4.3 How is the fuel flow rate measured ?

Appendix D requires the fuel flow rate to be continuously monitored and the data to be reduced to hourly averages. To achieve this a certified fuel flowmeter or a commercial billing meter may be used. To certify a fuel flowmeter, its accuracy must be established using one of the methods19 specified in section 2.1.5.1 of Appendix D.

• In most cases, the certification test procedure consists of calibrating the meter with a flowing fluid, at three flow rates covering its normal operating range. Generally, this requirement is met by calibrating the flowmeter in a laboratory, although the flowmeter may be calibrated at the affected facility, by comparison against an in-line “master meter” which has been tested for accuracy within the past 365 days using one of the methods in section 2.1.5.1 of Appendix D.

• Alternatively, an orifice, nozzle or venturi flowmeter may be certified if: (a) the primary element (for example, the orifice plate) meets the design criteria specified in American Gas Association Report No. 3; (b) the primary element passes a visual inspection; and (c) the pressure, temperature, and differential pressure transmitters are calibrated with standards traceable to the National Institute of Standards and Technology (NIST).

• A commercial billing meter may be used for Appendix D applications without certification, if the meter can provide hourly average fuel flow rates, and if the regulated source is not affiliated with the billing company.