

RULE 360. EMISSIONS OF OXIDES OF NITROGEN FROM LARGE WATER HEATERS AND SMALL BOILERS. (Adopted 10/17/2002)

A. Applicability

This rule applies to any person who supplies, sells, offers for sale, installs, or solicits the installation of any new water heater, boiler, steam generator or process heater for use within the District with a rated heat input capacity greater than or equal to 75,000 British thermal units per hour up to and including 2,000,000 British thermal units per hour.

B. Definitions

See Rule 102 for definitions not limited to this rule. For the purposes of this rule, the following definitions shall apply:

“Boiler or Steam Generator” means any external combustion equipment fired with liquid and/or gaseous and/or solid fossil fuel, used to produce steam or heat water. These terms do not include any unfired waste heat recovery boiler that is used to recover sensible heat from a combustion device.

“Heat Output” means the enthalpy of the working fluid output of the unit.

“Process Heater” means any external combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to water or process streams. Process Heater does not include any kiln or oven used for drying, baking, curing, cooking, calcinating or vitrifying or any fuel-fired degreasing of metal finishing equipment.

“Rated Heat Input Capacity” means the gross heat input specified on the nameplate of the unit or the burner.

“Unit” means a water heater, boiler, steam generator or process heater.

“Water Heater” means a device that heats water at a thermostatically controlled temperature for delivery on demand. Water is heated by the combustion of either liquid and/or gaseous fuel and withdrawn for use external to the vessel at pressures not exceeding 160 pounds per square inch gauge. The device includes the apparatus by which heat is generated and all controls and equipment necessary to prevent water temperature from exceeding 210°F (99°C).

C. Requirements – General

1. After October 17, 2003, a person shall not supply, sell, offer for sale, install or solicit the installation of any new unit with a rated heat input capacity greater than or equal to 75,000 British thermal units per hour and less than or equal to 400,000 British thermal units per hour in the District that does not meet the following criteria:
 - a. Oxides of nitrogen emissions shall not exceed 40 nanograms per joule (93 pounds oxides of nitrogen per billion British thermal unit) of heat output, or 55 parts per million at 3.00 percent stack gas oxygen by volume on a dry basis, and
 - b. The unit is certified in accordance with Section D.

2. After October 17, 2003, a person shall not supply, sell, offer for sale, install or solicit the installation of any new unit with a rated heat input capacity greater than 400,000 British thermal units per hour and less than or equal to 2,000,000 British thermal units per hour in the District that does not meet the following criteria:
 - a. Oxides of nitrogen emissions shall not exceed 30 parts per million at 3.00 percent stack gas oxygen by volume on a dry basis and carbon monoxide emissions shall not exceed 400 parts per million at 3.00 percent stack gas oxygen by volume on a dry basis, and
 - b. The unit is certified in accordance with Section D.

D. Compliance Certification

Every unit offered for sale within the District shall be certified by the Control Officer. On or before the applicable compliance date specified in Section C.1 or C.2, and thereafter at least 30 days prior to the date of proposed sale within the District, the manufacturer shall submit a compliance report for each new or modified unit by model. Certification shall be valid for three (3) years from the date of written approval by the Control Officer.

1. For each model certified, the manufacturer shall obtain from an independent testing laboratory a certification source test verifying compliance with the emission limits in Section C. Source tests shall be conducted on a randomly selected unit no more than 90 days prior to the date of proposed sale of the model in the District. Tests shall be conducted and reports shall be prepared according to Attachment A of this rule.
2. The compliance report shall contain the following information:
 - a. General Information
 - 1) Name and address of manufacturer,
 - 2) Brand name,
 - 3) Model number, as it appears on the permanent nameplate, and
 - 4) Description of the model being certified, including burner type and rated heat input capacity.
 - b. A report on the source test specified in Subsection D.1.
 - c. A signed and dated statement attesting, under penalty of perjury, to the accuracy of all statements and information in the compliance report.

E. Identification of Compliant Units

The manufacturer shall display both the model number and the certification status, as determined in Section D of this rule, of an applicable unit on the permanent nameplate. If the permanent nameplate is obscured by packaging, the model number and certification status shall also appear on the packaging.

F. Enforcement

1. The Control Officer may periodically inspect distributors, retailers, and installers of water heaters located in the District and require such tests as are deemed necessary to ensure compliance with the provisions of this rule.
2. Oxides of nitrogen emissions are measured as nitrogen dioxide using Air Resources Board Method 100. Field emission tests shall be conducted on units fired at maximum rated capacity, or as near thereto as practicable.

Attachment A
Certification Source Tests

Certification source tests, as specified in Subsection D.1, shall be conducted according to “Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers,” Protocol, South Coast Air Quality Management District, Source Testing and Engineering Branch, Applied Science and Technology.