

3.4.1 *Determining lb/mmBtu emission rates*

To calculate NO_x emission rates in terms of mass per unit of heat input (lb/mmBtu), NO_x concentration data, diluent gas (CO₂ or O₂) concentration data, and a fuel-specific “F-factor” are required. The F-factor relates the volume of stack gas or CO₂ produced by combustion to the heat content of the fuel combusted. For example, typical units for an F-factor are dry standard cubic feet of stack gas per million Btu of heat input (dscf/mmBtu), or standard cubic feet of CO₂ per million Btu (scf CO₂/mmBtu). Fuel-specific F-factors are listed in Appendix F of Part 75. These factors are based on the thermodynamic principles of combustion. Since F-factors are derived assuming that fuel and air are mixed in an exact stoichiometric ratio and that combustion is complete, the NO_x emission rate equations include corrections for excess air.