the Code of Federal Regulation, Title 10, Part 430, Subpart B, Appendix E.

501.4 A manufacturer that has certified a water heater model to demonstrate compliance with a State or local agency rule that meets the requirements of this Rule may submit the test results to the District in lieu of conducting duplicative testing.

502 **RECORDS:** A manufacturer shall keep Compliance Reports, test reports, and compliance statements for as long as the water heater model is offered for sale, sold, or installed within the District, or for five years, whichever is longer.

RULE 2.41 EXPANDABLE POLYSTYRENE MANUFACTURING OPERATIONS

Adopted September 10, 2008

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emissions of volatile organic compounds (VOCs) from the manufacturing of expanded polystyrene (EPS) products.
- 102 **APPLICABILITY:** The provisions of this rule are applicable to any facility which manufactures EPS products.
- 110 **EXEMPTION - Non-VOC Blowing Agent:** The provisions of this rule shall not apply to any EPS manufacturing operation which uses only non-VOC blowing agents.

200 DEFINITIONS

- 201 **BLOWING AGENT:** Any liquid, gaseous, or solid material that facilitates the formation of a cellular product from raw polymeric material.
- 202 **CERTIFICATE OF ANALYSIS (COA):** A written document, originated by the EPS bead manufacturer, which cites the blowing agent content (expressed as percentage by weight) of the EPS bead in a specific manufactured bead lot prior to shipment from the manufacturer.
- 203 **EMISSION CONTROL SYSTEM:** A system for reducing manufacturing emissions, which consists of a capture system and a control device.
- 204 **EXPANDABLE POLYSTYRENE (EPS):** A lightweight closed-cell foam which is manufactured in a range of densities.
- 205 **EPS PRODUCTS:** Foam products which are manufactured from a series of processes where raw polymeric materials containing a blowing agent, such as beads, are expanded by exposure to steam or other expansion agent and subsequently molded into final product, such as blocks.
- 206 **EPS MANUFACTURING EMISSIONS:** Any VOC emissions which occur during an EPS manufacturing operation, prior to capture and control.
- 207 **EPS MANUFACTURING OPERATION:** Any EPS production line, or portion of a production line, which processes raw EPS bead into final EPS product and which results in VOC emissions into the atmosphere. Production line processes

include, but are not limited to: pre-expansion, aging (pre-puff), and molding. The manufacturing process ends after the EPS product exits the mold.

- 208 **LOW PENTANE BEAD:** An expandable polystyrene bead containing pentane as a blowing agent with an upper limit less than 4.0 percent by weight, prior to shipment, as certified upon delivery by an accompanying bead manufacturer's COA.
- 209 **MID PENTANE BEAD:** An expandable polystyrene bead containing pentane as a blowing agent within the range of 4.0 to 5.2 percent by weight, prior to shipment, as certified upon delivery with an accompanying bead manufacturer's COA.
- 210 **NON-VOC BLOWING AGENT:** A blowing agent which does not contain VOCs.
- 211 **POLYMERIC MATERIAL:** A multi-molecular compound or mixture of compounds formed by polymerization and consisting essentially of repeating structural units.
- 212 **VOLATILE ORGANIC COMPOUND (VOC):** As defined in Rule 1.1, General Provisions and Definitions.

300 STANDARDS

- 301 **EMISSION CONTROLS:** All EPS manufacturing emissions shall be controlled by an emission control system which has a capture efficiency of at least 90% and a destruction efficiency of at least 95%.
- 302 **RAW MATERIAL USAGE:** All EPS products shall be manufactured with either low or mid pentane bead.
- 303 **SOURCE TESTING:** Each EPS manufacturing operation shall perform a source test to verify compliance with section 301 at least once every 12 calendar months, in accordance with a District-approved protocol and the test methods listed in section 600.
- 304 **VIOLATIONS:** Failure to comply with any provision of this rule shall constitute a violation of this rule. The owner or operator shall be liable for any penalties assessed in accordance with the California Health and Safety Code 42400.

400 ADMINISTRATIVE REQUIREMENTS

401 **COMPLIANCE SCHEDULE:** Facilities subject to the requirements of this rule shall demonstrate full compliance with all provisions by January 1, 2009.

402 **EMISSION CONTROL SYSTEM OPERATION AND MAINTENANCE (O&M) PLANS:** The owner/operator shall submit an O&M plan for the emission control system to the APCO for approval. The plan shall include procedures for collecting and recording required data and other information in a form approved by the APCO. The plan shall also include procedures and schedules for preventive and corrective maintenance performed for the purpose of maintaining the emission control system in proper operating condition.

500 REPORTING AND RECORD KEEPING

501 **REPORTING:** All records required by this Rule shall be maintained on site for a period of five years and made available to the APCO upon request.

502 **RECORD KEEPING:** Owners and/or operators shall maintain the following records:

502.1 **EMISSION CONTROL SYSTEM:** Daily records of the operation and maintenance of the emission control system. These records shall include key system operating parameters such as temperatures, pressures, flow rates, and other measurements to demonstrate ongoing compliance with section 300.

502.2 **RAW MATERIAL USAGE:** Daily records of raw EPS bead processed and the associated blowing agent content, as specified on the applicable COA. A copy of each applicable COA shall be retained.

502.3 **FINISHED PRODUCT:** Daily records of the amount of EPS product made, including the approximate weight and density of each product.

600 TEST METHODS AND CALCULATIONS

601 **GENERAL:** For the purposes of this Rule, the following

test methods (or their most recent approved versions) or calculation methods shall be used, upon review and approval by the District and EPA. Other test methods determined to be equivalent and approved in writing by the District and the EPA may also be used.

- 602 **FLOW:** Measurement of air flow and gas flow shall be conducted and reported in accordance with EPA Reference Methods 1 and 2, and their subparts.
- 603 **VOC LEAKS:** Measurement of VOC leaks shall be conducted and reported in accordance with EPA Reference Method 21.
- 604 **CONTROL EFFICIENCY:** Measurement of VOC concentration for determining control efficiency shall be conducted and reported in accordance with EPA Reference Method 25, and its subparts.
- 605 **PENTANE CONTENT:** Measurement of pentane content of materials shall be conducted and reported in accordance with SCAQMD Method 306-91.
- 606 **MOISTURE CONTENT:** Measurement of moisture content of gas shall be conducted and reported in accordance with EPA Reference Method 4.
- 607 **CAPTURE EFFICIENCY:** Measurement of capture efficiency shall be determined by the procedures contained in the EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995", and EPA Reference Methods 204 A-F.

RULE 2.42 NITRIC ACID PRODUCTION

ADOPTED May 13, 2009

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit nitrogen oxide (NO_x) and visible emissions from nitric acid production facilities.
- 102 **APPLICABILITY:** The provisions of this rule are applicable to weak nitric acid production facilities.
- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section or part of this rule for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of the rule.
- 104 **VIOLATIONS:** Failure to comply with any provision of this Rule shall constitute a violation of this rule.
- 110 **EXEMPTION - EQUIPMENT STARTUP AND SHUTDOWN:** The provisions of Section 301 and 302 shall not apply to any nitric acid production facilities during periods of equipment startup or shutdown, provided that the frequency and duration of these periods and the associated emissions are minimized to the maximum extent practicable.

200 DEFINITIONS

- 201 **EMISSION CONTROL SYSTEM:** The control device(s) and continuous emission monitoring system used to reduce and monitor NO_x emission concentrations created during the production of weak nitric acid.
- 202 **NITRIC ACID PRODUCTION FACILITY:** An operation that manufactures weak nitric acid either by the pressure or atmospheric pressure process.
- 203 **NITROGEN OXIDE (NO_x) EMISSIONS:** The sum of nitric oxide (NO) and nitrogen dioxide (NO₂) in the exhaust gas stream, expressed as NO₂.
- 204 **NO_x COMPLIANCE LIMIT:** Allowable NO_x emissions expressed in pounds of nitrogen dioxide (NO₂) emitted per ton of nitric acid produced (lb NO_x/ton HNO₃), where the production is expressed as 100% nitric acid by mass.
- 205 **OPERATING SYSTEM PARAMETERS:** Operating parameters that the Air Pollution Control Officer (APCO) has deemed necessary for analysis when determining compliance, including, but not limited to, daily nitric acid production rate, average daily nitric acid strength, NO_x emission rates, and hours of operation.
- 206 **SHUTDOWN PERIOD:** The period of time after feedstock is no longer introduced in a nitric acid production unit. The shutdown period is not to include the time required to cool down the control equipment and shall not exceed three (3) hours.
- 207 **STARTUP PERIOD:** The period of time between when feedstock is introduced into the nitric acid production process and the equipment achieves the proper operating

temperature and stable operating conditions. The startup period is not to include the time required to preheat the control equipment and shall not exceed three (3) hours.

- 208 **WEAK NITRIC ACID:** Nitric acid with a strength between 30% and 70% (by mass).

300 STANDARDS

- 301 **NO_x EMISSION LIMITATION:** The owner or operator of an affected facility shall not operate such equipment which results in measured NO_x (expressed as NO₂) emissions exceeding 3.0 lb/ton HNO₃ produced (being expressed as 100% nitric acid by mass) averaged over a three (3) hour rolling period.

- 302 **OPACITY LIMITATIONS:** No activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

302.1 Half 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

302.2 Of such opacity as to obscure an observer's view to a degree equal to or greater than smoke as described in subsection 302.1 or 10% opacity.

- 303 **CONTINUOUS EMISSION MONITORING SYSTEM (CEMS):** The owner or operator of an affected facility shall install, calibrate, maintain, and operate a Continuous Emission Monitoring System (CEMS) for measuring NO_x emission concentrations.

303.1 The CEMS shall comply with the requirements specified in 40 Code of Federal Regulations Part 60, Appendix B, Specification 2 or other alternative methods approved by the U.S. EPA and the District.

303.2 The CEMS shall be calibrated and checked using a NO₂ span gas with a value between 450 and 500 ppmv, or other alternative methods approved by the U.S. EPA and the District.

- 304 **SOURCE TESTING:** All facilities subject to the provisions of this Rule shall perform a source test to verify compliance with the requirements of Section 301 and 302 at least once every twelve (12) continuous calendar months, in accordance with a District-approved protocol and the test methods listed in Section 600 of this Rule.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **COMPLIANCE SCHEDULE:** The owner or operator of an affected facility shall demonstrate full compliance with all provisions by July 1, 2009.

402 **EMISSION CONTROL SYSTEM AND CEMS OPERATING AND MAINTENANCE PLAN:** The owner or operator of an affected facility shall submit an Operations and Maintenance (O&M) Plan for the emission control device and the CEMS to the APCO for approval. The plan shall include:

402.1 The procedures for collecting and recording required data and other information in a form approved by the APCO.

402.2 The procedures and schedules for preventive and corrective maintenance performed for the purpose of maintaining both the emission control device and the CEMS in proper operating condition.

500 REPORTING AND RECORDKEEPING

501 **REPORTING:** All records required by this Rule shall be maintained on-site for a period of five (5) years and made available to the APCO upon request.

502 **RECORDKEEPING:** The owner or operator of an affected facility shall maintain an operating log for the facility that includes, on a daily basis:

502.1 The actual startup and shutdown time;

502.2. Total hours of operation, amount of nitric acid produced (expressed as 100% acid strength);

502.3 Operating system parameters;

502.4 The exhaust gas NO_x concentrations in parts per million volume (ppmv) on a dry basis; and

502.5 The exhaust gas NO_x emission rate in lb/ton HNO₃ per three (3) hour rolling average.

600 TEST METHODS AND CALCULATIONS:

601 **NO_x EMISSION CONCENTRATION:** NO_x emission concentrations shall be determined in accordance with U.S. EPA Method 7, or alternative methods approved by the U.S. EPA and the District.

602 **NO_x EMISSION RATE:** The NO_x emission rate used to demonstrate compliance with the NO_x compliance limit of this Rule shall be calculated using the equation contained in 40 CFR Part 60.74(b)(1).

603 **NO_x EMISSION CONVERSION FACTOR:** The owner or operator of an affected facility shall calculate an emission conversion factor for the purpose of converting the NO_x CEMS data (in ppmv) into the units of the applicable NO_x compliance limit (in lb/ton) using the data from the most recent source test submitted to, and approved by, the District. The emission conversion factor shall:

- 603.1 Be calculated using the CEMS and source test data pertaining to the same operating time frame.
 - 603.2 Be calculated by dividing the source test data averages (in lb/ton) by the corresponding CEMS data averages (in ppmv) to obtain a conversion factor expressed in the units of lb/ton per ppmv.
 - 603.3 Be reestablished during any source test event performed pursuant to the requirements of Section 304 of this Rule.
- 604 **OPACITY:** Visible emission evaluations shall be determined in accordance with U.S. EPA Method 9, or alternative methods approved by the U.S. EPA and the District.

RULE 2.43 BIOMASS BOILERS

Adopted (November 10, 2010)

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100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emissions of oxides of nitrogen(NOx) and carbon monoxide (CO) from biomass fueled boilers.
- 102 **APPLICABILITY:** The provisions of this rule are applicable to boilers and steam generators with rated heat inputs of greater than or equal to 5 million BTU per hour and which combust biomass as a fuel.
- 110 **EXEMPTIONS:** The provisions of this rule shall not apply to the following:
- 110.1 **Boilers, Steam Generators, and Process heaters:** Boilers, steam generators, and process heaters which are subject to the provisions of District Rule 2.27 - Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters.
- 110.2 **Solid Waste Incinerators:** Combustion units whose primary purpose is to burn municipal solid waste.
- 110.3 **Waste Heat Recovery Boilers:** Waste heat recovery boilers that are used to recover sensible heat from the exhaust of combustion turbines or unfired waste heat recovery boilers used to recover sensible heat from the exhaust of any combustion equipment.

200 DEFINITIONS

- 201 **BIOMASS:** Any organic material not derived from fossil fuels, such as agricultural crop residues, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste, including these materials when separated from other waste streams. Biomass does not include material containing sewage sludge, industrial sludge, medical waste, hazardous waste, or radioactive waste.
- 202 **BIOMASS FUELED BOILER (BOILER):** Any combustion equipment designed to burn biomass to produce steam, heat water or other fluids, and/or produce electricity, including but not limited to boilers and steam generators.
- 203 **BLOCK 24-HOUR AVERAGE:** the arithmetic average of the hourly NOx or CO emission rates of a unit as measured over 24 one-hour periods, daily, from 12:00 AM to 11:59 PM, excluding periods of system calibration.
- 204 **BRITISH THERMAL UNIT (BTU):** The amount of heat required to raise the

temperature of one pound of water from 59 degrees Fahrenheit to 60 degrees Fahrenheit at one atmosphere.

- 205 **CARBON MONOXIDE (CO) EMISSIONS:** Carbon monoxide in the flue gas.
- 206 **CURING STARTUP:** A startup which includes heating the boiler at a predetermined rate and holding the temperature at several points to allow for insulating materials to cure in the boiler refractory.
- 207 **HEAT INPUT:** The chemical heat released due to fuel combustion in a unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- 208 **HIGHER HEATING VALUE (HHV):** The total heat liberated per mass of fuel burned (BTU per pound), when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to their standard states at standard conditions.
- 209 **NITROGEN OXIDE (NO_x) EMISSIONS:** The sum of nitric oxides and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide (NO₂).
- 210 **RATED HEAT INPUT:** The heat input capacity, in million BTU per hour, specified on the nameplate of the unit. If the unit has been altered or modified such that the maximum heat input is different than the heat input capacity specified on the nameplate, the maximum heat input shall be considered as the rated heat input.
- 211 **SHUTDOWN:** The period of time when fuel feed is curtailed and the unit cools down from its normal operating temperature, to an ambient temperature.
- 212 **STARTUP:** The period of time that a unit is heated to the normal operating temperature, from a shutdown status.
- 213 **UNIT:** Any biomass fueled boiler, as defined in section 202.

300 STANDARDS

- 301 **EMISSION LIMITS:** The owner/operator of an affected unit shall limit the emissions of that unit to less than the following, excluding startup/shutdown:

NO _x	CO
90 ppm, corrected to 3% O ₂ (block 24 hour average)	400 ppm, corrected to 3% O ₂ (block 24 hour average)

302 **STARTUP/SHUTDOWN PROVISIONS:** The emission limits of section 301 shall not apply during startup/shutdown, provided the following requirements are met:

302.1 A normal startup shall not exceed 24 hours in duration. A curing startup shall not exceed 96 hours in duration.

302.2 A shutdown shall not exceed 24 hours.

302.3 The frequency and duration of startup/shutdown periods and their associated emissions shall be minimized as much as technologically feasible.

303 **CONTINUOUS EMISSION MONITORING SYSTEM (CEMS):** The owner/operator of an affected unit shall install, calibrate, maintain, and operate a Continuous Emission Monitoring System (CEMS) for measuring NO_x and CO emission concentrations.

303.1 The CEMS shall comply with the requirements specified in 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Specification 2 and Appendix F or other alternative methods approved by the U.S. EPA and the District.

304 **SOURCE TESTING:** The owner/operator of an affected unit subject to the provisions of this rule shall perform a Relative Accuracy Test Audit (RATA) to verify compliance with 40 CFR Part 60, Appendix F at least once every four (4) calendar quarters, in accordance with a District-approved protocol and the procedures listed in Appendix F.

400 ADMINISTRATIVE REQUIREMENTS

401 **COMPLIANCE SCHEDULE:** The owner/operator of an affected unit subject to the requirements of this rule shall demonstrate full compliance with all provisions by July 1, 2011.

402 **CEMS OPERATING AND MAINTENANCE (O&M) PLAN:** The owner/operator of an affected unit shall submit an O&M Plan for the CEMS to the Air Pollution Control Officer (APCO) for approval. The plan shall include:

402.1 The procedures for collecting and recording required data and other information in a form approved by the APCO.

402.2 The procedures and schedules for preventive and corrective maintenance performed for the purpose of maintaining the CEMS in proper operating condition.

500 REPORTING AND RECORDKEEPING

501 **REPORTING:** All records required by this Rule shall be maintained on-site for a period of five (5) years and made available to the APCO upon request.

502 **RECORDKEEPING:** The owner/operator of an affected unit shall maintain an operating log for the unit that includes, on a daily basis:

502.1 The actual startup/shutdown time and total operating hours;

502.2. Type and amount of each biomass fuel burned;

502.3 The exhaust gas CO and NO_x concentrations in parts per million volume (ppmv), corrected to 3% O₂, for block 24-hour average.

600 TEST METHODS

601 **GENERAL:** For the purposes of this Rule, the following test methods (or their most recent approved versions) shall be used. Other alternative test methods that are approved in writing by the District and the EPA may also be used.

602 **NO_x EMISSION CONCENTRATION:** NO_x emission concentrations shall be determined in accordance with U.S. EPA Method 7.

603 **CO EMISSION CONCENTRATION:** CO emission concentrations shall be determined in accordance with U.S. EPA Method 10.

604 **STACK GAS OXYGEN:** The oxygen content of the stack gas shall be determined in accordance with U.S. EPA Method 3.

605 **STACK GAS VELOCITY (FLOW):** Velocity of the stack gases shall be determined in accordance with U.S. EPA Method 2.

606 **STACK GAS MOISTURE CONTENT:** Moisture content of the stack gases shall be determined in accordance with U.S. EPA Method 4.

607 **FUEL HHV:** The HHV of solid fuels shall be determined in accordance with ASTM E 711-87 or ASTM D 2015-96.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 3.1 GENERAL PERMIT REQUIREMENTS

ADOPTED - February 23, 1994

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100 GENERAL

101 **PURPOSE:** The purpose of this rule is to provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

110 **EXEMPTIONS:** An Authority to Construct and Permit to Operate shall not be required for equipment listed in Sections 101 to 113 of Rule 3.2, EXEMPTIONS.

200 DEFINITIONS

201 **ANNIVERSARY DATE:** The day and month of issuance of a permit to operate and that same day and month of each succeeding year.

202 **STATE AMBIENT AIR QUALITY STANDARDS:** All references in Rule 3.4, NEW SOURCE REVIEW, to national ambient air quality standards shall be interpreted to include state ambient air quality standards.

300 STANDARDS

301 AUTHORITY TO CONSTRUCT:

301.1 No person shall build, erect, alter, or replace any facility, article, machine, equipment, or other contrivance, 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, without first obtaining an authorization to construct from the Air Pollution Control Officer as specified in Section 401 of this Rule.

301.2 No person shall issue any building permit for a building or structure erecting, altering, or replacing any facility, article, machine, equipment, or other contrivance 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 unless the Air Pollution Control Officer shall have first issued an authorization to construct for such work.

302 PERMIT TO OPERATE:

302.1 No person shall operate any facility, article, machine, equipment, or other contrivance, for which an authorization to construct is required by these Rules and Regulations without first obtaining a written permit from the Air Pollution Control Officer. No permit to operate or use shall be granted either by the Air Pollution Control Officer or the Hearing Board for any article, machine, equipment, or contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants, constructed or installed without authorization as required by Section 301 of this Rule, until the information required is presented to the Air Pollution Control Officer and such article, machine, equipment, or contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants, is altered, if necessary, and made to conform to the standards set forth in Section 303 of this Rule, elsewhere in these Rules and Regulations including the requirements of Rule 3.8, FEDERAL OPERATING PERMITS, and in the Health and Safety Code.

302.2 No person shall operate any facility, article, machine, equipment, or other contrivance, 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, without obtaining a permit from the Air Pollution Control Officer or the Hearing Board.

303 STANDARDS FOR GRANTING APPLICATIONS:

303.1 The Air Pollution Control Officer shall deny authorization to construct or permit to operate, except as provided in Section 405 of this Rule and Rule 3.4, NEW SOURCE REVIEW, if the applicant does not show that every facility, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designated, controlled, equipped, and operated with such air pollution control equipment, that it may be shown to operate without emitting or without causing to be emitted air contaminants in violation of Sections 41700 or 41701, of the Health and Safety Code, of these Rules and Regulations, or any federal statutes or regulations as may be enforceable by the Air Pollution Control Officer. In addition, the Air pollution Control Officer shall require the applicant, as a condition of the authority to construct, to comply with the requirements of Health and Safety Code Part 6, (Section 44300 et. seq.), Air Toxics Hot Spots Assessment Act.

303.2 Before authorization to construct or a permit to operate is granted, the Air Pollution Control Officer may require the applicant to provide and maintain such facilities as are necessary for sampling and testing purposes in order to secure information that will disclose the nature, extent, quantity, or degree of air contaminants discharged into the atmosphere from the facility, article, machine, equipment, or other contrivance described in the authorization to construct or permit to operate. In the event of such a requirement, the Air Pollution Control Officer shall notify the applicant in writing of the required size, number, and location of sampling holes, the location of the sampling platform, the access to the sampling platform, and the utilities for operating the sampling and testing equipment. The platform and access shall be constructed in accordance with the General Industry Safety Orders of the State of California.

303.3 On acting upon a permit to operate, if the Air Pollution Control Officer finds that the facility, article, machine, equipment, or other contrivance has been constructed not in accordance with the authorization to construct, he shall deny the permit. The Air Pollution Control Officer shall not accept any further application for permit to operate the facility, article, machine, equipment, or other contrivance so constructed until he finds that the facility, article, machine, equipment, or other contrivance has been reconstructed in accordance with the authorization to construct.

303.4 The Air Pollution Control Officer shall determine that an applicant has complied with the applicable requirements of Health and Safety Code Section 42301.6, preparation and distribution of public notice, prior to approving an application for an authority to construct.

304 **TRANSFER:** Any permit or written authorization issued hereunder shall not be transferable, by operation of law or otherwise, from one location to another or from one piece of equipment to another. It shall be the transferee's responsibility to inform the District on assumption of ownership or operating control of any item under a permit from the District and for which a permit to operate will be required. Any such transfer as herein above described, said transferee shall make application for authorization in accordance with Section 401 of this Rule.

305 PERMIT RENEWAL: Each permit to operate shall be renewable annually on the permit's anniversary date, commencing one year after the date of issuance. The Air Pollution Control officer shall review every Permit to Operate upon annual renewal, pursuant to Health and Safety Code Section 42301(c), to determine that permit conditions are adequate to ensure compliance with, and the enforceability of, District Rules and Regulations applicable to the article, machine equipment, or contrivance for which the permit was issued. Applicable District Rules and Regulations shall include those which were in effect at the time when the Permit was issued or modified, or which have been subsequently been adopted and made retroactively applicable to an existing article, machine, equipment, or contrivance, by the District Board of Directors. The Air Pollution Control officer shall revise the conditions, if such conditions are not consistent, in accordance with all applicable Rules and Regulations.

400 ADMINISTRATIVE REQUIREMENTS

401 APPLICATIONS:

401.1 Requests for an authorization to construct or a permit to operate shall be initiated by filing an application with the Air Pollution Control Officer or his designee together with the filing fee required by these Rules and Regulations. The application shall contain all information necessary to enable the Air Pollution Control Officer to make a determination as required by Section 303 of this Rule, and Rule 3.4, NEW SOURCE REVIEW, and Rule 3.8, FEDERAL OPERATING PERMITS. When the information is not sufficient for the Air Pollution Control officer to make the determination required by Section 303 of this Rule, Rule 3.4, NEW SOURCE REVIEW, and any other applicable rule, regulation, or order additional information, plans, or specifications shall be submitted by the applicant as requested.

401.2 All applications for authorization to construct a facility subject to the provisions of this rule shall include information as listed in Exhibit B which is hereby incorporated into this regulation. The Air Pollution Control Officer may within 30 days of receipt of application stipulate relative information not specifically listed in Exhibit B.

401.3 The Air Pollution Control Officer shall inform each applicant that the criteria to be used for evaluating applications for an authorization to construct or a permit to operate shall be that given in Exhibit B which is hereby incorporated into this regulation.

402 CONDITIONAL APPROVAL: To assure compliance with all applicable regulations, the Air Pollution Control Officer may impose written conditions on any authorization to construct or permit to operate. The Air Pollution Control Officer may, after 30-day notice to the permittee, add or amend written conditions on any permit upon annual renewal to ensure compliance with and enforceability of any applicable rule or regulation. Additional provisions, as required by Title V of the Federal Clean Air Act, for the reopening of permits are specified in Rule 3.8, FEDERAL OPERATING PERMITS. Commencing work or operation under such a revised permits shall be deemed acceptance of all of the conditions so specified.

~~**403 DENIAL OF APPLICATIONS:** In the event of denial of authorization to construct or permit to operate, the Air Pollution Control Officer shall notify the applicant in writing of the reasons therefor. Service of this notification may be made in person or by mail, and such service may be proved by the written acknowledgment of the persons served. The Air Pollution Control Officer shall not accept a further application unless the applicant has complied with the objections specified by the Air Pollution~~

~~Control Officer as his reasons for denial of the authorization to construct or the permit to operate.~~

404 APPLICATIONS DEEMED DENIED: The applicant may, at his option, deem the authorization to construct or permit to operate denied if the Air Pollution Control Officer fails to act on the application within thirty (30) days after filing, or within thirty (30) days after applicant furnishes the further information, plans, and specifications requested by the Air Pollution Control Officer, whichever is later. Facilities subject to the provisions of Rule 3.8, FEDERAL OPERATING PERMITS, shall be subject to the timelines established in that Rule.

405 INFORMATION:

405.1 The Air Pollution Control Officer may at any time require from an applicant for, holder of, or one required to hold, an authorization to construct or permit to operate or from a person who will be required to hold a permit in the future by Section 302.1 of this Rule, such information, analysis, plans, or specifications as will disclose the nature, extent, quantity, or degree of air contaminants which are or may be discharged into the atmosphere.

405.2 Any facility, article, machine, equipment, or other contrivance for which a permit to operate has been issued will be reviewed annually for nature and amount of emissions and any other information as may be deemed necessary by the Air Pollution Control Officer to determine the status under permit requirements. Operators of such sources shall furnish appropriate information on forms prescribed by the Air Pollution Control Officer.

405.3 The owner or operator of any facility, article, machine, equipment, or other contrivance for which a permit to operate is in effect shall notify the District office whenever a breakdown, malfunction, or operational upset condition exists which would tend to increase emissions of air pollutants or whenever any operating condition contrary to any provision of the permit to operate exists. Such notice shall be given to the District no later than four hours after occurrence during regular workday hours or no later than two hours of the District workday following an occurrence not during regular District workday hours. The notice shall provide the District information as to causes and corrective action being taken, with a schedule for return to required operating conditions. If a facility is subject to the provisions of Rule 3.8, FEDERAL OPERATING PERMITS, then all recordkeeping requirements of that Rule pertaining to upsets, breakdowns, or malfunctions apply.

405.4 Any violation of any emission standard to which the stationary source is required to conform, as indicated by the records of a required continuous monitoring device, shall be reported by the operator of the source to the District within 96 hours after such occurrence. The District shall, in turn, report the violation to the State Board within five working days after receiving the report of the violation from the operator.

405.5 In order to ascertain that any facility, article, machine, equipment or other contrivance for which a permit to operate exists is operating according to permit requirements the Air Pollution Control Officer may at any time without notice inspect the operations and any pertinent records.

405.6 If a permit to operate is given for a source which has been evaluated to have emissions equal to or more than 90% of the offset levels specified in Section 302.1 of Rule 3.4, NEW SOURCE REVIEW, the Air Pollution Control Officer shall require that within

90 days after start up or as soon thereafter as operations are at a level representative of maximum emissions a source test to determine emissions will be performed.

If the source operator establishes that emissions can be determined confidently by other means, the Air Pollution Control Officer may exempt the source from source testing.

~~406 **APPEALS:** Within ten (10) days after notice by the Air Pollution Control Officer of denial or conditional approval of an authorization to construct or permit to operate, the applicant may petition the Hearing Board, in writing, for a public hearing. The Hearing Board, after notice and a public hearing held within thirty (30) days after filing the petition, may sustain or reverse the action of the Air Pollution Control Officer; such order may be made subject to specified conditions.~~

407 TERM OF AUTHORIZATION TO CONSTRUCT: An authorization to construct shall remain in effect only until an application for a permit to operate the facility, article, machine, equipment, or other contrivance in question is granted or denied; however, such an authorization shall not remain in effect beyond two years from the date of issuance unless the Air Pollution Control Officer finds that the time required for construction requires an extension and grants one or more extensions to a time within five years of the date of issuance.

408 POSTING: A person who has been granted under these Rules and Regulations a permit to operate any facility, article, machine, equipment, or other contrivance, shall firmly affix such permit to operate, an approved facsimile, or other approved identification bearing the permit number upon the facility, article, machine, equipment, or other contrivance in such a manner as to be clearly visible and accessible. In the event that the facility, article, machine, equipment, or other contrivance 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 facility, article, machine, equipment, or other contrivance, or maintained readily available at all times on the operating premises.

409 SUSPENSION: The Air Pollution Control Officer may suspend a permit if a holder of such permit willfully fails and refuses to furnish information, analyses, plans, and specifications, within a reasonable time, as requested by the Air Pollution Control Officer pursuant to Health and Safety Code Section 42303, District Rules and Regulations, or any other law, rule, regulation, agreement, or order enforceable by the District. The Air Pollution Control Officer shall serve notice, in writing, of such suspension and the reasons therefor. The Permit shall be reinstated when the District is furnished with all requested information, analyses, plans, and specifications.

3-29-94

RULE 3.2 EXEMPTIONS

ADOPTED August 25, 1993

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100 **GENERAL:** The exemptions contained in this rule shall not apply to an otherwise exempt piece of equipment which is part of a process that requires a permit. An Authority to Construct and Permit to Operate shall not be required for the equipment listed in sections 101 to 113 of this rule unless such equipment is:

100.1 Subject to New Source Performance Standards;

100.2 Subject to National Emissions Standards for Hazardous Air Pollutants;

100.3 Emits, in levels deemed appropriate for review by the Air Pollution Control Officer, substances identified as a toxic air contaminant or which are under review pursuant to Health and Safety Code section 39650 et seq;

100.4 The Air Pollution Control Officer makes a determination that the unit may not operate in compliance with District Rules and Regulations; or

100.5 The Air Pollution Control Officer may require recordkeeping to verify or maintain any exemption contained in this rule.

101 **VEHICLES:**

101.1 Motor vehicles as defined by the Vehicle Code of the State of California used to transport freight or passengers, but not including any article, machine, equipment, or other contrivance mounted on such a vehicle that would otherwise require a permit under provisions of these rules and regulations.

101.2 Locomotives, aircraft, and watercraft used to transport passengers or freight. This exemption shall not apply to equipment used for dredging of waterways or equipment used in piledriving adjacent to or in waterways.

102 **RESIDENTIAL STRUCTURES:** Any structure designed for and used exclusively as a dwelling for not more than four families and any such equipment utilized exclusively in connection with such a structure.

103 **COMFORT COOLING SYSTEMS AND VACUUM CLEANING:** Air conditioning, refrigeration, ventilating, or vacuum cleaning systems not designed to remove air contaminants generated by equipment which would require a permit under these rules and regulations.

104 **FOOD PROCESSING:** The following process equipment for food or other human consumables and exhaust systems or collectors exclusively serving such equipment:

- 104.1 Used in eating establishments for the purpose of preparing food for human consumption;
- 104.2 Smoke houses in which the maximum horizontal inside cross sectional area does not exceed two square meters (21.5 square feet);
- 104.3 Mixers and blenders used in bakeries, or ovens with a daily product capacity of 1000 lbs or less;
- 104.4 Confection cookers;
- 104.5 Used exclusively to grind, blend or package tea, cocoa, spices, or roasted coffee; and
- 104.6 Barbecue equipment which is not used for commercial purposes.

105 **COMBUSTION AND HEAT TRANSFER EQUIPMENT:**

- 105.1 Internal combustion engines with a manufacturers maximum continuous rating of 50 brake horsepower or less or gas turbine engines with a maximum heat input rate of 3,000,000 British Thermal Units (BTU) per hour or less at ISO standard day conditions. The ratings of all engines or gas turbines used in the same process shall be accumulated to determine whether this exemption applies.
- 105.2 Any combustion equipment that has a maximum heat input of less than 1,000,000 British Thermal Units (BTU) per hour (gross) and is equipped to be fired exclusively with natural gas, liquefied petroleum gas, or any combination there of, the ratings of all combustion equipment used in this process shall be accumulated to determine whether this exemption applies.

106 **PLASTICS AND CERAMICS PROCESSING:** The following plastics and ceramics processing equipment provided that emissions of volatile organic compounds do not exceed five pounds in any one day:

- 106.1 Ovens, kilns, or furnaces fired by electricity, and used exclusively for the heating, curing, softening, or annealing of plastics or ceramics. This exemption does not apply to equipment used for heating or curing of fiberglass reinforced

materials; and

- 106.2 Equipment used exclusively for extruding rubber products or plastic where no plasticizer or blowing agent is present, or for pelletizing polystyrene foam scraps except equipment used to extrude or pelletize acrylics, polyvinyl chloride, polystyrene, and their copolymers.
- 107 **AGRICULTURAL OPERATIONS:** Equipment used exclusively in the growing of agricultural crops or in the commercial raising of fowl or other animals.
- 108 **REPAIRS AND MAINTENANCE:** Repairs or maintenance not involving structural changes to any equipment for which a permit has been granted. Maintenance, as used herein does not include operation.
- 109 **STORAGE AND TRANSFER:** Tanks, reservoirs, vessels, or other containers and their associated dispensing, pumping, and compression systems (except internal combustion engines not exempted pursuant to Section 105.1 of this rule) exclusively for the storage of:
- 109.1 Liquified or compressed gases;
- 109.2 Unheated organic materials, provided that the throughput of these materials is less than 20,000 gallons per day, with an initial boiling point of 150 degrees Celsius (302 degrees Fahrenheit) or greater or with an organic vapor pressure of 5 mm Hg (0.1 psi) absolute or less at 20 degrees Celsius as determined by the following test methods:
- a. ASTM D 2879-86, "Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope"; and
 - b. ASTM D 1078-86, "Standard Test Method for Distillation Range of Volatile Organic Liquids";
- 109.3 Unheated organic liquids with a vapor pressure of 77.5 mm Hg (1.5 psi) absolute or less at 20 degrees Celsius, having an underground storage capacity of 23,000 liters (6076 gallons) or less. Equipment used exclusively for the transfer of organic liquids with a vapor pressure of 77.5 mm Hg (1.5 psia) to or from storage. Vapor pressure shall be determined according to Section 109.2.b.; and
- 109.4 Unheated solvent dispensing containers of 380 liters (100 gallons) capacity or less.

110 SURFACE COATING AND PREPARATION:

- 110.1 Water solution for surface preparation, cleaning, stripping, etching (other than chemical milling) or the electrolytic plating with electrolytic polishing of, or the electrolytic stripping or brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals.
 - 110.2 Surface coating operations using a combined total of one gallon per day or less of coating material and solvent.
 - 110.3 Unheated non-conveyorized solvent rinsing containers or unheated non-conveyorized coating dip tanks of 380 liters (100 gallons) or less with an open surface area of 1 square meter (11 square feet) or less provided no more than 25 gallons of solvent per year are evaporated or lost to the atmosphere from all such equipment.
- 111 **LABORATORY EQUIPMENT:** Laboratory equipment used exclusively for chemical or physical analysis and bench scale tests, including associated vacuum-producing equipment.
- 112 **COOLING TOWERS:** Water cooling towers that have a circulation rate of less than 10,000 gallons per minute and which are not used for the cooling of process water, water from barometric jets, or water from barometric condensers.
- 113 **OTHER EQUIPMENT:** Other equipment deemed not significant by the Air Pollution Control Officer provided that uncontrolled emissions from such equipment never exceeds two (2) pounds in any 24 hour period.

YSAQMD RULE 3.7 NEW SOURCE REVIEW
LAST REVISED 12/11/96

YOLO-SOLANO AQMD

Rule 3.4 NEW SOURCE REVIEW

Adopted 9/22/93

Previous Revisions 2/23/94 and 11/8/95

Last Revised 12/11/96

ADOPTED: December 11, 1996

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100 GENERAL

101 - PURPOSE: The purpose of this rule is to provide for the review of new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

102 - APPLICABILITY: This rule shall apply to all new stationary sources and emissions units and all modifications to existing stationary sources and emissions units which are subject to Rule 3.1, GENERAL PERMIT REQUIREMENTS, and which, after construction or modification, emit or may emit any affected pollutants. This rule shall not apply to prescribed burning of forest, agriculture or range land, road construction or any other non-point source common to timber harvesting or agricultural practices. This section shall not be used to exempt any stationary source or modification, which would be subject to review under U.S. Environmental Protection Agency regulations.

103 - SEVERABILITY: If a court of competent jurisdiction issues an order that any provision of this rule is invalid, it is the intent of the Board of Directors of the District that other provisions of this rule remain in full force and affect, to the extent allowed by law.

110 - EXEMPTION - EMERGENCY EQUIPMENT: The Air Pollution Control Officer shall exempt an emissions unit from the requirements of Sections 302, and 303, if it would provide emergency electrical power, emergency water pumping for flood control or fire fighting provided the following requirements are met.

(110.1) Operation for maintenance purposes shall be limited to 50 hours per year, and such maintenance shall be scheduled in cooperation with the District so as to limit air quality impact, and

(110.2) Operation of the equipment shall be limited to a total of 200 hours per year, and

110.3 Operation of the equipment shall not be for supplying power to a serving utility for distribution on the grid, and

(110.4) Operation for other than maintenance purposes shall be limited to actual interruptions of electrical power by the serving utility or emergency water pumping for flood control or fire fighting, or maintaining the safety and preserving the integrity of nuclear power generating systems.

111 - EXEMPTION - TEMPORARY SOURCE: The Air Pollution Control Officer may exempt an emissions unit from the requirements of Sections 302 and 303, if the emissions unit is a temporary source and is not: a major stationary source, a major modification, or located at a major stationary source.

112 - EXEMPTION - NOTIFICATION REQUIREMENTS: The requirements of Sections 404, 405, 406, 407 and 408.2 relating to notification, publication, and public inspection of Preliminary Decisions; and notification, publication, and public inspection of Final Action shall not apply if the application is for a new or modified stationary source or emissions unit which has an increase in historic potential to emit, calculated pursuant to Sections 414, 415, 416 or 417 as applicable, of less than:

Pollutant	lbs/quarter
Reactive organic compounds	7,500
Nitrogen oxides	7,500
Sulfur oxides	13,650
PM ₁₀	13,650
Carbon monoxide	49,500

Provided the increase is not a major modification.

113 - EXEMPTION: REPLACEMENT EQUIPMENT: The requirements of Sections 302 and 303 shall not apply to replacement equipment.

114 - EXEMPTION: RULE COMPLIANCE: The requirements of Sections 302 and 303 shall not apply to modifications necessary to comply with standards contained in Regulation 2, PROHIBITION EXCEPTIONS - REQUIREMENTS, or in the State Implementation Plan. Where more than one compliance option is allowed, then this exemption only applies to the emissions resulting from the least emissive option. The incremental emissions difference between the least emissive option and the selected option must comply with Sections 302 and 303. This exemption shall not apply to modifications in production rate, hours of operation, or other changes or additions to existing equipment not necessary for compliance with standards contained in District Regulation 2, PROHIBITION, EXCEPTIONS - REQUIREMENTS, or in the State Implementation Plan. If the modifications for compliance with standards contained in District Regulation 2, PROHIBITION, EXCEPTIONS - REQUIREMENTS, or the State Implementation Plan are significant modifications under the United States Environmental Protection Agency regulations promulgated pursuant to Title 1 of the Federal Clean Air Act including 40 CFR Parts 51 and 52, the United States Environmental Protection Agency may require the stationary source to offset the emissions increases resulting from the modifications.

200 DEFINITIONS: Unless otherwise defined below, the terms in this rule are defined in Rule 3.1, GENERAL PERMIT REQUIREMENTS, Rule 3.5, EMISSION REDUCTION CREDITS, and Rule 3.8, FEDERAL OPERATING PERMITS.

201 - ACTUAL EMISSIONS: Measured or estimated emissions which most accurately represent the emissions from an emissions unit.

202 - ACTUAL EMISSIONS REDUCTIONS: Reductions of historic actual emissions from an emissions unit selected for on-site or off-site emissions offsets. Historic actual emission reductions shall be calculated, adjusted and certified pursuant to Rule 3.5, EMISSION REDUCTION CREDITS.

203 - ACTUAL INTERRUPTIONS OF ELECTRICAL POWER: When electrical service is interrupted by an unforeseeable event.

204 - ACTUAL OPERATING DAYS: Any day of operation which results in the emission of an affected pollutant from the emissions unit.

205 - AFFECTED POLLUTANTS: Reactive organic compounds (ROC), nitrogen oxides (NO_x), sulfur oxides (SO_x), PM₁₀, carbon monoxide (CO), lead.

206 - AIR POLLUTION CONTROL OFFICER (APCO): "Air Pollution Control Officer" refers to the Air Pollution Control Officer of the Yolo-Solano Air Quality Management District, or his or her designee.

207 - AMBIENT AIR QUALITY STANDARDS: State and federal ambient air quality standards. For the purpose of submittal to the U.S. Environmental Protection Agency for inclusion in the California State Implementation Plan all references in this rule to Ambient Air Quality Standards shall be interpreted as National Ambient Air Quality Standards.

208 - BEST AVAILABLE CONTROL TECHNOLOGY (BACT):

(208.1) For any emissions unit the most stringent of:

- a. The most effective emission control device, emission limit, or technique, singly or in combination, which has been required or used for the type of equipment comprising such an emissions unit unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that such limitations required on other sources have not been demonstrated to be achievable in practice.
- b. Any alternative basic equipment, fuel, process, emission control device or technique, singly or in combination, determined to be technologically feasible and cost-effective by the Air Pollution Control Officer.

(208.2) In making a BACT determination for each affected pollutant, the Air Pollution Control Officer may consider the overall effect of the determination on other affected pollutants. In some cases the lowest emission rates may be required for one or more affected pollutants at the cost of not achieving the lowest emission rate for other pollutants. The Air Pollution Control Officer shall discuss these considerations in the Preliminary Decision prepared pursuant to Section 404.

(208.3) Under no circumstances shall BACT be determined to be less stringent than the emission control required by any applicable provision of district, state or federal laws or regulations, or contained in the implementation plan of any State for such class or category of stationary source unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that such limitations are not achievable.

209 - CARGO CARRIERS: Cargo carriers are trains dedicated to a specific source. The emissions within District boundaries of cargo carriers associated with the stationary source shall be considered emissions from the stationary source to the extent that emission reductions from cargo carriers are proposed as emission offsets.

210 - CEQA: The California Environmental Quality Act, Public Resources Code, Section 21000, et seq.

211 - CONTIGUOUS PROPERTY: Two or more parcels of land with a common boundary or separated solely by a public roadway or other public right-of-way.

212 - COST-EFFECTIVE: A cost per unit of emissions reduction which is lower than or equivalent to the maximum unit costs, for the affected pollutant or source category, of the same emission reduction through the use of Best Available Control Technology, calculated in current year dollars, in accordance with methodology and

criteria specified in the BACT Cost-Effectiveness Guidelines developed by the District.

213 - EMISSION OFFSET: An emission reduction credit that compensates for an emission increase of an affected pollutant from a new or modified stationary source subject to the requirements of Sections 302 and 303.

214 - EMISSIONS LIMITATION: One or more permit conditions specific to an emissions unit which restricts its maximum emissions, at or below the emissions associated with the maximum design capacity. An emissions limitation shall be:

(214.1) Contained in or enforceable by the latest Authority to Construct and Permit to Operate for the emissions unit; and

(214.2) Enforceable pursuant to Section 408; and

(214.3) Enforceable on an hourly, or daily, or quarterly, and/or yearly basis; and

(214.4) No less stringent than the applicable emission standards given in 40 CFR Part 60, Standards of Performance for New Stationary Sources, and 40 CFR Part 61 and 63, National Emission Standards for Hazardous Air Pollutants.

215 - EMISSIONS UNIT: An identifiable operation or piece of process equipment such as an article, machine, or other contrivance which controls, emits, may emit, or results in the emissions of any affected pollutant or hazardous air pollutant (HAP). Emissions unit does not include the open burning of agricultural biomass.

216 - FLUORIDES: Elemental fluorine and all fluoride compounds.

217 - FUGITIVE EMISSIONS: Those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.

218 - HAZARDOUS AIR POLLUTANT (HAP): Any air pollutant listed pursuant to Section 112(b) (42 U.S.C Section 7412(b) of the Federal Clean Air Act).

219 - HISTORIC ACTUAL EMISSIONS: Actual emissions for the existing emissions unit averaged over the two year period immediately preceding the date of application for an Authority to Construct. If the last two years are unrepresentative of normal source operations as determined by the Air Pollution Control Officer, then any two consecutive years of the last five years that represent normal source operation may be used. If, at any time during the two year period, actual emissions exceeded allowed or permitted emission levels, then actual emissions shall be reduced to reflect emission levels that would have occurred if the unit were in compliance with all applicable limitations and rules. If less than one year has passed since the date of issuance of the Permit to Operate then the historic actual emissions shall be zero. If less than two years have passed since the date of issuance of the Permit to Operate then the historic actual emissions shall be the actual emissions over the one year period immediately preceding the date of application.

220 - HISTORIC POTENTIAL EMISSIONS: Emissions based on the potential to emit of the emissions unit prior to modification. In determining the historic potential to emit, emissions limitations shall be treated as part of an emissions unit's design only if the limitations are representative of normal operations or if emission offsets were provided from a previous permitting action. For the purposes of the above determination, "normal operations" is defined as the usual or typical operation of an emissions unit resulting in actual emissions which are at least 80% of the specific limits contained in the emission unit's Authority to Construct or Permit to Operate. If there are no enforceable limiting conditions, or if limiting conditions are not representative of normal operating conditions then an emissions unit's potential to emit shall be the unit's historic actual emissions. For a new emissions unit, historic potential emissions are equal to zero. For BACT purposes, historic potential emissions are equal to the potential to emit without regards to the 80%.

221 - MAJOR MODIFICATION: Modification to a major stationary source which results in an increase in the potential to emit equal to or exceeding any of the following thresholds when aggregated with all other creditable increases and decreases in emissions from the source over the period of five consecutive years before the application for modification, and including the calendar year of the most recent application:

(221.1) 25 tons of reactive organic compounds; or

(221.2) 25 tons of nitrogen oxides; or

(221.3) 40 tons of sulfur oxides; or

(221.4) 25 tons of PM₁₀; or

(221.5) 100 tons of carbon monoxide.

With the exception of PM₁₀, the thresholds listed above are based on the U.S. EPA's definition of significant as defined in the Code of Federal Regulations Section 51.165. For Prevention of Significant Deterioration (PSD) purposes only, EPA defines the significant level for PM₁₀ as 15 tons per year.

222 - MAJOR STATIONARY SOURCE: A stationary source that emits or has the potential to emit an affected pollutant in quantities equal to or exceeding any of the following thresholds:

(222.1) 25 tons per year of reactive organic compounds; or

(222.2) 25 tons per year of nitrogen oxides; or

(222.3) 100 tons per year of sulfur oxides; or

(222.4) 100 tons per year of PM₁₀; or

(222.5) 100 tons per year of carbon monoxide.

Emissions associated with emissions units exempt from permit requirements of Rule 3.1, GENERAL PERMIT REQUIREMENTS, pursuant to Rule 3.2 EXEMPTIONS shall be included in the potential to emit of the stationary source unless total daily emissions from each emissions unit are less than 2 lbs/day of any pollutant. Fugitive emissions associated with the emissions unit or stationary source shall not be included in the potential to emit of the emissions unit or stationary source for the purpose of determining whether the source is major unless the source belongs to one of the categories of stationary sources included in 40 CFR 51.165.

223 - MODIFICATION: Any physical change, change in method of operation (including change in fuel characteristics), addition to or any change in hours of operation, or change in production rate, which:

(223.1) For an emissions unit:

a. Would necessitate a change in permit conditions; or

b. Is not specifically limited by a permit condition; or

c. Results in an increase in emissions not subject to an emissions limitation.

(223.2) For a stationary source:

a. Is a modification of an emissions unit, or

b. Addition of any new emissions unit. The following shall not be considered a modification for the purpose of this rule:

i. A change in ownership, or

ii. Routine maintenance and repair, or

iii. A reconstructed stationary source or emissions unit, which shall be treated as a new stationary source or emissions unit, or

iv. The addition of a continuous emission monitoring system.

224 - NONATTAINMENT POLLUTANT: Any pollutant and any precursors of such pollutants which have been designated "nonattainment" for the District by the U.S. Environmental Protection Agency in the Federal Register, or by the California Air Resources Board pursuant to Section 39607 of the Health and Safety Code.

225 - PEAKING POWER PLANT: A fossil-fueled combustion turbine power generation unit with an annual capacity factor of 25% or less, which is used during periods of peak electricity demand with frequent start-ups and shutdowns.

226 - PM₁₀: Particulate matter with an aerodynamic diameter smaller than or equal to a nominal 10 microns as measured by an applicable reference test method or methods found in Article 2, Subchapter 6, Title 17, California Code of Regulations (commencing with Section 94100).

227 - PORTABLE EQUIPMENT: Equipment which is periodically relocated and is not operated more than a total of 180 days at any one stationary source in the District within a continuous 12 month period.

228 - POTENTIAL TO EMIT: The maximum physical and operational design capacity to emit a pollutant. Limitations on the physical or operational design capacity, including emissions control devices and limitations on hours of operation, may be considered only if such limitations are incorporated into the applicable Authority to Construct and Permit to Operate. The potential to emit shall include both directly emitted and fugitive emissions.

229 - PRECURSOR: A pollutant that, when emitted into the atmosphere, may undergo chemical or physical changes, producing another pollutant for which an ambient air quality standard has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more ambient air quality standards. The following precursor-secondary air contaminant relationships shall be used for the purposes of this rule:

PRECURSOR	SECONDARY AIR CONTAMINANT
REACTIVE ORGANIC COMPOUNDS	A. PHOTOCHEMICAL OXIDANTS (OZONE)
	B. ORGANIC FRACTION OF PM ₁₀
NITROGEN OXIDES	A. NITROGEN DIOXIDE
	B. NITRATE FRACTION OF PM ₁₀

	C. PHOTOCHEMICAL OXIDANTS (OZONE)
SULFUR OXIDES	A. SULFUR DIOXIDE B. SULFATES C. THE SULFATE FRACTION OF PM ₁₀

230 - PRIORITY RESERVE BANK: A depository for preserving emission reduction credits pursuant to Rule 3.6, PRIORITY RESERVE, for use as an emission offset in accordance with Sections 302, 303 and 414.

231 - PROPOSED EMISSIONS: Emissions based on the potential to emit for the new or modified emissions unit.

232 - QUARTER/QUARTERLY: Calendar quarters beginning January 1, April 1, July 1, and October 1.

233 - REACTIVE ORGANIC COMPOUND: Any compound containing at least one atom of carbon excluding the following:

- (233.1) Carbon monoxide,
- (233.2) Carbon dioxide,
- (233.3) Carbonic acid,
- (233.4) Metallic carbides or carbonates,
- (233.5) Ammonium carbonate,
- (233.6) Methane,
- (233.7) Methylene chloride (dichloromethane),
- (233.8) 1,1,1-trichloroethane (methyl chloroform),
- (233.9) Trichlorofluoromethane (CFC-11),
- (233.10) Dichlorodifluoromethane (CFC-12),
- (233.11) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113),
- (233.12) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114),
- (233.13) Chloropentafluoroethane (CFC-115),
- (233.14) Chlorodifluoromethane (HCFC-22),
- (233.15) 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123),
- (233.16) 1,1-dichloro-1-fluoroethane (HCFC-141b),
- (233.17) 1-chloro-1,1-difluoroethane (HCFC-142b),
- (233.18) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124),
- (233.19) Trifluoromethane (HFC-23),

- (233.20) 1,1,2,2-tetrafluoroethane (HFC-134),
- (233.21) 1,1,1,2-tetrafluoroethane (HFC-134a),
- (233.22) Pentafluoroethane (HFC-125),
- (233.23) 1,1,1-trifluoroethane (HFC-143a),
- (233.24) 1,1-difluoroethane (HFC-152a),
- (233.25) Cyclic, branched, or linear completely methylated siloxanes,
- (233.26) The following four classes of perfluorocarbon compounds:
- a. Cyclic, branched, or linear, completely fluorinated alkanes,
 - b. Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
 - c. Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations,
 - d. Sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds to carbon and fluorine.
- (232.27) acetone,
- (232.28) ethane,
- (232.29) parachlorobenzotrifluoride (1-chloro-4-trifluoromethyl benzene), and
- (232.30) perchloroethylene.

Reactive organic compounds may also be referred to as volatile organic compounds (VOC).

234 - RECONSTRUCTED SOURCE: Any stationary source or emissions unit undergoing physical modification where the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost of a comparable entirely new stationary source or emissions unit. Fixed capital cost means the capital needed to provide and install all the depreciable components, including parts and labor. A reconstructed source shall be treated as a new stationary source or emissions unit.

235 - REDUCED SULFUR COMPOUNDS: Hydrogen sulfide, carbon disulfide, and carbonyl sulfide.

236 - REPLACEMENT EQUIPMENT: The replacement or modification of emission unit(s) where the replacement unit(s) serves the identical function as the unit(s) being replaced, and the maximum rating of the replacement unit(s) does not exceed the maximum rating of the unit(s) being replaced, and potential to emit of any pollutant from the replacement unit(s) will not be greater than the Historic Potential Emissions of the unit(s) being replaced.

237 - SACRAMENTO URBANIZED FEDERAL NON-ATTAINMENT AREA FOR CARBON MONOXIDE: The Sacramento County portion of the Census Bureau Urbanized Area.

238 - STATIONARY SOURCE: Any building, structure, facility, or emissions unit which emits or may emit any affected pollutant directly or as a fugitive emission.

(238.1) Building, structure, facility, or emissions unit includes all pollutant emitting activities which:

- a. Belong to the same industrial grouping; and
- b. Are located on one property or on two or more contiguous properties; and
- c. Are under the same or common ownership, operation, or control, or which are owned or operated by entities which are under common control.

(238.2) Pollutant emitting activities shall be considered as part of the same industrial grouping if:

- a. They belong to the same two-digit standard industrial classification code, or
- b. They are part of a common production process. (Common production process includes industrial processes, manufacturing processes and any connected processes involving a common material.)

239 - TEMPORARY SOURCE: Emission sources such as pilot plants and portable equipment that will be terminated or located outside the district after less than a cumulative total of 90 days of operation in any continuous 12 months.

240 - TOTAL REDUCED SULFUR COMPOUNDS: Hydrogen sulfide, methyl mercaptan, dimethyl sulfide and dimethyl disulfide.

300 STANDARDS

301 - BEST AVAILABLE CONTROL TECHNOLOGY: An applicant shall apply Best Available Control Technology to a new emissions unit or modification of an existing emissions unit, except cargo carriers, for each emissions change of an affected pollutant, which would have an increase in emissions according to procedures specified in Section 411, and the potential to emit of the new or modified emissions unit exceeds the levels specified in Section 301.1. If the emissions from the new or modified emission unit triggers major modification requirements, then the applicant shall apply Best Available Control Technology to the new or modified emissions unit. The Best Available Control Technology requirements shall apply even though the emissions from the new or modified emissions unit are less than the levels specified in Section 301.1.

(301.1)

Pollutant	lb/day
Reactive organic compounds	10
Nitrogen oxides	10
Sulfur oxides	80
PM ₁₀	80
Carbon monoxide	250
Lead	3.3

302 - EMISSION OFFSET REQUIREMENTS, GENERAL:

(302.1) Except as provided in Sections 302.2 and 304, an applicant shall provide emission offsets for the affected pollutant for new and modified stationary sources where the emission increase calculated pursuant to Section 413 or 414 exceeds the following levels:

a. Pollutant	lbs/quarter
Reactive organic compounds	7,500
Nitrogen oxides	7,500
Sulfur oxides	13,650
PM ₁₀	13,650
Carbon monoxide	49,500

Emission offsets shall be obtained pursuant to Rule 3.5, EMISSION REDUCTION CREDITS or Rule 3.6, PRIORITY RESERVE.

(302.2) In addition to 302.1, an applicant for a Peaking Power Plant or for electrical generating equipment used in an auxiliary power program shall provide emission offsets for the affected pollutant for new and modified stationary sources where the emission increase calculated pursuant to Section 412 or 413 exceeds the following levels:

a. Pollutant	lb/day
Reactive organic compounds	150
Nitrogen oxides	150
Sulfur oxides	150
PM ₁₀	80
Carbon monoxide	550

(302.3) Sufficient emission offsets shall be provided, from the same calendar quarter as the proposed emissions, to offset the net emissions increase of reactive organic compounds and nitrogen oxides (except as provided in Section 302.7 and 302.8) calculated according to procedures specified in Section 415.

(302.4) Sufficient emission offsets shall be provided, from the same calendar quarter as the proposed emissions, to offset the net emissions increase of sulfur oxides, PM₁₀ and carbon monoxide (except as provided in Section 302.6) calculated according to procedures specified in Section 416.

(302.5) If an application for an Authority to Construct is received for an emissions unit that has obtained emission reduction credits from a shutdown under Rule 3.5, EMISSION REDUCTION CREDITS, then sufficient emission offsets shall be provided consistent with Section 302.1. If the emissions unit does not trigger emission offsets in accordance with this section then the applicant shall provide sufficient emission offsets to offset the lesser of the amount of the emission reduction obtained pursuant to Rule 3.5, EMISSION REDUCTION CREDITS, or the projected emissions from the emissions unit.

(302.6) Except for portable equipment located at a major stationary source or that is a major stationary source by itself, portable equipment requiring offsets pursuant to Section 302 of this rule shall be offset based on the offset requirements of the initial location of operation within the District. In the event such portable equipment is shutdown, emission reduction credits shall be granted based on the initial location of

operation.

(302.7) Emissions of reactive organic compounds during the quarters starting April 1 and July 1 may be used to offset positive emissions changes of reactive organic compounds during the quarters starting October 1 and January 1.

(302.8) Emissions of nitrogen oxides during the quarters starting April 1 and July 1 may be used to offset positive emissions changes of nitrogen oxides during the quarters starting October 1 and January 1.

303 LOCATION OF EMISSION OFFSETS AND EMISSION OFFSET RATIOS:

(303.1) An applicant shall provide emission offsets from within the Sacramento Valley Air Basin for emissions from a proposed stationary source subject to the requirements of Section 302 according to the following ratios except as provided in 303.1(b) and 303.1(c):

a. Table of emission offset ratios (not for use with the Priority Reserve)

Location of Emission Offset	Emission Offset Ratio	
FOR USE BY MAJOR STATIONARY SOURCES OR MAJOR MODIFICATIONS	ROC's or Nitrogen oxides	Sulfur oxides, PM ₁₀ or CO
	Same Source	1.3 to 1.0
	Within 15-mile radius	1.2 to 1.0
	Greater than 15-mile but within 50-mile radius	1.5 to 1.0
	Greater than or equal to 50-mile radius	Greater than 1.5 to 1.0
FOR USE BY NON-MAJOR STATIONARY SOURCES OR NON-MAJOR MODIFICATIONS	ROC's or Nitrogen oxides	Sulfur oxides, PM ₁₀ or CO
	Same Source	1.0 to 1.0
	Within 15-mile radius	1.2 to 1.0
	Greater than 15-mile but within 50-mile radius	1.5 to 1.0
	Greater than or equal to 50-mile radius	Greater than 1.5 to 1.0

b. Applicants providing emission offsets obtained pursuant to Rule 3.6, PRIORITY RESERVE, shall provide emission offsets for all pollutants at all distances pursuant to the following:

Location of Emission Offset	Emission Offset Ratio
For use by non-major stationary sources or non-major modifications	1.0 to 1.0
For use by major stationary sources or major modifications for reactive organic compounds or nitrogen oxides	1.3 to 1.0

(303.2) Emission offsets which are required pursuant to Sections 302 and 303 and obtained pursuant to permitting actions in a district other than that in which the proposed source is located, may be used only if the Air Pollution Control Officer has reviewed the permit conditions issued by the other district in which the proposed emission offsets are obtained and made a determination that the impact of using such emission offsets meets the requirements of District Rules and Regulations and Health and Safety Code Section 40709.6.

(303.3) For major stationary sources or major modifications, emission offsets for reactive organic compounds and nitrogen oxides must be obtained from within the Sacramento Federal Non-attainment Area for ozone.

304 - INTERPOLLUTANT EMISSION OFFSETS: Interpollutant emission offsets are discouraged and may only be allowed between precursor contaminants. The Air Pollution Control Officer may approve interpollutant emission offsets for precursor pollutants on a case by case basis, provided that the applicant demonstrates, through the use of an air quality model, that the emission increases from the new or modified source will not cause or contribute to a violation of an ambient air quality standard. In such cases, the Air Pollution Control Officer shall impose, based on an air quality analysis, emission offset ratios in addition to the requirements of Section 303. Interpollutant emission offsets between PM₁₀ and PM₁₀ precursors may be allowed, but PM₁₀ emissions shall neither offset nitrogen oxides or reactive organic compound emissions in ozone nonattainment areas, nor offset sulfur oxide emissions in sulfate nonattainment areas. In no case shall the compounds excluded from the definition of Reactive Organic Compounds be used as offsets for Reactive Organic Compounds. Interpollutant emission offsets used at a major stationary source must receive written approval by the U.S. Environmental Protection Agency.

305 - AMBIENT AIR QUALITY STANDARDS: In no case shall emissions from a new or modified stationary source, prevent or interfere with the attainment or maintenance of any applicable ambient air quality standard. The Air Pollution Control Officer may require the use of an air quality model to estimate the effects of a new or modified stationary source. In making this determination the Air Pollution Control Officer shall take into account the mitigation of emissions through emission offsets obtained pursuant to this rule.

306 - DENIAL, FAILURE TO MEET STANDARDS: The Air Pollution Control Officer shall deny any Authority to Construct or Permit to Operate if the Air Pollution Control Officer finds that the subject of the application would not comply with the standards set forth in District, state, or federal rules, regulations, or statutes.

307 - DENIAL, FAILURE TO MEET CEQA: The Air Pollution Control Officer shall deny an Authority to Construct or Permit to Operate if the Air Pollution Control Officer finds that the project which is the subject of the application would not comply with CEQA.

400 ADMINISTRATIVE REQUIREMENTS: The administrative requirements in Sections 401-416 shall apply to any activities regulated by this rule, except for the review of power plants over 50 megawatts. Power plants over 50 megawatts shall be subject to the review requirements of Section 418.

401 - ALTERNATIVE SITING: For those sources for which an analysis of alternative sites, sizes, and production processes is required under Section 173 of the Clean Air Act, the Air Pollution Control Officer shall require the applicant to prepare an analysis functionally equivalent to the requirements of Division 13 of the Public

Resources Code (California Environmental Quality Act-CEQA). The District will not issue an ATC unless the APCO has concluded, based on the information included in the Alternative Siting Analysis that the benefits of the proposed source significantly outweigh the environmental and social cost imposed as a result of its location, construction, or modification.

402 - COMPLETE APPLICATION: The Air Pollution Control Officer shall determine whether the application is complete not later than 30 days after receipt of the application, or after such longer time as both the applicant and the Air Pollution Control Officer have agreed in writing. If the Air Pollution Control Officer determines that the application is not complete, the applicant shall be notified in writing of the decision specifying the information required. Upon receipt of any re-submittal of the application, a new 30-day period to determine completeness shall begin. Completeness of an application or re-submitted application shall be evaluated on the basis of the information requirements set forth in the District's List and Criteria (adopted pursuant to Article 3, 65940 through 65944 of Chapter 4.5 of Division 1 of Title 7 of the California Government Code) as it exists on the date on which the application or re-submitted application was received, and on payment of the appropriate fee pursuant to Rule 4.1, PERMIT FEES - STATIONARY SOURCE. The Air Pollution Control Officer may, during the processing of the application, request an applicant to clarify, amplify, correct, or otherwise supplement the information submitted in the application.

403 - AIR QUALITY MODELS: All air quality models used for the purposes of this rule shall be consistent with the requirements provided in the most recent edition of U.S. Environmental Protection Agency "Guidelines on Air Quality Models, OAQPS 1.2-080" unless the Air Pollution Control Officer finds that such models are inappropriate for use. After making such finding, the Air Pollution Control Officer may designate an alternate model only after allowing for public comment, and only with concurrence of the U.S. Environmental Protection Agency. Credit shall not be given for stacks higher than that dictated by good engineering practice. All modeling costs associated with the siting of a stationary source shall be borne by the applicant.

404 - ENHANCED NEW SOURCE REVIEW: Applications for which the applicant has requested review pursuant to this Section and Section 102 shall be reviewed in accordance with the procedural requirements specified in Sections 401 through 408 of District Rule 3.8, TITLE V FEDERAL OPERATING PERMIT PROGRAM, and Sections 70.6(a) through 70.6(g), 70.7(a), and 70.7(b), Part 70, Title 40, Code of Federal Regulations (40 CFR).

405 - PRELIMINARY DECISION: Except as provided in Section 112, following acceptance of an application as complete, the Air Pollution Control Officer shall perform the evaluations required to determine compliance with all applicable district, state and federal rules, regulations, or statutes and shall make a preliminary written decision as to whether an Authority to Construct should be approved, conditionally approved, or denied. The decision shall be supported by a succinct written analysis.

(405.1) The Air Pollution Control Officer shall transmit to the California Air Resources Board and the U.S. Environmental Protection Agency its preliminary written decision and analysis for sources subject to Sections 301 or 302, or applications reviewed under the Enhanced New Source Review process pursuant to Section 404, no later than the date of publication as required in Section 406.

406 - PUBLICATION AND PUBLIC COMMENT: Except as provided in Section 112, within ten calendar days following a preliminary decision pursuant to Section 300 Standards, of this rule, the Air Pollution Control Officer shall publish in at least one newspaper of general circulation in the District a notice stating the preliminary decision of the Air Pollution Control Officer, 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 Air Pollution Control Officer shall give notice of any public hearing at least 30 days in advance of the hearing.

407 - PUBLIC INSPECTION: Except as provided in Section 112, the Air Pollution Control Officer shall make available for public inspection at the District's office the information submitted by the applicant and the Air Pollution Control Officer's analysis no later than the date the notice of the preliminary decision is published, pursuant to Section 406. All such information shall be transmitted no later than the date of publication to the California Air Resources Board and the U.S. Environmental Protection Agency regional office, and to any party which requests such information. Information submitted which contains trade secrets shall be handled in accordance with Section 6254.7 of the California Government Code and relevant sections of the California Administrative Code.

408 - AUTHORITY TO CONSTRUCT, FINAL ACTION:

(408.1)

- a. Except as provided in Sections 408.1(b) and 408.1(c), the Air Pollution Control Officer shall take final action on the application, after considering all written comments, no later than 180 days after acceptance of an application as complete.
- b. The Air Pollution Control Officer shall not take final action for any project for which an Environmental Impact Report (EIR) or a Negative Declaration is being prepared until a final EIR for that project has been certified or a Negative Declaration for that project has been approved, and the Air Pollution Control Officer has considered the information in that final EIR or Negative Declaration. The Air Pollution Control Officer shall take final action on the application within whichever of the following periods of time is longer:
 1. Within 180 days after the certification of the final EIR or approval of the Negative Declaration, or
 2. Within 180 days of the date on which the application was determined complete by the Air Pollution Control Officer.
- c. The Air Pollution Control Officer shall take final action on applications reviewed pursuant to the Enhanced New Source Review Process no later than 18 months after acceptance of an application as complete.

(408.2) Except as provided in Section 112, the Air Pollution Control Officer shall provide written notice of the final action to the applicant, the U.S. Environmental Protection Agency, and the California Air Resources Board, and 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 District's office.

409 - REQUIREMENTS, AUTHORITY TO CONSTRUCT AND PERMIT TO OPERATE:

(409.1) General Conditions: As a condition for the issuance of a Permit to Operate, the Air Pollution Control Officer shall require that the emissions unit and stationary source, and any emissions units which provide emission offsets, be operated in the manner stated in the application in making the analysis required to determine compliance with this rule, and as conditioned in the Authority to Construct.

(409.2) Emissions Limitations: The following emissions limitations shall be included on the Authority to Construct and Permit to Operate, if applicable.

- a. Emission limitations which reflect Best Available Control Technology. Such condition shall be expressed in a manner consistent with testing procedures, such as ppmv NO_x, g/liter VOC, or lbs/hr.

b. An emissions limitation for each affected pollutant.

c. If the Air Pollution Control Officer determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of a numerical emission standard infeasible, the Air Pollution Control Officer may instead prescribe a design, operational, or equipment standard. In such cases, the Air Pollution Control Officer shall make a best estimate as to the emission rate that will be achieved. Any permits issued without an enforceable numerical emission standard must contain enforceable conditions that assure that the design characteristics or equipment will be properly maintained, or that the operational conditions will be properly performed, so as to continuously achieve the assumed degree of control.

(409.3) Emission offsets:

a. Before the Air Pollution Control Officer shall approve or conditionally approve an application for an Authority to Construct, the applicant shall supply evidence of a sufficient number of authorized emission reduction credits to meet any offset obligation in accordance with this rule.

b. Except as provided in Section 409.3(c), the operation of any emissions unit which provides emission offsets shall be subject to enforceable permit conditions, containing specific emissions and operational limitations, to ensure that the emission reductions are provided in accordance with the provisions of this rule.

c. Where the source of emission offsets is not required to obtain an Authority to Construct or a Permit to Operate pursuant to Rule 3.1, GENERAL PERMIT REQUIREMENTS, a written contract or a functional equivalent as determined by the Air Pollution Control Officer shall be required between the applicant and the owner or operator of such source, which contract or functional equivalent, by its terms, shall be enforceable against the source of the emission reduction credits by the Air Pollution Control Officer.

d. Except as provided in Section 409.3(c), external emission offsets must be made enforceable either by conditions in an offsetting source's Authority to Construct and Permit to Operate or by submittal of a SIP revision to U.S. Environmental Protection Agency. The enforceable mechanism shall be in place prior to the construction of the new source or modification, and in effect by the time the new source or modification commences operation. The SIP submittal, pursuant to procedures contained in 40 CFR Section 51.102 shall be submitted to the California Air Resources Board to be forwarded to the U.S. Environmental Protection Agency as part of the State Implementation Plan.

e. A violation of the emission limitation provisions of any contract pursuant to 409.3(c) shall be a violation of this rule by the applicant.

f. The operation of any emissions unit which uses emission offsets provided by another emissions unit shall be subject to enforceable permit conditions, containing specific emissions and operational limits, to ensure that the emission reductions are used in accordance with the provisions of District rules and shall continue for the reasonably expected life of the proposed emissions unit.

410 - ISSUANCE, PERMIT TO OPERATE: The Air Pollution Control Officer shall issue a Permit to Operate for an emissions unit pursuant to the requirements of this rule if it is determined that any offsets required as a condition of an Authority to Construct or amendment to a Permit to Operate will commence not later than the initial operation of the new or modified source. The emission offsets shall be maintained throughout the operation of the new or modified source which is the beneficiary of the emission offsets. Further, the Air Pollution Control Officer shall determine that all conditions specified in the Authority to Construct have been, or will be, complied with by the dates specified on the Authority to Construct. Such applicable conditions shall be contained in the Permit to Operate. Where a new or modified stationary source is, in whole or in part, a replacement for an existing stationary source on the same property, the Air Pollution Control Officer may allow a maximum of 90 days as a

start-up period for simultaneous operation of the existing stationary source and the new source or replacement.

411 - REGULATIONS IN FORCE GOVERN: An Authority to Construct shall be granted or denied based on Best Available Control Technology and emission offset requirements of Sections 301, 302 and 303 in force on the date the application is deemed complete as defined in Section 402. In addition, the Air Pollution Control Officer shall deny an Authority to Construct for any new stationary source or modification, or any portion thereof, unless:

(411.1) 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

(411.2) The owner or operator of the proposed new or modified source has demonstrated that all major stationary sources owned or operated by such person (or by an entity controlling, controlled by, or under common control with such person) in California which are subject to emission limitations are in compliance, or on a schedule for compliance, with all applicable emission limitations and standards in the Federal Act.

412 - CALCULATION OF EMISSIONS FOR BACT: The emissions change for a new or modified emissions unit shall be calculated by subtracting historic potential emissions from proposed emissions. Calculations shall be performed separately for each emissions unit for each calendar quarter.

413 - CALCULATION OF EMISSION OFFSET TRIGGERS FOR ROC AND NO_x: Except as provided in Sections 413.1, the emission increase for each calendar quarter for a stationary source shall be the sum of emissions from Sections 413.2 and 413.3 for each calendar quarter, expressed in terms of pounds per quarter. For Peaking Power Plants and for electrical generating equipment used in an auxiliary power program, the emissions for each calendar quarter shall be divided by the number of operating days in each calendar quarter.

(413.1) Any potential to emit represented by an Authority to Construct or Permit to Operate which has been cancelled or has expired and emission reduction credits have not been applied for pursuant to Rule 3.5, EMISSION REDUCTION CREDITS, shall not be included in the emissions increase calculation.

(413.2) The potential to emit for all emissions units shall be based on current Permits to Operate or Authorities to Construct where Permits to Operate have not been issued, including the current application(s) being reviewed.

(413.3) Emission reduction credits obtained pursuant to Rule 3.5, EMISSION REDUCTION CREDITS, from emissions units installed after January 1, 1977 shall be consistent with Section 413.1.

414 - CALCULATION OF EMISSION OFFSET TRIGGERS FOR SO_x, PM₁₀ AND CO: Except as provided in Sections 414.1, the emission increase for each calendar quarter for a stationary source shall be the sum of emissions from Sections 414.2 and 414.3 for each calendar quarter, expressed in terms of pounds per quarter. For Peaking Power Plants and for electrical generating equipment used in an auxiliary power program, the emissions for each calendar quarter shall be divided by the number of operating days in each calendar quarter.

(414.1) Any potential to emit represented by an Authority to Construct or Permit to Operate which has been cancelled or has expired and emission reduction credits have not been applied for pursuant to Rule 3.5, EMISSION REDUCTION CREDITS, shall not be included in the emissions increase calculation.

(414.2) The potential to emit for all emissions units shall be based on current Permits to Operate or

Authorities to Construct where Permits to Operate have not been issued, including the current application(s) being reviewed.

(414.3) Emission reduction credits shall be obtained pursuant to Rule 3.5, EMISSION REDUCTION CREDITS, from emissions units installed after January 1, 1977 consistent with Section 414.1.

415 - CALCULATION OF EMISSION OFFSETS - GENERAL: The emissions change for a new or modified emissions unit shall be calculated by subtracting historic potential emissions from proposed emissions. Calculations shall be performed separately for each pollutant and each emissions unit for each calendar quarter. Negative emissions changes shall be processed under the procedures specified in Rule 3.5, EMISSION REDUCTION CREDITS.

416 - CALCULATION OF EMISSION OFFSETS REQUIRED FOR ROC AND NO_x: The net emissions increase pursuant to Section 415 shall be one of the following for each calendar quarter expressed in terms of pounds per quarter, whichever is less.

(416.1) The potential to emit for the current application for new emission units or the emission increases from the current application for modifications to existing emissions units.

Any emissions increase represented by an Authority to Construct or Permit to Operate which has been cancelled or has expired shall not be included in the net emissions increase calculation.

417 - CALCULATION OF EMISSION OFFSETS REQUIRED FOR SO_x, PM₁₀ AND CO: The emission offset requirement for SO_x, PM₁₀ and CO shall be equal to the potential to emit of the current application expressed in terms of pounds per quarter.

418 - 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.

(418.1) Within 14 days of receipt of a Notice of Intention, the Air Pollution Control Officer shall notify the Air Resources Board and the California Energy Commission of the District's intent to participate in the Notice of Intention proceeding. If the District chooses to participate in the Notice of Intention proceeding, the Air Pollution Control Officer shall prepare and submit a report to the California Air Resources Board and the California Energy Commission prior to the conclusion of the non-adjudicatory hearing specified in Section 25509.5 of the California Public Resources Code. That report shall include, at a minimum:

- a. a preliminary specific definition of Best Available Control Technology for the proposed facility;
- b. 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; and
- c. 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 Notice of Intention.

(418.2) Upon receipt of an Application for Certification for a power plant, the Air Pollution 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 Application for Certification does not meet the requirements of this rule, the Air Pollution Control Officer shall, within 20 calendar days of receipt of the Application for Certification, so inform the California Energy Commission, and the Application for Certification shall be considered incomplete and returned to the applicant for re-submittal.

(418.3) The Air Pollution Control Officer shall consider the Application for Certification 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.

(418.4) The Air Pollution Control Officer may request from the applicant any information necessary for the completion of the determination of compliance review. If the Air Pollution Control Officer is unable to obtain the information, the Air Pollution Control Officer may petition the presiding Commissioner of the California Energy Commission for an order directing the applicant to supply such information.

(418.5) Within 180 days of accepting an Application for Certification as complete, the Air Pollution Control Officer shall make a preliminary decision on:

- a. Whether the proposed power plant meets the requirements of this rule and all other applicable district regulations; and
- b. In the event of compliance, what permit conditions will be required including the specific Best Available Control Technology requirements and a description of required mitigation measures.

(418.6) The preliminary written decision under Section 418.5 shall be finalized by the Air Pollution Control Officer only after being subject to the public notice and comment requirements of Section 404. The Air Pollution Control Officer shall not issue a determination of compliance unless all requirements of this rule are met.

(418.7) Within 240 days of the filing date, the Air Pollution Control Officer shall issue and submit to the California Energy Commission a determination of compliance or, if such a determination cannot be issued, shall so inform the California Energy Commission. A determination of compliance shall confer the same rights and privileges as an Authority to Construct only when and if the California Energy Commission approves the Application for Certification, and the California Energy Commission certificate includes all conditions of the determination of compliance.

(418.8) Any applicant receiving a certificate from the California Energy Commission pursuant to this section and in compliance with all conditions of the certificate, shall be issued a Permit to Operate by the Air Pollution Control Officer.

500 MONITORING AND RECORDS

501 - RECORDS: The following records shall be maintained for five years and provided to the Air Pollution Control Officer upon request:

(501.1) Emergency Equipment: Records of operation for maintenance purposes, for actual interruptions of power.

(501.2) Portable Equipment: Records of operating location and corresponding dates of operation.

(501.3) Temporary Equipment: Records of operating location and corresponding dates of operation.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 3.6 PRIORITY RESERVE

ADOPTED September 22, 1993

REVISED February 23, 1994

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100 GENERAL

101 PURPOSE: The Priority Reserve is established for the purpose of providing loans of emission reduction credits for use as offsets for new or modified stationary sources.

102 APPLICABLE REQUIREMENTS: Disbursement of emission reduction loans from the Priority Reserve shall be available, to the extent allowed pursuant to Sections 303 and 305, to publicly owned or non-profit essential public services, provided the applicant has secured all potential offsets available by modifying emission units at the same stationary source. Disbursement of emission reduction loans shall not be provided for on-site power generation. Disbursement shall not be provided for emissions units not necessary to provide or maintain public health and safety.

200 DEFINITIONS: Unless otherwise defined below, the terms used in this rule are defined in Rule 3.4, NEW SOURCE REVIEW, and Rule 3.5, EMISSIONS REDUCTION CREDITS.

201 CLEANUP OPERATION: Operation to remove environmental contaminants from soil or water.

202 ESSENTIAL PUBLIC SERVICES: Except as provided in Section 102, the following sources shall be considered essential public services:

202.1 Sewage treatment operations which are publicly owned and operated consistent with approved General Plans;

202.2 Prison, jail, correctional facility;

202.3 Police or fire fighting facility;

202.4 School or hospital;

202.5 Landfill gas control or processing systems;

202.6 Water delivery operations which are publicly owned and operated consistent with approved General Plans; and

202.7 Cleanup operations mandated by Regional Water Quality Control Board, California Department of Health Services, Environmental Protection Agency or any other state or federal law, rule or regulation.

203 PRIORITY RESERVE: A depository of emission reduction credits for applicable essential public services for use as offsets pursuant to Rule 3.4, NEW SOURCE REVIEW.

204 QUARTERLY: Calendar quarter beginning in January, April, July, and October.

300 STANDARDS

301 CRITERIA: The Priority Reserve shall be supported with actual emission reductions which are certified pursuant to Rule 3.5, EMISSION REDUCTION CREDITS.

302 PRIORITY RESERVE: Support of funding for the Priority Reserve shall include, but not be limited to:

302.1 The adjustment on all emission reductions in accordance with Rule 3.5, EMISSION REDUCTION CREDITS; and

302.2 Shutdowns or modifications of stationary sources or emission units not claimed for emission credits by the facility within 180 days of the surrender of the permit as provided in Rule 3.5, EMISSION REDUCTION CREDITS.

303 **ALLOCATION:** On or before December 31st of each year, the Air Pollution Control Officer shall determine the amount of emission reductions available for withdrawal from the Priority Reserve for the upcoming year. Quarterly allocations of each affected pollutant shall be established by the Air Pollution Control Officer.

Additional emission reductions not included in the yearly determination may be added, if the Air Pollution Control Officer determines there is a need, to the previously established quarterly allocations. Allocated emissions reductions shall be made available on the first Wednesday of each calendar quarter. The amount available shall never exceed the emission reductions in the Priority Reserve.

304 **DISBURSEMENT:** A loan of emission reductions from the Priority Reserve shall be based upon issuance of a Final Action on an Authority to Construct, pursuant to Rule 3.4, NEW SOURCE REVIEW, and no later than 15 days following the end of the calendar quarter or other schedule deemed applicable by the Air Pollution Control Officer. Applications which do not receive credits may be held for one additional calendar quarter.

304.1 Legal title to the borrowed emission reductions from the Priority Reserve remains in the District. An ERC certificate of ownership will not be issued for emission reductions loaned from the Priority Reserve.

304.2 A borrower from the Priority Reserve will be issued an ERC Bank account number and the borrowed emission reductions will be credited to that account.

304.3 Upon application by the borrower for an authority to construct or permit to operate the emission reductions in the borrowers account will be credited to the permit.

304.4 The District will enter the permit number and the amount credited from the borrowers account to that permit on the permit and in the borrowers account history.

305 **PRIORITY RESERVE PRIORITIZATION:** Priority shall be given to applications to the Priority Reserve the earliest date an application is deemed complete. The Board of Directors of the District may determine that a specific project shall be given priority for access to the Priority Reserve based on public health or safety, regardless of the application submittal date.

306 **RESERVING PRIORITY RESERVE CREDITS:** Sources may, at the discretion of the Air Pollution Control Officer, reserve Priority Reserve credits for up to three years to allow multi-year projects to be planned. The sum of such credits shall amount to no more than 25 percent of each calendar quarter allocation for the Priority Reserve for those three years.

307 **UNUSED CREDITS:** During any calendar quarter for which there are fewer requests for emission credits than are available for the calendar quarter allocation, the unused credits shall be made available for use the following calendar quarter. Except as provided in Section 302, such unused credits may be transferred from one emission bank to the other at the discretion of the Air Pollution Control Officer.

308 **TRANSFERS:** Priority Reserve credits shall not be banked or transferred from one person to another.

309 **RETURNS:** Emission credits shall be returned in full to the Priority Reserve under any of the following conditions:

309.1 Construction is not complete within one year of date of issuance of the ERC Certificate.

309.2 Voluntary surrender or revocation of Authority to Construct or Permit to Operate.

309.3 Emission reduction credits are issued to the stationary source pursuant to Rule 3.5, EMISSION REDUCTION CREDITS.

310 MORATORIUM: Except as provided in Section 309, a loan of emission reduction credits shall exist for the life of the emissions unit using such credits. If the District Board of Directors determines that additional emission reductions are necessary, a moratorium on loans or termination of existing loans may be imposed. Prior to terminating loans or issuing a moratorium, the Air Pollution Control Officer shall provide a notice of the date of the meeting of the District Board of Directors to consider such actions. The loans shall be reissued or the moratorium shall be lifted upon determination that additional emission reductions are not necessary by the District Board of Directors.

400 ADMINISTRATIVE REQUIREMENTS

401 CALCULATION PROCEDURES: Funding of the Priority Reserve with emission reductions shall be quantified pursuant to calculation procedures specified in Rule 3.5, EMISSION REDUCTION CREDITS.

402 EMISSION REDUCTION CREDITS: Any stationary source which holds Emission Reduction Credits for the affected pollutant requested in this application or a requested in prior applications, must first use these to replenish credits previously obtained or for the pending application, prior to being allowed access to the Priority Reserve.

500 MONITORING AND RECORDS

501 RECORDS

501.1 Each stationary source shall maintain a cumulative total of emission credits obtained from the Priority Reserve.

501.2 The District shall maintain records of the source and amount of emission reductions obtained for deposit in the Priority Reserve, and transfers of these credits to applicants.

RULE 3.14 EMISSION REDUCTION CREDITS

ADOPTED September 22, 1993

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101 **PURPOSE:** To provide an administrative mechanism for quantifying, adjusting, and certifying surplus emission reductions for:

101.1 Later use as offsets pursuant to District, state or federal rules or regulations;

101.2 Transfer to other sources as offsets pursuant to Rule 3.16, NEW SOURCE REVIEW.

102 **APPLICABILITY:** This rule shall apply to all emissions reduction credits for use within a stationary source or for transfer to other sources.

110 **EXEMPTION - NOTIFICATION REQUIREMENTS:** The requirements of Sections 403 and 404; relating to notification, publication, and public inspection of Preliminary Decisions; shall not apply if the application is for emission reduction credits of less than 9000 pounds per quarter of nitrogen oxides, reactive organic compounds, or sulfur oxides; 7200 pounds per quarter of PM₁₀; or 49,500 pounds per quarter of carbon monoxide.

111 **EXEMPTION - SHUTDOWNS AND CURTAILMENTS:** The provisions of Section 201.4.a. and 304.3 shall not apply to emission reduction credits from shutdowns or curtailments provided:

111.1 The shutdowns or curtailment occur after December 31, 1987; or

111.2 The shutdowns or curtailments are documented in District permitting actions pursuant to Rule 3.16, NEW SOURCE REVIEW;

111.3 The emissions from the emissions unit to be shutdown or curtailed are included in the District's 1987 emission inventory and;

111.4 The District is notified before November 21, 1993 of shutdowns and curtailments which occurred before September 22, 1993.

DEFINITIONS: Unless otherwise defined below, the terms used in this rule are defined in Rule 3.16, NEW SOURCE REVIEW.

201 **ACTUAL EMISSIONS REDUCTIONS:** Reductions of emissions from an emissions unit. Actual emission reductions shall be calculated pursuant to Section 409, Calculation of Emissions and meet all of the following criteria:

201.1 The emissions reductions shall be real, enforceable, quantifiable, and permanent.

- 201.2 The emissions reductions shall be surplus emissions reductions in excess of any emissions reduction which is:
- a. Required or encumbered by any laws, rules, regulations, agreements, or orders, except the requirements of and unless such law by its terms states that the emission reduction shall be considered surplus; or
 - b. Attributed to a control measure noticed for workshop in the District, or proposed or contained in a State Implementation Plan; or
 - c. Proposed or contained as near-term measures in the District Air Quality Attainment Plan for attaining the annual reductions required by the California Clean Air Act and;
 - d. Reductions in emissions from the required phasedown of rice straw burning qualify as surplus pursuant to Section 41865 of the California Health and Safety Code.
- 201.3 Emissions reductions attributed to a proposed control measure may be re-eligible as surplus actual emissions reductions for:
- a. Control measures identified in the District Air Quality Attainment Plan or State Implementation Plan where no rule has been adopted within two years from the scheduled adoption date, provided, however, the Air Pollution Control Officer has not extended the scheduled adoption date; or
 - b. Control measures not identified in the District Air Quality Attainment Plan or State Implementation Plan where no rule has been adopted and two years have elapsed beyond the date of the latest public workshop notice; or
 - c. Control measures proposed in the District Air Quality Attainment Plan which are not included into the Plan adopted by the District Board shall become re-eligible upon adoption of the Plan.
- 201.4 Source shutdowns and curtailments may not be given emission reduction credit in the case of non-attainment pollutants if they occurred prior to the date of application unless:
- a. The shutdown or curtailment was claimed by the affected facility as a credit within 180 days. A letter of intent to apply may be provided by the affected facility. Shutdown or curtailment credits not claimed within 180 days shall pass to the Priority Reserve as provided in Rule 3.15, PRIORITY RESERVE and;
 - b. The proposed new source or modification is a replacement, and the shutdown or curtailment occurred after August 7, 1977; or
 - c. The proposed new source or modification does

not meet the EPA definition of a major source or major modification, the shutdown or curtailment occurred after August 7, 1977, the emission reduction credit is used at the same stationary source.

- 202 **BANKING:** The system of quantifying, certifying, recording, and storing ERC's for future use and transfer. This system shall be called the Emission Reduction Credit Bank (ERC Bank).
- 203 **BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT):** An emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source. The criteria for BARCT are specified in "California Clean Air Act Guidance for the Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology", California Air Resources Board, April 1990.
- 204 **CERTIFIED:** Emission reduction credits which have been evaluated under the requirements of this rule and other applicable District, state and federal rules and regulations and which have been granted by the Air Pollution Control Officer.
- 205 **ELECTRICAL POWER PLANTS:** An electrical generating facility that regularly generates electricity so the local electric utility can provide its daily energy requirements. Emergency electrical generating equipment are not considered electrical power plants.
- 206 **EMISSION REDUCTION CREDITS (ERC):** Reductions of actual emissions from an emission unit that are registered with the District in accordance with the requirements of this rule.
- 207 **EMISSIONS UNIT:** An identifiable operation or piece of process equipment such as an article, machine, or other contrivance which controls, emits, may emit, or results in the emissions of any affected pollutant directly or as fugitive emissions. Emissions unit shall not include the open burning of biomass.
- 208 **ENFORCEABLE:** Verifiable and legally binding.
- 209 **ERC CERTIFICATE:** A document certifying title to a defined quantity and type of ERC's issued by the District to the owner(s) identified on the Certificate.
- 210 **HISTORIC ACTUAL EMISSIONS:** Actual emission reductions for the existing emissions unit averaged over the two year period immediately preceding the date of application. If the last two years are unrepresentative of normal source

operations as determined by the Air Pollution Control Officer, then any two consecutive years of the last five years may be used. If, at any time during the specified period, actual emissions exceeded allowed or permitted emission levels, then actual emissions shall be reduced to reflect emission levels that would have occurred if the unit were in compliance with all applicable limitations and rules. If less than one year has passed since the date of issuance of the Permit to Operate then the historic actual emissions shall be zero. If less than two years have passed since the date of issuance of the Permit to Operate then the historic actual emissions shall be the actual emissions over the one year period immediately preceding the date of application.

- 211 **NON-PERMITTED EMISSIONS:** Those emissions of an affected pollutant which are not required to obtain a permit pursuant to Rule 3.1, AUTHORIZATIONS AND PERMITS REQUIRED. Non-permitted emissions may include emissions from mobile sources, indirect sources, and exempt equipment.
- 212 **OFFSET:** The use of an emission reduction credit to compensate for an emission increase of an affected pollutant from a new or modified source subject to the requirements of Rule 3.16, NEW SOURCE REVIEW.
- 213 **PERMANENT:** The sum of all ERC's endures for the life of the project utilizing that sum of ERC's.
- 214 **PORTABLE EQUIPMENT:** Equipment which is periodically relocated and is not operated more than 180 days at any location in the District within a 12 month period.
- 215 **POTENTIAL TO EMIT:** The maximum physical and operational design capacity to emit a pollutant during each calendar quarter. Limitations on the physical or operational design capacity, including emissions control devices and limitations on hours of operation, may be considered only if such limitations are incorporated into the applicable authority to construct and permit to operate.
- 216 **QUANTIFIABLE:** Ability to estimate emission reductions in terms of their amount and characteristics. The same method of estimating emissions should generally be used to quantify the emission levels before and after the reduction.
- 217 **QUARTERLY:** Calendar quarter beginning in January, April, July, and October.
- 218 **REAL:** Actually occurring, implemented, and not artificially devised.
- 219 **REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT):** The lowest emission limitation that a particular source is capable of

meeting by the application of emission control technology that is reasonably available considering technical and economic feasibility. The criteria for RACT are specified in "California Clean Air Act Guidance for the Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology", California Air Resources Board, April 1990.

- 220 **REGISTER:** The document that records all ERC deposits, withdrawals, transfers, and transactions.
- 221 **REPLACEMENT EQUIPMENT:** A replacement of a piece of equipment with an structurally identical piece of equipment with emissions less than or equal to those from the original piece of equipment.
- 222 **SHUTDOWN:** Either the earlier of the permanent cessation of emissions from an emissions unit or the surrender of that unit's Permit to Operate. If the Air Pollution Control Officer determines that the unit has been removed or fallen into an inoperable and unmaintained condition, the Air Pollution Control Officer may notify the owner of intent to cancel the Permit. If the owner does not respond within 60 days, the Air pollution Control officer may cancel the Permit and deem the source shutdown as of the date of the last emissions.
- 223 **TEMPORARY:** A stationary source or emissions unit which operates no longer than one consecutive twelve month period.
- 224 **TRANSFER:** The change in ownership of an ERC from one person to another.

300 STANDARDS

- 301 **CERTIFICATION:** Only actual emission reduction credits shall be certified as ERC's. Such actual emission reductions shall meet the following requirements to be certified as ERC's.
 - 301.1 Apply for emission reduction credits pursuant to Section 401;
 - 301.2 Receive written approval of the Air Pollution Control Officer and;
 - 301.3 If the emission reduction is created from an emission unit where the demand for the services or product could shift to other similar sources in the District, submittal of data to document that such reductions will result in District-wide emission reductions may be required by the Air Pollution Control Officer. Such documentation must be approved by the Air Pollution Control Officer.

302 **REEVALUATION:** Actual emission reductions granted prior to (date of rule adoption) shall be reevaluated under the requirements and procedures specified in this rule.

303 **NON-PERMITTED SOURCES:**

303.1 Except as provided in Section 303.2, non-permitted emissions units or stationary sources requesting emission reduction credits specified in such emissions units shall void the exemption specified in Rule 3.2, EXEMPTIONS. Such sources shall not operate such emissions unit or stationary source without first obtaining a permit pursuant to Rule 3.1, AUTHORIZATIONS AND PERMITS REQUIRED.

303.2 If state or federal law prohibits the District from requiring an Authority to Construct or a Permit to Operate, the applicant for emission reduction credits shall execute a legally binding contract with one or more owner(s) or operator(s) of the non-permittable emissions unit that ensures the sum of all emission reductions emission reductions will be provided in accordance with the requirements of this rule, and will continue for the life of the stationary source using the credits or life of the credits as provided in the application. Such contract shall be filed with the District and, by its terms, be enforceable by the Air Pollution Control Officer.

304 **SHUTDOWNS:**

304.1 Applicants for emission reductions due to the shutdown of permitted or non-permitted emissions units shall demonstrate to the satisfaction of the Air Pollution Control Officer that such equipment will no longer be operated within the District.

304.2 Emission reductions from the shutdown of retail dry cleaners and retail gasoline stations shall be prohibited.

304.3 Emission reductions from the shutdown of emissions units or stationary sources shall be submitted within 180 days, unless the applicant has requested an extension of time, in writing prior to the end of the 180 day period, from the Air Pollution Control Officer. The Air Pollution Control Officer may grant an extension of time not to exceed 90 days.

305 **USE OF ERC'S - BANKING:** ERC's may be banked for later use as offsets. The name of the user shall be entered into the Register for the applicable ERC's. Except as provided in Sections 307, 308, and 309, such ERC's may not be returned

to the bank following the start of operation of the stationary source or emissions unit using the ERC as offsets.

- 306 **USE OF ERC'S - OFFSETS:** ERC's may be used immediately as offsets. The ERC shall be entered into the Register along with the name of the user. Except as provided in Sections 307, 308, and 309, such ERC's may not be returned to the bank following the start of operation of the stationary source or emissions unit using the ERC as offsets.
- 307 **RETURNS - USE OF ERC'S FOR TEMPORARY STATIONARY SOURCES AND PORTABLE EQUIPMENT:** ERC's used as offsets for temporary stationary sources or emissions units or used as offsets for portable equipment shall be returned in full to the owner upon verification of shutdown of the stationary source, emissions unit, or portable equipment by the Air Pollution Control Officer. ERC's must then be re-deposited in the Bank and re-entered into the Register by the owner, within 60 days.
- 308 **RETURNS - ISSUANCE OF PERMIT TO OPERATE:** If the applicant for a Permit to Operate requests a lowering of the quarterly emission limitation as a result of emissions testing conducted pursuant to an Authority to Construct demonstrated achievable by such emissions testing, the difference emission reductions credits necessary to offset the emissions unit pursuant to Rule 3.16, NEW SOURCE REVIEW, shall be re-deposited in the Bank and re-entered into the Register.
- 309 **RETURNS - USE OF ERC'S FOR ELECTRICAL POWER PLANTS:** ERC's may be used at electrical power plants to offset emission increases resulting from increased power plant operation needed to compensate for reduced operation at other electrical power plant(s) within the District, due to emergency breakdown, or regularly scheduled maintenance. ERC's shall be returned in full to the owner upon verification of return to normal operation of the using electrical power plant. ERC's shall be re-deposited in the Bank and re-entered into the Register. This Section shall apply only during the period from November 1 through February 28 or 29, and shall be approved in writing by the Air Pollution Control Officer prior to use.

400 ADMINISTRATIVE REQUIREMENTS

401 COMPLETE APPLICATION:

- 401.1 The Air Pollution Control Officer shall determine whether the application is complete not later than 30 days after receipt of the application for ERC, or after such longer time as both the applicant and the Air Pollution Control Officer may have agreed in writing. If the Air Pollution Control Officer

determines that the application is not complete, the applicant shall be notified in writing of the decision specifying the information required. If specified information is not submitted by the applicant within 60 days, the application shall be canceled by the Air Pollution Control Officer unless the applicant has requested an extension of time, in writing and prior to the end of the 60 day period, from the Air Pollution Control Officer. The Air Pollution Control Officer may grant an extension of time not to exceed 90 days. If the application is for a shutdown or curtailment emission reduction credit, failure to provide the additional information or failure to request an extension of time shall result in those credits passing to the Priority Reserve pursuant to Rule 3.16, NEW SOURCE REVIEW.

- 401.2 Upon receipt of any re-submittal of the application, a new 30-day period to determine completeness shall begin.
- 401.3 Completeness of an application or re-submitted application shall be evaluated on the basis of the information requirements set forth in District regulations (adopted pursuant to Article 3, 65940 through 65944 of Chapter 4.5 of Division 1 of Title 7 of the California Government Code) as they exist on the date on which the application or re-submitted application was received. The Air Pollution Control Officer may, during the processing of the application, request an applicant to clarify, amplify, correct, or otherwise supplement the information submitted in the application.
- 401.4 A fee shall be required pursuant to Rule 4.1, PERMIT FEES - STATIONARY SOURCE.
- 401.5 For offsets provided in accordance with Health and Safety Code Sections 41605.5, 42314.5, and 41865 concerning emission reductions from open field burning, an ERC application covering the total emission reductions necessary to offset stationary source emissions may be submitted at the time of application for an Authority to Construct.
- 402 **PRELIMINARY DECISION:** Except as provided in Section 110, following acceptance of an application as complete, the Air Pollution Control Officer shall perform the evaluations required to determine compliance with all applicable District rules and regulations and make a preliminary written decision as to whether the emission reduction credit should be certified as an ERC. The decision shall be supported by a succinct written analysis.

- 403 **PUBLICATION AND PUBLIC COMMENT:** Except as provided in Section 110, within ten calendar days following a preliminary decision, the Air Pollution Control Officer shall publish, in at least one newspaper of general circulation in the District, a notice stating the preliminary decision of the Air Pollution Control Officer, noting how the pertinent information can be obtained, and inviting written public comment for a 30-day period following the date of publication.
- 404 **PUBLIC INSPECTION:** Except as provided in Section 110, the Air Pollution Control Officer shall make available for public inspection at the District's office the information submitted by the applicant and the Air Pollution Control Officer's analysis no later than the date the notice of the preliminary decision is published, pursuant to Section 403. Information submitted which contains trade secrets shall be handled in accordance with Section 6254.7 of the California Government Code and relevant sections of the California Administrative Code. Further, all such information shall be transmitted no later than the date of publication to the California Air Resources Board and the US Environmental Protection Agency regional office, and to any party which requests such information.
- 405 **CERTIFICATION, FINAL ACTION:**
- 405.1 Within 180 days after acceptance of an application as complete, the Air Pollution Control Officer shall take final action on the application after considering all written comments.
- 405.2 Except as provided in Section 110, the Air Pollution Control Officer shall provide written notice of the final action to the applicant, the US Environmental Protection Agency, and the California Air Resources Board, and 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 District's office.
- 406 **WITHDRAWAL OF APPLICATION:** Withdrawal of an application for certification of an ERC by the applicant shall result in cancellation.
- 407 **REGISTRATION:**
- 407.1 Following certification of emission reduction credits and verification that the proposed emission reduction have been implemented, the Air Pollution Control Officer shall issue an original ERC Certificate to the owner(s) by certified mail or in person.

The issuance of an ERC certificate shall not constitute evidence of compliance with the rules and regulations of the District, or a representation or assurance to the recipient upon which reliance is authorized or intended that the ERC represented by the ERC certificate are available from the District ERC bank.

- 407.2 The ERC Certificate shall contain:
- a. Certificate number;
 - b. Date of issuance;
 - c. Street address and APN (Assessors Parcel Number) of site creating the surplus emissions reductions for which the ERC Certificate is issued;
 - d. Signature of the responsible District official;
 - e. The name of the owner shall be typed on the certificate and the owner shall sign the certificate. If the owner is a public or private business entity, a person authorized to sign on behalf of the owner shall sign the certificate and;
 - f. Conditions of operation or use.
- 407.3 A copy of each ERC Certificate issued shall be maintained in the Bank Register.
- 407.4 Multiple owners of emission reduction credits shall be separated according to agreements, filed with the District, between the owners with one ERC Certificate issued to each owner for their respective portion.
- 407.5 Upon transfer of ERC's between parties, the transferor's ERC certificate, and a copy of a writing, signed by the transferor, authorizing and memorializing the transfer of the ERC to the transferee must be surrendered to the Air Pollution Control Officer by the transferee within 30 days of the date of the writing authorizing the transfer of the ERCs.
- Upon receipt and review of said documents the Air Pollution Control Officer shall issue a new ERC certificate in the name of the transferee. If fewer than all the transferor's ERCs are transferred, a new certificate shall be issued to the transferor showing the remaining ERC's. The District may refuse to recognize any transfer of ERC's that does not comply with the requirements of this Section.
- 407.6 The original ERC Certificate surrendered by the registered owner shall be filed in the register and marked with the date of issuance of the new ERC

Certificate(s), the number of credits transferred, and the new ERC Certificate number(s). If fewer than all ERC's are transferred, the new balance in the name of the original owner shall be entered in the register.

407.7 Prior to the issuance of a permit allowing the use of ERC's, the registered owner shall surrender the ERC Certificate to the Air Pollution Control Officer. The certificate surrendered by the owner shall be filed in the register and marked with the permit number, street address, and APN of site of use, and the name of the owner using the ERC's. If a balance of ERC's remain, a new ERC Certificate shall be issued to the original owner and the original ERC Certificate shall be filed in accordance with the provisions of this rule.

407.8 In the case of loss or destruction of the original ERC Certificate, the registered owner shall request in writing that a replacement ERC Certificate be issued by the Air Pollution Control Officer. Such a request shall include an affidavit by the owner describing all circumstances of loss of the Certificate and stating that the original certificate is permanently lost or destroyed. This replacement Certificate shall be clearly identified as a replacement for the original Certificate. Where the surrender of an ERC Certificate to the Air Pollution Control Officer is required, only the replacement Certificate issued pursuant to this Section will be recognized as complying with the requirements of Sections 407.5, 407.6, or 407.7. A fee for the issuance of the replacement Certificate shall be required pursuant to Rule 4.1, PERMIT FEES - STATIONARY SOURCE.

408 **CONVERSION OF AIR EMISSION REDUCTIONS TO ERC's:** Before the Air Pollution Control Officer may issue a certificate of ownership for any ERC's, the emission reductions calculated in Section 409 shall be adjusted 1.05 emission reductions to 1.0 ERC. Emission reductions captured by the ERC adjustment shall pass to the Priority Reserve pursuant to Rule 3.16, NEW SOURCE REVIEW.

409 **CALCULATION OF EMISSIONS:** Calculations performed pursuant to procedures specified in this Section shall not conflict with the requirements of state law.

409.1 Actual emission reductions from modifications to, or shutdowns of, existing emissions units shall be calculated for each calendar quarter by subtracting the proposed emissions from historical actual emissions. Any positive value shall qualify as an emission reduction credit.

- 409.2 Credits for particulate matter emission reduction credits shall be expressed in terms of PM_{10} .
- 409.3 Credits for nitrogen oxides, reactive organic compounds, carbon monoxide, sulfur oxides and PM_{10} shall be quantified in terms of pounds of pollutants per quarter for each calendar quarter.
- 409.4 Actual emission reductions shall be adjusted to at least reflect emission rates achievable with best available retrofit control technology. In some instances reasonably available control technology and BARCT will be the same for specific emission source categories.

410 **ERC REGISTER:**

- 410.1 The register shall contain the following information for each ERC Certificate issued by the Air Pollution Control Officer:
- Certificate number;
 - Date of issuance;
 - Name and address of the registered owner;
 - Street address and APN of site creating the surplus emissions reductions for which the ERC Certificate is issued and;
 - Number of ERC's registered.
- 410.2 Upon notice of a transfer of an ERC Certificate the Air Pollution Control Officer shall enter the following information in the register:
- Original ERC Certificate number;
 - New ERC Certificate number, or street address, APN, and permit numbers at which ERC's are being used;
 - Name and address of new owner(s), if any and;
 - Number of ERC's being transferred.
- 410.3 Upon the use of ERC's for offsets, the following information shall be entered in the register:
- All information required in Section 410.2;
 - Date ERC Certificate was surrendered to the Air Pollution Control Officer;
 - Permit numbers to which ERC's are being applied;
 - Name and address of ERC user;
 - Name, if any, address, and APN of site where ERC's are being used as offsets and;
 - Number of ERC's being used for offsets.

- 411 **MORATORIUM:** Except as provided in Section 201.2, after the issuance of an ERC Certificate, subsequent changes in regulations, except Regulation III, shall not reduce or eliminate the deposit. If the District Board of Directors

determines that additional emission reductions are necessary, a moratorium on withdrawals may be imposed. Prior to imposing a moratorium, the Air Pollution Control Officer shall provide a notice of the date of the meeting of the District Board of Directors to consider issuance of a moratorium to owners of ERC's and other interested parties. The moratorium shall be lifted upon determination that additional emission reductions are not necessary by the District Board of Directors.

RULE 3.18 EMISSION STATEMENTS

ADOPTED JULY 28, 1993

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 - 402 CERTIFICATION

100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to provide the District with an accurate accounting of emissions from significant sources with which the District and ARB can compile an accurate inventory.
- 102 **APPLICABILITY:** This rule applies to all owners or operators of stationary sources that emit or may emit oxides of nitrogen or reactive organic compounds.
- 103 **EXEMPTION, SMALL SOURCES:** The Air Pollution Control Officer (APCO) may waive the requirement for emission statements for any class or category of stationary sources which emit less than 25 tons per year of both oxides of nitrogen and reactive organic compounds if the District has provided the ARB with an emission inventory of those sources emitting greater than 10 tons per year of oxides of nitrogen or reactive organic compounds based on the use of emission factors acceptable to the ARB.

200 DEFINITIONS

- 201 **RESPONSIBLE OFFICIAL:** An officer of the company or business operating an emissions unit, who is responsible for the completion and certification of the emissions statement, and who accepts legal responsibility for the emission statement's accuracy.

300 STANDARDS

- 301 **EMISSIONS STATEMENT:** Any stationary source which emits or may emit oxides of nitrogen or reactive organic compounds shall provide the District with a written statement, in such form as the APCO prescribes, showing actual emissions from that stationary source. As a minimum the emissions statement shall contain all of the information contained in the ARB's Emission Inventory Turn Around Document as described in Instructions for the Emission Data System Review and Update Report. The statement shall contain emissions for the previous calendar year.

The owner or operator of any stationary source subject to this section may comply with the provisions of this section by satisfying either of the following requirements:

- 301.1 The owner or operator shall return an Emissions Statement to the APCO. The Emissions Statement shall contain all information requested in the Emissions Data Survey Form and emission estimates. This

Emissions Statement shall be certified by the responsible official of the source and shall state that the information contained in the Emissions Statement is accurate to the best knowledge of the individual certifying the statement.

- 301.2 The owner or operator shall complete and return an Emissions Data Survey Form to the APCO. The District shall estimate the emissions of the stationary source based on the data contained in the Emissions Data Survey Form. The emissions estimates calculated by the District shall be provided to the owner or operator of the source and shall be certified by the responsible official and returned to the district. This Emissions Statement shall state that the information contained in the Emissions Statement is accurate to the best knowledge of the individual certifying the statement.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **COMPLIANCE SCHEDULE:** The initial emissions statement shall cover calendar year 1992 emissions and shall be submitted to the District by September 30, 1993. Emissions statements shall be submitted annually thereafter no later than March 31 of the year following the period specified in Section 301 of this rule.
- 402 **CERTIFICATION:** All emissions statements shall contain a certification by a responsible official of the stationary source that the information contained in the emissions statement is accurate to the best knowledge of the person certifying the emissions statement.

RULE 3.21 RICE STRAW EMISSION REDUCTION CREDITS
ADOPTED December 10, 2008

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100 GENERAL

- 101 **PURPOSE:** The purpose of this Rule is to provide a federally recognized procedure for quantifying and certifying rice straw burning emission reductions, and issuing the resulting Emission Reduction Credit (ERC) certificates.

This rule provides the only process by which ERC certificates issued for reductions in rice straw burning may be stored for later use to meet federal new source review offset requirements. Once issued in accordance with this rule, the procedures in Rule 3.5 EMISSION REDUCTION CREDITS shall be used as the administrative mechanism for sources to transfer ERCs to other sources for use as offsets.

- 102 **APPLICABILITY:** The provisions of this Rule shall apply to any agricultural operation that grew rice and burned rice straw in the District during the baseline period.

- 200 **DEFINITIONS:** Unless otherwise defined below, the terms used in this Rule are the same as defined in District Rule 3.5, EMISSION REDUCTION CREDITS, Rule 3.4, NEW SOURCE REVIEW, or Rule 1.1, GENERAL PROVISIONS, in that order of priority.

- 201 **AGRICULTURAL BURNING:** Open outdoor fires used in the growing of crops. For the purpose of this Rule, agricultural burning is considered to be a source and such activity requires an agricultural burn permit.

- 202 **AGRICULTURAL BURN PERMIT:** A permit issued by the District, which is required in order to conduct an agricultural burn.

- 203 **AGRICULTURAL OPERATION:** Equipment used exclusively in the growing of agricultural crops or in the commercial raising of fowl or animals.

- 204 **AIR POLLUTION CONTROL OFFICER (APCO):** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District (District), or his or her designee.

- 205 **APPLICANT:** For a new application, the owner (or his/her designee) of the parcel. For a re-certification application, the current owner (or his/her designee) of an existing rice straw burning ERC.

- 206 **APPLICANT DESIGNEE:** The person, company, or entity submitting an application on behalf of the applicant. Such designee shall provide written authorization signed by the applicant to serve as the designee.

- 207 **BANKING:** The system of quantifying, certifying, recording, and storing ERCs for future use and transfer. This system shall be called the ERC Bank.

- 208 **BASELINE PERIOD:** Calendar years 1988 through 1992.
- 209 **CERTIFIED:** ERCs which have been evaluated under the requirements of this Rule and other applicable District, State, and Federal Rules and Regulations and which have been granted by the APCO.
- 210 **EMISSION REDUCTION CREDITS (ERCs):** Reductions of actual emissions that are registered with the District in accordance with the requirements of Rule 3.5, EMISSION REDUCTION CREDITS.
- 211 **HISTORIC BURN FRACTION (HBF):** The amount of rice (as a percentage of the amount planted) which was burned during the baseline period, equal to 96%.
- 212 **NEW APPLICATION:** An application submitted in accordance with this rule for which the District has not already issued an ERC for reductions in rice straw burning for a parcel(s) prior to adoption of this Rule.
- 213 **PARCEL:** A legally identifiable piece of land as registered with a County Assessor's office for property tax purposes and assigned an Assessors Parcel Number (APN).
- 214 **RE-CERTIFICATION APPLICATION:** An application submitted in accordance with this rule for which the District has previously issued an ERC for reductions in rice straw burning for a parcel(s) prior to adoption of this Rule.
- 215 **REGISTER:** The document that records all ERC deposits, withdrawals, transfers, and transactions.
- 216 **RESTRICTED BURN LIST:** A list (maintained by the District) of parcels which have restrictions related to future agricultural burning.
- 217 **RICE STRAW BURNING:** The intentional open burning of rice straw material. For the purpose of this Rule, rice straw burning is considered to be a source and such activity requires an agricultural burn permit.
- 218 **RICE STRAW BURNING EMISSION REDUCTIONS:** Emission reductions that qualify for banking pursuant to Section 41865 of the California Health and Safety Code.
- 219 **RICE GROWING ACREAGE:** The amount of acreage contained in a parcel that was used for the production of rice during the baseline period.
- 220 **SURPLUS:** The amount of emission reductions that are, at the time of generation 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 State Implementation Plan (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 requirements of this Section. Examples of federal, state, and local laws, and of SIP-related requirements, include, but are not limited to, the following:

- 220.1 The federally-approved California SIP;
- 220.2 Other adopted State air quality laws and regulations not in the SIP, including but not limited to, any requirement, regulation, or measure that: (1) the District or the State has included on a legally-required and publicly-available list of measures that are scheduled for adoption by the District or the State in the future; or (2) is the subject of a public notice distributed by the District or the State regarding an intent to adopt such revision;
- 220.3 Any other source- or source-category specific regulatory or permitting requirement, including, but not limited to, Reasonable 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
- 220.4 Any regulation or supporting documentation that is required by the federal Clean Air Act but is not contained or referenced in 40 Code of Federal Regulations (CFR) Part 52, including but not limited to: assumptions used in attainment and maintenance demonstrations (including Reasonable Further Progress 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.

300 STANDARDS

- 301 **DETERMINATION IF A PARCEL IS ELIGIBLE:** A particular parcel qualifies to generate ERCs under this rule if the following requirements are met:
 - 301.1 The parcel is located in the Sacramento Federal Non-attainment Area (SFNA); and
 - 301.2 Rice straw burning occurred on the parcel during the baseline period.
- 302 **DETERMINATION OF AVAILABLE ACREAGE:** The available acreage for generating ERCs shall be determined by adding all of the rice growing acreage of an

applicant's eligible parcels and multiplying by the HBF. In no case shall the total available acreage for the entire District exceed 28,279 acres. In the event that the District receives applications for which the total available acreage exceeds 28,279 acres, the District shall lower the amount of available acreage for each application in accordance with section 404.

- 303 **DETERMINATION OF ANNUAL EMISSION REDUCTIONS AVAILABLE:** The amount of annual emission reductions available shall be determined by multiplying the available acreage times 75% times the applicable emission factor in the following table:

Pollutant	Emission Factor (lbs/acre)
Volatile Organic Compounds (VOC)	14.1
Nitrogen Oxides (NOx)	15.6
Carbon Monoxide (CO)	172.2
Particulate Matter less than 10 microns (PM10)	18.9
Sulfur Oxides (SOx)	3.3

- 304 **DETERMINATION OF QUARTERLY EMISSION REDUCTIONS AVAILABLE:** The emission reductions shall be quantified on a calendar quarter basis. The following percentages shall be used to determine the amount of emission reductions in each calendar quarter:

Calendar Quarter	Percentage
First Quarter	28%
Second Quarter	26%
Third Quarter	8%
Fourth Quarter	38%

- 305 **PRIORITY RESERVE ADJUSTMENT:** Before the APCO may issue an ERC, the calculated emission reductions shall be adjusted 1.05 emission reductions to 1.0 ERC. Emission reductions captured by this adjustment shall pass to the District's Priority Reserve Bank.
- 306 **DEED RESTRICTION:** Prior to the issuance of an ERC, a deed restriction shall be placed on the parcel or group of contiguous parcels for which ERCs will be

granted and a copy provided to the District. The deed restriction shall prohibit agricultural burning on the parcel which is not consistent with the ERC.

307 **RESTRICTED BURN LIST:** Prior to the issuance of an ERC, the District shall place the parcel or group of contiguous parcels on the restricted burn list. In each calendar year, no agricultural burn permit may be issued for greater than 25% of the rice growing acreage of any parcel listed on the restricted burn list.

308 **BURNING PROHIBITION:** No person shall conduct agricultural burning on more than 25% of the rice growing acreage of a parcel which has received an ERC certificate pursuant to the provisions of this rule. In addition, applicants must comply with California Health & Safety Code (CH&SC) 41865.

400 **ADMINISTRATIVE REQUIREMENTS**

401 **APPLICATION FILING DEADLINE:** All applications to obtain rice straw ERC certificates in accordance with this rule shall be submitted by June 10, 2009. Applications submitted after June 10, 2009 shall not be eligible for ERCs under this rule.

402 **APPLICATION REQUIREMENTS - NEW APPLICATIONS:** The applicant shall submit one application for each parcel or for each set of contiguous parcels. The application shall contain the following information:

402.1 List of each parcel included in the application, including APN and any owner's designation or identifier.

402.2 The acreage of each parcel that was used to grow rice during the baseline period, and documentation of such acreage.

402.3 Documentation that rice straw burning occurred on the acreage of each parcel (identified above) during the baseline period. Examples of acceptable documentation include, but are not limited to, copies of a District burn permit, log books, pictures, or other District approved verifiable records. In the event that a burn permit or other records are not available, the District may accept a signed affidavit (under penalty of perjury) from the applicant certifying that rice straw on the parcel was burned during the baseline period.

402.4 A statement of intent to file a deed restriction required by Section 305 for each parcel or for each set of contiguous parcels for which an application is being submitted (A copy of the deed restriction must be provided prior to final issuance of the rice straw ERC certificate).

402.5 Filing fees for the evaluation and issuance of ERCs in accordance with District Rule 4.1, PERMIT FEES - STATIONARY SOURCE.

403 **APPLICATION REQUIREMENTS - RE-CERTIFICATION**

APPLICATIONS: The applicant shall submit one application for each existing ERC certificate. In addition to the information in 402, prior to re-issuance of the ERC, the applicant must surrender all previous certificates issued for rice straw burning on the parcel or group of contiguous parcels.

404 **AVAILABLE ACREAGE ADJUSTMENT:** In the event that the District receives applications in which the requested available acreage totals to more than 28,279 acres, the District shall lower the percentage available as follows:

404.1 The re-certification applications meeting the criteria of this rule shall get full credit on their acreage.

404.2 The applications with verifiable burn records will have second priority. If the total available acreage for all these applications along with the re-certification applications does not exceed 28,279 acres, these applications will get full credit. If the total of all these applications along with the re-certification applications exceeds 28,279 acres, these applications shall be adjusted proportionally so that the total acreage for which all rice straw burning ERCs are issued does not exceed 28,279 acres.

404.3 For all remaining applications with affidavits for burn documentation, the amount of rice straw acreage determined to be available shall be adjusted proportionally so that the total acreage for which all rice straw burning ERCs are issued does not exceed 28,279 acres.

405 **APPLICATION PROCESSING PROCEDURES:**

405.1 **COMPLETE APPLICATION:** The APCO shall determine whether the application is complete not later than 30 days after receipt of the application for ERC certificates. If the APCO determines that the application is not complete, the applicant shall be notified in writing of the decision specifying the information required. If the specified information is not submitted within 30 days the application shall be canceled by the APCO.

405.2 **ADDITIONAL INFORMATION:** Upon receipt of additional information for an incomplete application a new 30 day period to determine completeness shall begin. During the processing of the application, the APCO may request an applicant to clarify, amplify, correct, or otherwise supplement the information submitted in the application.

405.3 **PRELIMINARY DECISION:** Following acceptance of an application as complete, the APCO shall perform the evaluations required to determine compliance with all applicable District Rules and Regulations and make a

preliminary written decision as to whether the emission reduction should be certified as ERCs. The decision should be supported by a succinct written analysis.

405.4 **PUBLICATION AND PUBLIC COMMENT:** Within 10 calendar days following a preliminary decision, 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 the pertinent information can be obtained, and inviting written public comment for a 30 day period following the date of publication.

405.5 **DEED RESTRICTION:** Within 90 calendar days of the public notice being published, the applicant shall submit a final copy of a legal deed restriction.

405.6 **PUBLIC INSPECTION:** The APCO shall make available for public inspection at the District office the information submitted by the applicant and the APCO's analysis no later than the date the notice of the preliminary decision is published, pursuant to Section 405.4. Further, all such information shall be transmitted to the California Air Resources Board and the US Environmental Protection Agency (EPA) regional office, and to any party which requests such information no later than the date of publication.

405.7 **FINAL ACTION:** Within 180 days after the application filing deadline in Section 401 of this rule, the APCO shall take final action on the applications, after considering all written comments.

406 **VIOLATIONS:** Failure to comply with any provision or restriction of this rule shall be considered a violation of this rule.

500 MONITORING AND RECORDS

501 **BURN RECORDS:** For any parcel or group of contiguous parcels for which a rice straw ERC certificate has been issued, the initial ERC holder or current land owner shall keep records of the amount of acres, crop type and burning that has occurred during the previous 5 years.

600 PROGRAM EVALUATION: Within two (2) years after adoption of this rule, the District shall evaluate the program and submit an evaluation report to EPA. The report shall include a discussion of the total number of applications approved, total acreage subject to this rule, and total amount of ERCs issued.

RULE 3.24 PREVENTION OF SIGNIFICANT DETERIORATION

Adopted June 13, 2012

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100 GENERAL

- 101 **PURPOSE:** The prevention of significant deterioration (PSD) program is a construction permitting program for new major facilities and major modifications to existing major facilities located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant. The intent of this Rule is to incorporate the federal PSD rule requirements into the District's Rules and Regulations by incorporating the federal requirements by reference.
- 102 **APPLICABILITY:** The provisions of this Rule shall apply to any source and the owner or operator of any source subject to the requirements of Title 40 Code of Federal Regulations, Part 52, Subpart A, section 52.21 (40 CFR 52.21) as incorporated herein.
- 103 **INCORPORATION BY REFERENCE:** Except as provided in Section 104, the provisions of 40 CFR 52.21, in effect on (date of rule adoption or July 1, 2012 if adopted after that date), are incorporated herein by reference and made part of the Rules and Regulations of the Yolo-Solano Air Quality Management District.
- 104 **EXCLUSIONS, GENERAL:** The following subsections of 40 CFR 52.21 are hereby excluded from this Rule: (a)(1), (b)(55)-(58), (f), (g), (i)(1)(i)-(v) and (ix)-(x), (i)(6)-(8), k(2), (p)(6)-(8), (q), (s), (t), (u), (v), (w), (x), (y), (z), and (cc).
- 105 **EXEMPTION, GREENHOUSE GAS AIR QUALITY ANALYSES:** Greenhouse gas emissions shall not be subject to the requirements of subsections (k) or (m) of 40 CFR 52.21.

200 DEFINITIONS: Unless otherwise stated below, the terms used in this Rule are the same as defined in 40 CFR 52.21(b) as in effect on (date of rule adoption).

- 201 **ADMINISTRATOR:** The term "administrator" means:
- 201.1 "Federal Administrator" in 40 C.F.R. 52.21(b)(17), (b)(37)(i), (b)(43), (b)(48)(ii)(c), (b)(50)(i), (b)(51), (l)(2) and (p)(2); and
- 201.2 "Air Pollution Control Officer (APCO)" elsewhere, as defined in District Rule 1.1, GENERAL PROVISIONS AND DEFINITIONS.
- 202 **PARAGRAPH (q):** The phrase "paragraph (q) of this section" in 40 CFR 52.21(p)(1) and (l)(2) shall read as follows: "the public participation provisions of Rule 3.24, sections 402".

300 STANDARDS

- 301 **APPLICANT REQUIREMENTS:** An owner or operator must:
- 301.1 Obtain a PSD permit pursuant to this Rule before beginning actual construction of a new major stationary source, a major modification, or a Plantwide Applicability Limitation (PAL) major modification, as defined in 40 CFR 52.21(b), and
- 301.2 Pay the applicable fees specified in District Rule 4.1, PERMIT FEES – STATIONARY SOURCES.

400 ADMINISTRATIVE REQUIREMENTS

401 DISTRICT REQUIREMENTS: Notwithstanding the provisions of any other District Rule or Regulation, the District shall:

401.1 Require compliance with this Rule prior to issuing a federal PSD permit as required by Clean Air Act (CAA) Section 165.

401.2 Determine whether the application is complete not later than 60 days after receipt of the application or after such longer time as both the applicant and the APCO have agreed in writing. If the APCO determines that the application is not complete, the applicant shall be notified in writing of the decision specifying the information required. Upon receipt of any re-submittal of the application, a new 60-day period to determine completeness shall begin. The APCO may, during the processing of the application, request an applicant to clarify, amplify, correct, or otherwise supplement the information submitted in the application.

401.3 Make a final determination within one year of receipt of a complete application.

402 PUBLIC PARTICIPATION: Prior to issuing a federal PSD permit pursuant to this rule and after receipt of a complete application, the APCO shall:

402.1 Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

402.2 Make available at the District office a copy of all materials the applicant submitted, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination.

402.3 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.

402.4 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: 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.

402.5 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.

402.6 Consider all written comments 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 at the District office.

- 402.7 Make a final determination whether construction should be approved, approved with conditions, or disapproved.
- 402.8 Notify the applicant in writing of the final determination and make such notification available for public inspection at the District office.

**RULE 3.25 FEDERAL NEW SOURCE REVIEW
FOR NEW AND MODIFIED MAJOR PM2.5 SOURCES**

Adopted July 12, 2017
Amended May 15, 2019

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100 GENERAL

- 101 **PURPOSE:** The federal nonattainment New Source Review (NSR) program is a preconstruction permitting program for new major sources and major modifications to existing major sources located in areas classified as nonattainment with the National Ambient Air Quality Standards (NAAQS). The intent of this Rule is to incorporate the federal nonattainment NSR rule requirements from the Clean Air Act (CAA) for PM_{2.5} into the Yolo-Solano Air Quality Management District's (District's) Rules and Regulations.

The effective date of this Rule is the date the Rule is approved by EPA.

102 **APPLICABILITY:**

102.1 The provisions of this Rule shall only apply to new and modified sources located in those portions of the District that are designated nonattainment for the federal PM_{2.5} NAAQS, as listed in 40 CFR 81.305.

102.2 This Rule shall apply to any stationary source, whose emissions of PM_{2.5} or a PM_{2.5} precursor constitute a new major source or a major modification, as defined in this Rule. Emission calculations shall be performed as specified in Sections 402 and 403. This Rule shall not apply to sources with a Plantwide Applicability Limit (PAL) as provided in Section 415.

- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section, or part of this Rule for any reason is judged to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of the Rule.

200 DEFINITIONS: For the purposes of this Rule, the terms defined below shall apply. The definitions contained in title 40 CFR 51.165(a)(1), as it exists on July 1, 2017 are hereby incorporated by reference, and shall apply unless the same term is defined below.

201 **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, a national lakeshore or seashore.

202 **COMPLETE:** In reference to an application, an application which contains all of the information necessary for processing the application.

- 203 **EMISSION REDUCTION CREDIT (ERC):** Reductions of actual emissions from emission units that have been documented as being real, surplus, quantifiable, permanent and practically enforceable, in accordance with applicable District Rules.
- 204 **INTERNAL EMISSION REDUCTIONS:** Emission reductions which have or will occur at the same major stationary source as the proposed emission increase will occur.
- 205 **MAJOR MODIFICATION:** Any physical change, change in method of operation (including change in fuel), or addition, to a stationary source classified as a major source for PM_{2.5} or PM_{2.5} precursor emissions, which results in a significant emissions increase and a significant net emissions increase.
- 206 **MAJOR STATIONARY SOURCE:** A stationary source that emits or has the potential to emit 100 tons per year or more of directly emitted PM_{2.5}, or 100 tons per year or more of a PM_{2.5} precursor, or a physical change at a non-Major Stationary Source, if the change would constitute a Major Stationary Source by itself.
- Fugitive emissions associated with the emissions unit or stationary source shall not be included in the potential to emit of the emissions unit or stationary source for the purpose of determining whether the source is major unless the source belongs to one of the categories of stationary sources listed in 40 CFR 51.165(a)(1)(iv)(C).
- 207 **PM_{2.5}:** Particulate matter with an aerodynamic diameter smaller than or equal to a nominal 2.5 microns. Gaseous emissions which condense to form PM_{2.5} shall also be counted as PM_{2.5}.
- 208 **PM₁₀:** Particulate matter with an aerodynamic diameter smaller than or equal to a nominal 10 microns. Gaseous emissions which condense to form PM₁₀ shall also be counted as PM₁₀.
- 209 **PERMANENT:** An emission reduction which is federally enforceable for the life of a corresponding increase in emissions.
- 210 **PROJECT:** A physical change in, or change in the method of operation of, an existing stationary source.
- 211 **SHUTDOWN:** The cessation of operation of any air pollution control equipment or process equipment for any purpose.

- 212 **SIGNIFICANT:** A rate of emissions that would equal or exceed any of the following rates:
- 212.1 10 tons per year of direct PM_{2.5}, or
 - 212.2 40 tons per year sulfur dioxide emissions, or
 - 212.3 40 tons per year nitrogen dioxide emissions, or
 - 212.4 40 tons per year Volatile Organic Compound (VOC) emissions, or
 - 212.5 40 tons per year of ammonia.
- 213 **STARTUP:** The setting into operation of any air pollution control equipment or process equipment for any purpose except routine phasing in of process equipment.
- 214 **SURPLUS:** The amount of emission reductions that are, at the time of generation or 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 State Implementation Plan (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:
- 214.1 The federally-approved California SIP;
 - 214.2 Other adopted state air quality laws and regulations not in the SIP, including but not limited to, any requirement, regulation, or measure that: (1) the Local Air District or the state has included on a legally-required and publicly-available list of measures that are scheduled for adoption by the Local Air District or the State in the future; or (2) is the subject of a public notice distributed by the District or the State regarding an intent to adopt such revision;
 - 214.3 Any other source- or source-category specific regulatory or permitting requirement, including, but not limited to, Reasonable 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

214.4 Any regulation or supporting documentation that is required by the federal 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 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.

215 **TEMPORARY SOURCE:** Temporary emission sources such as pilot plants, and portable facilities, which are not operated or located within the District for more than a cumulative total of 90 days of operation in any continuous 12-month period.

216 **YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT (DISTRICT):** The local air pollution control agency and Reviewing Authority.

300 STANDARDS

301 **LOWEST ACHIEVABLE EMISSION RATE (LAER):** The applicant shall propose equipment which meets the LAER for PM_{2.5}.

302 **EMISSION OFFSETS:** The applicant shall provide ERCs or internal emission reductions in accordance with the following:

302.1 For a new major stationary source, the quantity of ERCs or internal emission reductions required shall be the product of:

- a. the sum of the (Potential To Emit) PTE of all emissions units, including fugitive emissions, and
- b. the offset ratio of 1:1.

302.2 For a major modification, the quantity of ERCs or internal emission reductions required shall be the product of:

- a. the sum of the difference between the potential to emit after the modification and the actual emissions before the modification for each emissions unit, including fugitive emissions, and
- b. the offset ratio of 1:1.

303 **STATEWIDE COMPLIANCE:** The applicant shall demonstrate that each existing Major Stationary Source owned or operated by the applicant in the State of California 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.

304 **ANALYSIS OF ALTERNATIVES:** Per U.S. Code 7502(c)(5), the applicant shall submit an analysis of alternative sites, sizes, production processes, and environmental control techniques for the proposed source that demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification. This requirement is functionally equivalent to the requirements of Division 13 of the Public Resources Code (California Environmental Quality Act-CEQA).

305 **VISIBILITY:** The applicant shall submit a determination of whether the Project impacts visibility at any Class I area. Such determination shall follow the procedure included in the Federal Land Managers' Air Quality Related Values Work Group Phase I Report—Revised (2010), Natural Resource Report NPS/NRCC/NRR—2010/232 (Guidance).

If the determination made using the Initial Screening Criteria provided in the Guidance exceeds the “annual emissions over distance factor,” the applicant shall submit a full evaluation of the visibility impacts from the Project performed in accordance with the Guidance.

306 **AMBIENT AIR QUALITY STANDARDS:** The Air Pollution Control Officer (APCO) may require the use of an air quality model to estimate the effects of a new or modified stationary source. The analysis shall estimate the effects of the new or modified stationary source and verify that the new or modified stationary source will not prevent or interfere with the attainment or maintenance of the PM_{2.5} NAAQS. 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 of Section 302.

307 **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). For the purposes of this Section, the definitions in 40 CFR 51.100 shall apply.

307.1 Before the APCO issues an Authority to Construct under this rule to a source with a stack height that exceeds good engineering practice (GEP) stack height, the APCO shall notify the public of the availability of the demonstration study and provide opportunity for a public hearing.

307.2 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 APCO prior to any emission limit being established.

307.3 The provisions of Section 307 do not restrict, in any manner, the actual stack height of any stationary source or facility.

308 **ENFORCEMENT:** Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this Rule, any changes to the application as required by the APCO, or with the terms of its Authority to Construct, shall be subject to enforcement action.

309 **COMPLIANCE:** Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the SIP and any other requirements under local, state, or federal law.

310 **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 otherwise 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.

400 ADMINISTRATIVE REQUIREMENTS

401 **VISIBILITY:** In cases where the Project exceeds the “annual emissions over distance factor” provided in the Initial Screening Criteria section of the Guidance, and a full visibility evaluation is required to be submitted in accordance with Section 305 herein, the District shall consult with the Federal Land Manager (FLM) to ascertain the FLM’s determination as to whether the Project will impact a Class I Federal area.

The District shall include the FLM’s determination in its rationale for approval or denial of a Project. In the event the District deviates from the FLM’s determination regarding a Project, the rationale for the deviation shall be included in the Notification of the Project per Section 412 herein.

402 **MAJOR MODIFICATION CALCULATIONS:** The provisions set out in this Section shall be used to determine if a proposed Project will result in a major modification to an existing major stationary source. These provisions shall not be

used to determine the quantity of offsets required for a Project subject to the requirements of this Rule.

402.1 Except as otherwise provided in Section 403, a Project is a major modification for PM_{2.5} if it first causes a significant emissions increase and additionally causes a significant net emissions increase.

402.2 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 Subsections 402.3 through 402.5. 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* (40 CFR 51.165(a)(1)(vi)). Regardless of any such preconstruction projections, a major modification results if the Project causes a significant emissions increase and a significant net emissions increase.

402.3 **Actual-to-Potential-to-Emit Applicability Test for Projects that Only Involve Existing Emissions Units.** The owner or operator of a major polluting facility may elect to use the emissions unit's potential to emit, in tons per year, to determine if a significant emissions increase is projected to occur.

402.4 **Actual-to-Projected-Actual Applicability Test for Projects that Only Involve Existing Emissions Units.** A significant emissions increase 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.

402.5 **Actual-to-Potential Test for Projects that Only Involve Construction of a New Emissions Unit(s).** A significant emissions increase is projected to occur if the sum of the difference between the PTE 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.

402.6 **Hybrid Test for Projects that Involve Multiple Types of Emissions Units.** A significant emissions increase is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in Subsection 402.3, 402.4, or 402.5, as applicable, with respect to each emissions unit, equals or exceeds the significant amount for that pollutant.

403 **PROJECTS WHICH RELY ON A PROJECTED ACTUAL EMISSIONS TEST:** The provisions of this Section shall apply to existing emissions units located at a major stationary source of PM_{2.5} or PM_{2.5} precursor emissions, other than a source with a Plant-wide Applicability Limit (PAL) permit, if the owner or operator has determined that the Project is not a major modification, but has a projected emission increase of at least 50% of the amount that is a “Significant Emission Increase,” as defined in 40 CFR 51.165(a)(1)(xxvii); and the owner or operator elects to use the methods specified in Subsections 402.3 through 402.6 to calculate emission increases from the Project.

403.1 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 PM_{2.5} or PM_{2.5} precursors 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 PM_{2.5} or PM_{2.5} precursors, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Paragraph (B)(3) of the definition of *Projected Actual Emissions* and an explanation for why such amount was excluded, and any netting calculations, if applicable.

403.2 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 Subsection 403.1 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 before beginning actual construction, except such owner or operator may be subject to the requirements of District Rules 3.1 and 3.4, including the requirement to obtain an Authority to Construct, or other applicable requirements.

403.3 The owner or operator shall monitor the emissions of PM_{2.5} or PM_{2.5} precursors that could increase as a result of the Project and that are emitted by any emissions unit identified in Subsection 403.1.b; and calculate and maintain a record of the annual emissions (in tons per year (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 PM_{2.5} or a PM_{2.5} precursor at such emissions unit.

- 403.4 If the emissions unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the APCO within 60 days after the end of each calendar year during which records must be generated under Subsection 403.3, setting out the unit's annual emissions during the calendar year that preceded submission of the report.
- 403.5 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 Subsection 403.1.b exceed the Baseline Actual Emissions by a Significant amount for PM_{2.5}, and if such emissions differ from the Projected Actual Emissions (prior to exclusion of the amount of emissions under the definition of *Projected Actual Emissions*) as documented and maintained pursuant to Subsection 403.1.b. Such report shall be submitted to the APCO within 60 days after the end of such year. The report shall contain the following:
- a. The name, address, and telephone number of the major stationary source;
 - b. The annual emissions, as calculated pursuant to Subsection 403.3; and
 - c. Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
- 403.6 The owner or operator of the source shall make the information required to be documented and maintained pursuant to this Section 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).
- 403.7 A "reasonable possibility" under this Section 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 PM_{2.5}; or
 - b. A projected actual emissions increase that, added to the amount of emissions excluded under Paragraph (B)(3) 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 PM_{2.5} or a PM_{2.5} precursor.

- c. For a Project for which a reasonable possibility occurs exclusively within the meaning of Subsection 403.7.b, the provisions of Subsections 403.2 through 403.5 do not apply to the Project.

403.8 Records required for compliance with this Section shall be made available to District personnel or to the general public upon request.

404 OFFSET REQUIREMENTS:

404.1 Pollutant-specific emissions shall be offset with federally enforceable ERCs or with internal emission reductions.

404.2 ERCs from one or more sources may be used, alone or in combination with internal emission reductions, in order to satisfy offset requirements.

404.3 Emissions reductions achieved by shutting down an existing emission 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 emission units. However, in no event may credit be given for shutdowns that occurred before August 7, 1977.

405 OFFSET TIMING:

405.1 Except as provided by 405.2, the decrease in actual emissions used to generate ERCs or internal emission reductions must be federally enforceable at the time of ATC issuance and shall occur no later than the commencement of operation of the new or modified major stationary source.

405.2 Where the new emission unit is a replacement for an emission unit that is being shut down in order to provide the necessary offsets, the APCO may allow up to 180 calendar days for shakedown or commissioning of the new emission unit before the existing emission unit is required to cease operation.

406 EMISSION REDUCTION REQUIREMENTS:

406.1 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 Authority to Construct containing the offset requirements.

406.2 Permitted sources whose emission reductions are used to satisfy offset requirements must appropriately amend, or cancel their Authority to Construct or Permit to Operate, to reflect their new reduced PTE, including practicably enforceable conditions to limit their PTE.

406.3 Emission reductions must be obtained from the same federal PM2.5 nonattainment area, except 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 national ambient air quality standard in the nonattainment area in which the source is located.

406.4 The use of ERCs shall not provide:

- a. Authority for, or the recognition of, any pre-existing vested right to emit any PM2.5;
- 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.

407 **RESTRICTIONS ON TRADING POLLUTANTS:** Interpollutant offsets between PM2.5 and PM2.5 precursors are not allowed unless modeling has been used to demonstrate appropriate PM2.5 interpollutant offset ratios in an EPA-approved PM2.5 Attainment Plan. In such cases, the APCO shall impose, based on an air quality analysis, emission offset ratios in addition to the 1:1 offset ratio of Section 302. Interpollutant emission offsets must receive written approval by the U.S. Environmental Protection Agency.

408 **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 notice and opportunity for public comment.

409 **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 the direct emissions from the stationary source, the requirements of Section 404, but no other provisions of this Rule, must also be met for secondary emissions.

410 **APPLICATION:** In addition to any information required to be submitted with the Authority to Construct application required by Rule 3.1, the following information shall be submitted if the Project is a new major source or a major modification for PM_{2.5}, in accordance with the calculations of this Rule:

410.1 A determination as to whether the Project will result in any secondary emissions.

410.2 The calculations used to determine applicability of this Rule, including the emission calculations (increases or decreases) for each Project that occurred during the contemporaneous period.

410.3 The calculations, pursuant to Section 302 (Emission Offsets), used to determine the quantity of offsets required for the proposed Project.

410.4 Identification of existing emission reduction credits 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.

410.5 Compliance Certification stating that all other federally major facilities within the State of California owned, operated, or under the responsibility of the applicant are in compliance with all air quality rules and regulations.

411 **PRELIMINARY DECISION:** Following acceptance of an application as complete, the APCO shall perform the evaluations required to determine compliance with all applicable District, state and federal rules, regulations, or statutes and shall make a preliminary written decision as to whether an Authority to Construct 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.

411.1 Prior to issuance of a preliminary written decision to issue an Authority to Construct for a new major stationary source or major modification, the APCO shall determine:

- a. That each emissions unit(s) that constitutes the new source or modification will not violate any applicable requirement of the District's portion of the California State Implementation Plan (SIP); and
- b. That the emissions from the new or modified stationary source will not interfere with the attainment or maintenance of any applicable national ambient air quality standard; and
- c. That the emission limitation for each emissions unit that constitutes the new source or modification specifies LAER 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 302; and
- e. That all ERCs or internal emission reductions required for the new source or modification have been identified and have been made federally enforceable or legally and practicably enforceable; and

- f. That the quantity of ERCs or internal emission reductions determined under Section 302 will be surrendered prior to commencing operation.

411.2 Temporary sources and emissions resulting from the construction phase of a new source are exempt from paragraphs (d), (e) and (f) of Section 411.1.

412 **NOTIFICATION AND REVIEW OF PROPOSED DECISION:** After the APCO has made a preliminary written decision to issue an Authority to Construct for a new Major Stationary Source or Major Modification, the APCO shall:

412.1 Publish in at least one newspaper of general circulation in the District, or on the District's webpage, 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).

412.2 No later than the date the notice of the preliminary written determination is published, make the following available: a copy of all materials the applicant submitted, a copy of the preliminary decision, a copy of the proposed permit, and a copy or summary of other materials, if any, considered in making the preliminary written decision.

412.3 Send a copy of the notice of public comment to the applicant, EPA Region 9, the California Air Resources Board (ARB), 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.

412.4 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.

413 **AUTHORITY TO CONSTRUCT – FINAL DECISION:** Prior to making a final decision to issue an Authority to Construct for a new major stationary source or major

modification, the APCO shall 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 determination on the approvability of the application and make all comments available, including the District's response to the comments, for public inspection in the same locations where the District made available preconstruction information relating to the proposed source or modification. In addition, a copy of the final determination together with the District's responses to comments will be submitted to any commenters and the reviewing authorities noted in Section 412.3.

- 414 **PLANTWIDE APPLICABILITY LIMIT (PAL):** The APCO may approve the use of an actuals PAL for any existing PM_{2.5} or PM_{2.5} precursor major stationary source if the PAL meets the requirements contained in 40 CFR 51.165(f)(1) through (15). The provisions of 40 CFR 51.165(f)(1) through (15), as they exist on July 1, 2017 are hereby incorporated by reference.

REGULATION VI. AGRICULTURAL BURNING

11/3/82

RULE 6.1 Prohibitions.

a. Days.

1. Agricultural burning for agricultural operations or range improvement as defined in Rule 1.2.a shall be permitted only on permissive burn days and under provisions of this regulation unless authorized otherwise by the Air Pollution Control Officer pursuant to the authority granted to him by these regulations.
2. During the period between January 1 and May 31 range improvement burning may be conducted by special permit of the Air Pollution Control Officer on a no-burn day, providing that more than 50 percent of the land has been brush treated and that the California Air Resources Board has not prohibited such range improvement burning in order to maintain suitable air quality.
3. No-burn days declared by the District can be declared for specific areas within the District. A District declared no-burn day will be based on whether there has been poor meteorological dispersion of pollutants on previous days such that visibility and Federal oxidant standard might be violated and agricultural burning could exacerbate poor ambient air quality conditions for the day.

- b. Other Material. Materials listed in Rule 2.9 shall not be disposed of under agricultural burning.
- c. Minimum Smoke. No person shall set or allow an open fire for agricultural operations burning and range improvement burning unless under conditions which produce a minimum of smoke.
- d. Dirt and Moisture. No person shall knowingly set or permit an open outdoor fire for agricultural operations burning and range improvement burning unless materials are reasonably free of dirt and moisture.
- e. Material Preparation. No person shall knowingly set or permit an open outdoor fire for agricultural operations burning or range improvement burning unless materials have been prepared as follows:
 - 1. Straw and stubble from crops other than from rice crops are not required to have an after-harvest drying period.
 - 2. The rules for preparation of rice straw and stubble are as follows:
 - (a) A minimum drying period of three days for evenly spread rice straw.
 - (b) A minimum drying period of ten days for rice straw not evenly spread.
 - (c) No minimum drying period for rice straw that passes the crackle test.
 - (d) Following a rain exceeding 0.15 inches rice straw shall not be burned until it passes the crackle test.
 - (e) A field shall pass the crackle test if a composite sample of straw from under the mat, the center of the mat, and from different areas of the field gives an audible crackle when broken.

3. A minimum drying period of thirty (30) days for trees, stumps, and large branches greater than approximately six (6) inches in diameter. Trees will be felled before burning.
4. Sufficient time for other materials, such as small branches, grass and weeds, vegetable tops, seed screenings, in order to assure rapid and complete combustion with a minimum of smoke.
5. For range burning, brush shall have been treated at least six (6) months prior to burning if economically and technically feasible.
6. The Air Pollution Control Officer may by order authorize burning in shorter times if the denial of such permit would threaten imminent and substantial economic loss.
7. Materials other than vegetation shall be prepared and burned by special permit and conditions specified by the Air Pollution Control Officer and local fire agency.

f. Total Daily Burning.

1. Except for the period of October 1 through November 15, no more than 2500 acres of field or range materials shall be burned within the District on any one day.
2. The following requirements are for burning in the period October 1 through November 15.
 - (a) The daily acreage on permissive burn days for open burning in agricultural operations in the growing of crops or raising of fowl or animals shall be restricted to that amount of particulate emissions allotted by the Sacramento Valley Air Basin Control Council.

11/3/80

(b) The Air Pollution Control Officer shall not schedule prior to the day of burning more acres than would amount to 22 tons of particulate matter emissions.

(c) The Air Pollution Control Officer may allow on the day of burning an amount of acreage which would equal the particulate matter base emission amount allocated by the Sacramento Valley Air Basin Control Council.

(d) Under favorable ambient conditions the Air Pollution Control Officer may allow additional acreage over the base emission amount allocated by the Sacramento Valley Air Basin Control Council provided any such additional burning is done under the provisions established by the Sacramento Valley Air Basin Control Council for one-section or two-section burning.

11/8/82

3. "The Air Pollution Control Officer can upon specific authorization of the District Board, allow other amounts of acreage than given above to be burned in the District for purposes which are intended to improve burning practices and lessen adverse impacts of agricultural burning which are consistent with the District allocation given in the SVAB plan for agricultural burning."

11/3/80

g. Burning Hours.

1. No person shall knowingly ignite or permit to be ignited any field crop materials for agricultural operations burning before 10:00 A.M. or after 5:00 P.M. of any day.
2. Any other agricultural operations burning or range improvement burning shall not be ignited before 8:00 A.M. or after 5:00 P.M. or one hour before sunset, whichever is later.
3. The Air Pollution Control Officer may set other hours on the basis of fire protection considerations.
4. The Air Pollution Control Officer may limit the burning hours when in his judgment additional burning would seriously affect the air quality over any populated area.

11/8/82

5. "The Air Pollution Control Officer can, upon specific authorization of the District Board, set other burning hours than given above for purposes which are intended to improve burning practices and lessen adverse impacts of agriculture burning consistent with burning hours provided for in the SVAB plan for agricultural burning."

11/3/80

h. Ignition.

1. Only those devices approved by the Air Pollution Control Officer may be used for ignition of agricultural operations burning and range improvement burning. Approved ignition devices are butane, propane, LPG pressure fuel devices, and other ignition devices approved by the Air Pollution Control Officer.

2. All field and range burning shall be ignited by backfiring or alternatively by strip firing into the wind except where extreme fire hazards are declared to exist or when the crop residues are not suitable for burning by such ignition, as approved by the Air Pollution Control Officer.

1. Burning Near Cities. Except as authorized by special permit and subject to burning restrictions in certain designated areas as below, no person shall knowingly set or permit an open outdoor fire for agricultural operations burning or range improvement burning within three miles of a populated area if the wind is towards that area. The Air Pollution Control Officer and the local fire agency may set additional conditions on burning which will minimize adverse effects over populated areas.

1. AREA I

That area bounded by Highway 16 on the north, Russell Boulevard on the south, CR 104 south of CR 17 to CR 29, then easterly two miles, then southerly to Russell Boulevard on the east, and CR 95 on the west will be designated as Area I and will be subject to the following burning regulations:

- (a) Burning of 50 acres or less by any one person is allowed when winds, either ground level or elevated, are away from populated areas and the field is within three miles of a populated area.
- (b) Burning of more than 50 acres may take place when the wind is away from populated areas and the field is not within three miles of a populated area, provided the person doing the burning has established the direction of the wind by burning a small acreage which shows no adverse effect over a populated area and the wind is anticipated to be steady over the time of burning.
- (c) Where field residue has been reduced by practices such as baling or foraging, the APCO may permit larger acreages.

2. AREA II

That area within three miles of the South Sacramento area known as the Pocket Area, and bounded by West Sacramento on the north, Fumhouse

Road on the south, following the Pumphouse Road alignment to the Deepwater Channel, the Deepwater Channel on the west, and the Sacramento River on the east will be designated as Area II and subject to the same burning regulations as Area I.

3. AREAS III AND IIIA

That area north of the City of Woodland is broken into three-mile and five-mile areas as follows:

- (a) The area north of the City of Woodland bounded by Highway 16 on the south, CR 17 on the north, CR 95 on the west, and the alignment of CR 104 on the east is designated as Area III and is subject to the following burning regulations:
 - (1) No burning is allowed on northerly winds at either ground level or upper altitude.
 - (2) No acreage limitations on southerly winds provided wind direction has been established at ground level and elevated levels prior to burning any more than 50 acres by any one person.
- (b) North of this area between CR 17 and CR 15, bounded on the west by CR 95 or its alignment and on the east by CR 104 or its alignment is designated as Area IIIA or a five-mile area, and burning is allowed only under the following conditions:

- (1) On northerly winds a maximum of 50 acres may be ignited at any given time by one person until it has been established that burning of additional acreage will not adversely affect air quality over Woodland and permission is given by the Air Pollution Control Officer or the fire agency.
- (2) On southerly winds there are no acreage limitations provided wind direction has been established at upper altitude and ground surface and is anticipated to be steady.

4. AREAS IV AND IVA

That area south of the City of Davis is broken into three-mile and five-mile areas as follows:

- (a) The area bounded by Russell Boulevard on the north, on the south by Maxwell Lane or its alignment, on the east by CR 106 or its north-south alignment, and on the west by the CR 95 alignment is designated as Area IV and is subject to the following burning regulations:

- (1) No burning is allowed on southerly winds at either ground level or upper altitude.

(2) Burning is allowed on northerly winds with no acreage limitations provided wind direction has been established at ground level and elevated levels prior to burning any more than 50 acres by any one person.

(b) South of this area between the Maxwell Lane alignment on the north and Dixon Avenue or its alignment on the south, bounded on the east by Mace Boulevard, and on the west by CR 95 (which is the Batavia Road alignment south of I-5), is designated as Area IVA or a five-mile area and burning is allowed only under the following conditions:

- (1) On southerly winds a maximum of 50 acres may be ignited at any time by one person until it has been established that burning of additional acreage will not adversely affect air quality over any populated area and permission is given by the Air Pollution Control Officer or the fire agency.
- (2) On northerly winds there is no acreage limitation provided wind direction has been established at upper altitude and ground surface and is anticipated to be steady.

11/3/80

- k. Exceptions. The Air Pollution Control Officer may
- exempt from these rules burning performed by flaming
- with LPG or natural gas fired burners which are used
- to desiccate seed crops or to kill seedling grass
- and weeds in orchards, field crops, and ditch banks
- when the growth is such that combustion will not
- continue without the burner flame.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 6.2 Permits to Burn.

- a. No person shall knowingly set or permit an open outdoor fire for agricultural burning unless he has a valid permit to burn from a designated agency.
- b. Application. Applications for a permit to burn shall be submitted to the designated agency and shall provide information specified by the designated agency for fire protection purposes and shall provide information required to determine whether the proposed fire will be according to these regulations, including information concerning the kinds of materials and amounts burned.

11/3/80

Rule 6.3 Special Permits.

- a. "Special permit" applies only to permits issued for State Air Resources Board declared no-burn days.

b. Applications for special permits to do agricultural operations burning or range improvement burning on no-burn days or to burn within 3 miles of a populated area when the wind direction is towards the populated area shall, in addition to information required for regular permits, include information concerning the reason why a denial of a special permit would result in imminent and substantial economic loss.

c. Special permits will be issued only when the following conditions are met:

1. No special permits will be issued for any day on which it is anticipated the Federal ambient ozone standard of .12 ppm will be exceeded.
2. No special permits will be issued to anyone, except for due cause, until the third day after a burn day or to anyone who has not used the previous burn day.
3. No special permits will be issued to any person unless burning under the special permit will comply with all applicable burning rules.
4. No special permits shall be issued when burning under such permit would adversely affect air quality over populated areas.
5. The total acreage on any given day under special permits shall not exceed 10% of material allowed to be burned on permissive burn days during that period of the year.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 6.4 Forms.

The Air Pollution Control Officer and the designated agencies shall jointly prepare forms of applications and permits to burn in accordance with the Rules and Regulations.

2/25/73

RULE 6.5 Standards for Granting Applications.

b. Burning permits will be issued on a quarterly basis with restrictions for shorter times at the discretion of the Air Pollution Control Officer and issuing agency. Permits may cover any land area by the same permittee within a given agency's area. Separate permits will be required for burning in areas of different agencies.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 6.7 Permit Form.

Permits to burn shall contain the following:

- a. Name and address of the permittee.
- b. Location of the proposed burn.
- c. Total acreage to be burned or acreage from which material was generated.
- d. The kind of agricultural material to be burned.
- e. Period of time for the permit.
- f. The statement, "THIS PERMIT IS VALID ONLY ON THOSE DAYS WHICH ARE NOT PROHIBITED BY THE STATE AIR RESOURCES BOARD PURSUANT TO SECTION 41855 OF THE HEALTH AND SAFETY CODE."
- g. Such other conditions as may be required by the agency issuing the permit.
- h. The opening and closing hours for ignition of fires.

YOLO SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 6.8 Fire Prevention.

Nothing in these rules is intended to permit an open outdoor fire for agricultural operations burning or range improvement burning on days when such burning is prohibited by public fire protection agencies for purposes of fire control or prevention.

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

RULE 10.3 GENERAL CONFORMITY

ADOPTED February 8, 1995

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100 GENERAL

101 **PURPOSE:** The U.S. Environmental Protection Agency's (EPA) Federal General Conformity Rule became effective on January 31, 1994. The purpose of this Rule is to implement part of the Federal Clean Air Act Amendments of 1990, Section 176 (c): a federal action must not adversely affect the timely attainment and maintenance of national air quality standards or emission reduction progress plans, cause or contribute to any new violations of an air quality standard or emission reduction progress plan, cause or contribute to any new violations of an air quality standard, increase the frequency or severity of any existing violation, or delay the timely attainment of any standard or required interim emission reductions or milestones in any applicable area.

The Rule requires that State Implementation Plans (SIPs) be revised to incorporate the Rule by November 30, 1994. Therefore, the District is adopting the Federal General Conformity Rule by reference.

102 **CODE OF FEDERAL REGULATIONS:** The Code of Federal Regulations, Title 40, Chapter I, Subchapter C, Parts 6 and 51 are incorporated herein by this reference and shall apply as if fully set forth herein.

103 **APPLICABILITY:** The General Conformity Rule applies to federal activities that are not covered by the Transportation Conformity Rule. The Rule covers all "direct" and "indirect" emissions that are "reasonably foreseeable" resulting from a federal action.

RULE 11.2 CONFINED ANIMAL FACILITIES PERMIT PROGRAM

ADOPTED June 14, 2006

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100 GENERAL

101 **PURPOSE:** The purpose of this Rule is to implement the requirements of Section 40724.6 of the California Health and Safety Code.

102 **APPLICABILITY:** The provisions of this Rule shall apply to any Confined Animal Facility (CAF).

103 EXEMPTIONS:

103.1 Except for the requirements of Section 502 of this Rule, the provisions of this Rule shall not apply to a Confined Animal Facility which does not meet the definition of a Large Confined Animal Facility as defined in Section 211 of this Rule.

103.2 The provisions of this Rule shall not apply to a Confined Animal Facility subject to the requirements of District Rule 3.8 - FEDERAL OPERATING PERMITS.

200 DEFINITIONS

201 **AIR CONTAMINANT:** As defined in District Rule 1.1, excluding odors.

202 **AIR POLLUTION CONTROL OFFICER (APCO):** The Air Pollution Control Officer of the Yolo-Solano Air Quality Management District, or his or her designee.

203 **BEST AVAILABLE CONTROL TECHNOLOGY (BACT):** As defined in District Rule 3.4.

204 **BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT):** An emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts.

205 **COMPLIANCE CERTIFICATION STATEMENT:** A statement which includes the following:

- a. A list of each CAF Permit term or condition (e.g., mitigation measure, emission limitation, standard, or work practice);
- b. The compliance status for each CAF Permit term or condition, which includes whether compliance was continuous or intermittent, and method(s) used to determine compliance for the current time period

- and over the entire reporting period;
 - c. A statement by the CAF Permit Holder that the information provided in the compliance certification statement is true, accurate, and complete;
 - d. The CAF owner or operator's printed name and signature.
- 206 **CONFINED ANIMAL FACILITY (CAF):** A 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.
- 207 **CONFINED ANIMAL FACILITY (CAF) PERMIT:** Permit issued to a CAF pursuant to the provisions of this Rule.
- 208 **CORRECTION STATEMENT:** A statement which includes the following:
- a. Description of the action taken to correct the deviation;
 - b. The date the corrective action was completed;
 - c. A statement by the CAF Permit Holder that the information provided in the correction statement is true, accurate, and complete;
 - d. The CAF owner or operator's printed name and signature.
- 209 **DEVIATION STATEMENT:** A statement which includes the following:
- a. Description of the deviation from the CAF Permit terms and conditions;
 - b. The date the deviation occurred;
 - c. The probable cause of the deviation;
 - d. A compliance schedule to outline the course of action to be taken by the CAF Permit Holder to correct the deviation, including an estimated time-frame to complete the corrective action;
 - e. A statement by the CAF Permit Holder that the information provided in the deviation statement is true, accurate, and complete;
 - f. The CAF owner or operator's printed name and signature.
- 210 **EXISTING CONFINED ANIMAL FACILITY:** A CAF which is subject to the requirements of this Rule upon Rule adoption.
- 211 **LARGE CONFINED ANIMAL FACILITY:** A CAF which exceeds any threshold listed in the table below:

Livestock Category	Threshold
Dairy	1,000 milking cows
Beef Cattle	3,500 beef cattle
Other Cattle	7,500 calves, heifers, or other cattle
Turkeys	100,000 head
Chickens	650,000 head
Swine	3,000 head
Sheep, lambs, or goats	15,000 head of sheep, lamb, goats, or any combination of the three
Horses	2,500 head
Ducks	650,000 head
Any other livestock not listed above	30,000 head

212 **MODIFIED CONFINED ANIMAL FACILITY:** A CAF that changes the design, capacity, process, or arrangement of the CAF which will increase or affect the kind or amount of air contaminants emitted from the CAF.

213 **NEW CONFINED ANIMAL FACILITY:** A CAF which becomes subject to the requirements of this Rule after the date of Rule adoption.

300 STANDARDS

301 **CAF PERMIT:** No person shall operate a CAF without first obtaining a CAF Permit from the APCO.

302 **CAF MODIFICATION:** No person shall alter a CAF without following the application procedures outlined in Section 402.2 of this Rule.

303 STANDARDS FOR GRANTING APPLICATIONS:

303.1 The APCO shall deny any application for a CAF Permit if the applicant does not show that the

CAF is so designed, controlled, equipped, or operated with such air pollution control equipment, that it may be shown to operate without emitting or without causing to be emitted any air contaminant in violation of these Rules and Regulations, or any state or federal statutes or regulations that may be enforceable by the APCO.

303.2 The APCO shall determine that an applicant has complied with the applicable requirements of Health and Safety Code Section 42301.6, preparation and distribution of public notice, prior to approving an application for a CAF Permit.

304 **CAF PERMIT TRANSFER**

304.1 A CAF Permit shall not be transferable, by operation of law or otherwise, from one location to another.

304.2 A CAF Permit may be transferred from the CAF Permit Holder to another entity provided that an application for such transfer is submitted in accordance with Section 402.4 of this Rule. It shall be the transferee's responsibility to inform the District on assumption of ownership or operating control of the CAF.

305 **EXISTING CAF:** An existing CAF that complies with the application procedures outlined in Section 402.1 of this Rule, and for which the District grants a CAF Permit, shall implement all emission control measures required by the CAF Permit within one (1) year of the date the CAF Permit is issued to the existing CAF.

306 **BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY:** The APCO shall require the use of Best Available Retrofit Control Technology to reduce emissions from pollutants that contribute to the nonattainment of any ambient air quality standard, within the regulatory authority of the APCO, for any CAF.

307 **BEST AVAILABLE CONTROL TECHNOLOGY:** The APCO shall require the use of Best Available Control Technology to reduce emissions from pollutants that contribute to the nonattainment of any ambient air quality standard, within

the regulatory authority of the APCO, for any new CAF or modified CAF.

308 **MITIGATION PLAN:** All applications submitted pursuant to this Rule shall include an emissions mitigation plan. The emissions mitigation plan shall demonstrate that the facility will comply with Section 306 or Section 307 of this Rule, as applicable.

309 **OPERATION ACCORDING TO THE CAF PERMIT CONDITIONS:** No person shall operate a CAF contrary to the terms and conditions specified on the CAF Permit issued in accordance with the provisions of this Rule.

400 **ADMINISTRATIVE REQUIREMENTS**

401 **CAF PERMIT APPLICATIONS:** Requests for a CAF Permit shall be initiated by filing a standard CAF Permit application with the APCO together with the initial filing fee required by Section 601 of this Rule.

402 **APPLICATION REQUIREMENTS:**

402.1 **EXISTING CAF:** The owner or operator of an existing CAF shall submit a standard CAF Permit application no later than six (6) months after the date of rule adoption.

402.2 **MODIFICATION TO CAF PERMIT:** Applications for modification to a CAF Permit shall be submitted prior to altering the CAF. The CAF shall not be operated contrary to the terms and conditions specified in the existing CAF Permit prior to APCO issuance of the new CAF Permit.

402.3 **CAF PERMIT RENEWAL:** For renewal of a CAF Permit, granted pursuant to this Rule, the CAF Permit Holder shall submit a standard CAF Permit application no earlier than twelve (12) months and no later than six (6) months before the expiration date of the current CAF Permit.

402.4 **TRANSFER OF OWNERSHIP:** Applications to transfer a CAF Permit shall be submitted within thirty (30) days of the ownership change occurring. Operation of the CAF by the new owner shall be under the terms and

conditions of the CAF Permit issued to the previous owner until the new CAF Permit is issued.

403 INFORMATION:

- 403.1 The application for a CAF Permit shall contain all information necessary to enable the APCO to prepare an emissions inventory of all regulated air pollutants emitted from the CAF.
- 403.2 The application for a CAF Permit shall contain all information necessary to enable the APCO to make a determination as required by Section 303 of this Rule.
- 403.3 The APCO may at any time require from an applicant for, holder of, or one required to hold, a CAF Permit such information, analysis, plans, or specifications as will disclose the nature, extent, quantity, or degree of air contaminants which are or may be discharged into the atmosphere.

404 COMPLETENESS REVIEW: The APCO shall determine if an application for a CAF Permit, submitted pursuant to Sections 401, 402.1, 402.2, and 402.3 of this Rule, is complete and shall notify the applicant of the determination not later than thirty (30) days of receiving the application, or after such longer time as both the applicant and APCO have agreed upon in writing. If the APCO determines that the application is not complete, the applicant shall be notified in writing of the decision, specifying the information required. Upon receipt of any re-submittal of the application, a new thirty (30) day period to determine completeness shall begin.

405 APPLICATION PROCESSING: The APCO shall act upon an application for a CAF Permit, submitted pursuant to Sections 401, 402.1, 402.2, and 402.3 of this Rule, no later than six (6) months after acceptance of an application as complete.

406 PUBLIC NOTIFICATION:

- 406.1 Within the applicable time-frame specified in Section 405 of this Rule, the APCO shall

provide at least 30 days for the notice of, and opportunity to review and comment on, any proposed decision to issue a CAF Permit pursuant to this Rule, except CAF Permit Transfers.

406.2 The APCO shall provide written notice, the proposed CAF Permit, and, upon request, copies of the District analysis to interested persons and agencies. Interested persons or agencies shall include persons who have requested in writing to be notified of proposed decisions pursuant to this Rule.

407 **CONDITIONAL APPROVAL:** The APCO may include written conditions on any CAF Permit to ensure compliance with these Rules and Regulations.

408 **PERMIT REOPENING:** The APCO may reopen and revise a CAF Permit under the following circumstances:

408.1 To correct a material mistake or an inaccurate statement; or

408.2 To incorporate any new, revised, or additional applicable requirements.

409 **DENIAL OF APPLICATIONS:** In the event of denial of an application submitted pursuant to this Rule, the APCO shall notify the applicant in writing of the basis for denial.

410 **APPEALS:** Within thirty (30) days after notice by the APCO of denial or approval of an application submitted pursuant to this Rule, the applicant may petition the Hearing Board, in accordance with District Rule 5.1, for a public hearing. The Hearing Board, after notice and a public hearing, may sustain or reverse the action of the APCO; such order may be made subject to specified conditions.

411 **RIGHT OF ENTRY:** In order to ascertain that a CAF is operating under the requirements of its CAF Permit, the APCO may at any time, without notice, inspect the operations and any pertinent records.

412 **TERM OF CAF PERMIT:** The term of a CAF Permit shall not exceed three (3) years from the date of issuance.

413 **CAF PERMIT RENEWAL:**

413.1 Each CAF Permit shall be renewable at the end of the CAF Permit term provided that the CAF Permit Holder complies with the application procedures outlined in Section 402.3 of this Rule.

413.2 The APCO shall review every CAF Permit upon renewal to determine the feasibility of mitigation measures and that permit conditions are adequate to ensure compliance with, and the enforceability of, District Rules and Regulations applicable to the CAF for which the permit was issued. Applicable District Rules and Regulations shall include those which were in effect at the time when the CAF Permit was issued or modified, or which have been subsequently adopted and made retroactively applicable to a CAF by the District Board of Directors. The APCO shall revise the conditions, if such conditions are not consistent, in accordance with all applicable Rules and Regulations.

500 MONITORING AND RECORDS

501 **NUMBER OF ANIMALS:** The owner or operator of a CAF shall keep records that specify the number of animals maintained daily. Such records shall be maintained at a central place of business for a period of not less than three (3) years and shall be made available to the APCO or their designee upon request.

502 **NUMBER OF ANIMALS - EXEMPTION DEMONSTRATION:** For any CAF which exceeds 50 percent of any Large CAF threshold listed in Section 211 of this Rule claiming an exemption pursuant to Section 103.1 of this Rule, the owner or operator shall maintain records demonstrating that the CAF meets the exemption criteria of this Rule. Such records shall be maintained at a central place of business for a period of not less than three (3) years and shall be made available to the APCO or their designee upon request.

503 **REPORTING:**

503.1 **DEVIATION STATEMENT:** The CAF Permit Holder

shall report any deviation from the CAF Permit terms and conditions through a deviation statement. A deviation statement shall be submitted to the APCO as expeditiously as practical, but not later than five (5) days after deviation occurrence.

503.2 **CORRECTION STATEMENT:** The CAF Permit Holder shall submit to the APCO a correction statement as expeditiously as practical, but not later than five (5) days after the action was completed to correct the deviation for which a deviation report was submitted pursuant to Section 503.1 of this Rule.

503.3 **COMPLIANCE CERTIFICATION STATEMENT:** The CAF Permit Holder shall submit a compliance certification statement to the APCO every twelve (12) months.

600 FEES

601 **CAF PERMIT PROCESSING FEE:** The fee for applications filed in accordance with Sections 401, 402.1, 402.2, and 402.3 of this Rule shall be based on the actual hours spent by District staff in evaluating the application and processing the CAF Permit. The fee shall be assessed in accordance with the time and materials labor rate established in Section 307.10 of District Rule 4.1. All applications filed in accordance with Sections 401, 402.1, 402.2, and 402.3 shall be submitted with an initial filing fee. The initial filing fee shall be equal to two (2) hours at the time and materials labor rate established in Section 307.10 of District Rule 4.1. Application filing fees cannot be refunded or applied to any other application.

602 **CAF PERMIT TRANSFER FEE:** A fee equal to two (2) hours at the time and materials labor rate, established in Section 307.10 of District Rule 4.1, shall be charged to process applications filed in accordance with Section 402.4 of this Rule. The fee shall be submitted at the time of application.

603 **ANNUAL CAF PERMIT FEE:** An annual fee shall be charged to CAF Permit Holders in accordance with the requirements of Section 500 of District Rule 3.8.

604 **NOTIFICATION OF FEES DUE:** The CAF Permit Holder will be notified by mail of fees due and payable and the date the fees are due. If the fees are not paid by the specified due date, the District shall assess a penalty of not more than 50 percent of the fees due, but in an amount sufficient, in the District's determination, to pay the District's additional expenses incurred by the CAF Permit Holder's non-compliance. If the fees or penalty are not paid within thirty (30) days after notice, the CAF Permit will be cancelled and the CAF Permit Holder will be notified by mail.