

#### **4.6 How is the unit heat input rate calculated ?**

For an Acid Rain or CAIR unit using Appendix D to determine the hourly unit heat input rate, an equation with the following basic structure is used:

$$\textbf{\underline{Heat input rate (mmBtu/hr) = Fuel flow rate x Fuel GCV x Units conversion factor}}$$

Examples of equations having this basic structure are Equations D-6 and D-8 in section 3 of Appendix D. In the general equation above, the fuel flow rate is the hourly average reading from the fuel flowmeter, and the GCV is based on the results of periodic fuel sampling and analysis. The units of measure for the fuel flow rate and the GCV must be consistent. For example, if the fuel flowmeter measures in gallons per hour, the GCV is expressed in units of Btu per gallon.