

## SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

### **RULE 4905 NATURAL GAS-FIRED, FAN-TYPE RESIDENTIAL CENTRAL FURNACES**

*(Adopted October 20, 2005)*

#### 1.0 Purpose

The purpose of this rule is to limit NO<sub>x</sub> emissions from natural gas-fired, fan-type residential central furnaces.

#### 2.0 Applicability

The provisions of this rule shall apply to any person who supplies, sells, offers for sale, installs, or solicits the installation of natural gas-fired, fan-type residential central furnaces for use within the District with a rated heat input capacity of less than 175,000 British thermal units per hour and, for combination heating and cooling units, a rated cooling capacity of less than 65,000 British thermal units per hour.

#### 3.0 Definitions

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

3.2 Annual Fuel Utilization Efficiency: the efficiency descriptor as defined by Section 430.2 of the Code of Federal Regulations, Title 10, Part 430, Subpart A.

3.3 District: as defined in Rule 1020 (Definitions).

3.4 Fan-type Residential Central Furnace: a self-contained space heater providing for circulation of heated air at pressures other than atmospheric through ducts more than 10 inches in length.

3.5 Heat Output (Central Furnace): the product obtained by multiplying the annual fuel utilization efficiency as defined by Section 430.2 of the Code of Federal Regulations (CFR), Title 10, Part 430, Subpart A, by the rated heat input capacity of the natural gas-fired central furnace.

3.6 Manufactured Home: as defined in 42 United States Code Section 5402 and California Health and Safety Code Section 18007, means a structure, transportable in one or more sections, which, in the traveling mode, is eight body feet or more in width, or 40 body feet or more in length, or, when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein; except that such term shall

include any structure which meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification and complies with the standards established under this part. "Manufactured home" includes a mobilehome subject to the National Manufactured Housing Construction and Safety Act of 1974 (42 U.S.C., Sec. 5401, et seq.).

- 3.7 Natural Gas: a mixture of gaseous hydrocarbons containing at least 80 percent methane by volume, as determined according to Standard Method ASTM D1945-64.
- 3.8 NO<sub>x</sub>: any oxides of nitrogen.
- 3.9 Rated Cooling Capacity: the cooling capacity specified on the nameplate of the cooling unit. Cooling capacity is the amount of heat energy the cooling system can displace in one hour (British thermal units per hour).
- 3.10 Rated Heat Input Capacity: the heat input capacity specified on the nameplate of the combustion unit. Heat input is the amount of energy consumed in one hour (British thermal units per hour).

#### 4.0 Exemptions

The provisions of this rule shall not apply to:

- 4.1 Units installed in manufactured homes.
- 4.2 Units using fuels other than natural gas.
- 4.3 Nonfan-type residential central furnaces.

#### 5.0 Requirements

No person shall supply, sell, offer for sale, install, or solicit the installation of any natural gas-fired, fan-type residential central furnace for use within the District unless it has certified emissions of oxides of nitrogen less than or equal to 0.093 pounds per million BTU of heat output or 55 ppm NO<sub>x</sub> at 3.00% O<sub>2</sub> stack gas by volume (dry).

#### 6.0 Administrative Requirements

##### 6.1 Emission Certification

- 6.1.1 Certified emissions levels shall be demonstrated by an emission certification approved under any of the following:

- 6.1.1.1 Certification testing as described in Section 6.2 of this rule.

6.1.1.2 The South Coast Air Quality Management District Certification List for Rule 1111 (NO<sub>x</sub> Emissions From Natural-gas-fired, Fan-type Central Furnaces).

6.1.1.3 Other emission certification programs approved by the APCO and the United States Environmental Protection Agency.

6.1.2 The central furnace manufacturer shall display the model number of the appliance complying with Section 5.0 on the shipping carton and the rating plate of the appliance.

6.1.3 Upon request of the APCO, each manufacturer shall submit to the District a statement confirming the appliance subject to this rule is in compliance with the emission limit specified in Section 5.0. The statement shall be signed, dated, and shall attest to the accuracy of all information. The statement shall include:

6.1.3.2 Name and address of manufacturer,

6.1.3.3 Brand name,

6.1.3.4 Model number, as it appears on the appliance rating plate,

6.1.3.5 Heat input rating, British thermal units per hour, and

6.1.3.6 A source test report verifying compliance with Section 5.0.

## 6.2 Certification Testing

6.2.1 During testing, each tested central furnace shall be operated in accordance with the procedures specified in 10 CFR 430, Subpart B, Appendix N.

6.2.2 Compliance with the oxides of nitrogen emission requirement in Section 5.0 shall be determined using California Air Resources Board Method 100, or United States Environmental Protection Agency Methods 7E and 3A.

## 6.3 Recordkeeping

Compliance testing records shall be maintained for five years and made available to the APCO upon request.

## 7.0 Compliance Schedule

On and after January 1, 2007, no person shall supply, sell, offer for sale, install, or solicit the installation of a unit subject to this rule unless it meets the requirements of section 5.0.

