(Adopted April 1, 2022)

RULE 1147.2 NOX REDUCTIONS FROM METAL MELTING AND HEATING FURNACES

(a) Purpose

The purpose of this rule is to reduce emissions of Nitrogen Oxide (NOx) and Carbon Monoxide (CO) from Metal Melting Furnaces, Metal Heat Treating Furnaces, Metal Heating Furnaces, and Metal Forging Furnaces.

(b) Applicability

This rule applies to an owner or operator of a Metal Melting Furnace, Metal Heat Treating Furnace, Metal Heating Furnace, or Metal Forging Furnace that requires a South Coast AQMD permit.

(c) Definitions

(1) ALTERATION means any physical change or addition to an Existing Unit requiring an application for Permit to Construct pursuant to South Coast AQMD Rule 201 – Permit to Construct.

(2) BTU means British thermal unit or units.

(3) CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) means the total combined equipment and systems required to continuously determine air contaminants and diluent gas concentrations and/or a mass emission rate of a source effluent (as applicable). The CEMS consists of three major subsystems: sampling interface, analyzer, and data acquisition system.

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

(5) EXISTING means operating or in place as of April 1, 2022.

(6) 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.

(7) HEAT INPUT means the chemical heat released due to assumed complete combustion of fuel in a Unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.

(8) METAL FORGING FURNACE means a device which applies heat to a solid metal to allow for its further processing, forming, or shaping.

(c) (9) METAL HEAT TREATING FURNACE means a device where heat is applied to a solid metal in order to alter its chemical properties, alter its microstructure to achieve desired mechanical properties (strength, hardness, toughness, ductility, and corrosion resistance), or alter its surface chemistry.

(10) METAL HEATING FURNACE means a device where heat is applied to a solid metal in order to alter its physical properties.

(11) METAL MELTING FURNACE means a device where metal is heated to, or maintained in, a molten state.

(12) NEW UNIT means a Unit that is installed, relocated, or replaced after April 1, 2022.

(13) NON-RECLAIM FACILITY means a facility, or any of its successors, that was not in the Regional Clean Air Incentives Market program as of January 5, 2018, as established in Regulation XX.

(14) OPERATING HOURS means the number of hours in which fuel is burned by a UNIT.

(15) OXIDES OF NITROGEN (NOX) EMISSIONS is the sum of nitrogen oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(16) RADIANT-TUBE BURNER means an indirect-fired burner where combustion takes place in a tube to prevent contact between the products of combustion and the parts being heated.

(17) RATED HEAT INPUT CAPACITY means the Heat Input of the combustion Unit specified on a permanent rating plate attached by the manufacturer to the device. If the Unit has been altered or modified, the new Rated Heat Input Capacity as specified in subparagraph (i)(2)(A) shall be considered as the Rated Heat Input Capacity.

(18) RECLAIM FACILITY means a facility, or any of its successors, that was in the Regional Clean Air Incentives Market program as of January 5, 2018, as established in Regulation XX.

(19) REFRACTORY DRY-OUT is as defined in South Coast AQMD Rule 429 – Startup and Shutdown Exemption Provisions for Oxides of Nitrogen.

(20) SHUTDOWN is as defined in South Coast AQMD Rule 429 – Startup and Shutdown Exemption Provisions for Oxides of Nitrogen.

(21) STARTUP is as defined in South Coast AQMD Rule 429 – Startup and Shutdown Exemption Provisions for Oxides of Nitrogen.

(22) THERM means 100,000 Btu.

(c) (23) UNIT means any Metal Melting Furnace, Metal Heat Treating Furnace, Metal Heating Furnace, or Metal Forging Furnace.

(d) Requirements

(1) Until an owner or operator is required to meet the NOx and CO concentration limits in Table 1 or the alternative NOx and CO concentration limits in Table 2 pursuant to the implementation schedule in subdivision (e), the owner or operator shall not operate a Unit that exceeds a NOx concentration limit of:

(A) 60 ppmv, corrected to 3% oxygen, dry, for any Unit at a Non-RECLAIM Facility as demonstrated pursuant to subdivision (h); or

(B) 102 ppmv, corrected to 3% oxygen, dry, or an existing NOx concentration limit, whichever is lower, and as demonstrated pursuant to subdivision (h), for any Unit at a RECLAIM Facility upon the date of becoming a Former RECLAIM Facility.

(2) An owner or operator of a Unit with a Rated Heat Input Capacity less than 40 MMBtu/hr shall not operate the Unit that exceeds the applicable NOx or CO concentration limits in Table 1 beyond the dates specified in the implementation schedule in paragraph (e)(1) as demonstrated pursuant to subdivision (h).

(3) An owner or operator of a Unit with a Rated Heat Input Capacity less than 40 MMBtu/hr and where the burner age is less than 32 years old, as of January 1, 2023 as determined pursuant to subdivision (f), may elect to comply with the NOx and CO concentration limits in Table 1 pursuant to the alternative implementation schedule in paragraph (e)(2), provided that:

(A) The owner or operator operates the Unit in compliance with the permit if the Unit has an Existing permit condition that complies with the alternative NOx and CO concentration limits in Table 2; or

(B) The owner or operator of a Unit that does not have an Existing permit condition pursuant to subparagraph (d)(3)(A):

(i) Submits a permit application by July 1, 2023, to add a permit condition to the Permit to Operate that requires compliance with the alternative NOx and CO concentration limits in Table 2; and

(ii) Demonstrates compliance with the alternative NOx and CO concentration limits in Table 2 by a source test conducted pursuant to subdivision (h) and the source test report is approved by the Executive Officer pursuant to the implementation schedule in paragraph (e)(2) where the source test has been conducted no

later than 36 months prior to the application submittal and where no modification to the Unit has been made between the date of the source test and when the permit application is submitted.

(d) (4) An owner or operator of a Unit greater than or equal to 40 MMBtu/hr shall not operate a Unit that exceeds the applicable NOx or CO concentration limits in Table 1 beyond the dates specified in the implementation schedule in paragraph (e)(3).

(5) An owner or operator of a New Unit shall not operate a New Unit that exceeds the applicable NOx or CO concentration limits in Table 3.

(6) In lieu of complying with the NOx and CO concentration limit requirements of paragraphs (d)(1) through (d)(4) an owner or operator of a Unit may elect to Decommission the Unit pursuant to paragraph (e)(6).

(7) In lieu of complying with the NOx and CO concentration limit requirements of paragraphs (d)(1) through (d)(5), an owner or operator of a Unit may elect to comply with the following, whichever is lower:

(A) NOx emissions less than one pound per day, averaged over a calendar month, pursuant to subdivision (g) and maintain records pursuant to subdivision (j); or

(B) Any new or Existing permit limit of less than one pound of NOx per day.

(8) An owner or operator of a Unit electing to comply with paragraph (d)(7) that fails to demonstrate compliance with paragraph (d)(7) shall:

(A) Submit a permit application to meet the concentration limits in Table 1 within 180 days of failure to demonstrate compliance with paragraph (d)(7); and

(B) Meet the concentration limits in Table 1 no later than:

(i) 12 months after a permit is issued; or

(ii) The expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205.

Table 1 – NOx and CO Concentration Limits for Existing Units

Unit Size	Furnace Type	Temperature	NOx Limit[1,2] (ppmv)	CO Limit[1] (ppmv)
< 40 MMBtu/hr	Metal Melting	All Temperatures	40	1,000
	Metal Heat Treating, Metal Heating, and Metal Forging	≤ 1,200 °F	40	
		> 1,200 °F	50	
	Units with Radiant-Tube Burners	All Temperatures	50	
≥ 40 MMBtu/hr	All Units	All Temperatures	15	

[1] Corrected to 3% oxygen, dry
[2] Averaged over an 8-hour rolling interval for Units equipped with a certified NOx CEMS

Table 2 – Alternative NOx and CO Concentration Limits for Existing Units

Unit Size	Furnace Type	Temperature	NOx Limit[1,2] (ppmv)	CO Limit[1] (ppmv)
< 40 MMBtu/hr	Metal Melting	All Temperatures	50	1,000
	Metal Heat Treating, Metal Heating, and Metal Forging	≤ 1,200 °F	50	
		> 1,200 °F	60	
	Units with Radiant-Tube Burners	All Temperatures	60	

[1] Corrected to 3% oxygen, dry
[2] Averaged over an 8-hour rolling interval for Units equipped with a certified NOx CEMS

Table 3 – NOx and CO Concentration Limits for New Units

Unit Size	Furnace Type	Temperature	NOx Limit[1,2] (ppmv)	CO Limit[1] (ppmv)
< 40 MMBtu/hr	Metal Melting	All Temperatures	40	1,000
	Metal Heat Treating, Metal Heating, and Metal Forging	≤ 1,200 °F	30	
		> 1,200 °F	40	
	Units with Radiant-Tube Burners	All Temperatures	40	
≥ 40 MMBtu/hr	All Units	All Temperatures	15	

[1] Corrected to 3% oxygen, dry
[2] Averaged over an 8-hour rolling interval for Units equipped with a certified NOx CEMS

(e) Implementation Schedules

(1) An owner or operator of a Unit with a Rated Heat Input Capacity less than 40 MMBtu/hr that is required to meet the NOx and CO concentration limits in Table 1 pursuant to paragraph (d)(2) shall:

(A) Submit a permit application for each Unit to limit the NOx and CO concentrations to a level not to exceed the concentration limits in Table 1:

(i) On or before July 1, 2023, for any Unit where the burner age is 12 years or older, as determined pursuant to subdivision (f), as of January 1, 2023; or

(ii) On or before July 1 of the year when a Unit's burner age reaches 12 years, as determined pursuant to subdivision (f), by January 1 of that year; and

(B) Cease operation of the Unit that exceeds the NOx or CO concentration limits in Table 1 no later than:

(i) 12 months after a permit is issued; or

(ii) The expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205.

(2) An owner or operator of a Unit with a Rated Heat Input Capacity less than 40 MMBtu/hr that meets the requirements for use of an alternative implementation schedule pursuant to subparagraph (d)(3)(A) or (d)(3)(B), shall:

(A) Submit a permit application for each Unit to limit the NOx and CO concentrations to a level not to exceed the concentration limits in Table 1 on or before July 1 of the year when a Unit's burner age reaches 32 years, as determined pursuant to subdivision (f), by January 1 of that year; and

(B) Cease operation of the Unit that exceeds the NOx or CO concentration limits in Table 1, no later than:

(i) 12 months after a permit is issued; or

(ii) The expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205.

(3) An owner or operator of a Unit with a Rated Heat Input Capacity greater than or equal to 40 MMBtu/hr shall:

(A) Submit a permit application for each Unit to limit the NOx and CO concentrations to a level not to exceed the concentration limits in Table 1 on or before July 1, 2023; and

(e) (3) (B) Cease operation of the Unit that exceeds the NOx or CO concentration limit in Table 1, no later than:

(i) 18 months after a permit is issued; or

(ii) The expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205.

(4) An owner or operator of a Unit that fails to comply with the requirements of paragraph (d)(2), (d)(3), or (d)(4) shall:

(A) For Units with a Rated Heat Input Capacity less than 40 MMBtu/hr, not operate the Unit unless the Unit meets the concentration limits in Table 1 or Table 2 by the following dates, whichever is sooner:

(i) 12 months after a permit is issued or the expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205; or

(ii) 30 months following the permit application submittal date in the implementation schedule of paragraphs (e)(1) or (e)(2).

(B) For Units with a Rated Heat Input Capacity greater than or equal to 40 MMBtu/hr, not operate the Unit unless the Unit meets the concentration limits in Table 1 by the following dates, whichever is sooner:

(i) 18 months after a permit is issued or the expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205; or

(ii) 36 months following the permit application submittal date in the implementation schedule of paragraph (e)(3).

(5) An owner or operator of a Unit that demonstrates compliance with the concentration limit requirements of paragraph (d)(2), (d)(3), or (d)(4) pursuant to subdivision (h) without any Alteration to the Unit and without a permit condition requiring compliance with the NOx and CO concentration limits specified in Table 1 or Table 2 shall submit a permit application to modify the Permit to Operate for the Unit pursuant to the implementation schedule in paragraph (e)(1), (e)(2), or (e)(3).

(6) An owner or operator that elects to Decommission a Unit, in lieu of meeting the requirements of paragraph (d)(1), (d)(2), (d)(3), or (d)(4) shall Decommission the Unit no later than 30 months following the permit application submittal date pursuant to the implementation schedule in paragraphs (e)(1) through (e)(3) and, by that date, inactivate the Unit's applicable South Coast AQMD permit.

(e) (7) Implementation Schedule for Facilities with Two or More Units

An owner or operator of a facility with two or more Units subject to paragraphs (d)(2), (d)(3), or (d)(4) with a July 1, 2023 permit application submittal date pursuant to the implementation schedule in paragraph (e)(1) or (e)(2), may elect to comply with the multiple unit implementation schedule pursuant to Table 4, in lieu of the implementation schedule in paragraph (e)(1) or (e)(2), provided:

(A) The owner or operator submits permit applications by the permit application submittal dates specified in Table 4 to comply with the concentration limits in Table 1; where

(i) The total Rated Heat Input Capacity means the sum of all of the Units' Rated Heat Input Capacity that are subject to the multiple unit implementation schedule in Table 4; and

(ii) The minimum percentages listed in Table 4 require that the calculated number of Units is rounded up to the nearest whole number of Units.

(B) Each Unit demonstrates compliance, pursuant to subdivision (h), with the concentration limits in Table 1 no later than:

(i) 12 months after a permit is issued; or

(ii) The expiration date of the permit, if any extension of time has been approved in writing pursuant to Rule 205.

(C) The owner or operator that elects to meet the permit application submission requirements of subparagraph (e)(7)(A) by Decommissioning a Unit shall Decommission the Unit within 30 months of the applicable permit application submittal deadline in Table 4 and, by that date, inactivate the Unit's applicable South Coast AQMD permit.

Table 4 – Multiple Unit Implementation Schedule to Meet Concentration Limits in Table 1

Permit Application Submittal Deadline	2 – 9 Units (Minimum % of total Rated Heat Input Capacity)	10 – 19 Units (Minimum % of total Rated Heat Input Capacity)	20 or More Units (Minimum % of total Rated Heat Input Capacity)
January 1, 2023	50%	-	-
January 1, 2024	100%	50%	33%
January 1, 2025	Not Applicable	-	-
January 1, 2026		100%	67%
January 1, 2027		Not Applicable	-
January 1, 2028			100%

(f) Determination of Burner Age

(1) Burner age for Units with a Rated Heat Input Capacity less than 40 MMBtu/hr and equipped with burners of varying ages shall be based on the oldest burner age.

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

(A) Invoice from burner manufacturer for purchase of burner equipment;

(B) Information submitted to the South Coast AQMD with applications for permit prior to April 1, 2022 for the specific burner;

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

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

(3) The burner shall be deemed to be 32 years old as of January 1, 2023, for any Unit where the burner age cannot be determined pursuant to paragraph (f)(2).

(g) Demonstration of Less than One Pound NOx per Day Averaged Over a Calendar Month

(1) Effective upon October 1, 2022, an owner or operator demonstrating compliance with NOx emissions of less than one pound per day, averaged over a calendar month, shall:

(A) Install and maintain in service a non-resettable totalizing time meter on the Unit and operate the Unit no more than the specified time per calendar month in Table 5 or as calculated using Equation 1; or

$$\text{Monthly Operating Hours} = D \div [R \; x \; (EF \; \div HHV)] \quad \text{(Equation 1)}$$

Where,

D = Number of Days in Calendar Month

R = Rated Heat Input Capacity (MMBtu/hr)

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

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

Table 5 –Monthly Operating Limits

Unit Rated Heat Input Capacity (Btu/hr)	Monthly Operating Limit (hours)
< 1,000,000	240
≥ 1,000,000 to < 1,500,000	160
≥ 1,500,000 to ≤ 2,000,000	120

(B) Install and maintain in service a non-resettable totalizing fuel meter on the Unit and consume no more than the Therms of fuel per month calculated using Equation 2, with fuel use corrected to standard temperature and pressure.

$$\text{Monthly Therms of Fuel} = (D \div EF) \; x \; HHV \; x \; 10 \quad \text{(Equation 2)}$$

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

(h) Monitoring and Source Testing Requirements

(1) An owner or operator of a Unit subject to the concentration limit requirements in paragraph (d)(1), (d)(2), (d)(3), (d)(4), or a South Coast AQMD permit concentration limit shall:

(A) For Units with a Rated Heat Input Capacity less than 10 MMBtu/hr, conduct a source test no later than 60 calendar months from the previous source test; or

(B) For Units with a Rated Heat Input Capacity greater than or equal to 10 MMBtu/hr, conduct a source test no later than:

(i) 60 calendar months from the previous source test for Units with an annual heat input of less than or equal to 23 billion Btu per year; or

(ii) 36 calendar months from the previous source test for Units with an annual heat input of greater than 23 billion Btu per year in any year.

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

(A) For Existing Units,

(i) No later than 24 months after April 1, 2022 or no later than 24 months after 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 subparagraph (h)(1)(A) or (h)(1)(B) and April 1, 2022 and establish the date of this source test as the basis for subsequent source testing frequency. The source test and source test protocol must still be representative of the current operation of the equipment, or a new source test protocol will be required to be submitted pursuant to paragraph (h)(3).

(B) For New Units, no later than 18 months after the Permit to Construct is issued 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.

(h) (3) An owner or operator of a Unit shall submit a source test protocol to the Executive Officer for approval no later than 90 days prior to the scheduled source test and conduct the source test within the 90-day period, or within 30 days following the source test protocol approval, whichever is later.

(4) An owner or operator of a Unit that has a previously approved protocol pursuant to the protocol submission requirements of paragraph (h)(3) may submit the previously approved protocol if the burner and Unit have not been Altered in a manner that requires a permit modification, and rule or permit concentration limits have not become more stringent since the previous source test, unless the Executive Officer determines that the previously approved protocol is no longer applicable or requires modification and a new source test protocol is required to be submitted.

(5) Any source test conducted to demonstrate compliance shall use a South Coast AQMD-approved contractor under the Laboratory Approval Program according to the following procedures:

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

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

(C) 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);

(D) EPA Test Method 19 – Sulfur Dioxide Removal and Particulate, Sulfur Dioxide and Nitrogen Oxides from Electric Utility Steam Generators (August 2017); or

(E) Any alternative test method submitted in writing to, and pre-approved by, the Executive Officer of the South Coast AQMD, the California Air Resources Board, and the United States Environmental Protection Agency.

(6) Source test reports, including a description of the equipment tested, shall be submitted to the Executive Officer within 60 days of completion of the source test.

(h) (7) An owner or operator of a Unit conducting a source test shall:

(A) Not perform any Unit tuning, including modifying the air-to-fuel ratio and excess air content, subsequent to the beginning of a source test, except to maintain the burner settings set during the Unit tuning;

(B) Conduct the source test within the calendar month that the source test is due pursuant to the source testing frequency requirements in paragraph (h)(1); and

(C) For a Unit that is not in operation on the date the source test is required, conduct the source test by the end of seven consecutive days, or 15 cumulative days, of resumed operation.

(8) An owner or operator of a Unit with a Rated Heat Input Capacity greater than or equal to 40 MMBtu/hr shall:

(A) For Units located at a Non-RECLAIM Facility, install, certify, operate, and maintain a CEMS to measure NOx and oxygen within 12 months of April 1, 2022 pursuant to the applicable South Coast AQMD Rules 218.2 and 218.3 requirements to demonstrate compliance with the concentration limits in Table 1 at the corresponding oxygen correction and averaging times;

(B) For Units located at a Former RECLAIM Facility, install, certify, operate, and maintain a CEMS to measure NOx and oxygen within 12 months of receipt of the final determination notification or within 12 months of April 1, 2022, whichever is later, pursuant to the applicable South Coast AQMD Rules 218.2 and 218.3 requirements to demonstrate compliance with the concentration limits in Table 1 at the corresponding oxygen correction and averaging times;

(C) For Units located at a RECLAIM Facility install, certify, operate, and maintain a CEMS to measure NOx and oxygen within 12 months of April 1, 2022 pursuant to South Coast AQMD Rule 2012 to demonstrate compliance with the concentration limits in Table 1 at the corresponding oxygen correction and averaging times;

(D) An owner or operator of a Unit equipped with a certified CEMS to measure NOx emissions shall not require NOx source testing requirements;

(E) An owner or operator of a Unit equipped with a certified CEMS to measure CO emissions shall not require CO source testing requirements; and

(h) (8) (F) Conduct an annual relative accuracy test audit (RATA) required by any applicable South Coast AQMD rule or certification procedure for CEMS certification, operation, monitoring, reporting, and notification; 40 CFR Part 75 Subpart E; or 40 CFR Part 60 Appendix B Specification 2, for those pollutants monitored by a CEMS.

(9) An owner or operator of a Unit with an exhaust emission control system that utilizes an ammonia-based chemical reagent to control NOx shall:

(A) Demonstrate compliance quarterly with any ammonia limit established in the permit of the Unit, according to the procedures in South Coast AQMD Source Test Method 207.1 – Determination of Ammonia Emissions from Stationary Sources, as specified by a permit condition or beginning within 12 months of a new Permit to Operate being issued, whichever is sooner;

(B) Demonstrate compliance annually with any ammonia limit established in the permit of the Unit, if the Unit has demonstrated compliance with the quarterly source test requirements of subparagraph (h)(9)(A) for four consecutive quarterly source tests;

(C) Return to the original schedule to conduct source tests quarterly pursuant to subparagraph (h)(9)(A) if a Unit fails to demonstrate compliance with the annual source test requirements of subparagraph (h)(9)(B);

(D) In lieu of complying with subparagraphs (h)(9)(A) through (h)(9)(C), Units located at a Non-RECLAIM Facility or Former RECLAIM Facility shall install, certify, operate, and maintain a CEMS to measure ammonia and oxygen pursuant to any applicable South Coast AQMD rule or certification procedure for CEMS certification, operation, monitoring, reporting, and notification to demonstrate compliance with the ammonia permit limit of the Unit at the corresponding oxygen correction and averaging times;

(E) For Units that are equipped with a CEMS to measure ammonia and oxygen that is not certified pursuant to any applicable South Coast AQMD rule or certification procedure for CEMS certification, operation, monitoring, reporting, and notification, conduct periodic ammonia source testing pursuant to paragraphs (h)(9)(A) or (h)(9)(B) until the ammonia CEMS is certified; and

(F) For Units that are subject to paragraphs (h)(9)(A) or (h)(9)(B), and that do not utilize a certified NOx CEMS and CO CEMS shall conduct source testing for NOx and CO concurrently with source testing for ammonia.

(h) (10) Compliance determinations approved by the Executive Officer shall be used to establish the basis for subsequent source testing frequency, including any compliance determinations required as part of a permit.

(11) All compliance determinations pursuant to paragraph (d)(1), (d)(2), (d)(3), (d)(4), (d)(5), or South Coast AQMD permit concentration limits shall be calculated:

(A) Using a South Coast AQMD approved test protocol averaged over a period of at least 15 minutes of operation and no more than 60 consecutive minutes, or alternative time period approved by the Executive Officer;

(B) After Unit Startup; and

(C) In the normal firing range of the Rated Heat Input Capacity of the Unit.

(12) An owner or operator of a Unit that is subject to more than one NOx concentration limit due to varying operating temperatures may elect to comply with the higher NOx concentration limit.

(13) An owner or operator of multiple Units operating in-series with a common exhaust shall comply with the lowest NOx concentration limit of any individual Unit.

(i) Labeling Requirements

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

(2) The owner or operator of a Unit that is Altered 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 Alteration pursuant to the burner age determination requirements of subdivision (f).

(j) Reporting and Recordkeeping Requirements

(1) An owner or operator shall maintain on-site, for at least 5 years and make available to the Executive Officer upon request, and if applicable, source test reports and monthly records demonstrating compliance with the less than one pound NOx per day, averaged over a calendar month, demonstration requirements of subdivision (g).

(2) An owner or operator shall maintain operating records to demonstrate that a Unit complies with the requirements of subparagraph (h)(7)(C).

(j) (3) An owner or operator shall maintain records on-site identifying the Rated Heat Input Capacity for any Unit subject to this rule and make such records available to the Executive Officer upon request.

(4) An owner or operator of a Unit that is Altered and subject to this rule shall maintain records on-site to include the name of the company and person Altering the Unit, a description of all Alterations, the date(s) the Unit was Altered, and a calculation of the Rated Heat Input Capacity and make such records available to the Executive Officer upon request.

(5) An owner or operator of a Unit equipped with a CEMS shall maintain records on-site in compliance with any applicable South Coast AQMD Rule for CEMS certification, operation, monitoring, reporting, and notification or any applicable permit condition, for at least 5 years and make records available to the Executive Officer upon request.

(k) Exemptions

(1) The concentration limits of subdivision (d) shall not apply to Units during periods of Refractory Dry-Out.

(2) The provisions of this rule shall not apply to Units equipped with a certified CEMS to measure NOx, during periods of Startup or Shutdown pursuant to South Coast AQMD Rule 429.

(3) The provisions of this rule shall not apply to electrically-powered Units.

(4) A Unit emitting less than one pound NOx per day, averaged over a calendar month, pursuant to paragraph (d)(7) shall:

(A) Be exempt from the requirements of this rule except for the less than one pound NOx per day, averaged over a calendar month, requirements of subdivision (g), the labelling requirements of subdivision (i), and the recordkeeping requirements of subdivision (j); and

(B) Permanently lose exemption under subparagraph (k)(4)(A) if the Unit fails to demonstrate compliance with paragraph (d)(7).