RULE 4307 BOILERS, STEAM GENERATORS, AND PROCESS HEATERS – 2.0 MMBtu/hr to 5.0 MMBtu/hr (Adopted December 15, 2005; Amended April 20, 2006; Amended October 16, 2008; Amended May 19, 2011; Amended April 21, 2016)

1.0 Purpose

The purpose of this rule is to limit emissions of oxides of nitrogen (NOx), carbon monoxide (CO), oxides of sulfur (SO_2), and particulate matter 10 microns or less (PM10) from boilers, steam generators, and process heaters.

2.0 Applicability

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input of 2.0 million Btu per hour (MMBtu/hr) up to and including 5.0 MMBtu/hr.

3.0 Definitions

3.1 Air Pollution Control Officer (APCO): as defined in Rule 1020 (Definitions).

3.2 Air Resources Board (ARB): as defined in Rule 1020 (Definitions).

3.3 Annual Heat Input: the actual, total heat 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.

3.4 Atmospheric Unit: any unit with a non-sealed combustion chamber in which the combustion air and flue gases are drawn through the unit without the use of a fan.

3.5 Boiler or Steam Generator: any external combustion equipment fired with any fuel used to produce hot water or steam.

3.6 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.

3.7 California Public Utility Commission (PUC) Quality Natural Gas: any gaseous fuel, gas-containing fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet and no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. PUC quality natural gas also means high methane gas of at least 80% methane by volume.

3.8 Certified Unit or Certified Retrofit Control Technology: any unit, any control technology, or any burner and ancillary controls or blowers, that has been demonstrated to comply with the emissions limits of this rule and which has been approved by the APCO pursuant to Section 9.0 of this rule.

3.9 Dryer: any unit in which material is dried in direct contact with the products of combustion.

3.10 Gaseous Fuel: any fuel which is a gas at Standard Conditions.

3.11 Glycol Reboiler: a burner that supplies heat to remove water vapor and hydrocarbons from rich glycol by simple distillation. Reboilers are also known as regenerators.

3.12 Heat Input: the heat (hhv basis) released due to fuel combustion in a unit, not including the sensible heat of incoming combustion air and fuel.

3.13 Higher Heating Value (hhv): the total heat liberated per mass of fuel burned (expressed as Btu per pound), when fuel and dry air at standard conditions undergo complete combustion and all resulting products are brought to their standard states at standard conditions.

3.14 Humidifier: a device or system that uses an air stream heated by a direct contact combustion process in combination with a water spray to produce warm air of high humidity in order to maintain or increase the moisture content of the material being processed or conveyed by the air stream.

3.15 Liquid Fuel: any fuel which is a liquid at Standard Conditions.

3.16 Liquefied Petroleum Gas (LPG): a gas containing propane, butane, or a mixture of propane/butane, which is gaseous under ambient atmospheric conditions but can be liquefied under moderate pressure at normal temperatures.

3.17 NOx Emissions: the sum of oxides of nitrogen expressed as NO_2 in the flue gas.

3.18 NOx Exhaust Control: a device or technique used to treat a unit's exhaust combustion gas to reduce NOx emissions. Such a device or technique includes, but is not limited to, selective catalytic reduction or nonselective catalytic reduction.

3.19 Parts Per Million by Volume (ppmv): as defined in Rule 1020 (Definitions).

3.20 Process Heater: any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to water or process streams. This definition excludes: kilns or ovens used for drying, baking, cooking, calcining, or vitrifying; and unfired waste heat recovery heaters used to recover sensible heat from the exhaust of combustion equipment.

3.21 Qualified Technician: a stationary source employee or any personnel contracted by a stationary source operator who has a documented training and a demonstrated experience performing tune-ups on a unit to the satisfaction of the APCO. The documentation of tune-up training and experience shall be made available to the APCO upon request.

3.22 Rated Heat Input (expressed as million Btu per hour): the heat input capacity specified on the nameplate of the unit. If the unit has been physically modified such that its maximum heat input differs from what is specified on the nameplate, the modified maximum heat input shall be considered as the rated heat input and made enforceable by Permit to Operate.

3.23 Re-ignition: the relighting of a unit after an unscheduled and unavoidable interruption or shut off of the fuel flow or electrical power, for a period of less than 30 minutes, due to reasons outside the control of the operator.

3.24 School: any public or private school used for the purpose of education and instruction of school pupils in Kindergarten through Grade 12, but does not include any private school in which education and instruction are primarily conducted in private homes.

3.25 Shutdown: the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to a cold or ambient temperature as the fuel supply is turned off. A unit is considered in shutdown status when the fuel supply to the unit is turned off for a continuous period of at least 30 minutes.

3.26 Solid Fuel: any fuel which is a solid at Standard Conditions.

3.27 Standard Conditions: as defined in Rule 1020 (Definitions).

3.28 Start-up: the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure.

3.29 Stationary Source: as defined in Rule 2201 (New and Modified Stationary Source Review Rule).

3.30 Tree Nut Pasteurizer: a unit, designed to remove pathogens from tree nuts, which is operated at a tree nut processing facility subject to any part of Title 7 Section 900 through 999 of the Code of Federal Regulations (7 CFR 900 through 7 CFR 999).

3.31 Unit: any boiler, steam generator or process heater as defined in this rule.

3.32 US Environmental Protection Agency (EPA): the United States Environmental Protection Agency or any person authorized to act on its behalf.

4.0 Exemptions

This rule shall not apply to:

4.1 Solid fuel fired units.

4.2 Dryers and glass melting furnaces.

4.3 Kilns, humidifiers, and smelters where the products of combustion come into direct contact with the material to be heated.

4.4 Unfired or fired waste heat recovery boilers that are used to recover or augment heat from the exhaust of combustion turbines or internal combustion engines.

4.5 Units used at a school. On and after July 1, 2015, units used at a school shall comply with all applicable requirements of this rule.

4.6 The requirements of Section 5.1 shall not apply to a unit when burning any fuel other than PUC quality natural gas during a PUC quality natural gas curtailment provided all of the following conditions are met:

4.6.1 Fuels other than PUC quality natural gas are burned no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing, as limited by Permit to Operate or Permit-Exempt Equipment Registration.

4.6.2 NOx emission shall not exceed 150 ppmv (corrected to 3.00 percent oxygen) or 0.215 lb/MMBtu. Demonstration of compliance with this limit shall be made by either source testing, continuous emission monitoring system (CEMS), an APCO approved Alternate Monitoring System, or an APCO approved portable NOx analyzer.

5.0 Requirements

All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen in accordance with Section 8.1.

5.1 NOx and CO Emission Limits

5.1.1 Except for units subject to either Section 5.1.2 or Section 5.2, no unit shall be operated unless it is certified, according to Section 9.0, or source tested in accordance with the test methods in Section 6.2, to comply with the applicable emission limits specified in Table 1 and Table 2.

Table 1 NOx and CO limits		
Type of Unit	NOx Limit	CO Limit (ppmv)
Gaseous Fuel-Fired Unit	30 ppmv or 0.036 lb/MMBtu	400
Liquid Fuel-Fired Unit	40 ppmv or 0.052 lb/MMBtu	400

Table 2 NOx and CO limits for New and Replacement Units			
I. Atmospheric Units			
Type of Unit	NOx Limit	CO Limit (ppmv)	Effective Date
A. A new or replacement unit that is not included in Section I. B.	12 ppmv or 0.014 lb/MMBtu	400	Upon Installation of a new or replacement unit on and after January 1, 2010
B. A new or replacement unit that is one of the following: 1. a unit used at a school; or 2. a unit in an oilfield or refinery; or 3. a glycol reboiler; or 4. a unit with a heat input greater than 1.8 billion Btu but less than 5.0 billion Btu per calendar year	12 ppmv or 0.014 lb/MMBtu	400	Upon Installation of a new or replacement unit on and after January 1, 2016
II. Non-Atmospheric Units			
Type of Unit	NOx Limit	CO Limit (ppmv)	Effective Date
A. A new or replacement unit that is not included in Section II. B.	9 ppmv or 0.011 lb/MMBtu	400	Upon Installation of a new or

			replacement unit on and after January 1, 2010
B. A new or replacement unit that is one of the following: 1. a unit used at a school; or 2. a unit in an oilfield or refinery; or 3. a glycol reboiler; or 4. a unit with a heat input greater than 1.8 billion Btu but less than 5.0 billion Btu per calendar year	9 ppmv or 0.011 lb/MMBtu	400	Upon Installation of a new or replacement unit on and after January 1, 2016

5.1.2 Tree nut pasteurizers shall be fired exclusively on LPG or PUC quality natural gas.

5.1.2.1 All tree nut pasteurizers shall be operated and maintained according to manufacturer's specifications or APCO-approved alternative procedures.

5.1.2.2 Operation and maintenance records and manufacturer's specifications/APCO-approved alternative procedures shall be maintained in accordance with Section 6.1.5.

5.1.2.3 During PUC quality natural gas curtailments, operators of tree nut pasteurizers shall abide by the provisions of Section 4.6, if the unit is operated during the curtailment.

5.2 Operators shall meet the following requirements as applicable.

5.2.1 Until June 30, 2015, for each existing atmospheric unit operated in an oilfield or refinery; each glycol reboiler; or each unit limited to no more than 5.0 billion Btu per calendar year heat input pursuant to a Permit to Operate or Permit-Exempt Equipment Registration, the operator shall comply with Section 5.5.2, Section 7.3, Section 7.4, and either Section 5.2.1.1, 5.2.1.2, or 5.2.1.3.

5.2.1.1 Tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown; or

5.2.1.2 Operate the unit in a manner that maintains exhaust oxygen concentrations at less than or equal to 3.00 percent by volume on a dry basis; or

5.2.1.3 Certify the unit according to Section 9.0 to comply with the applicable emission requirements of Section 5.1 Table 1.

5.2.2 On and after July 1, 2015, for each unit limited to no more than 1.8 billion Btu per calendar year heat input pursuant to a Permit to Operate or Permit-Exempt Equipment Registration, the operator shall comply with Section 5.5.2, Section 7.3, Section 7.4, and either Section 5.2.1.1, 5.2.1.2, or 5.2.1.3.

5.2.3 On and after July 1, 2015, for each existing atmospheric unit in an oilfield or refinery; each glycol reboiler; or each unit with a heat input greater than 1.8 billion Btu to less than 5.0 billion Btu per calendar year, the operator shall comply with the applicable emission requirements of Section 5.1 Table 1. The operator shall comply with the compliance requirements and deadlines specified for Group 3 units in Section 7.1 Table 3.

5.3 Particulate Matter Control Requirements

5.3.1 To limit particulate matter emissions, an operator shall comply with one of the following requirements:

5.3.1.1 On and after July 1, 2015, operators shall fire units exclusively on PUC quality natural gas, commercial propane, butane, liquefied petroleum gas, or a combination of such gases; or

5.3.1.2 On and after July 1, 2015, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

5.3.1.3 On and after July 1, 2015, operators shall install and properly operate an emission control system that reduces SO_2 emissions by at least 95% by weight; or limit exhaust SO_2 to less than or equal to 9 ppmv corrected to 3.0% O_2.

5.3.2 On and after July 1, 2015, liquid fuel shall be used only during a PUC quality natural gas curtailment period provided it contains no more than 15 ppm sulfur as determined by the test method specified in Section 6.2.7. An operator shall comply with the recordkeeping requirement of Section 6.1.3. In lieu of testing the sulfur content of liquid fuel, an operator may demonstrate compliance with the 15 ppm sulfur content by obtaining a copy of the fuel sulfur content specification data from the fuel manufacturer or vendor.

5.4 Start-Up and Shutdown Requirements

The applicable emission limits of Sections 5.1 and 5.2.1.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified below.

5.4.1 For units not equipped with a NOx exhaust control, the duration of each start-up and each shut down shall not exceed one hour, except as provided in Section 5.4.4.

5.4.2 For units equipped with a NOx exhaust control, the duration of each start-up and each shut down shall not exceed two hours, except as provided in Section 5.4.4.

5.4.3 The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown.

5.4.4 The APCO, ARB, and EPA may approve a longer start-up or shutdown duration than the duration specified in Section 5.4.1 or 5.4.2 (as applicable), if an operator submits an application for a Permit to Operate or Permit-Exempt Equipment Registration which provides a justification for the requested additional duration.

5.4.4.1 The maximum allowable duration of start-up or shutdown will be determined by the APCO, ARB, and EPA.

5.4.4.2 At a minimum, a justification for increased start-up or shutdown duration shall include the following:

5.4.4.2.1 A clear identification of the control technologies or strategies to be utilized; and

5.4.4.2.2 A description of what physical conditions prevail during start-up or shutdown periods that prevent the controls from being effective; and

5.4.4.2.3 A reasonably precise estimate as to when the physical conditions will have reached a state that allows for the effective control of emissions; and

5.4.4.2.4 A detailed list of activities to be performed during start-up or shutdown and a reasonable explanation for the length of time needed to complete each activity; and

5.4.4.2.5 A description of the material process flow rates and system operating parameters, etc., the operator plans to evaluate during the process optimization; and an explanation of how the activities and process flow affect the operation of the emissions control equipment; and

5.4.4.2.6 Basis for the requested additional duration of start-up or shutdown.

5.4.5 Permit to Operate (PTO) changes solely to include start-up or shutdown conditions may be exempt from Best Available Control Technology (BACT) and emission offset requirements if the PTO changes meet the requirements of Rule 2201 (New or Modified Stationary Source Review Rule) Section 4.2 (BACT Exemptions) and Rule 2201 Section 4.6 (Offset Exemptions).

5.5 Monitoring Provisions

5.5.1 For units subject to the emission limits of Section 5.1 the operator shall;

5.5.1.1 Monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO; and

5.5.1.2 Tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. In lieu of tuning the unit, operators shall monitor the emissions with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule.

5.5.2 The operator of any unit limited to the annual heat input specified in Section 5.2.1 or Section 5.2.2 shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit. Volumetric flow measurements shall be periodically compensated for temperature and pressure. A master meter, which measures fuel to all units in a group of similar units, may satisfy these

requirements if approved by the APCO in writing. The cumulative annual fuel usage may be verified from utility service meters, purchase or tank fill records, or other acceptable methods, as approved by the APCO.

5.5.3 Monitoring SOx Emissions

5.5.3.1 Operators complying with Section 5.3.1.3 by installing and operating a control device with 95% SOx reduction shall propose the key system operating parameters and frequency of the monitoring and recording. The monitoring option proposed shall be submitted for approval by the APCO.

5.5.3.2 Operators complying with Sections 5.3.1.1 or 5.3.1.2 shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit To Operate or Equipment Registration condition. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2.

5.6 Compliance Determination

5.6.1 For the purposes of certification, the operator of any unit shall have the option of demonstrating compliance with either the applicable heat input emission limits (lb/MMBtu) or the concentration emission limits (ppmv) specified in Section 5.1. The emission limits selected to demonstrate compliance shall be specified in the Permit to Operate or Permit-Exempt Equipment Registration. The emission limit selected in Section 5.1 shall also be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

5.6.2 All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate or Permit-Exempt Equipment Registration.

5.6.3 Unless otherwise specified in the Permit to Operate or Permit-Exempt Equipment Registration no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0.

5.6.4 Notwithstanding the requirements of Section 5.6.3, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified in Section 5.6.3 and continue through its normal cyclical firing period.

5.6.5 For emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical

limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.

6.0 Administrative Requirements

6.1 Recordkeeping

The records required by Sections 6.1.1 through 6.1.5 shall be maintained, and retained for five calendar years. The records shall be made available to the APCO, ARB, and EPA upon request. Failure to maintain records or information contained in the records that demonstrates noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

6.1.1 The operator of any unit limited to the annual heat input specified in Section 5.2.1 or Section 5.2.2 shall record the amount of fuel use, at least once a month for each unit, or for a group of units as specified in Section 5.5.2. On and after the compliance schedule specified in Section 7.0 Table 3, any unit that exceeds the annual heat input limit specified in Section 5.2.1 or Section 5.2.2, shall be brought into full compliance with this rule as specified in Section 7.3.

6.1.2 The operator of any unit subject to the applicable requirements of Sections 5.2.1.1, 5.5.1.1, and 5.5.1.2 shall maintain records to verify that tune-up and monitoring of the operational characteristics of the unit have been performed.

6.1.3 Operators who operate a unit on liquid fuel during PUC-quality natural gas curtailment period shall record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period.

6.1.4 The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown that exceed the applicable requirements of Sections 5.4.1 or 5.4.2.

6.1.5 Tree Nut Pasteurizers Operations and Maintenance Records

The operator of a tree nut pasteurizer shall maintain operation and maintenance records that demonstrate operation of the tree nut pasteurizer is within the limits of the manufacturer's specification and maintenance according to manufacturer's recommendation or APCO-approved alternative procedures.

6.1.5.1 Operations records shall be maintained for the days on which the tree nut pasteurizer is operated.

6.1.5.2 The operator shall keep maintenance records that verify that maintenance was performed in accordance with manufacturer's specifications or APCO-approved alternative procedures.

6.1.5.3 A copy of the manufacturer's operation specifications and maintenance instruction manual or APCO-approved alternative procedures shall be maintained on-site during normal business hours.

6.1.5.4 If the manufacturer's operation specifications or maintenance instruction manual are not available, the operator of a tree nut pasteurizer shall submit alternative operation or maintenance procedures for approval by the APCO by November 1, 2011 or as part of the Authority to Construct application, whichever is later.

6.1.5.5 The operator of a tree nut pasteurizer shall maintain records that demonstrate that the fuel used to fire the pasteurizer is LPG or PUC quality natural gas.

6.2 Test Methods

The following test methods shall be used unless otherwise approved by the APCO, ARB, and EPA.

6.2.1 Oxides of nitrogen (ppmv) – EPA Method 7E, or ARB Method 100.

6.2.2 Carbon monoxide (ppmv) – EPA Method 10, or ARB Method 100.

6.2.3 Stack gas oxygen – EPA Method 3 or 3A, or ARB Method 100.

6.2.4 NOx Emission Rate (Heat Input Basis) – EPA Method 19.

6.2.5 Stack gas velocities – EPA Method 2.

6.2.6 Stack gas moisture content – EPA Method 4.

6.2.7 Sulfur content of liquid fuel – American Society for Testing and Materials (ASTM) D 6920-03 or ASTM D 5453-99.

6.2.8 Determination of total sulfur as hydrogen sulfide (H2S) content – EPA Method 11 or EPA Method 15, as appropriate.

6.2.9 Oxides of sulfur – EPA Method 6C, EPA Method 8, or ARB Method 100.

6.2.10 The SOx emission control system efficiency shall be determined using the following:

$$\% \text{ Control Efficiency} = [\ (C_{SO2,\ inlet} - C_{SO2,\ outlet}) / C_{SO2,\ inlet}\ ] \text{ X } 100$$

Where:

$C_{SO2,\ inlet}$ = concentration of SOx (expressed as SO_2) at the inlet side of the SOx emission control system, in lb/dscf

$C_{SO2,\ outlet}$ = concentration of SOx (expressed as SO_2) at the outlet side of the SOx emission control system, in lb/dscf

6.3 Compliance Demonstration

6.3.1 The operator shall conduct an initial source test at the time of installation and/or modification for each non-certified unit or each non-certified retrofit control technology to demonstrate compliance with the applicable certification emission limits in Section 5.1. Units demonstrating compliance are eligible for certification under the provisions of Section 9.0.

6.3.2 Source testing of a certified unit or certified retrofit control technology, as defined in Section 3.0, is not required provided the operator complies with the requirements of Sections 6.3.2.1 and 6.3.2.2.

6.3.2.1 Operate the unit within range of operating parameters specified in the APCO-approved certification document.

6.3.2.2 Operate and maintain the unit in accordance with the manufacturer's instructions and conditions specified in the APCO-approved certification document.

6.3.3 A unit or retrofit control technology that loses its certification status shall be source tested within 60 days after the date the certification status is lost to demonstrate compliance with the emission limits of this rule. The manufacturer or operator may request re-certification of a unit or retrofit

control technology that lost its certification status provided the provisions of Section 9.0 are met.

6.4 Equipment Registration Requirement

Except for units that require a Permit to Operate pursuant to Rule 2020 (Exemptions), the operator shall register with the District any unit subject to this rule no later than the applicable date shown in Table 3, in accordance with Rule 2250 (Permit-Exempt Equipment Registration).

7.0 Compliance Schedule

7.1 An operator with multiple units at a stationary source shall comply with this rule in accordance with the schedule specified in Table 3. An operator with only one unit at a stationary source shall comply with the schedule specified in Table 3, Group 2.

TABLE 3 - Compliance Schedule

Quantity of Units to be in Compliance at a Stationary Source	Authority to Construct	Permit-Exempt Equipment Registration	Full Compliance
Group 1: 50% or more of the total number of units subject to this rule on July 1, 2008, excluding Group 3	January 1, 2008	April 1, 2008	July 1, 2008
Group 2: 100% of the total number of units subject to this rule on and after July 1, 2009, excluding Group 3	January 1, 2009	April 1, 2009	July 1, 2009
Group 3: 100%of the total number of units subject to Section 5.2.3 and 100% of the total number of units located at a school, subject to this rule on and after July 1, 2015	January 1, 2015	April 1, 2015	July 1, 2015

Units are considered to be subject to this rule if the rule is applicable to the units pursuant to Section 2.0 and the units are not exempt pursuant to Section 4.0.

7.2 As shown in Table 3, the column labeled:

7.2.1 "Authority to Construct" identifies the date by which the operator shall submit an Application for Authority to Construct for each unit subject to this rule and which is required to have a Permit to Operate (PTO) pursuant to Rule 2020 (Exemptions).

7.2.2 "Permit-Exempt Equipment Registration" identifies the date by which the owner or operator shall submit a complete Permit-Exempt Equipment Registration application for each unit subject to the registration requirements of Rule 2250 (Permit-Exempt Equipment Registration).

7.2.3 "Full Compliance" identifies the date by which the owner shall demonstrate that each unit is in compliance with this rule regardless of whether the unit requires a Permit to Operate or a Permit-Exempt Equipment Registration.

7.3 Any unit that becomes subject to the emission limits of this rule as a result of exceeding the annual heat input limit specified in Section 5.2.1 or Section 5.2.2, shall be in compliance with the emission limits specified in Section 5.1 Table 1 on and after the date the annual heat input limit is exceeded.

7.4 When an existing unit, that is subject to Section 5.2, is replaced, the replacement unit shall be certified, according to Section 9.0, or source tested in accordance with the test methods in Section 6.2 to comply with the applicable emission limits specified in Section 5.1, on and after the date of initial operation.

8.0 Calculations

8.1 All ppmv emission limits specified in Section 5.1 are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen as follows:

$$[ppm\,NOx]_{corrected} = \frac{17.95\%}{20.95\% - [\%O2]_{measured}}\ x\ [ppm\,NOx]_{measured}$$

$$[ppm\,CO]_{corrected} = \frac{17.95\%}{20.95\% - [\%O2]_{measured}}\ x\ [ppm\,CO]_{measured}$$

8.2 All pounds per million Btu NOx emission rates shall be calculated as pounds of nitrogen dioxide per million Btu of heat input (hhv).

9.0 Equipment Certification Requirements

9.1 To be considered for APCO certification, the manufacturer or operator shall comply with the following requirements:

9.1.1 Certification shall be based upon the emission source testing results of a specific unit, or a randomly selected unit of each model, or retrofit control technology.

9.1.2 A source testing protocol shall be submitted in accordance with the provisions of Rule 1081 (Source Sampling) for approval by the APCO prior to conducting the source test. The source testing protocol approved by the APCO shall be strictly adhered to during certification source testing.

9.1.3 Source testing shall be conducted over the range of operating parameters for which the unit(s) or retrofit control technology will be operated.

9.1.4 The source testing results shall demonstrate compliance with the emission limits of this rule for each model of unit(s), or retrofit control technology to be certified.

9.1.5 The source testing procedure and reports shall be prepared by an ARB-approved independent testing laboratory, and shall contain all the elements identified in the APCO-approved source testing protocol.

9.1.6 Source testing shall be conducted no more than 90 days prior to the date of submission of request for certification by the APCO.

9.2 The manufacturer or operator requesting certification shall submit to the APCO the following information:

9.2.1 Copies of the source testing results conducted pursuant to the requirements of Section 9.1, and other pertinent technical data to demonstrate compliance with the emission limits of this rule.

9.2.2 The applicant shall sign and date the statement attesting to the accuracy of all information in the statement.

9.2.3 Name and address of the unit manufacturer or operator, brand name of the unit or retrofit control technology, model number, rated heat input as it appears in the unit nameplate, and description of model of unit(s), or retrofit control technology being certified.

9.3 The APCO will only approve an application for certification to the extent that the requirements of Sections 9.1 through 9.2 are met and the source testing results demonstrate that the emission limits of this rule are met.

9.4 The APCO-approved certification is valid only for the range of operating parameters for which certification is issued.

9.5 A certified unit or a certified retrofit control technology that is operated outside the APCO-certified range of operating parameters shall lose its certification status. A unit or retrofit control technology that loses its certification status shall comply with the requirements of Section 6.3.3.

9.6 The APCO shall publish a list of certified units or certified retrofit control technology after the certification process is completed.

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