

SCAQMD Rule 1147

This pamphlet provides a summary of Rule 1147 requirements and compliance options including amendments adopted in July 2017

Adopted by the South Coast Air Quality Management District (SCAQMD) Governing Board on December 5, 2008 with a compliance schedule phased in over 10 years. The purpose of this rule is to reduce nitrogen oxide emissions (NOx) from gaseous and liquid fuel fired combustion equipment

Amended in July 2017 to provide additional compliance flexibility for units with NOx emissions of less than 1 pound per day

Affects manufacturers, sellers, and owners of combustion equipment that are not subject to rules that affect boilers, liquid process heaters, turbines, and engines.

Regulates ovens, dryers, furnaces, afterburners, incinerators, and other equipment used in a variety of processes. Examples of processes regulated by the rule include metal casting, forging, heat treating, coating and curing operations, drying, asphalt manufacturing, and printing operations

Please Note: This pamphlet is for information purposes only and does not supersede rule requirements



SCAQMD Rule 1147 Frequently Asked Questions (FAQs)

How do I determine if my equipment is subject to Rule 1147?

Unless specifically exempt from the rule, any combustion equipment that is not exempt from a permit and is not subject to a source-specific NOx limit is subject to 1147.

If uncertain, you can contact **SCAQMD Small Business Assistance Office at (800) 388-2121** or ask for **SCAQMD Compliance at (909) 396-2000** to be connected to the team that is responsible for inspecting your business. Alternatively, you can request feedback from the local gas utility or your consultant to help evaluate your equipment and process.

How do I determine if my unit has NOx emissions of less than 1 pound per day?

Several options are available:

1. Equipment burner is rated between 325,000 to 1,200,000 BTU/HR, refer to **Table 2** for low use limits
2. Equipment natural gas usage is less than 7,692 standard cubic feet per day
3. Call the **Combustion Hotline at (909)-396-3419** to inquire on the calculations estimating your maximum permitted emissions (potential to emit)

Is a list of companies that perform emissions testing available?

The SCAQMD does provide a list of companies that are prequalified. Just go to <http://www.aqmd.gov> -> "Business Programs" -> "Laboratory Approval"

When is my equipment subject to Rule 1147 emission limits?

All new permitted equipment rated at $\geq 325,000$ BTU/HR is required to demonstrate compliance with the NOx emission limit. Existing permitted in-use units with NOx emissions of less than 1 pound per day must demonstrate compliance with the emission limit at the time the unit is modified, replaced, relocated* or prior to 35 years of age

Are ovens, dryers and dry roasters used in the preparation of food and food products subject to Rule 1147?

No. Food ovens, dry roasters, and food dryers are regulated by Rule 1153.1 (Commercial Food Ovens), not Rule 1147. However, fryers (including those used for oil roasting) and afterburners controlling emissions of organic gases and particulate matter from food ovens, roasters, and dryers are regulated by Rule 1147. It should be noted that ovens used in restaurants do not require an SCAQMD permit and are therefore not affected by Rule 1147.

* Relocation exemption available for existing less than 1 pound/day units when owner relocates entire facility

South Coast
Air Quality
Management
District



Complying With Rule 1147

– NOx Reductions from Miscellaneous Sources

APPLICABILITY:

Facility owners and operators of Rule 1147 applicable Equipment Emitting LESS than 1 pound per day of NOx

PURPOSE:

To identify affected equipment, applicable emission limit and frequently asked questions (FAQ)

TABLE 1:
Summary of Rule 1147 Requirements as Amended July 7, 2017

Equipment Category

Requirements for Units With Emissions Less than 1 Pound/Day

New Units

**Any Unit Installed
 On Or After
 January 1, 2010**

- Demonstrate compliance with NOx emissions limit as stated in Table 3 using one of three options:
 - Emission testing of unit (source test)
 - Unit Certification (for product line of identical ovens, furnaces, heaters, etc.)
 - Burner Manufacturer Guarantee (Burner Manufacturer Certification) for an individual oven or furnace that includes burner, combustion air and fuel components, and control system for that particular unit
- Keep records on-site documenting emission test results, unit certification, or burner manufacturer guarantee and SCAQMD approval of compliance demonstration
- Perform combustion system maintenance and keep copy of combustion system maintenance manual and maintenance records on-site for all units including those exempt from emission limit

Existing Units

**Any Unit In-Use (Operating)
 Before
 January 1, 2010**

- Keep on-site records documenting NOx emissions less than 1 pound/day (See Table 2)
- Demonstrate compliance with NOx emissions limit as shown in Table 3 when modified, replaced, relocated* and prior to 35 years of age
- Keep records on site documenting emission test results, unit certification, or burner manufacturer guarantee and SCAQMD approval of applicable compliance demonstration
- Perform combustion system maintenance and keep copy of combustion system maintenance manual and maintenance records on site

Specific Existing Units

- **Heated process tanks, parts washers, and evaporators in-use (operating) before January 1, 2010**
- **Heated process tanks, parts washers, and evaporators installed and operating with an SCAQMD permit before January 1, 2014**
- **Remediation units installed between December 5, 2008 and March 1, 2012**

- Demonstrate compliance with NOx emissions limit as shown in Table 3 when unit or combustion system is modified or replaced
- Keep records on site documenting emission test results, unit certification, or burner manufacturer guarantee and SCAQMD approval of applicable compliance demonstration
- Perform combustion system maintenance and keep on site copies of combustion system maintenance manual and maintenance records

*Relocation exemption available for existing less than 1 pound/day units when owner relocates entire facility

TABLE 2:
Small and Low Use Unit Daily Operating Limits

Unit Rating (BTU/Hour)	Daily Hour Limit	Monthly Hour Limit
325,000 to 400,000	16	352
400,001 to 500,000	14	308
500,001 to 800,000	8	176
800,001 to 1,000,000	6	132
1,000,001 to 1,200,000	5	110

Table 3:
**NOx Emission Limit for Unit
 Heat Ratings ≥ 325,000 BTU/hour
 (Exemption for Units < 325,000 Btu/hour)**

Equipment Category	NOx Emission Limit	
	PPM @ 3% O2 Dry Or Pound/mmBtu heat input	
Operation Temperature:	<1200°F	≥1200°F
	40 ppm or	
Asphalt Manufacturing Operation	0.053 lb/mmBtu	
Afterburner, Degassing Unit, Remediation Unit, Thermal Oxidizer, Catalytic Oxidizer or Vapor Incinerator	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Burn-off Furnace, Burnout Oven, Incinerator or Crematory with or without Integrated Afterburner ¹	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Evaporator, Fryer, Heated Process Tank, or Parts Washer	60 ppm or 0.073 lb/mmBtu	
Metal Heat Treating, Metal Melting Furnace, Metal Pot, or Tar Pot	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Oven, Dehydrator, Dryer, Heater, Kiln, Calciner, Cooker, Roaster, Furnace, or Heated Storage Tank	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Make-Up Air Heater or other Air Heater located outside of building with temperature controlled zone inside building	30 ppm or 0.036 lb/mmBtu	
Tenter Frame or Fabric or Carpet Dryer	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Other Gaseous Fuel-Fired Unit or Process	30 ppm or 0.036 lb/mmBtu	40 ppm or 0.053 lb/mmBtu
All liquid fuel-fired Units	40 ppm or 0.053 lb/mmBtu	

1. Emission limit applies to burners in units fueled by 100% natural gas that are used to incinerate air toxics, VOCs, or other vapors; or to heat a unit. The emission limit applies solely when burning 100% fuel and not when the burner is incinerating air toxics, VOCs, or other vapors. The unit shall be tested or certified to meet the emission limit while fueled with natural gas.

