## 199–19.7(476) Standards of quality of service.

**19.7(1)** *Purity requirements.* All gas supplied to customers shall be substantially free of impurities which may cause corrosion of mains or piping or from corrosive or harmful fumes when burned in a properly designed and adjusted burner.

**19.7(2)** *Pressure limits.* The maximum allowable operating pressure for a low-pressure distribution system shall not be so high as to cause the unsafe operation of any connected and properly adjusted low-pressure gas-burning equipment.

**19.7(3)** Adequacy for pressure. Each utility shall have a substantially accurate knowledge of the pressures inside its piping. Periodic pressure measurements shall be taken during periods of high demand at remote locations in distribution systems to determine the adequacy of service. Records of such measurements including the date, time, and location of the measurement shall be maintained not less than two years.

## 19.7(4) Standards for pressure measurements.

*a.* Secondary standards. Each utility shall own or have access to a dead weight tester. This instrument must be maintained in an accurate condition.

*b. Working standards.* Each utility must have or have access to water manometers, laboratory quality indicating pressure gauges, and field-type dead weight pressure gauges as necessary for the proper testing of the indicating and recording pressure gauges used in determining the pressure on the utility's system. Working standards must be checked periodically by comparison with a secondary standard.

**19.7(5)** *Handling of standards.* Extreme care must be exercised in the handling of standards to ensure that their accuracy is not disturbed. Each standard shall be accompanied at all times by a certificate or calibration card, duly signed and dated, on which are recorded the corrections required to compensate for errors found at the customary test points at the time of the last previous test.

## 19.7(6) Heating value.

*a. Awareness.* Each utility shall have a substantially accurate knowledge of the heating value of the gas being delivered to customers at all times.

*b.* Natural and LP-gas. The heating value of natural gas and undiluted, commercially pure LP-gas shall be considered as being not under the control of the utility. The utility shall determine the allowable range of monthly average heating values within which its customers' appliances may be expected to function properly without repeated readjustment of the burners. If the monthly average heating value is above or below the limits of the allowable range for three successive months, the customers' appliances must be readjusted in accordance with 19.4(18)"c."

c. Peak shaving or other mixed gas. The heating value of gas in a distribution system which includes gas from LP or LNG peak shaving facilities, or gas from a source other than a pipeline supplier, shall be considered within the control of the utility. The average daily heating value of mixed gas shall be at least 95 percent of that normally delivered by the pipeline supplier. All mixed gas shall have a specific gravity of less than 1.000, and heating value shall not be so high as to cause improper operation of properly adjusted customer equipment.

*d.* Heating value determination and records. Unless acceptable heating value information is available for all periods from other sources, including the pipeline supplier, the utility shall provide and maintain equipment, or shall have a method of computation, by which the heating value of the gas in a distribution system can be accurately determined. The type, accuracy, operation and location of equipment, and the accuracy of computation methods, shall be in accordance with accepted industry practices and equipment manufacturer's recommendations and shall be subject to review by the board.

## **19.7(7)** Interruptions of service.

*a.* Each utility shall make reasonable efforts to avoid interruptions of service, but when interruptions occur, service shall be reestablished within the shortest time practicable, consistent with safety. Each utility shall maintain records for not less than two years of interruptions of service as required to be reported in 19.17(1) and shall periodically review these records to determine steps to be taken to prevent recurrence.

*b.* Planned interruptions shall be made at a time that will not cause unreasonable inconvenience to customers. Interruptions shall be preceded by adequate notice to those who will be affected.