

Attachment A

Board Resolution

Rule 411

RESOLUTION NO. AQM _____

Rule 411 – NOx FROM BOILERS, PROCESS HEATERS, AND STEAM GENERATORS

**THE BOARD OF DIRECTORS
OF THE SACRAMENTO METROPOLITAN AIR QUALITY
MANAGEMENT DISTRICT**

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District is authorized to adopt, amend or repeal rules and regulations by Sections 40001, 40702, and 41010 of the California Health and Safety Code (Health and Safety Code Section 40727(b)(2)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that a need exists to amend Rule 411 – NOx FROM BOILERS, PROCESS HEATERS, AND STEAM GENERATORS to further reduce NOx emissions as required by Title 17, California Code of Regulations Section 70600 (Transport Mitigation), Health and Safety Code Sections 40919 (Best Available Retrofit Control Technology), 39614 (SB 656 Particulate Matter), and 40914(b)(2) (All Feasible Measures) (Health and Safety Code Section 40727(b)(1)); and

WHEREAS, the board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that the meaning of amended Rule 411 can be easily understood by the persons affected by it (Health and Safety Code Section 40727(b)(3)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that the rule amendments are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations (Health and Safety Code Section 40727(b)(4)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that Rule 411 contains requirements that are more stringent than existing state or federal regulations (Health and Safety Code Section 40727(b)(5)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that amended Rule 411 implements Title 17, California Code of Regulations Section 70600 (Transport Mitigation), Health and Safety Code Sections 40919 (Best Available Retrofit Control Technology), 39614 (SB 656 Particulate Matter), and 40914(b)(2) (All Feasible Measures), and Sections 182(c) and (d) of the Federal Clean Air Act Amendments of 1990 (Health and Safety Code Section 40727(b)(6)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has considered a written analysis prepared by staff (Health and Safety Code Section 40727.2); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has maintained records of the rulemaking proceedings (Health and Safety Code Section 40728); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District held a duly noticed public hearing on October 27, 2005 and considered public comment on the proposed amendments to Rule 411 (Health and Safety Code Sections 40725 and 40726); and

WHEREAS, The Board of Directors of the Sacramento Metropolitan Air Quality Management District has considered the socioeconomic impacts of the rule amendments (Health and Safety Code Section 40728.5); and

WHEREAS, the District's Environmental Coordinator has found the amendments to Rule 411 to be exempt from the California Environmental Quality Act (CEQA) under Section 15308 of the State CEQA Guidelines as an action by a regulatory agency for protection of the environment.

NOW, THEREFORE, BE IT RESOLVED THAT this rule project is exempt from the provisions of CEQA; and

BE IT FURTHER RESOLVED THAT THIS BOARD approves and adopts the proposed amendments to Rule 411 – NOx from BOILERS, STEAM GENERATORS, and PROCESS HEATERS.

BE IT ORDERED that the amendments to Rule 411 be effective as of October 27, 2005.

ON A MOTION by Director _____, seconded by Director _____, the foregoing Resolution was passed and adopted by the Board of Directors of the Sacramento Metropolitan Air Quality Management District, State of California, this 27th day of October, 2005, by the following vote, to wit:

AYES: Directors

NOES: Directors

ABSENT: Directors

Chairperson of the Board
Sacramento Metropolitan Air Quality Management District
State of California

(SEAL)

ATTEST: _____
Clerk of the Board
Sacramento Metropolitan Air Quality Management District

Attachment B

Board Resolution

Rule 301

RESOLUTION NO. AQM _____

Rule 301 – PERMIT FEES – STATIONARY SOURCE

**THE BOARD OF DIRECTORS
OF THE SACRAMENTO METROPOLITAN AIR QUALITY
MANAGEMENT DISTRICT**

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that a need exists for the adoption of amendments to Rule 301 – PERMIT FEES – STATIONARY SOURCE in order to recover costs associated with the stationary source permitting program; and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District is authorized to adopt rules and regulations by Health and Safety Code Sections 40001, 40702, 40716, 41010, and 41013 (Health and Safety Code Section 40727(b)(2)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District is specifically authorized to adopt this fee schedule by Sections 41080(a), 41512, and 42311 of the California Health and Safety Code, and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that Rule 301 – PERMIT FEES – STATIONARY SOURCE must be amended to clarify the fees required of small emission units subject to Rule 411 – NOx FROM BOILERS, PROCESS HEATERS, AND STEAM GENERATORS; and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that the meaning of the rule can be easily understood by the persons directly affected by it (Health and Safety Code Section 40727(b)(3)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that the rule amendments are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations (Health and Safety Code Section 40727(b)(4)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that the rule amendments do not impose the same requirements as any existing state or federal rule or regulation that applies to affected industry within the District (Health and Safety Code Section 40727(b)(5)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District recognizes that Rule 301 – PERMIT FEES – STATIONARY SOURCE implements, interprets, or makes specific a statute, court decision, or other provision of law (Health and Safety Code Section 40727(b)(6)); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has maintained records of the rulemaking proceedings (Health and Safety Code Section 40728); and

Board Resolution
Rule 301
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WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District held a duly noticed public hearing on October 27, 2005 and considered public comments on the proposed amendments to the rule (Health and Safety Code Sections 40725, 40726, and 40920.6); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has considered the socioeconomic impacts of the rule amendments (Health and Safety Code Section 40728.5); and

WHEREAS, the Board of Directors of the Sacramento Metropolitan Air Quality Management District has determined that amendments to Rule 301 – PERMIT FEES – STATIONARY SOURCE are exempt from CEQA under Public Resources Code section 21080(b)(8) and section 15273;

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Directors of the Sacramento Metropolitan Air Quality Management District approves and adopts the proposed amendments to Rule 301 – PERMIT FEES – STATIONARY SOURCE; and

BE IT ORDERED that the amendments to Rule 301 – PERMIT FEES – STATIONARY SOURCE be effective as of October 27, 2005.

ON A MOTION by Director _____, seconded by Director _____, the foregoing resolution was passed and adopted by the Board of Directors of the Sacramento Metropolitan Air Quality Management District, this 27th day of October 2005, by the following vote, to wit:

AYES: Directors

NOES: Directors

ABSENT: Directors

Chairperson of the Board
Sacramento Metropolitan Air
Quality Management District
State of California

(SEAL)

ATTEST: _____

Clerk of the Board
Sacramento Metropolitan Air Quality Management District

Attachment C

Draft Rule 411

RULE 411, ~~BOILER~~-NO_x from BOILERS, PROCESS HEATERS and STEAM GENERATORS

Adopted 02-02-95

(Amended 11/7/96, 01/09/97, 7/22/99, xx-xx-05)**INDEX****100 GENERAL**

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100 GENERAL

- 101 **PURPOSE:** To limit NO_x and CO emissions from ~~industrial, institutional, and commercial~~ boilers, steam generators, and process heaters.
- 102 **APPLICABILITY:** The requirements of this Rule shall apply to units (i.e., boilers, steam generators and process heaters) fired on gaseous or nongaseous fuels with a rated heat input capacity of 51 million Btu per hour or greater, ~~used in industrial, institutional, and commercial operations.~~
- ~~110 **EXEMPTION - EQUIPMENT RATING:**
The requirements of this Rule shall not apply to any unit with a rated heat input capacity of 5 million Btu per hour.~~
- 1140 **EXEMPTION - ELECTRIC UTILITY BOILERS:** The requirements of this Rule shall not apply to any unit that is exclusively used by an electric utility to generate electricity.
- 1121 **EXEMPTION - PROCESS HEATERS, KILNS, AND FURNACES:** The requirements of this Rule shall not apply to process heaters, kilns, and furnaces where the products of combustion come into direct contact with the material to be heated.
- 1132 **EXEMPTION - WASTE HEAT RECOVERY BOILERS:** The requirements of this Rule shall not apply to waste heat recovery boilers ~~used to recover heat from the exhaust of combustion turbines or reciprocating internal combustion engines.~~
- 1143 **EXEMPTION - LOW FUEL USAGE:**
- 113.1 The requirements of Sections 301 and 302 that are effective May 31, 1997, and 303 and through 304 shall not apply to any unit rated at 5 million Btu per hour input or greater that uses less than 90,000 therms per year of fuel provided that the owner or operator complies with one of the requirements listed in Section 305. If the fuel usage for any unit claiming this exemption exceeds or equals 90,000 therms in any calendar year, then the unit must be operated in compliance with the applicable NO_x and CO emission limits in Sections 301 through 304. This exemption applies only to owners or operators that applied for use of this exemption on or before May 31, 1997, and received approval pursuant to Rule 201 – General Permit Requirements. Additionally, any unit exempt pursuant to this section must comply with the recordkeeping requirements in Section 502.
- 113.2 The requirements of Sections 301 and 302 that are effective pursuant to the applicable schedule in Section 407, shall not apply to any unit with annual usage below the applicable level in the table below. An owner or operator of a unit that is exempt pursuant to this section shall comply with Section 305.1 or 305.2. Additionally, any owner or operator claiming this exemption shall submit to the District prior to [Twelve months from the date of adoption of the amendments to this rule] a complete application for Authority to Construct pursuant to Rule 201-GENERAL PERMIT REQUIREMENTS to establish fuel usage limitations. Any unit exempt pursuant to this section shall comply with one of the requirements listed in Section 306.2. If the annual fuel usage for any unit exceeds or equals the level specified in the table below, then the unit must comply with the requirements in Section 405. This exemption applies only to owners or operators that applied for use of this exemption on or before [Twelve months after the date of adoption of the amendments to this rule] and received approval pursuant to Rule 201-GENERAL PERMIT REQUIREMENTS. Additionally, any unit exempt pursuant to this section must comply with the recordkeeping requirements in Section 502.

<u>Boiler Size (mmBtu/hr)</u>	<u>Annual Fuel Usage (therms/yr)</u>
<u>1 - <2.5</u>	<u>40,000</u>
<u>>=2.5 - <5</u>	<u>70,000</u>
<u>>=5 - < 100</u>	<u>200,000</u>
<u>>= 100</u>	<u>300,000</u>

114 **EXEMPTION – STANDING PILOT FLAME BURNER:** The NO_x emission requirements in Section 301 shall not apply to a standing pilot flame burner that is used in a load following unit to sustain low steam demand. To qualify for this exemption, the standing pilot flame burner heat input rating shall not exceed 5 mmBtu/hr. Additionally, the NO_x emissions from the standing pilot flame shall not exceed 30 ppmvd @ 3% O₂, except for startup and shutdown periods. Any source test required by Section 403 shall include separate testing of the standing pilot flame burner for which this exemption is claimed.

200 DEFINITIONS

- 201 **ANNUAL FUEL USAGE (HEAT INPUT):** The total input of fuels burned by a unit in a calendar year, as determined from the higher heating value and cumulative annual usage of each fuel.
- 202 **BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT):** Best available retrofit control technology as defined in Section 40406 of the California Health and Safety Code is "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 sources." These limits are specified in Sections 301, 302, ~~and~~ 303, and 304.
- 203 **BIOMASS:** Any solid, organic material used as a fuel source for boilers or steam generators including, but not limited to, wood, almond shells, or agricultural waste.
- 204 **BIOMASS BOILER OR BIOMASS STEAM GENERATOR:** ~~Any unit used in any institutional, commercial, or industrial operation that is designed to burn biomass fuel to produce steam, heat water and/or other fluids, and/or generate electricity. For the purpose of this rule, A boiler or steam generator unit that burns a fuel containing biomass simultaneously burns multiple fuels including biomass fuel shall be considered a biomass boiler or steam generator.~~
- 205 **BOILER OR STEAM GENERATOR:** ~~Any unit fired with any fuel used to produce steam or heat water that is not used exclusively to produce electricity for sale. Boiler or Steam Generator does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine or reciprocating internal combustion engines. Any external combustion equipment fired with any fuel used to produce hot water or steam, excluding waste heat recovery boilers.~~
- 206 **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.
- 207 **HEAT INPUT:** The chemical heat released due to fuel combustion in a combustion unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
- 208 **GASEOUS FUEL:** Any fuel which is a gas at standard conditions.
- 209 **HIGH 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. If certification of the HHV is not provided by the third party fuel supplier, it shall be determined by one of the

test methods specified in Section 501.23.

- 210 **LANDFILL GAS:** Any gas derived through any biological process from the decomposition of waste buried within a waste disposal site.
- 211 **LOAD FOLLOWING UNIT:** A unit with normal operational load fluctuations and requirements, imposed by fluctuations in the process(es) served by the unit, which exceed the operational response range of an Ultra-Low NO_x burner system(s) operating at 9 ppmv NO_x. The operator shall designate load-following units on the Permit to Operate.
- ~~2102~~ **MALFUNCTION:** Any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunction.
- ~~2143~~ **NITROGEN OXIDES (NO_x):** The sum of nitric oxide and nitrogen dioxide in the flue gas.
- ~~2124~~ **NONGASEOUS FUEL:** Any fuel which is not a gas at standard conditions.
- ~~2135~~ **PARTS PER MILLION BY VOLUME (PPMV):** The ratio of the number of gas molecules of a given species, or group, to the number of millions of total gas molecules.
- ~~2146~~ **PROCESS HEATER:** Any unit fired with any fuel which transfers heat from combustion gases to water or process streams, including reformers as defined in Section 218. Process heater does not include any dryer in which the material being dried is in direct contact with the products of combustion, cement or lime kilns, glass melting furnaces, or smelters.
- ~~2157~~ **RATED HEAT INPUT CAPACITY:** The heat input capacity in million Btu per hour specified in the nameplate of the combustion unit. If the heat input capacity on the nameplate of the unit's burner is different than the heat input capacity on the nameplate of the unit's boiler, the heat input capacity of the burner will be used to determine rated heat input capacity. If the burner or boiler has been altered or modified such that its maximum heat input capacity is different than the heat input capacity specified on the name plate, the maximum heat input capacity shall be considered as rated heat input capacity.
- 218 **REFORMER:** A furnace in which a hydrocarbon feedstock is reacted with steam over a catalyst at high temperature to form hydrogen and lesser amounts of carbon monoxide and carbon dioxide.
- ~~2169~~ **RETROFIT:** Any physical change to an emissions unit necessary for reducing NO_x and CO emissions to comply with the NO_x and CO emissions limits specified in Sections 301 through 304 of this rule, including, but not limited to, burner replacement, addition of emissions control equipment, and addition of oxygen trim systems. Changes in the method of operation shall not be considered as retrofit.
- ~~24720~~ **SHUTDOWN:** The period of time a unit is cooled from its normal operating temperature. The shutdown period shall be limited to two hours.
- ~~24821~~ **STANDARD CONDITIONS:** For the purpose of this rule, standard conditions are 68 °F and one atmosphere.
- ~~24922~~ **STARTUP:** The period of time, not to exceed two hours, in which a unit is brought to its operating temperature and pressure immediately after a period in which the gas flow is shut off for a continuous period of 30 minutes or longer.
- ~~2203~~ **THERM:** One hundred thousand (100,000) Btu's.
- ~~2244~~ **UNIT:** Any boiler, including steam generator, as defined in Section 204 or Section 205, or

process heater, as defined in Section 2146.

225 **WASTE HEAT RECOVERY BOILER:** A device that recovers normally unused energy and converts it to usable heat. Waste heat recovery boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat recovery boiler are not considered waste heat recovery boilers, but are considered boilers. Waste heat recovery boilers are also referred to as heat recovery steam generators.

2226 **WOOD:** Wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, dust from sanding, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

300 STANDARDS

301 BARCT EMISSIONS LIMITS - GASEOUS FUEL FIRING

~~301.1~~ **NO_x Emissions:** Except as provided in Section 1143, the NO_x and CO emissions from any unit shall not exceed ~~30~~the limits specified in the table below. The NO_x and CO emission limits shall be measured as parts per million by volume on a dry basis, as determined pursuant to Section 501, and corrected to three percent oxygen (~~30 ppmvd @ 3% O₂~~), when firing on gaseous fuels.

~~301.2~~ **CO Emissions:** Except as provided in Section 114, the CO emissions from any unit shall not exceed ~~400~~ parts per million by volume on a dry basis, as determined pursuant to Section 501, corrected to 3 percent oxygen (~~400 ppmvd @ 3% O₂~~), when firing on gaseous fuels.

<u>Unit Size/Description</u> <u>MmBtu/hr Input</u>	<u>Effective</u> <u>May 31, 1997</u>		<u>Effective</u> <u>(See Section 407)</u>	
	<u>NO_x</u> <u>Limits</u> <u>ppmvd@</u> <u>3% O₂</u>	<u>CO</u> <u>Limits</u> <u>ppmvd@</u> <u>3%O₂</u>	<u>NO_x</u> <u>Limits</u> <u>ppmvd@3</u> <u>%O₂</u>	<u>CO</u> <u>Limits</u> <u>ppmvd@</u> <u>3%O₂</u>
<u>Greater than or equal to 1 and less than 5</u>	<u>-</u>	<u>-</u>	<u>30</u>	<u>400</u>
<u>Greater than or equal to 5 and less than or equal to 20</u>	<u>30</u>	<u>400</u>	<u>15</u>	<u>400</u>
<u>Greater than 20</u>	<u>30</u>	<u>400</u>	<u>9</u>	<u>400</u>
<u>Gas Fired Reformer Furnaces</u>	<u>30</u>	<u>400</u>	<u>30</u>	<u>400</u>
<u>Greater than or equal to 5 and fired on landfill gas or a combination of landfill gas and natural gas</u>	<u>30</u>	<u>400</u>	<u>15</u>	<u>400</u>
<u>Load Following Units greater than or equal to 5 mmBtu/hr input</u>	<u>30</u>	<u>400</u>	<u>15</u>	<u>400</u>

302 BARCT EMISSIONS LIMITS - NONGASEOUS FUEL FIRING

~~302.1~~ **NO_x Emissions:** Except as provided in Section 1143, the NO_x and CO emissions from any unit shall not exceed ~~30~~the limits specified in the table below. The NO_x and CO emission limits shall be measured as parts per million by volume on a dry basis, as determined pursuant to Section 501, and corrected to three percent oxygen (~~40 ppmvd @ 3% O₂~~), when firing on nongaseous fuels.

~~302.2~~ **CO Emissions:** Except as provided for in Section 114, the CO emissions from any unit shall not exceed ~~400~~ parts per million by volume on a dry basis, as determined pursuant to Section 501, corrected to three percent oxygen (~~400 ppmvd @ 3% O₂~~), when firing on nongaseous fuels.

<u>Unit Size/Description</u> <u>mmBtu/hr Input</u>	<u>Effective</u> <u>May 31, 1997</u>		<u>Effective</u> <u>(See Section 407)</u>	
	<u>NO_x Limits</u> <u>ppmvd@3%</u>	<u>CO Limit</u> <u>ppmvd@3%</u>	<u>NO_x Limits</u> <u>ppmvd@3%</u>	<u>CO Limit</u> <u>ppmvd@3%</u>
	<u>O₂</u>	<u>O₂</u>	<u>O₂</u>	<u>O₂</u>
<u>Greater than or equal to 1</u> <u>and less than 5</u>	-	-	<u>40</u>	<u>400</u>
<u>Greater than or equal to 5</u>	<u>40</u>	<u>400</u>	<u>40</u>	<u>400</u>

303 **BARCT EMISSIONS LIMITS - BIOMASS FUEL FIRING**

303.1 **NO_x Emissions:** Except as provided in Section 1143.1, the NO_x emissions from any unit shall not exceed 70 parts per million by volume on a dry basis, as determined pursuant to Section 501, corrected to twelve percent carbon dioxide (70 ppmvd @ 12% CO₂), when firing on biomass fuels.

303.2 **CO Emissions:** Except as provided in Section 1143.1, the CO emissions from any unit shall not exceed 400 parts per million by volume on a dry basis, as determined pursuant to Section 501, corrected to twelve percent carbon dioxide (400 ppmvd @ 12% CO₂), when firing on biomass fuels.

304 **EMISSION LIMIT - EMERGENCY STANDBY NONGASEOUS FUEL FIRING**

304.1 **NO_x Emissions:** The NO_x emissions from any unit which normally burns gaseous fuel but burns nongaseous fuel only during emergency interruption of gaseous fuel supply by the serving utility shall not exceed 150 parts per million by volume on a dry basis as determined pursuant to Section 501, corrected to three percent oxygen (150 ppmvd @ 3% O₂), when firing on nongaseous fuel. Operation of the unit under this Section shall not exceed 168 hours per calendar year, excluding equipment and emission testing time, not exceeding 48 hours per calendar year.

305 **LOW FUEL USAGE:** Any unit exempted pursuant to Section 1143 shall meet one of the following conditions:

305.1 The unit shall be operated in a manner that maintains stack-gas oxygen concentrations at less than or equal to 3.00 % by volume on a dry basis; or

305.2 The unit shall be tuned at least once per year by a qualified technician. If the unit is not operational for the entire calendar year, then no tune-up shall be required until re-startup of the unit. The tune-up shall be performed in accordance with the procedure described in ATTACHMENT A; ~~or~~

~~305.3 The unit shall be operated in compliance with the applicable emission levels specified in Sections 301 through 304~~

~~305.4 Sources applying after May 31, 1997 are not eligible to receive this exemption.~~

306 **EQUIPMENT REQUIREMENT - FUEL CONSUMPTION**

306.1 Owners or operators of units subject to the requirements of Section 304 shall install a non-resetting totalizing hour meter on each unit, or shall install a computerized tracking system that maintains a continuous daily record of hours of operation when the boiler is operated on diesel fuel.

306.2 Owners or operators of units ~~subject to the requirements of Section 305~~ exempt from the NO_x and CO requirements in Sections 301 through 303 pursuant to Section 113 because of low fuel usage shall:

a. Install a non-resetting totalizing fuel meter in the fuel line for each fuel burned. Each unit serviced by the fuel line shall have a meter installed to monitor fuel consumption. If a volumetric flow meter is installed, it must compensate for pressure and temperature using integral gauges; or

b. Install a non-resetting totalizing hour meter. This requirement shall apply to each unit. In this case, the fuel usage shall be calculated by multiplying the number of operating hours for the unit by the maximum fuel usage for the unit as specified by the unit manufacturer; or

- c. Install a computerized tracking system that maintains a continuous daily record of hours of operation and/or fuel consumption rate for each fuel line. This requirement shall apply to each unit serviced by a fuel line. If only hours of operation are recorded, the fuel usage shall be calculated by multiplying the number of operating hours for the unit by the maximum fuel usage for the unit as specified by the unit manufacturer. If both hours of operation and fuel consumption rate are recorded, the actual recorded fuel consumption rate shall be integrated over the actual number of hours operated to determine total fuel usage.

400 ADMINISTRATIVE REQUIREMENTS

401 LOW FUEL USAGE:

401.1 The owner or operator of any unit claiming exemption pursuant to Section 1143.1 that is required to install new fuel consumption monitoring equipment must comply with Section 306 by January 22, 2000. New fuel consumption equipment is required when one fuel meter, hour meter, or computerized tracking system serves multiple boilers and/or other equipment prior to July 22, 1999.

401.2 The owner or operator of any unit claiming exemption pursuant to Section 113.2 that is required to install new fuel consumption monitoring equipment must comply with Section 306 by (twenty-four months after adoption).

402 **REPORTING – TUNE-UP VERIFICATION:** The owner or operator of units subject to the requirements of Section 305.2 shall submit to the Air Pollution Control Officer a tune-up verification report or a verification of inactivity not less than once every calendar year for each unit.

403 **SOURCE TESTING FREQUENCY:** The owner or operator of units subject to the emissions limits set forth in Sections 301 through 303 shall ~~conduct~~ perform emissions source testing using the test methods specified in Section 501 of this rule according to the following schedule and maintain records as provided in Section 502:

403.1 Except as provided in Section 405.2, initial source test to verify compliance with the NOx and CO emission limits effective [See Section 407 for specific compliance dates] listed in Sections 301 and 302 shall be conducted by the full compliance date specified in Section 407;

403.2a. Any unit with a rated heat capacity of 250 million Btu per hour or greater shall be tested ~~within 1 year of July 22, 1999, and~~ once every calendar year ~~thereafter~~.

403.3b. Any unit with a rated heat capacity greater than or equal to 5 million Btu per hour but less than 250 million Btu per hour shall be tested ~~within 2 years of July 22, 1999 and~~ once every second calendar year ~~thereafter~~.

403.4 **Small Units:** Any unit with a rated heat capacity greater than or equal to 1 million Btu per hour input and less than 5 million Btu per hour input shall be required to be tested to verify compliance with the NOx and CO emission limits pursuant to Section 403.1. As an alternative to testing, the owner or operator of a unit subject to the requirements of this section may use a portable analyzer as part of an Air Pollution Control Officer approved alternate emissions monitoring system. The portable analyzer shall meet the specification standards in Attachment B.

a. At least thirty days prior to the portable analyzer test, the owner or operator shall notify the Air Pollution Control Officer of the exact date and time of the test.

403.e5 Any unit that is equipped with a continuous emission monitoring system (CEMs) shall conduct accuracy testing using the methods specified in Section 501 of this rule once every calendar year.

404 SOURCE TESTING PROTOCOL:

404.1 **Source Tests:** At least 30 days prior to the scheduled source test date, the owner or operator of a unit subject to this rule shall submit a source test plan to the Air Pollution Control Officer. At least seven days prior to the source test, the owner or

operator shall notify the Air Pollution Control Officer of the exact date and time of the source test. A final source test report, and the applicable source test observation and evaluation fee as authorized under Rule 301, shall be submitted to the Air Pollution Control Officer within 60 days following the actual source test date.

404.2 Portable Analyzer: Emission readings using a portable analyzer pursuant to Section 403.4 shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced over the 15-consecutive-minute period. If the results of the portable analyzer show that the NOx emissions from the unit exceed the allowable limits in Section 300, then the unit will be required to be source tested no later than 60 days from the date of discovering such exceedance.

405 LOSS OF EXEMPTION: If any unit with a Permit to Operate issued pursuant to Rule 201-GENERAL PERMIT REQUIREMENTS approving an exemption from the requirements in Sections 301 or 302 pursuant to Section 113.2 exceeds or equals the levels specified in the table in Section 113.2 in any calendar year after (12 Months after date of adoption), the owner or operator shall:

405.1 Maintain compliance with the requirements of Section 305 until compliance is demonstrated with Section 301 or 302; and

405.2 Within 12 months after the end of the calendar year during which the unit exceeded or equaled the fuel usage, conduct an initial source test and demonstrate compliance with Section 301 or 302. The unit will subsequently not qualify for exemption pursuant to Section 113.2.

406 ADMINISTRATIVE REQUIREMENTS FOR LOAD FOLLOWING UNITS: The owner or operator of a load following unit shall submit to the Air Pollution Control Officer with their authority to construct application the following information to demonstrate that the unit(s) qualify as load-following:

406.1. Technical data such as steam demand charts or other information to demonstrate the normal operational load fluctuations and requirements of the unit;

406.2. Technical data showing the operational response range of all reasonably available Ultra-Low NOx burner system(s) operating at 9 ppmv NOx; and

406.3. Technical data demonstrating that the unit(s) are designed and operated to optimize the use of base-loaded units in conjunction with the load-following unit(s).

407 COMPLIANCE SCHEDULE: An owner or operator of any unit subject to Section 301 or 302 on or after (date of adoption) shall comply with this Rule in accordance with the following schedules.

407.1 Except as provided in Section 407.2 and 407.3, for units installed prior to (date of adoption) and permit application deemed complete by the Air Pollution Control Officer prior to (date of adoption), or installed after (date of adoption) and permit application deemed complete prior to (date of adoption):

<u>Number of Units subject to Sections 301 through 304</u>	<u>Number of these units required to be in full compliance by (two years from adoption)</u>	<u>Number of these units required to be in full compliance by (three years from adoption)</u>	<u>Number of these units required to be in full compliance by (four years from adoption)</u>
<u>1 or 2</u>	<u>1</u>	<u>2</u>	<u>N/A</u>
<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
<u>4</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>5 or 6</u>	<u>2</u>	<u>4</u>	<u>6</u>
<u>More than 6</u>	<u>25% of these units</u>	<u>75% of these units</u>	<u>100% of these units</u>

Notes: Full Compliance identifies the date by which the owner shall demonstrate that each unit is in compliance with this rule.

- 407.2 [For units installed after \(date of adoption\) and permit application deemed complete by the Air Pollution Control Officer after \(date of adoption\): date of installation.](#)
- 407.3 [For units installed prior to \(date of adoption\) and permit application deemed complete by the Air Pollution Control Officer after \(date of adoption\): \(one year from adoption\).](#)

500 MONITORING AND RECORDS

501 TEST METHODS

501.1 GASEOUS EMISSIONS: SOURCE TEST:

- [a.](#) Compliance with the NO_x [and CO](#) emission requirements and the stack gas ~~carbon monoxide and~~ oxygen requirements of Sections 301 through 304 shall be determined using the test methods specified below. All emissions determinations shall be made in the as-found operating condition, except no compliance determination shall be established during unit startup as defined in Section ~~24922~~, or shutdown as defined in Section ~~24720~~. Tests shall be conducted while units are operating at a firing rate that is as close as physically possible to the unit's rated heat input capacity. Tests shall be conducted for three 40 minute runs. Results shall be averaged over the three test periods. Test reports shall include the operational characteristics of all flue-gas NO_x reduction equipment.
- [1.a](#) Oxide of Nitrogen - ARB Method 100 or EPA Method 7E.
- [2.b](#) Carbon Monoxide - ARB Method 100 or EPA Method 10.
- [3.e](#) Stack Gas Oxygen - ARB Method 100 or EPA Method 3A.
- [4.e](#) Carbon Dioxide - ARB Method 100 or EPA Method 3A.
- [b.](#) [A scheduled source test may not be discontinued solely due to the failure of one or more runs to meet applicable standards.](#)
- [c.](#) [In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of one of the following reasons, then compliance may be determined using the average of the other two runs:](#)
- [1.](#) [Forced shutdown; or](#)
 - [2.](#) [Failure of an irreplaceable portion of the sampling train; or](#)
 - [3.](#) [Extreme meteorological conditions presenting a hazard to the sampling team; or](#)
 - [4.](#) [Other circumstances beyond the owner or operators control as determined by the Air Pollution Control Officer, then compliance may be determined using the average of the other two \(2\) runs.](#)
- [d.](#) [A source test not conducted pursuant to the source test methods listed in Section 501.1\(a\) may be rejected and the test report determined to be invalid.](#)

501.2 GASEOUS EMISSIONS: CONTINUOUS EMISSIONS MONITORING SYSTEMS

- (CEMS):** Compliance with NO_x emission requirements specified in Sections 301 through 304 may also be determined using CEMS. All emissions determinations shall be made in the as-found operating condition, except no compliance determination shall be established during unit startup as defined in Section ~~24922~~, or shutdown as defined in Section ~~24720~~. Where the unit(s) are equipped with CEMS:
- a. **General:** All CEMS must be installed according to the procedures specified in 40CFR~~460.13g~~. All CEMS shall be installed such that a representative measurement of emissions is obtained. Additional procedures for the location of CEMS found in 40CFR60 Appendix B shall be used. The data recorder for CEMS shall be in operation at all times [the unit is operated](#).
- b. **Cycle time:** The owner or operator of any unit using a continuous emission monitoring system (CEM) shall ensure that the CEM system completes a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15 minute period.
- c. **Calibration:** Zero and span shall be checked once every 24 hours. [The CEMS shall be calibrated in accordance with the manufacturer's](#)

- [specifications.](#)
- d. **Averaging:** The data recorded during periods of calibration checks, zero and span adjustments shall not be included in averaging for compliance determinations. Compliance shall be determined on an hourly basis using the average of the 3 previous 1 hour average emissions concentrations. The 1-hour average emissions concentration shall be determined from at least two data points recorded by the CEMs.
 - e. **Accuracy Testing:** Accuracy testing of Continuous Emission Monitoring Systems shall be conducted using a relative accuracy test audit pursuant to 40CFR60 Appendix F.
- 501.3 **HIGH HEAT VALUE:** HHV shall be determined by one of the following test methods:
- a. ASTM D 2015-85 for solid fuels; or
 - b. ASTM D 240-~~8702~~ or ASTM D ~~23823282~~-88 for liquid hydrocarbon fuels; or
 - c. ASTM D 1826-~~8894~~, or ASTM D 1945-~~8496~~ in conjunction with ASTM D 3588-89 for gaseous fuels.

502 RECORDKEEPING

- 502.1 The owner or operator of units subject to the requirements of Section 304 [and 306.1](#) shall monitor and record for each unit the cumulative ~~annual~~ [calendar year](#) hours of operation on each emergency standby non-gaseous fuel.
- ~~502.2 The owner or operator of units subject to the requirements of Section 305 shall monitor and record for each unit the HHV and cumulative gaseous and non-gaseous fuel usage.~~
- [502.2 The owner or operator of units exempt pursuant to Section 113 and subject to the requirements of Sections 305 and 306.2a or 306.2c for fuel consumption shall record for each unit the HHV and the calendar year gaseous and non-gaseous fuel usage.](#)
- [502.3 The owner or operator of units exempt pursuant to Section 113 and subject to the requirements of Sections 305 and 306.2b or 306.2c for hours of operation shall record for each unit the HHV, calendar year hours of operation, and the calendar year calculated fuel usage.](#)
- [502.4 An owner or operator subject to the requirements in Section 403.4 using a portable analyzer to verify compliance with the NOx and CO emission limits shall keep records of the measured NOx and CO emissions, and all data as specified in Attachment B.](#)
- 502.~~35~~ The owner or operator of any unit subject to Section 501 of this rule shall maintain copies of all CEMS data and final source test reports as applicable.
- 502.~~46~~ ~~Such~~[R](#)ecords shall be maintained on-site for a continuous 5-year period and made available for review by the Air Pollution Control Officer upon request.

Attachment A**Tuning Procedure¹****A. Equipment Tuning Procedure for Forced-Draft Boilers, Steam Generators, and Process Heaters**

Nothing in this Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

1. Operate the unit at the firing rate most typical of normal operation. If the unit experiences significant load variations during normal operation, operate it at its average firing rate.
2. At this firing rate, record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number² (for liquid fuels), and observe flame conditions after unit operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values³ and if the 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.
3. Increase combustion air flow to the furnace until stack gas oxygen levels increase by one to two percent over the level measured in Step 2. As in Step 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 boiler operation stabilizes.
4. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in Step 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.
5. Continue to reduce combustion air flow stepwise, until one of these limits is reached:
 - a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.
 - b. Stack gas CO concentrations greater than 400 ppm.
 - c. Smoking at the stack.
 - d. Equipment-related limitations - such as low wind box/furnace pressure differential, built in air-

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.

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

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

low limits, etc.

6. Develop an O₂ /CO curve (for gaseous fuels) or O₂/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.
7. From the curves prepared in Step 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 and #2 oils	smoke-spot number	number 1
#4 Oil	smoke-spot number	number 2
#5 Oil	smoke-spot number	number 3
Other oils	smoke-spot number	number 4

The above conditions are referred to as the CO or smoke thresholds, or as the minimum excess oxygen levels.

Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, burner adjustments can probably be made to improve fuel and air mix, thereby allowing operations with less air.

8. Add 0.5 to 2.0 percent to the minimum excess oxygen level found in Step 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.
9. If the load of the combustion unit varies significantly during normal operation, repeat Steps 1-8 for firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, setting should optimize conditions at the rate.
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 Step 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.

Figure 1
Oxygen/CO Characteristic Curve

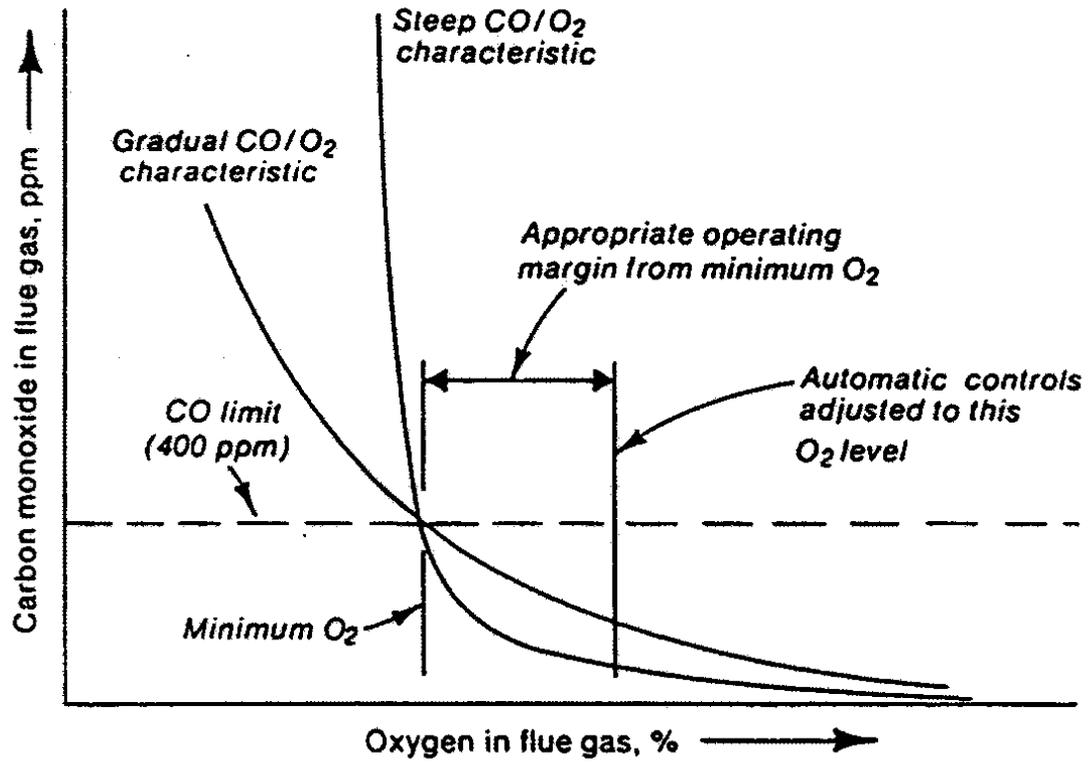
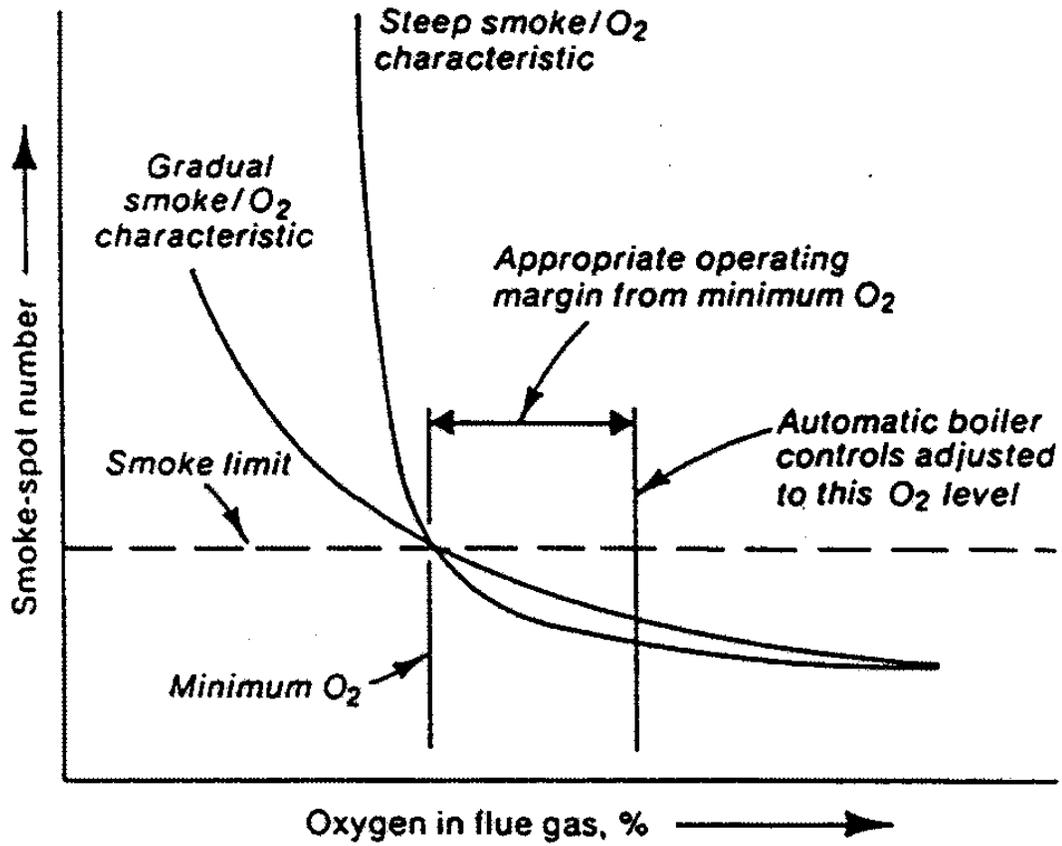


Figure 2
Oxygen/Smoke Characteristic Curve



B. Equipment Tuning Procedure for Natural Draft-Fired Boilers, Steam Generators, and Process Heaters.

Nothing in this Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations, and requirements.

1. PRELIMINARY ANALYSIS**a. CHECK THE OPERATING PRESSURE OR TEMPERATURE.**

Operate the boiler, steam generator, or 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. COMBUSTION ANALYSIS.

Perform an "as is" combustion analysis (CO, O₂, etc.) with a warmed up unit at high and low fire, if possible. In addition to data obtained from combustion analysis, also record the following:

ii. Inlet fuel pressure at burner (at high & low fire)

ii. Draft above draft hood or barometric damper

1) Draft hood: high, medium, and low

2) 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:

1. CHECKS & 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 & HEAT TRANSFER SURFACES.

External and internal build-up of sediment and scale on the heating surfaces creates an insulating effect that quickly reduces unit efficiency. Excessive fuel cost will result if the unit is not kept clean. Clean tube surfaces, remove scale and soot, assure proper process fluid flow 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.

2. SAFETY CHECKS

a. Test primary and secondary low water level controls.

b. Check operating and limit pressure and temperature controls.

c. Check pilot safety shut off operation.

d. Check safety valve pressure and capacity to meet boiler, steam generator or process heater requirements.

e. Check limit safety control and spill switch.

3. 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 rate; record fuel manifold pressure.

b. Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at both high, medium and low fire. Carbon Monoxide (CO) value should always be below 400 parts per million (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 range of firing rates.

When above adjustments and corrections have been made, record all data.

4. **FINAL TEST**

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

- a. Fuel pressure at burner (High, Medium, and Low).
- 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.

Attachment BApprovable Portable Analyzer

A. General: A portable analyzer consists of a sample interface, a gas detector, and a data recorder, and is used to quantitatively analyze stack gas for one or more components. A portable analyzer for CO, O₂, or NO_x shall be considered approved by the District if it adheres to the standards that are set forth in this section, is used in accordance with the standards of this section, and is used in accordance with the manufacturer's specifications. Other portable analyzers and techniques are approvable on a case by case basis.

B. Definitions:

Sample interface: That portion of the portable analyzer used for one or more of the following: sample acquisition, sample transport, sample conditioning, or protection of the portable analyzer from the effects of the stack effluent.

Gas detector: That portion of the portable analyzer that senses the gas to be measured and generates an output proportional to the gas concentration.

Data recorder: A strip chart recorder, digital recorder, or any other device used for recording or displaying measurement data from the gas detector output.

Resolution: The smallest increment of output that the gas detector will provide. This value should be reported by the equipment manufacturer.

Error: The maximum standard measurement error over the measurement range. This value should be reported by the equipment manufacturer.

Detection Limit: The lowest concentration of gas that can be detected by the gas detector. This value should be reported by the equipment manufacturer.

Response Time: The amount of time required for the portable analyzer to display 95% of a step change in gas concentration on the data recorder.

C. Equipment: The portable analyzer shall adhere to the standards tabulated below for each of the pollutants that it is intended to measure. All values in the table refer to maximum values. In addition to the parameters contained in the table, the minimum upper limit of the measurement range shall be equal to 1.5 times the emission limit for the species being measured.

<u>Detector</u>	<u>Resolution</u>	<u>Error</u>	<u>Detection Limit</u>	<u>Response Time</u>
<u>CO</u>	<u>20 ppm</u>	<u>± 50 ppm</u>	<u>50 ppm</u>	<u>1 min</u>
<u>O₂</u>	<u>0.5%</u>	<u>± 1.0%</u>	<u>0%</u>	<u>1 min</u>
<u>NO_x</u>	<u>2 ppm</u>	<u>± 5 ppm</u>	<u>5 ppm</u>	<u>1 min</u>

D. Calibration: Each gas detector shall be calibrated a minimum of once every six months and all instrument calibration data shall be kept on file with the monthly analyses. If the manufacturer recommends calibration more than once every six months, then the instrument calibration shall follow the manufacturer's recommended interval. Two calibration gases are required, the upper limit calibration gas shall have a concentration of 60-100% of the upper limit of the measurement range and the lower limit calibration gas shall have a concentration from 0-10% of the upper limit of the measurement range. Ambient air may be used as the upper limit calibration gas for O₂ and may be used as the lower limit calibration gas for both NO_x and CO. The system response time shall be determined during the gas detector calibration. The portable analyzer shall first be purged with ambient air. Calibration gas is then provided to the portable analyzer through a tubing length typically used during analysis. The time necessary for the data recorder to display a concentration equal to 95% of the final steady state concentration shall be recorded as the response time.

E.**Measurement:**

1. Concentration measurements shall not be taken until the sample acquisition probe has been exposed to the stack gas for at least 150% of the response time. Measurements shall be taken in triplicate.
2. If water vapor is not removed prior to measurement, the absolute humidity in the gas stream must be determined so that the gas concentrations may be reported on a dry basis. If water vapor creates an interference with the measurement of any component, then the water vapor must be removed from the gas stream prior to concentration measurements.
3. The concentration of NO_x is calculated as the sum of the volumetric concentrations of both NO and NO₂. The portable analyzer used to detect NO_x must either convert NO₂ to NO and measure NO, convert NO to NO₂ and measure NO₂, or measure both NO and NO₂. An NO₂ to NO converter is not necessary if data are presented to demonstrate that the NO₂ portion of the exhaust gas is less than 5 percent of the total NO_x concentration.

Attachment D

Draft Rule 301

RULE 301 PERMIT FEES - STATIONARY SOURCE

Adopted 11-29-71

(Amended 8-27-85, 10-14-86, 10-27-87, 7-1-88, 7-25-89, 7-24-90, 10-22-91, 6-7-94, 2-2-95,
4-6-95, 12-5-96, 10-25-01, [xx-xx-05](#))

Consumer Price Index Adjustment: 8-20-02, 11-26-03, 7-12-04, 7-1-05

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500 MONITORING AND RECORDS (NOT INCLUDED)

100 GENERAL

101 **PURPOSE:** To establish fees to be charged to (1) owners/operators of a stationary source required to obtain an Authority to Construct or a Permit to Operate by Rule 201, (2) owners/operators of a stationary source required to obtain a Title V operating permit by Rule 207, and (3) applicants requesting to deposit or withdraw emission reduction credits from the District credit bank.

102 **PUBLIC AGENCIES NOT EXEMPT:** Federal, state or local government agencies or public agencies shall pay fees to the extent allowed under Chapter 2, Division 7, Title 1 of the Government Code (commencing with Section 6100) and Section 42311 of Division 26 of the California Health and Safety Code.

200 DEFINITIONS

201 **CANCELED APPLICATION:** Any application which has been withdrawn by the applicant.

202 **CHANGE OF LOCATION:** Any transfer of an existing permitted source from one location to another not on the same property or facility.

203 **AUTHORITY TO CONSTRUCT FEE:** A fee for each authority to construct based on the type and size of the source.

204 **INITIAL PERMIT FEE:** A fee for each new permit based on the type and size of the source.

205 **PERMIT RENEWAL FEE:** A fee required for the annual renewal of a permit to operate.

206 **MODIFICATION:** Any physical change in an existing facility or change in the method of operation which results or may result in either an increase or decrease in emission of any air pollutant subject to district control, or the emission of any such air pollutant not previously emitted. The following shall not be regarded as physical changes or changes in the method of operation:

206.1 Routine maintenance, repair or replacement with identical or equivalent equipment;

206.2 Increased production rate or increased hours of operation where there is no increase in fixed capital cost, unless such production and hours are limited by permit conditions.

207 **SOURCE:** Any operation that produces and/or emits air pollutants.

300 STANDARDS

301 **AUTHORITY TO CONSTRUCT FEE:** Every applicant for an authority to construct shall pay one half of the estimated initial permit fee in Section 308 of this rule upon filing the application.

301.1 Within 30 days of receipt of an application, the Air Pollution Control Officer may notify the applicant that, due to the complexity of the application, the permit processing fees shall be based on the actual hours spent by the District staff in evaluating the application and verifying equipment compliance. This fee shall be assessed in accordance with the hourly rate established in Section 308.11. The applicant shall deposit with the District the amount estimated by the Air Pollution Control Officer to be charged for processing the authority to construct, which said sum is not to exceed the actual cost of such work. This estimate may include costs associated with planning meetings and/or design evaluations prior to actual submission of a complete application. The deposit shall be required for the following:

- a. Equipment associated with cogeneration projects.
- b. Equipment associated with resource recovery projects.

- c. Equipment associated with landfill projects.
- d. Equipment associated with power plants.
- e. Equipment involving the disposal by incineration, or other thermal process, of hazardous, toxic or infectious waste.
- f. Equipment involving the emission of hazardous or toxic materials.
- g. Equipment which is expected to emit 25 tons, or more, per year of any pollutant, or which is expected to increase the emissions of any pollutant from an existing facility by 25 tons, or more, per year.
- h. Any project for which the evaluation is expected to take 10 hours or more.

The applicant may request a conference with the Air Pollution Control Officer to review the cost estimate. The applicant may propose to provide additional information with the application that would reduce the time spent by the Air Pollution Control Officer in reviewing the application. The Air Pollution Control Officer's cost estimate shall be reduced accordingly.

302 **INITIAL PERMIT FEE:** Every applicant for a permit to operate shall pay the initial permit fee in Section 308 of this rule for the issuance of a permit to operate. An applicant for an authority to construct who has paid a portion of the initial permit fee shall be required to pay only the remaining portion for the issuance of a permit to operate.

302.1 When an application for a permit to operate is submitted for equipment that has been operated without a required permit from the District, the applicant shall pay renewal back fees for each year of unpermitted operation, to a maximum of 3 years, in addition to the initial permit fee.

302.2 When an application for a permit is submitted for the replacement of a boiler, process heater, or steam generator which is rated at or above 1 million BTU/hr and below 5 mmBTU/hr and is subject to the NOx emission limit requirements in Rule 411, NOX FROM BOILERS, PROCESS HEATERS, AND STEAM GENERATORS, then the applicant shall pay an initial permit fee equivalent to the permit renewal fee in Section 308.3. This section only applies for initial compliance with the limits adopted on (amendments to Rule 411 adoption date).

303 **PERMIT RENEWAL FEE:** Every holder of a permit to operate shall pay a fee for the annual permit renewal. The permit renewal fee shall be the total of:

303.1 The Permit Renewal Fee indicated by the appropriate schedule of Section 308 of this rule, and

303.2 The calculated fee for the total tons of each pollutant emitted during the prior calendar year as indicated by the following table. The minimum fee shall be that for one ton per year. The total tons of each pollutant shall be the actual emission rounded up to the next whole ton.

Table 303 – 1

Pollutant	Fee Per Ton of Pollutant Emitted During 12-Month Period
Carbon Monoxide (CO)	\$50 for Schedule 6, \$52 for all other schedules
Nitrogen Oxides (NOx)	\$50 for Schedule 6, \$52 for all other schedules
Reactive Organic Gas (ROG)	\$50 for Schedule 6, \$52 for all other schedules
Sulfur Oxides (SOx)	\$50 for Schedule 6, \$52 for all other schedules
Total Suspended Particulate (TSP)	\$50 for Schedule 6, \$52 for all other schedules

303.3 The holder of permits with more than one anniversary date may request a common renewal date and that fees be prorated as necessary.

304 **CANCELLATION OR WITHDRAWAL:** If the application for an authority to construct is canceled or denied, the fees paid shall not be refunded nor applied to any other application. Fees paid under Section 301.1 that are not used prior to an application being withdrawn by the applicant shall be refunded upon request.

305 **REVOCACTION:** If a permit to operate is revoked, the permit renewal fee applicable to that portion of the year during which the permit is invalid shall not be refunded nor applied to any other application.

306 **ALTERATIONS, ADDITIONS, REVISIONS OR CHANGE IN CONDITIONS:**

306.1 When an application is filed for a permit involving alterations or additions resulting in a change to any existing equipment for which a permit to operate was granted for such equipment and has not been canceled under Section 401 of this rule, the applicant shall pay a permit fee based on the incremental increase in rating, capacity or increase in the number of nozzles resulting from such change in accordance with the fee schedule in Section 308 of this rule.

306.2 When an application is filed for a revision of conditions on a permit to operate or any alteration or addition, but no increase or change is made in rating, capacity or number of nozzles, the applicant shall pay a permit fee of \$567.

307 **CHANGE OF LOCATION OR OWNERSHIP:** When an application is filed for a permit because the equipment has been moved to a new location, or ownership has been transferred from one person to another and a permit to operate granted for such equipment has not been canceled under Section 401 of this rule, the applicant shall pay a permit fee equivalent to the permit renewal fee in Section 303 of this rule.

308 **SCHEDULES FOR INITIAL PERMIT FEE AND PERMIT RENEWAL FEE:**

308.1 It is determined that the cost of issuing permits, and of inspections pertaining to such issuance exceeds the fees specified in this rule. If more than one fee schedule is applicable to a permit, the governing schedule shall be that which results in the higher fee. When a group of machines are included in a single permit, the permit fee shall be based on the total rating of the group.

308.2 **SCHEDULE 1, ELECTRIC MOTOR HORSEPOWER SCHEDULE:** Any equipment using motors as a power source shall be assessed a permit fee based on the cumulative total rated horsepower of all motors included, in accordance with the following schedule:

Horsepower	Initial Permit Fee	Permit Renewal Fee
Less than 5	\$567	\$284
5 to 49	\$1134	\$567
50 to 199	\$2267	\$1134
200 or greater	\$4533	\$2267

308.3 **SCHEDULE 2, FUEL BURNING SCHEDULE:** Any equipment in which fuel is burned, with the exception of incinerators which are covered in Schedule 4, shall be assessed a permit fee based upon the design fuel consumption of the equipment expressed in thousands of British Thermal Units (BTU) per hour, using gross heating values of the fuel, in accordance with the following schedule:

Million BTU Per Hour	Initial Permit Fee	Permit Renewal Fee
Less than 1	\$283	\$142
1 to 9	\$567	\$284
10 to 49	\$1134	\$567
50 to 99	\$2267	\$1134
100 or greater	\$4533	\$2267

308.4 **SCHEDULE 3, ELECTRICAL ENERGY SCHEDULE:** Any equipment which uses electrical energy, with the exception of motors covered in Schedule 1, shall be

assessed a permit fee based on total Kilovolt Ampere (KVA) ratings, in accordance with the following schedule:

<u>Kilovolt Ampere</u>	<u>Initial Permit Fee</u>	<u>Permit Renewal Fee</u>
Less than 150	\$1134	\$567
150 or greater	\$4533	\$2267

- 308.5 **SCHEDULE 4, INCINERATOR SCHEDULE:** Any equipment designed and used primarily to dispose of combustible refuse by wholly consuming the material charged leaving only the ashes or residue shall be assessed a permit fee based on the maximum horizontal inside cross sectional area, in square feet, of the primary combustion chamber, in accordance with the following schedule:

<u>Area, Square Feet</u>	<u>Initial Permit Fee</u>	<u>Permit Renewal Fee</u>
Less than 10	\$1134	\$567
10 to 39	\$3401	\$1701
40 to 99	\$4533	\$2267
100 or greater	\$5668	\$2834

- 308.6 **SCHEDULE 5, STATIONARY CONTAINER SCHEDULE:** Any stationary tank, reservoir or other container, with the exception of stationary storage tanks covered in Schedule 6, shall be assessed a permit fee based on the capacity in gallons, in accordance with the following schedule:

<u>Gallons</u>	<u>Initial Permit Fee</u>	<u>Permit Renewal Fee</u>
Less than 40,000	\$1134	\$567
40,000 to 399,999	\$4533	\$2267
400,000 or greater	\$5668	\$4533

- 308.7 **SCHEDULE 6, GASOLINE FUELING EQUIPMENT SCHEDULE:** Any gasoline fueling equipment at a single location including stationary gasoline storage tanks, dispensers, and vapor recovery systems shall be assessed a permit renewal fee based on the number of gasoline dispensing nozzles in accordance with the following schedule:

<u>Gasoline Nozzles</u>	<u>Initial Permit Fee</u>	<u>Permit Renewal Fee</u>
Gasoline dispensing equipment with phase I or phase II vapor recovery system	\$1060 minimum at \$152 per gasoline nozzle	\$530 minimum at \$76 per gasoline nozzle

The permit renewal fee for a gasoline dispensing facility granted an exemption for nozzle vapor recovery by Rule 449 shall be \$265. The initial permit fee for a gasoline dispensing facility shall be reduced by \$32 if the underground inspection is performed by a fire department/district through the consolidated inspection program.

- 308.8 **SCHEDULE 7, INTERNAL COMBUSTION ENGINE HORSEPOWER SCHEDULE:** Any equipment using internal combustion engines as a power source shall be assessed a permit fee based on the cumulative total rated horsepower of all internal combustion engines included, in accordance with the following schedule:

<u>Horsepower</u>	<u>Initial Permit Fee</u>	<u>Permit Renewal Fee</u>
Less than 50	\$283	\$142
50 to 249	\$567	\$284
250 to 499	\$1134	\$567
499 to 999	\$2267	\$1134

1000 or greater \$4533 \$2267

- 308.9 **SCHEDULE 8, ELECTRICAL GENERATING EQUIPMENT GREATER THAN 5MW:** The Initial Permit fee or Permit Renewal fee for an electrical generating stationary source producing greater than 5MW shall be based on the actual hours spent by the District staff in evaluating the application and processing the permit. The fee shall be assessed in accordance with the hourly rate established in Section 308.12.
- 308.10 **SCHEDULE 9, MISCELLANEOUS EQUIPMENT:** Any equipment which is not included in the preceding schedules shall be assessed an initial permit fee of \$1134 and a permit renewal fee of \$567. Notwithstanding Section 308.1, standby and emergency equipment may be included in this schedule.
- 308.11 **SCHEDULE 10, TIME AND MATERIALS LABOR RATE RESTRICTED BY HEALTH AND SAFETY CODE SECTION 41512.7(b):** This Schedule shall only be applicable to fees required by Section 301.1. The rate for time and materials shall be \$95 per hour.
- 308.12 **SCHEDULE 11, TIME AND MATERIALS LABOR RATE:** This Schedule shall only be applicable to fees required by Sections 308.9, 311, and 313 through 315. The rate for time and materials shall be \$118 per hour.
- 309 **PERMIT TO OPERATE GRANTED BY HEARING BOARD:** Permits granted by the Hearing Board after denial by the Air Pollution Control Officer are subject to this Rule.
- 310 **DUPLICATE PERMITS:** A request for a duplicate permit shall be made in writing by the permittee. A fee of \$18 shall be charged for issuing a duplicate permit.
- 311 **SOURCE TEST OBSERVATION AND REPORT EVALUATION:** A fee of \$1134 will be charged against the owner or operator of a source whenever the Air Pollution Control Officer finds that a source test is required and must be observed and the report evaluated by district personnel to determine the actual emissions from the source for the purpose of issuing or renewing a permit to operate. When multiple source tests are performed and the results submitted in one consolidated report, the source test fee of \$1134 shall apply to the first 10 hours of District work. Each additional hour or portion thereof required for reviewing the source test shall be charged the time and materials labor rate established in Section 308.12.
- 312 **ANALYSIS FEES:** Whenever the Air Pollution Control Officer finds that an analysis of the emissions from any source is necessary to determine the extent and amount of pollutants being discharged into the atmosphere which cannot be determined by visual observation, he may collect and analyze emissions samples. The cost of collecting samples, making the analysis and preparing the necessary reports shall be charged against the owner or operator of said source. The Air Pollution Control Officer shall provide the applicant with an estimate of the actual cost of such work. The applicant may request a conference with the Air Pollution Control Officer to review the cost estimate. The applicant may provide additional information that would reduce the time spent by the Air Pollution Control Officer in performing an analysis of the emission from the source. The Air Pollution Control Officer's cost estimate shall be reduced accordingly.
- 313 **TITLE V OPERATING PERMIT FEE:** The fee for (1) the issuance of an initial Title V operating permit, (2) the renewal of a Title V operating permit, (3) the modification of a Title V operating permit or (4) an administrative Title V permit amendment shall be based on the actual hours spent by the District staff in evaluating the application and processing the operating permit. The fee shall be assessed in accordance with the hourly rate established in Section 308.12.
- 314 **REINSPECTION FEE:** If, during an inspection for the purpose of issuing (1) an initial Permit to Operate, (2) renewal of a Permit to Operate, or (3) any type of Title V operating permit, a

permit unit's operation cannot be evaluated or approved due to circumstances beyond the control of the Air Quality Management District, the owner/operator shall pay the actual cost of a reinspection. The fee for the reinspection shall be assessed in accordance with the hourly rate established in Section 308.12.

- 315 **EMISSION REDUCTION CREDIT BANKING FEE:** Any person who requests to deposit emission reduction credits in the District credit bank or to withdraw emission reduction credits from the District credit bank shall pay a fee based on actual hours spent by the District staff in processing the request. The fee shall be assessed in accordance with the hourly rate established in Section 308.12.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **NOTIFICATION OF INITIAL PERMIT FEE OR PERMIT RENEWAL FEE DUE:** After the provisions for granting permits as set forth in Division 26 of the Health and Safety Code and these rules and regulations have been complied with or on the renewal date of a permit to operate, the applicant/permittee will be notified by mail of the fee due and payable and the date the fee is due. If the fee is not paid by the specified due date, the fee shall be increased by one half the amount and the applicant/permittee shall be notified by mail of the increased fee. If the increased fee is not paid within 30 days after notice the application/permit will be canceled and the applicant/permittee will be notified by mail. A canceled application/permit may be reinstated by payment of the applicable permit fee plus fee increases.
- 402 **NEGOTIATED PAYMENT SCHEDULE:** If a permittee certifies to the Air Pollution Control Officer's satisfaction through declaration that payment in full of Permit to Operate Renewal fees would result in undue financial hardship, the District may negotiate an amended fee payment schedule, provided that the amended schedule includes reimbursing the District for any increased costs of processing the extra payments. Failure to make any payments by any negotiated due date may result in penalties as otherwise authorized in this rule and/or cancellation of the permit.
- 403 **CONSUMER PRICE INDEXING OF FEES:** Permit fees may be adjusted on an annual basis. If the Air Pollution Control Officer anticipates the need for a change, the adjustment must initially be proposed as part of the annual budget process. The proposed rate change must meet the requirements of the California Health and Safety Code, including sections 41512.7(b) and 42311(a). The rate change must be noticed as part of the proposed and final budgets. If the Board of Directors approves a fee change with the final budget, the Air Pollution Control Officer may adjust fees by up to the maximum rate approved by the Board.