(Adopted November 7, 2014)(Amended August 4, 2023)

RULE 1153.1 EMISSIONS OF OXIDES OF NITROGEN FROM COMMERCIAL FOOD OVENS

(a) Purpose

The purpose of this rule is to reduce Oxides of Nitrogen (NOx) and Carbon Monoxide (CO) emissions from gaseous and liquid fuel-fired Commercial Food Ovens as defined in this rule.

(b) Applicability

This rule applies to owners or operators of Units that require South Coast Air Quality Management District (South Coast AQMD) permits and are used to prepare food or products for making beverages for human consumption.

(c) Definitions

(1) ALTERNATIVE COMPLIANCE SCHEDULE PLAN means a compliance plan that allows an owner or operator of a Unit(s) required to meet the Phase II Emission Limits to apply for an alternative compliance schedule if the electrical upgrades required by their utility company will result in a delay in meeting the rule deadlines and are beyond the control of the facility.

(2) BAKERY OVEN means a Commercial Food Oven used to heat, cook, or prepare baked products. Bakery Ovens include, but are not limited to, tunnel ovens, conveyor ovens, tray ovens, and griddle ovens.

(3) COMBUSTION-BASED EMISSION LIMITS means emission limits that rely on technologies that combust gaseous or liquid fuel and include Phase I Emission Limits and South Coast AQMD permit emission limits.

(4) COMBUSTION SYSTEM means a specific combination of burner, fuel supply, combustion air supply, and control system components as identified in a permit application to South Coast AQMD, or in an application for certification pursuant to subdivision (h) of this rule, or in a South Coast AQMD permit, as applicable.

(5) COMMERCIAL FOOD OVEN means a cooking device used to heat, cook, dry, or prepare food or products for making beverages for human consumption that is used as part of a business.

(c) (6) COOKING OVEN means a Commercial Food Oven used to cook food products including, but not limited to, meat, fish, poultry, or vegetables. Cooking ovens do not include Bakery Ovens, Tortilla Ovens, Drying Ovens, and Smokehouses.

(7) DECOMMISSION means to permanently shut down a Unit by removing the fuel, air, electricity, or other utility source connected to it and to inactivate the Unit's applicable South Coast AQMD permit.

(8) DIRECT-FIRED BAKERY OVEN means a Bakery Oven where the energy or heat source is placed directly inside the baking chamber and the heat transfer is primarily carried out by radiation from the flames, electrical resistance, or hot surface.

(9) DRYER means a Commercial Food Oven using either a direct or indirect heat source to dry food products using a rotating drum. Dryers include spray dryers, which are Commercial Food Ovens where liquids or slurry are atomized and dried into powder form by spraying the feed into a heated chamber.

(10) DRYING OVEN means a Commercial Food Oven used to remove water or moisture to dry food products.

(11) ELECTRIC HEATING ELEMENT means any component of a Commercial Food Oven used to transform electrical energy into heat.

(12) FORMER RECLAIM FACILITY means a facility, or any of its successors, that was in the REgional Clean Air Incentives Market (RECLAIM) program as of January 5, 2018, as established in Regulation XX, that has received a final determination notification, and is no longer in the RECLAIM program.

(13) GASEOUS FUEL means natural gas; compressed natural gas (CNG); liquefied petroleum gases (LPG), including but not limited to propane and butane; synthetic natural gas (SNG); or other fuel that is a gas at ambient temperature and atmospheric pressure.

(14) GRIDDLE OVEN means a Commercial Food Oven that uses a moving griddle, which is a flat or grooved metal plate, that is heated between 550°F to 900°F to produce baked products such as, but not limited to, English muffins.

(15) HEAT INPUT means the higher heating value of the fuel to the burner or Unit measured as Btu per hour.

(16) HEAT OUTPUT means the enthalpy of the working fluid at the output of a burner or Unit.

(17) INDIRECT-FIRED BAKERY OVEN means a Bakery Oven that uses heat exchangers connected to the burning zone to indirectly heat the baking chamber, where the product being baked does not contact the combustion gases.

(c) (18) INFRARED BURNER (IR Burner) means a burner with ceramic, metal fiber, sintered metal, or perforated metal flame-holding surface; with more than 50 percent of the Heat Output as infrared radiation; that is operated in a manner where the zone above the flame-holding surface is red and does not produce observable blue or yellow flames in excess of ½ inch (13 mm) in length; and with a Rated Heat Input Capacity per square foot of flame-holding surface of 100,000 Btu per hour or less.

(19) OXIDES OF NITROGEN (NOx) EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide, collectively expressed as nitrogen dioxide.

(20) PARTS PER MILLION BY VOLUME (ppmv) means, for the purpose of this rule, Parts Per Million by Volume of a pollutant corrected to three percent oxygen on a dry basis at Standard Conditions.

(21) PHASE I EMISSION LIMITS means the NOx and CO emission limits specified in Table 1 under the Phase I heading.

(22) PHASE II EMISSION LIMITS means the NOx and CO emission limits specified in Table 1 under the Phase II heading, if applicable.

(23) RATED HEAT INPUT CAPACITY means the gross Heat Input of the combustion Unit specified on a permanent rating plate attached by the manufacturer to the device. If the Unit or Combustion System has been altered or modified such that its gross Heat Input is higher or lower than the rated Heat Input capacity specified on the original manufacturer's permanent rating plate, the modified gross Heat Input shall be considered as the Rated Heat Input Capacity.

(24) RECLAIM FACILITY means a facility, or any of its successors, that was in the NOx RECLAIM program as of January 5, 2018, as established in Regulation XX and has not exited from the program.

(25) RESPONSIBLE OFFICIAL means:

(A) For a corporation: a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions for the corporation;

(B) For a partnership or sole proprietorship: general partner or proprietor, respectively;

(C) For a government agency: a duly authorized person.

(26) ROASTER means a Commercial Food Oven used to dry roast food products that include, but are not limited to, nuts, coffee beans, or other plant seeds. Roasters include Units with an integrated afterburner which consists of a single burner used as the heat source for the afterburner and Roaster.

(c) (27) SMOKEHOUSE means a Commercial Food Oven in which meat products are cured using smoke and heat.

(28) SOURCE TEST PROTOCOL means a South Coast AQMD approved set of test procedures for determining compliance with emission limits for applicable equipment.

(29) STANDARD CONDITIONS is as defined by Rule 102 – Definition of Terms.

(30) THERM means 100,000 Btu.

(31) TORTILLA OVEN means a Commercial Food Oven used to cook, toast, or bake tortilla chips and other tortilla products.

(32) UNIT means any Commercial Food Oven, including, but not limited to, Bakery Oven, Cooking Oven, Direct-Fired Bakery Oven, Dryer, Drying Oven, Indirect-Fired Bakery Oven, Roasters, Smokehouse, or Tortilla Ovens used to prepare food, or products for making beverages, for human consumption.

(d) Requirements

(1) An owner or operator of a Unit shall not operate the Unit in a manner that exceeds:

(A) For a Unit that was installed and in operation before August 4, 2023:

(i) Phase I Emission Limits specified in Table 1 pursuant to the compliance schedule in Table 2; and

(ii) Phase II Emission Limits specified in Table 1, if applicable, pursuant to the compliance schedule in Table 3.

(B) For a new Unit that was placed in operation on or after August 4, 2023:

(i) Phase I Emission Limits for a Unit that does not have a Phase II Emission Limit; and

(ii) For a Unit with a Phase II Emission Limit, Phase I Emission Limits if a complete permit application is submitted before January 1, 2024, and the Phase II Emission Limit pursuant to the compliance schedule in Table 3.

Table 1 – NOx and CO Emission Limits (ppmv)[1]

Equipment Categories		Phase I		Phase II	
		NOx	CO	NOx	CO
Direct Fired Bakery Ovens	≤3 MMBtu/hr	30	800	0	0
	>3 MMBtu/hr	30	800	N/A	N/A
Indirect-Fired Bakery Ovens		30	800	0	0
Griddle Oven		30	800	N/A	N/A
Tortilla Ovens	Heated solely by IR Burners	15	800	N/A	N/A
	All Other Tortilla Ovens	30	800	N/A	N/A
Cooking Ovens	≤3 MMBtu/hr	30	800	0	0
	>3 MMBtu/hr	30	800	N/A	N/A
Drying Ovens		30	800	N/A	N/A
Smokehouses		30	800	0	0
Dryers		30	800	N/A	N/A
Roasters		30	800	N/A	N/A

[1] Parts per million by volume (ppmv) corrected to three percent oxygen, dry

(d) (2) Emission Rate Limits

An owner or operator of a Unit that elects to comply with a NOx emission limit based on pound per million Btu (lb/MMBtu) in lieu of a ppmv limit shall not operate the Unit in a manner that exceeds the following limits, pursuant to the schedule in Table 2:

(A) 0.036 lb/MMBtu in lieu of the 30 ppmv; or

(B) 0.018 lb/MMBtu in lieu of the 15 ppmv.

(3) Interim Emission Limits

An owner or operator of a Unit at a Former RECLAIM Facility shall not operate the Unit in a manner that exceeds a 102 ppmv interim NOx emission limit upon the

date of becoming a Former RECLAIM Facility until that Unit is required to meet the emission limits in paragraph (d)(1).

(d) (4) One Pound or Less of NOx per Day Emission Limit

In lieu of complying with the Table 1 emission limits, an owner or operator of a Unit may elect to comply with one of the following NOx emission limits and shall maintain records demonstrating compliance pursuant to subdivision (j):

(A) One pound or less of NOx per day averaged over a calendar month pursuant to paragraph (i)(1); or

(B) One pound or less of NOx per day pursuant to paragraph (i)(2).

(5) Decommissioned Unit(s)

In lieu of complying with the Phase I or Phase II Emission Limits, an owner or operator of a Unit may elect to Decommission a Unit pursuant to the schedule in paragraph (e)(5) for a Unit subject to Phase I Emission Limits and pursuant to the schedule in Table 3 for a Unit subject to Phase II Emission Limits by:

(A) Inactivating the applicable South Coast AQMD permit for the Unit to be decommissioned; and

(B) Disconnecting and blinding the fuel line(s) of the Unit to be decommissioned.

(6) An owner or operator of a Unit subject to the Combustion-Based Emission Limits shall perform Combustion System maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual or other written materials supplied by the manufacturer or distributor.

(7) An owner or operator of a Unit that elects to comply with a pounds per million Btu emission limit pursuant to paragraph (d)(2) shall install and maintain a non-resettable, totalizing fuel meter(s) for the fuel(s) supplied to each Unit pursuant to paragraph (j)(7) prior to the compliance determination specified in subdivision (g).

(8) An owner or operator of a Unit with a Combustion System that operates at only one firing rate, as required by permit condition, that elects to comply with an emission limit expressed as pounds per million Btu pursuant to paragraph (d)(2) shall install a non-resettable, totalizing time or fuel meter for the fuel(s) supplied to each Unit pursuant to paragraph (j)(7).

(9) An owner or operator of a Unit subject to Phase II Emission Limits not requiring a South Coast AQMD permit to limit the NOx emission pursuant Rule 1153.1, may be required to obtain a permit to comply with another South Coast AQMD regulation.

(e) Compliance Schedule

(1) Phase I Emission Limits

An owner or operator of a Unit that is required to meet the Phase I Emission Limits and does not have an existing permit condition that limits the NOx and CO emissions to the applicable Phase I Emission Limits shall not operate a Unit that exceeds the Phase I Emission Limits pursuant to the compliance schedule in Table 2.

Table 2: Phase I Emission Limit Compliance Schedule

<table>
<tr><th>Burner Age as of August 4, 2023</th><th>7 Years or Older</th><th>Less Than 7 Years</th></tr>
<tr><td>Date to Submit Permit Application to Meet Phase I Emission Limit</td><td>On or before July 1, 2024</td><td>On or before the July 1st after the end of the calendar year when the Unit’s burner age is 7 years</td></tr>
<tr><td rowspan="3">Compliance Date Whichever is Sooner between A and B, if Applicable</td><td colspan="2">(A) 12 months after the date a permit to construct is issued, or if a request for a permit extension pursuant to Rule 205 – Expiration of Permits to Construct (Rule 205) is approved in writing, the date included in the permit extension</td></tr>
<tr><td colspan="2">or</td></tr>
<tr><td>(B) N/A</td><td>(B) When the Unit's Burner Age is 10 Years Old</td></tr>
</table>

(2) Phase II Emission Limits

Unless an owner or operator has an approved Alternative Compliance Schedule Plan, on and after January 1, 2027, an owner or operator of a Unit required to meet the Phase II Emission Limits shall, pursuant to paragraph (d)(5), Decommission each Unit that exceeds the applicable Phase II Emission Limit and not operate a Unit that exceeds the Phase II Emission Limits pursuant to the compliance schedule in Table 3.

Table 3: Phase II Emission Limit Compliance Schedule Effective January 1, 2027

Unit with a Burner(s) 10 Years or Older		
Unit Age as of January 1, 2027	**25 Years or Older**	**Less Than 25 Years**
Compliance Date to Decommission Unit or Submittal Date to Inactivate Permit and Not Operate the Unit	On or before January 1, 2027	On or before the January 1st after the end of the of calendar year when the Unit age is 25 years
Unit with a Burner(s) less than 10 Years Old		
Unit Age as of January 1, 2027	**25 Years or Older**	**Less Than 25 Years**
Compliance Date to Decommission Unit, Whichever is Sooner between A and B	(A) On or before January 1st after the end of the of calendar year when the Unit's burner age is 10 years	(A) On or before January 1st after the end of the calendar year when the Unit age is 25 years or older and the Unit's burner age is 10 years or older
	or	or
	(B) As of January 1, 2036	(B) As of January 1, 2036, when the Unit age is 25 years

(e) (3) Alternative Compliance Schedule Plan

An owner or operator of a Unit that is required to meet a Phase II Emission Limit and the utility company is unable to provide the necessary power to operate the Unit, which will result in a delay in meeting the compliance schedule in Table 3 and is beyond the control of the facility, shall submit an Alternative Compliance Schedule Plan pursuant to the requirements in paragraph (k)(1).

(4) An owner or operator of a Unit that elects to comply with the one pound or less of NOx per day emission limit pursuant to paragraph (d)(4) that fails to demonstrate compliance pursuant to subdivision (i) shall:

(A) Submit a permit application to meet the applicable emission limit within 180 days of failure to demonstrate compliance pursuant to subdivision (i) or exceeding the NOx emission limit pursuant to paragraph (d)(4); and

(B) Not operate a Unit that exceeds the applicable Phase I Emission Limit by one of the following dates, whichever occurs first:

(e) (4) (B) (i) 12 months after the date a permit is issued, or the date included in a permit extension, approved in writing, pursuant to Rule 205; or

(ii) Two years from the date the Unit failed to demonstrate compliance.

(5) An owner or operator that elects to Decommission a Unit pursuant to paragraph (d)(5) in lieu of complying with the Phase I Emission Limits shall Decommission the Unit no later than 30 months after the applicable permit application submittal date pursuant to Table 2.

(6) An owner or operator of a Unit that fails to meet the compliance by certification requirements specified in paragraph (h)(1) shall demonstrate compliance with the applicable Phase I Emission Limit through source test pursuant to subdivision (g) according to the following schedule:

(A) Submit a complete source test protocol within 180 days of failing the compliance demonstration;

(B) Conduct the initial source test within 90 days after receiving written approval of the Source Test Protocol by the Executive Officer; and

(C) Conduct subsequent source tests according to the schedule in paragraph (g)(1).

(7) An owner or operator of a Unit that fails to operate the Unit as specified in the manufacturer's emission certification pursuant to paragraph (h)(1), including specified processes, operating conditions, and temperatures, or in case of an expired certification and the manufacturer does not re-certify the Unit, shall demonstrate compliance with the applicable Phase I Emission Limits through source test pursuant to subdivision (g) according to the following schedule:

(A) Submit a complete source test protocol within 180 days of failing the compliance demonstration;

(B) Conduct the initial source test within 90 days after receiving written approval of the Source Test Protocol by the Executive Officer; and

(C) Conduct subsequent source tests according to the schedule in paragraph (g)(1).

(f) Equipment Age

(1) Burner Age

For all burner age determinations in this rule, an owner or operator of a Unit shall determine the burner age as follows:

(A) Burner age for a Unit equipped with burners of varying ages shall be based on the oldest burner age;

(f) (1) (B) Burner age shall be based on the original date of installation determined by:

(i) Invoice from purchase of burner equipment provided by burner manufacturer;

(ii) Information submitted to South Coast AQMD in previous permit applications for replacement of the specific burner;

(iii) Original Unit manufacturer's identification or rating plate permanently affixed to the Unit; or

(iv) Any other method of determining burner age that can be substantiated through written information as approved by the Executive Officer.

(C) The burner shall be deemed to be 7 years old as of January 1, 2024, for any Unit where the burner age cannot be determined pursuant to subparagraphs (f)(1)(A) and (f)(1)(B).

(2) Unit Age

For all Unit age determinations in this rule, an owner or operator of a Unit shall determine the Unit age as follow:

(A) Unit age shall be based on the original date of installation determined by:

(i) Invoice from purchase of Unit provided by manufacturer;

(ii) Information submitted to South Coast AQMD in previous permit applications for Unit replacement;

(iii) Original Unit manufacturer's identification or rating plate permanently affixed to the Unit; or

(iv) Any other method of determining Unit age that can be substantiated through written information as approved by the Executive Officer.

(B) The Unit shall be deemed to be 25 years old as of January 1, 2024, for any Unit where the Unit age cannot be determined pursuant to subparagraph (f)(2)(A).

(g) Source Test Requirements for Units Subject to Combustion-Based Emission Limits

(1) An owner or operator of a Unit(s) subject to Combustion-Based Emission Limits or a South Coast AQMD permit concentration limit shall conduct simultaneous source tests for NOx and CO, averaged over a period of at least 15 consecutive minutes and no more than 60 consecutive minutes, to demonstrate compliance with the applicable Combustion-Based Emission Limit every five calendar years, but no earlier than 48 calendar months after the previous source test.

(2) An owner or operator of a Unit shall conduct an initial source test:

(A) For Units installed before August 4, 2023:

(g) (2) (A) (i) No later than 24 months after August 4, 2023 or, for a RECLAIM facility, no later than 24 months after the date the facility operating the Unit becomes a Former RECLAIM Facility, whichever is later, and establish the date of this source test as the basis for subsequent source testing frequency; or

(ii) Use the results of a South Coast AQMD-approved source test conducted between the applicable frequency required in paragraph (g)(1) and August 4, 2023 and establish the date of this source test as the basis for subsequent source testing frequency. The source test and source test protocol must be representative of the current operation of the equipment, or a new Source Test Protocol will be required to be submitted pursuant to paragraph (g)(3).

(B) For Units installed after August 4, 2023, according to the conditions set forth in the permit to construct and establish the date of this source test as the basis for subsequent source testing frequency unless an extension of time has been approved in writing by the Executive Officer.

(3) An owner or operator of a Unit required to conduct a source test pursuant to this subdivision shall:

(A) Submit a complete Source Test Protocol for approval at least 60 days prior to conducting the initial source test; and

(B) Conduct the source test within 90 days after issuance of a written approval of the Source Test Protocol by the Executive Officer.

(4) Unless requested by the Executive Officer, after the approval of the initial Source Test Protocol pursuant to paragraph (g)(3), an owner or operator of a Unit is not required to resubmit a Source Test Protocol for approval if:

(A) The method of operation of the Unit has not been altered in a manner that requires a permit application submittal;

(B) The applicable Table 1 emission limit or South Coast AQMD permit emission limit has not changed since the previous source test;

(C) There have been no changes in the source test method(s) that is referenced in the approved Source Test Protocol; and

(D) The approved Source Test Protocol is representative of the operation and configuration of the Unit.

(5) An owner or operator of a Unit shall conduct the source test to demonstrate compliance with the applicable Combustion-Based Emission Limits and determine stack-gas oxygen and carbon dioxide concentrations:

(g) (5) (A) Using an independent contractor to conduct testing, which is approved by the Executive Officer under the Laboratory Approval Program for the applicable test methods;

(B) Using a South Coast AQMD approved Source Test Protocol;

(C) At the maximum Heat Input of the Unit normal operating range;

(D) At a Heat Input of less than 35 percent of the Rated Heat Input Capacity; and

(E) Using at least one of the following applicable test methods:

(i) South Coast AQMD Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989);

(ii) ASTM Method D6522-00 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers;

(iii) United States Environmental Protection Agency Conditional Test Method CTM-030 – Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers;

(iv) South Coast AQMD Source Test Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989);

(v) South Coast AQMD Source Test Method 10.1 – Carbon Monoxide and Carbon Dioxide by Gas Chromatograph/Non-Dispersive Infrared Detector (GC/NDIR) – Oxygen by Gas Chromatograph-Thermal Conductivity (GC/TCD) (March 1989); or

(vi) Any alternative test method determined approved before the test in writing by the Executive Officers of South Coast AQMD the California Air Resources Board, and the United States Environmental Protection Agency.

(6) An owner or operator who elects to comply with the Table 1 limits using NOx emissions in pounds per million Btu of Heat Input pursuant to paragraph (d)(2), shall calculate the NOx emissions using procedures in 40 CFR Part 60, Appendix A, Method 19, Sections 2 and 3.

(7) An owner or operator of equipment with two or more Units in series or multiple Units with a common exhaust, including an afterburner, thermal oxidizer, or vapor

incinerator subject to Rule 1147 – NOx Reductions from Miscellaneous Sources (Rule 1147) may elect to demonstrate compliance with the applicable emission limits by one of the following:

(g) (7) (A) Test each Unit separately and demonstrate each Unit's compliance with the applicable emission limit; or

(B) Test only after the last Unit in the series and at the end of a common exhaust for multiple Units, when all Units are operating, and demonstrate that the series of Units meet either:

(i) The lowest rule limit for any of the units in the series; or

(ii) A Heat Input weighted average of all the applicable emission limits using Equation 1 (Eq. 1):

$$Weighted\ Limit = \frac{\sum_1^N (EL_X \times Q_X)}{\sum_1^N Q_X} \quad \text{(Eq. 1)}$$

Where:

N = Total number of Units or processes
X = Each individual Unit or process
EL_X = Emission limit for Unit or process X
Q_X = Heat Input for Unit or process X during test

(8) Emissions determined to exceed any limit established by this rule using any of the test methods specified in subparagraph (g)(5)(E) shall constitute a violation of this rule.

(h) Compliance by Certification for Units Subject to Phase I Emission Limits

(1) The owner or operator of a Unit subject to Phase I Emission Limits with a Rated Heat Input Capacity of 2 million Btu per hour (MMBtu/hr) or less may elect to demonstrate compliance with the applicable emission limit through a burner manufacturer's emission certification in lieu of a source test by providing the following information with a permit application or with an application to renew a burner emission certification:

(A) Emission certifications, provided by the burner(s) manufacturer or a manufacturer authorized burner(s) distributor, which is signed and dated by the burner manufacturer's Responsible Official, that guarantees the burner(s), fuel and combustion air system, and combustion control system identified in the permit application comply with the applicable NOx

emission limit in Table 1 when used for specified processes and operating conditions, and within specified temperature ranges;

(h) (1) (B) The signed and dated emissions certifications separately provided by the manufacturer or manufacturer authorized distributor of the burner(s) addressed to:

(i) The owner or operator of the Unit; and

(ii) Executive Officer or designee;

(C) Any supporting documentation, submitted by the manufacturer or manufacturer authorized distributor of the burner(s) to the Executive Officer or designee, including emission test reports of at least five South Coast AQMD approved emission tests using a South Coast AQMD approved test protocol and methods for five different Units operating the same:

(i) Process;

(ii) Burner;

(iii) Fuel and combustion air system;

(iv) Combustion control system; and

(v) Temperature range;

(D) The emission test results specified in subparagraph (h)(1)(C) approved by the Executive Officer prior to submittal of the permit application or application to renew a burner emission certification; and

(E) A contract or purchase order, signed and dated by the Responsible Official representing the owner or operator of the Unit, for purchase of the burner(s), fuel and combustion air system, and combustion control system to be installed in the Unit as identified in the permit application and the signed and dated letter or bid from the burner manufacturer to the owner or operator of the Unit as specified in subparagraph (h)(1)(A).

(2) The Executive Officer will notify the owner or operator of a Unit in writing whether the manufacturer's emission certification has been approved. The certification will be valid for five years from the date of the written notification of approval and thereafter will expire.

(3) No later than 60 days prior to the date the manufacturer's emission certification expires pursuant to paragraph (h)(2), the owner or operator of a Unit shall:

(A) Submit a new application for a burner manufacturer's emission certification for review by the Executive Officer that includes all the information required in paragraph (h)(1); or

(h) (3) (B) Submit a source test protocol and demonstrate compliance by conducting a source test according to the requirements in subdivision (g) and establish the date of that source test as the basis for subsequent source testing frequency, unless an extension of time has been approved in writing by the Executive Officer.

(4) Any emission test conducted by the Executive Officer for a Unit establishing compliance through certification pursuant to this subdivision that demonstrates the emissions for the Unit exceeds the applicable emission limit allowed in this rule shall constitute a violation.

(i) Demonstration of one pound or less of NOx per day

(1) One Pound or Less of NOx Per Day – Monthly Demonstration

On or before January 1, 2024, an owner or operator of a Unit electing to comply with paragraph (d)(4) by demonstrating that NOx emissions are less than one pound per day averaged over a calendar month shall:

(A) Install and maintain a non-resettable totalizing time meter on the Unit pursuant to paragraph (j)(7) and operate the Unit no more than the specified time per calendar month in Table 4 or as calculated using Equation 2 (Eq. 2); or

$$Monthly\ Operating\ Hours = D \div [R \times (EF \div HHV)] \quad \text{(Eq. 2)}$$

Where:

D = Number of Days in Calendar Month

R = Rated Heat Input (MMBtu/hr)

EF = Emission Factor for the Unit (lbs NOx/million standard cubic feet (MMScf) natural gas)

HHV = Higher Heating Value of Natural Gas (1,050 MMBtu/MMScf)

Table 4 – Less than One Pound per Day, Monthly Operating Limits

Unit Rated Heat Input (Btu/hr)	Monthly Operating Limit (Hours)
≤ 400,000	320
>400,000 to ≤ 800,000	160
> 800,000 to ≤ 1,200,000	100

(i) (1) (B) Install and maintain a non-resettable totalizing fuel meter pursuant to paragraph (j)(7) corrected to Standard Conditions on the Unit and consume no more than the Therms of fuel per month calculated using Equation 3 (Eq. 3).

$$Monthly\ Therms\ of\ Fuel\ =\ (D \div EF)\ \times\ HHV\ \times\ 10 \qquad \text{(Eq. 3)}$$

Where:

D = Number of Days in Calendar Month

EF = Emission Factor for the Unit (lbs NOx/MMScf natural gas)

HHV = Higher Heating Value of Natural Gas (1,050 MMBtu/MMScf)

10 = Conversion from MMBtu to Therms

(2) One Pound or Less of NOx Per Day – Daily Demonstration

An owner or operator of a Unit electing to comply with paragraph (d)(4) by demonstrating daily NOx emissions of one pound or less per day shall:

(A) Install and maintain a non-resettable totalizing time meter on the Unit pursuant to paragraph (j)(7) and operate the Unit no more than the specified time in Table 5; or

Table 5 – Less than One Pound per Day, Daily Operating Limits

Unit Rated Heat Input (Btu/hr)	Daily Operating Limit (Hours)
≤ 400,000	16
>400,000 to ≤ 800,000	8
> 800,000 to ≤ 1,200,000	5

(B) Install and maintain a non-resettable totalizing fuel meter on the Unit pursuant to paragraph (j)(7) and operate the Unit using less than or equal to 7,692 cubic feet per day of natural gas corrected to Standard Conditions and maintain records pursuant to paragraph (j)(8).

(j) Monitoring, Recordkeeping, and Reporting Requirements

(1) An owner or operator of a certified Unit pursuant to paragraph (h)(1) shall maintain records of Unit installation, operation, maintenance, repair, Combustion System modification, and test records of owners, operators, manufacturers, distributors, retailers, and installers of Units located in South Coast AQMD, and conduct such tests as deemed necessary to ensure compliance with this rule.

(j) (2) An owner or operator of a Unit(s) that has an applicable Phase II Emission Limit shall provide the following documentation to the Executive Officer:

(A) On or before January 1, 2024, documentation identifying the age of the Unit(s) pursuant to paragraph (f)(2) and anticipated date of replacement; and

(B) On or before January 1, 2024, for a Unit that is 17 years or older on August 4, 2023 or on or before January 1st of the year when a Unit's burner reaches 17 years or older, an official document on company letterhead signed by the responsible party of the utility company that services the facility that includes:

(i) An explanation if service upgrades will be required by the utility company to power Unit(s) replacing existing Unit(s) to meet the applicable Phase II Emission Limit(s); and

(ii) The estimated timeframe required from the utility company to complete the service upgrades.

(3) An owner or operator of a Unit shall maintain on site a copy of all documents identifying the Unit's Rated Heat Input Capacity. The Rated Heat Input Capacity shall be identified by a manufacturer's or distributor's manual or invoice and permanent rating plates attached to the Unit and individual burners.

(4) An owner or operator of a Unit shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner(s) on a permanent rating plate.

(5) The owner or operator of a Unit that is modified shall:

(A) Display the new Rated Heat Input Capacity on a new permanent supplemental rating plate installed in an accessible location on the Unit or burner; and

(B) Determine the date of Unit modification pursuant to the burner age determination requirements of subdivision (f).

(6) An owner or operator of a Unit subject to subdivision (g) shall maintain the following records on site at the facility where the Unit is being operated:

(A) A copy of the written maintenance schedule and instructions by the manufacturer, distributor, installer, or maintenance company and retain a record of the maintenance activity;

(B) A copy of the South Coast AQMD certification or the South Coast AQMD approved source test reports, conducted by an independent third party, demonstrating that the specific Unit complies with the applicable emission limit; and

(j) (6) (C) Reports of the source test(s) conducted pursuant to a South Coast AQMD approved Source Test Protocol which include the Unit's model and serial numbers.

(7) An owner or operator of a Unit requiring a non-resettable totalizing fuel meter or non-resettable time meter to comply with any provision in this rule shall:

(A) On or before January 1, 2024, install and operate a non-resettable totalizing fuel meter or non-resettable time meter, unless a metering system is currently installed and the fuel meter or time meter is approved in writing by the Executive Officer;

(B) Each non-resettable totalizing fuel meter or non-resettable time meter shall be equipped with a permanent supply of electric power that cannot be unplugged, switched off, or reset except by the main power supply circuit for the building and associated equipment or the safety shut-off switch;

(C) Ensure that the continuous electric power to the non-resettable totalizing fuel meter or non-resettable time meter may only be shut off for maintenance or safety; and

(D) Ensure each non-resettable totalizing fuel meter or non-resettable time meter is calibrated and recalibrate the meter annually thereafter based on the manufacturer's recommended procedures. If the non-resettable totalizing fuel meter or non-resettable time meter was calibrated within one year prior to January 1, 2024, the next calibration shall be conducted within one year of the anniversary date of the prior calibration.

(8) An owner or operator of a Unit complying with the one pound or less of NOx emission limit pursuant to paragraph (d)(4) as demonstrated pursuant to subdivision (i) shall keep daily records documenting the use of the Unit, including, but not limited to:

(A) For an owner or operator demonstrating Unit compliance pursuant to subparagraph (i)(2)(A):

(i) Time records of Unit operation using a unit-specific non-resettable time meter;

(ii) Daily fuel consumption documented using a non-resettable fuel meter; and

(iii) Daily process rate.

(B) For an owner or operator demonstrating Unit compliance pursuant to subparagraph (i)(2)(B):

(j) (8) (B) (i) Records documenting fuel gas consumption with a non-resettable fuel meter; and

(ii) Test protocol, calculations, and results of a test of gas pressure to the meter conducted by the local utility or an independent contractor. The documentation of gas pressure to the meter shall include a letter stating that the test was performed using the approved test protocol and the letter shall be signed by the person performing the test.

(9) RECLAIM Facilities must continue to comply with reporting requirements pursuant to Regulation XX until the facility becomes a Former RECLAIM Facility.

(10) Records of source tests pursuant to subdivision (g) and records required pursuant to paragraphs (j)(1), (j)(2), (j)(3), (j)(6), and (j)(7) shall be retained on site for at least five years and made available to the Executive Officer upon request.

(k) Alternative Compliance Schedule Plan

(1) Alternative Compliance Schedule Plan Requirements

An owner or operator of a Unit(s) subject to Phase II Emission Limits may submit an Alternative Compliance Schedule Plan no later than two years prior to the date the Unit is required to comply with the Phase II Emission Limits to request an extension of no longer than two-year from the date the Unit is required to comply with the Phase II Emission Limits. Facilities with multiple Units subject to Phase II Emissions Limits shall submit one Alternative Compliance Plan per facility no later than two years prior to the earliest Phase II compliance date. The Alternative Compliance Schedule Plan shall include the following:

(A) The unit(s) included in the Alternative Compliance Schedule Plan;

(B) An official document on company letterhead signed by the responsible party of the utility company that services the facility that includes:

(i) An explanation of the service upgrades required by the utility company;

(ii) Communications with the utility provider when the service upgrade was requested;

(iii) The estimated date the utility company will complete the service upgrades;

(iv) Additional information to substantiate that an Alternative Compliance Schedule Plan is necessary; and

(k) (1) (B) (v) Documentation which demonstrates that the delays are outside of the control of the owner or operator.

(2) Alternative Compliance Schedule Plan Review and Approval Process

The Executive Officer will notify the owner or operator in writing whether the Alternative Compliance Schedule Plan is approved or disapproved. The Alternative Compliance Schedule Plan shall be approved if the following criteria is met, and they are subject to disapproval if any of the following applicable criteria are not met:

(A) The owner or operator submitted a complete Alternative Compliance Schedule Plan at least one year prior to the compliance schedule specified in Table 3; and

(B) The owner or operator submitted the required documentation from the utility company that includes all the required information in paragraph (k)(1).

(3) Upon receiving approval of an Alternative Compliance Schedule Plan pursuant to paragraph (k)(2), the owner or operator shall Decommission each Unit with a NOx emission limit that exceeds the applicable Phase II Emission Limit within six months of the date specified in clause (k)(1)(B)(iii) in the approved Alternative Compliance Schedule Plan.

(4) Within 45 days of receiving written notification from Executive Officer that the Alternative Compliance Schedule Plan is disapproved, the owner or operator shall correct any deficiencies and re-submit the Alternative Compliance Schedule Plan.

(5) If the owner or operator does not re-submit the Alternative Compliance Plan pursuant to paragraph (k)(4), or upon receiving written notification from the Executive Officer that the Alternative Compliance Schedule Plan re-submitted pursuant to paragraph (k)(4) is disapproved, the owner or operator shall Decommission each Unit with a NOx emission limit that exceeds the applicable Phase II Emission Limit pursuant to the compliance schedule in Table 3.

(6) Modifications to an Approved Alternative Compliance Schedule Plan

An owner or operator that seeks approval to modify an approved Alternative Compliance Schedule Plan shall submit a request in writing to the Executive Officer to modify an approved Alternative Compliance Schedule Plan that includes all the submittal requirements pursuant to paragraph (k)(1).

(7) The Executive Officer will review any modifications to an approved Alternative Compliance Schedule Plan in accordance with the review and approval process pursuant to paragraph (k)(2).

(k) (8) An owner or operator with an approved Alternative Compliance Schedule Plan shall submit written notification detailing the progress of the service upgrades to the Executive Officer 12 months from date the Alternative Compliance Schedule Plan was approved, which shall include:

(A) Actions taken on the service upgrade, signed by the responsible party of the utility company;

(B) Actions to implement the service upgrade yet to be completed; and

(C) Any anticipated changes to the compliance schedule in the approved Alternative Compliance Schedule Plan.

(9) Notification of Pending Approval of an Alternative Compliance Schedule Plan

The Executive Officer will make the proposed Alternative Compliance Schedule Plan or proposed modifications to an approved Alternative Compliance Schedule Plan available to the public on the South Coast AQMD website 30 days prior to approval and update the status of the Alternative Compliance Schedule Plan once the Executive Officers deems it approved or disapproved.

(10) Plan Fees

The review and approval of the following shall be subject to applicable plan fees pursuant to Rule 306 – Plan Fees:

(A) Alternative Compliance Schedule Plan;

(B) Modification of an approved Alternative Compliance Schedule Plan; and

(C) Notification on the increments of progress submitted pursuant to paragraph (k)(8).

(l) Exemptions

(1) The provisions of this rule shall not apply to the following equipment:

(A) Boilers, water heaters, thermal fluid heaters, or process heaters, including, but not limited to those that provide heat to a Unit through a heat exchange system, subject to the following South Coast AQMD rules:

(i) Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters;

(ii) Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters;

(iii) Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters; or

(l) (1) (A) (iv) Rule 1147.

(B) Units subject to registration pursuant to South Coast AQMD Rule 222;

(C) Solid fuel-fired combustion equipment;

(D) Charbroilers as defined by Rule 1147;

(E) Fryers, including fryers used for nut, seed, or other food product oil roasting;

(F) Emission control equipment, including but not limited to afterburners, thermal oxidizers, and vapor incinerators as defined by Rule 1147; and

(G) Units with a Rated Heat Input Capacity less than 325,000 Btu per hour pursuant to paragraph (j)(4).

(2) The provisions in subdivision (g) shall not apply to an owner or operator of a Unit electing to comply with the one pound or less of NOx per day emission limit pursuant to paragraph (d)(4), as determined pursuant to subdivision (i).