

SACRAMENTO METROPOLITAN AQMD

RULE 107 - ALTERNATIVE COMPLIANCE

(Adopted 8-1-96; Amended 9-5-96, 11-7-96, 3-6-97, 8-7-97, 6-4-98, 4-27-00, 9-25-03)

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100 GENERAL

101 **PURPOSE:** To provide an orderly procedure for the review of Authority to Construct and Permit to Operate applications for alternative compliance from certain emission standards established in applicable District Rules and Regulations by providing eligible emission reduction credits to offset the emission increases resulting from noncompliance if needed. This rule shall not be used for the following:

- 101.1 Compliance with Best Available Control Technology requirements pursuant to Rule 202, NEW SOURCE REVIEW;
- 101.2 Compliance with Maximum Available Control Technology standards as described in 40 CFR Part 63;
- 101.3 Compliance with National Emissions Standards for Hazardous Air Pollutants as described in 40 CFR Part 61;
- 101.4 Compliance with New Source Performance Standards as described in 40 CFR Part 60;
- 101.5 Compliance with toxic air contaminant regulations as described in Health and Safety Code Section 39665 et seq;
- 101.6 To avoid penalties or enforcement actions by obtaining credits after the fact of noncompliance;
- 101.7 For netting out of NSR or PSD requirements pursuant to Rule 202, NEW SOURCE REVIEW and Rule 203, PREVENTION OF SIGNIFICANT DETERIORATION; or
- 101.8 To meet requirements for motor vehicle emissions standards, reformulated gasoline, clean fueled fleets, employer trip reduction programs, or vehicle inspection and maintenance programs as described in Title II of the Clean Air Act and Division 26, Part 5 of the Health and Safety Code.

102 **APPLICABILITY:** This rule pertains only to emission standards established in Section 300 of the rules specified below and does not relieve a stationary source from any other requirements of those rules. Stationary sources subject to this rule must comply with all other requirements as though the stationary source was also subject to the emission standard provisions of the applicable rules. Such requirements include, but are not limited to, source testing, source test frequency, monitoring and recordkeeping. In addition, this rule may only be used by operations that are subject to the following District rules:

- 102.1 Rule 411, BOILER NO_x;
- 102.2 Rule 450, GRAPHIC ARTS OPERATIONS for compliance timelines that are in effect after March 6, 1997;
- 102.3 Rule 451, SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS for compliance timelines that are in effect after March 6, 1997;
- 102.4 Rule 452, CAN COATING;
- 102.5 Rule 454, DEGREASING OPERATIONS;
- 102.6 Rule 456, AEROSPACE ASSEMBLY AND COMPONENT COATING OPERATIONS;
- 102.7 Rule 459, AUTOMOTIVE, TRUCK AND HEAVY EQUIPMENT REFINISHING OPERATIONS;

- 102.8 Rule 460, ADHESIVES;
- 102.9 Rule 463, WOOD PRODUCTS COATING;
- 102.10 Rule 465, POLYESTER RESIN OPERATIONS;
- 102.11 Rule 464, ORGANIC CHEMICAL MANUFACTURING OPERATIONS, Sections 305 and Section 306, for wastewater liquid transfer; or
- 102.12 Rule 466, SOLVENT CLEANING.

[Note: Rules 464, 460, 454, and 466 have not been yet approved by the United States Environmental Protection Agency into the State Implementation Plan (SIP). Approval of this rule into the SIP does not constitute automatic SIP approval of these rules.]

- 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.
- 104 **VIOLATIONS:** If a stationary source violates any provision of this rule at any time during the compliance or reporting period, the stationary source is in violation for every day of the compliance or reporting period unless the stationary source establishes that it did not operate on a specific day or did not violate the underlying rule on a specific day.

200 DEFINITIONS:

- 201 **ELIGIBLE EMISSION REDUCTION CREDITS:** For purposes of this rule, eligible emission reduction credits shall mean an emission reduction credit certified pursuant to Rule 204, EMISSION REDUCTION CREDITS, and calculated in accordance with the methodology and criteria specified in the Sacramento Metropolitan Air Quality Management District Emission Reduction Credit Certificate 96-00415 or in an Emissions Quantification Protocol approved by the Sacramento Metropolitan Air Quality Management District Board of Directors unless the California Air Resources Board or the U.S. Environmental Protection Agency has disapproved the Emission Quantification Protocol.
- 202 **MATERIAL:** For purposes of this rule, material shall mean coating, primer, adhesive, and solvents including cleanup solvents.
- 203 **OVERALL CONTROL EFFICIENCY:** The ratio of the weight of the VOC removed by the emission control system, to the total weight of VOC emitted from the coating operation, both measured simultaneously, and can be calculated by the following equation:

$$CE = \frac{Wc - Wa}{We}$$

where: CE = Overall control efficiency of the air pollution control system
 Wc = weight of VOC entering control device

Wa = weight of VOC discharged from the control device
We = weight of VOC emitted from coating operation

204 **VOLATILE ORGANIC COMPOUND (VOC):** For the purposes of this rule, “volatile organic compound” has the same meaning as in Rule 101—GENERAL PROVISIONS AND DEFINITIONS. Volatile organic compounds may also be referred to as reactive organic compounds (ROC).

300 STANDARDS

301 **ALTERNATIVE COMPLIANCE, GENERAL:** Notwithstanding the emission limitations and/or control efficiency of the emissions control system specified in the applicable rules, the owners or operators of a stationary source may comply with applicable rules by using an air pollution control system that has been permitted pursuant to Rule 201, GENERAL PERMIT REQUIREMENTS and/or by providing eligible emission reduction credits pursuant to this rule. The need for emission reduction credits will be determined by the calculations in Section 406. If the excess emissions, calculated pursuant to Section 406, are greater than zero pounds per calendar quarter, then the emissions credits needed shall be determined using the following equations:

$$G = E * 1.1$$

Where: G = Total emissions needed for offsets (lbs/quarter)
E = Excess emissions as calculated in Section 403
(lbs/quarter)

400 ADMINISTRATIVE REQUIREMENTS

- 401 **APPLICATION PROCESS:** The owner or operator of a stationary source requesting alternative compliance pursuant to this rule shall apply for an Authority to Construct in accordance with Rule 201, GENERAL PERMIT REQUIREMENTS and Rule 202, NEW SOURCE REVIEW and shall pay an application processing fee of \$91/hour. The application shall contain all information required by Part E of the District's List and Criteria (adopted pursuant to Article 3, Sections 65940 through 65944 of Chapter 4.5 of Division I of Title 7 of the California Government Code).
- 402 **PRELIMINARY DECISION:** 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.
- 403 **NOTIFICATION REQUIREMENTS:** The Air Pollution Control Officer shall publish in at least one major daily circulation newspaper of general circulation in the affected community 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 also be published in accordance with any applicable Targeted Outreach Plan that has been developed and approved by the Sacramento Metropolitan Air Quality Management District Board of Directors. The notice shall include a statement of the procedure to request a public meeting (unless a public meeting has already been scheduled). The Air Pollution Control Officer shall give notice of any public meeting at least 15 days in advance of the meeting. This notification may be combined with the notifications required pursuant to other District rules.
- 404 **PUBLIC INSPECTION:** 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. All such information shall be transmitted no later than the date of publication 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.
- 405 **ACTION ON APPLICATION:** After considering all written comments, the application will be processed in accordance with the procedures in Rule 201, GENERAL PERMIT REQUIREMENTS and Rule 202, NEW SOURCE REVIEW unless otherwise required pursuant to this rule. Except as provided in Section 110, the Air Pollution Control Officer shall provide written notice of the final action to the applicant and any person who submitted written comments pursuant to Section 403, and shall publish such notice in the same manner as the notice was published pursuant to Section 403 and shall make the notice and all supporting documents available for public inspection at the District's office.

406 **CALCULATION PROCEDURE FOR EMISSION REDUCTION CREDITS NEEDED FOR COMPLIANCE:** The owner or operator of the stationary source shall calculate the emission reduction credits needed by the stationary source for each calendar quarter in accordance with the following:

406.1 Calculation Procedure for Stationary Sources Subject to Rule 411, BOILER NO_x:

- a. The excess emissions shall be calculated as follows:

$$E = (EF1 - EF2) * U$$

Where, E = Excess NO_x emissions (lbs/quarter)
 EF1 = Noncompliant NO_x emissions (lb-NO_x/mmbtu input). The noncompliant emissions shall be the highest value of the available data from the following: source test results, continuous emission monitors, AP-42 - Compilation of Air Pollutant Emission Factors, or manufacturer's data.
 EF2 = Required NO_x emissions (lb-NO_x/mmbtu input)
 U = Quarterly permitted fuel usage for the unit (mmbtu/quarter)

- b. The lb-NO_x/mmbtu emissions shall be converted from ppm NO_x based on EPA Method 19 Section 2.

406.2 Calculation Procedure for Stationary Sources Subject to Rule 450, GRAPHIC ARTS OPERATIONS, Rule 451, SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS, Rule 452, CAN COATING, Rule 454, DEGREASING OPERATIONS, Rule 456, AEROSPACE ASSEMBLY AND COMPONENT COATING OPERATIONS, Rule 459, AUTOMOTIVE, TRUCK AND HEAVY EQUIPMENT REFINISHING OPERATIONS; Rule 460, ADHESIVES, Rule 463, WOOD PRODUCTS COATING, Rule 465, POLYESTER RESIN OPERATIONS, OR Rule 466, SOLVENT CLEANING: Use the following steps to calculate the total excess emissions for all noncompliant materials:

- a. Calculate the excess emissions for **each** noncompliant material as applied:

1. Calculate the actual quarterly VOC emissions using the following equation:

$$VOC1_i = G_i * NC_{VOCi}$$

where, VOC1_i = The volatile organic compound emissions of the noncompliant material *i* (lbs-VOC/quarter).

G_i = Volume of noncompliant material *i*, less water and exempt compounds, requested to be used per quarter

(gallons/quarter). G_i excludes water and exempt compounds.

NC_{VOCi} = VOC content of the noncompliant material i (lbs-VOC/gal-material less water and exempt compounds).

2. Calculate the actual quarterly volume of solids applied using the following equation:

$$SOLID_i = G_i * NC_{SOLIDi}$$

where, $SOLID_i$ = Volume of solids in noncompliant material i (gals-solid/quarter)

NC_{SOLIDi} = Solid content of the noncompliant material i (gal-solid/gal-material less water and exempt compounds). Mathematically, $NC_{SOLIDi} = 1 - (NC_{VOCi} / S_{DENSITYi})$.

$S_{DENSITYi}$ = Density of the VOC solvent in the noncompliant material i (lbs-VOC/gal-VOC) or use EPA default of 7.36 lbs/gal.

3. Calculate the rule compliant quarterly VOC emissions using the following equation:

$$VOC2_i = RULE_{VOC/SOLIDi} * SOLID_i$$

where,

$VOC2_i$ = The allowable volatile organic compound emissions for the noncompliant material i based on the limit specified in the applicable rule, (lbs-VOC/quarter).

$Rule_{VOC/SOLIDi}$ = The allowable pounds of VOC per gallon of solid for the noncompliant material i based on the limit specified in the applicable rule, (lbs-VOC/gal-solid). Mathematically, $Rule_{VOC/SOLIDi} = RULE_{VOCi} / [1 - (RULE_{VOCi} / 7.36 \text{ lbs/gal})]$, where $[1 - (RULE_{VOCi} / 7.36 \text{ lbs/gal})] = \text{gallon of solids per gallon of material less water and exempt compounds}$.

$Rule_{VOCi}$ = The allowable VOC content for the noncompliant material i category as specified in the applicable rule (lbs-

VOC/gal-material less water and exempt compounds).

4. Calculate the excess emissions using the following equation:

$$E_i = \text{VOC1}_i * (1 - \text{CE}_i) - \text{VOC2}_i$$

where, E_i = The excess volatile organic compound emissions of noncompliant material i (lbs/quarter).

CE_i = Overall control system efficiency of noncompliant material i . If no control then CE_i equals zero.

- b. Calculate the total excess emissions for **all** noncompliant material as

applied:

$$E_{total} = \sum E_i$$

where, E_{total} = The sum of all excess volatile organic compound emissions from each material i (lbs/quarter).

406.3 Calculation Procedure for Stationary Sources Subject to Rule 464, ORGANIC CHEMICAL MANUFACTURING OPERATIONS Section 305 and Section 306 for Wastewater Liquid Transfer:

- a. The excess emissions shall be calculated as follows:

$$E = \text{UCE} * 0.92$$

Where, E = Excess volatile organic compound emissions, lbs/quarter

UCE = Uncontrolled volatile organic compound emissions, pounds per quarter, as calculated pursuant to Section 406.3.b.

- b. The uncontrolled volatile organic compound emissions shall be determined as follows:

1. POTENTIAL TO EMIT \geq 25 TPY: A stationary source with a potential to emit 25 tons per year or more of VOC from organic chemical plants shall determine the maximum uncontrolled VOC emission rate by using emission testing pursuant to Rule 464, ORGANIC CHEMICAL MANUFACTURING OPERATIONS, Section 410, Determination of VOC Mass Emission Rate Using Testing.
2. POTENTIAL TO EMIT $<$ 25 TPY: A stationary source with a potential to emit less than 25 tons per year of VOC from organic chemical plants shall determine the maximum uncontrolled VOC emissions by using engineering assessment pursuant to Rule 464, ORGANIC CHEMICAL MANUFACTURING OPERATIONS, Section 409,

Determination of VOC Mass Emission Rate Using Engineering Assessment.

- 406.4 The test methods listed in the following rules will be used to determine the excess emissions, as needed:
- a. Rule 411, BOILER NOx;
 - b. Rule 450, GRAPHIC ARTS OPERATIONS;
 - c. Rule 451, SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS;
 - d. Rule 452, CAN COATING;
 - e. Rule 454, DEGREASING OPERATIONS
 - f. Rule 456, AEROSPACE ASSEMBLY AND COMPONENT COATING OPERATIONS;
 - g. Rule 459, AUTOMOTIVE, TRUCK AND HEAVY EQUIPMENT REFINISHING OPERATIONS;
 - h. Rule 460, ADHESIVES;
 - i. Rule 463, WOOD PRODUCTS COATING;
 - j. Rule 464, ORGANIC CHEMICAL MANUFACTURING OPERATIONS; and
 - k. Rule 465, POLYESTER RESINS.
 - l. Rule 466, SOLVENT CLEANING

407 **PROGRAM REPORTING:**

- 407.1 By March 1 of each year the Air Pollution Control Officer shall prepare and submit to the California Air Resources Board and to U.S. Environmental Protection Agency an annual report which documents the following:
- a. By pollutant and by rule and source category:
 1. The quantity of excess emissions calculated pursuant to Section 406;
 2. The quantity of emission reduction credits needed pursuant to Section 301;
 3. The cost of the emission reduction credits needed; and
 4. The cost avoided by not complying with the appropriate rule based on the cost effectiveness from the rulemaking documents or other information if available;
 - b. The total emission reduction credits used for the year and compares the total emission reduction credits used to the emission reduction credits available from Sacramento Metropolitan Air Quality Management District Emission Reduction Credit Certificate 96-00415 and to the emission reduction credits from Certificate 96-00415 that were in the 1990 baseline emission inventory;
 - c. Summary of changes made to the calculation protocols defined in Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 5.5, Section 91507(b); and
 - d. An annual summary of the rules adopted, the implementation dates for the rules, and the estimated emission benefits from the rules.
- 407.2 The District shall evaluate the performance of the alternative compliance program triennially, beginning in 2000. The evaluation shall include the results of the annual reports and identify what, if any, changes were incorporated into the emission inventory update as a result of program

implementation. The evaluation will be prepared pursuant to Rule 205, COMMUNITY BANK AND PRIORITY RESERVE BANK, Section 316, Moratorium.

500 MONITORING AND RECORDS

- 501 **RECORD KEEPING:** In addition to the record keeping requirements specified in each rule listed in Section 102, the owner or operator of the stationary source shall maintain the following records:
- 501.1 For material application operations, the owner or operator of the stationary source shall maintain the following records:
- a. At least a quarterly record of all noncompliant material used in gallons;
 - b. The volatile organic compound content for each noncompliant material as applied in grams per liter and pounds per gallon including any supporting information such as data sheet, material list, or invoice giving material name, manufacturer identification, material application and VOC content as applied; and
- 501.2 For boilers, the owner or operator of the stationary source shall maintain a record of the fuel usage in therms per quarter or gallons per quarter whichever is applicable.
- 501.3 **DURATION OF RECORDS:** These records shall be maintained on-site for a period of five years, during which time they shall be made available to the Air Pollution Control Officer upon request.
- 502 **TEST METHODS:** The test methods specified in the referenced rules in Section 102 shall be used as applicable. The owner or operator of the stationary source shall comply with any source testing requirements specified in the referenced rules in Section 102.

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