- **1319.3** Shutoff valves provided for the connection of future piping shall meet the following requirements:
- (1) Be locked in a restricted area.
- (2) Be locked or latched closed.
- (3) Be identified in accordance with Section 1322.0. [NFPA 99:5.1.4.10]
 - **1319.3.1** Future connection valves shall be labeled as to gas content. [NFPA 99:5.1.4.10.1]
 - **1319.3.2** Downstream piping shall be closed with a brazed cap with tubing allowance for cutting and rebrazing. [NFPA 99:5.1.4.10.2]
 - **1319.3.3** A zone valve shall be located immediately outside each vital life-support, critical care, and anesthetizing location in each medical gas and/or vacuum line, and located so as to be readily accessible in an emergency. [NFPA 99:5.1.4.8.7]
 - **1319.3.4** Gas-delivery columns, hose reels, ceiling tracks, control panels, pendants, booms, or other special installations shall be located downstream of the zone valve. [NFPA 99:5.1.4.8.7.1]
 - **1319.3.5** Zone valves shall be so arranged that shutting off the supply of gas to any one operating room or anesthetizing location will not affect the others. [NFPA 99:5.1.4.8.7.2]
- **1319.4 Source Valve.** A shutoff valve shall be placed at the immediate connection of each source system to the distribution piping to permit the entire source, including all accessory devices (such as hair dryers, final line regulators, etc.), to be isolated from the facility. [NFPA 99:5.1.4.4]
 - **1319.4.1** The source valve shall be located in the immediate vicinity of the source equipment. [NFPA 99:5.1.4.4.1]
 - **1319.4.2** The source valve shall be labeled in accordance with Section 1322.0, Source Valve for the (Source Name). [NFPA 99:5.1.4.4.2, 5.1.11.2.3]
- **1319.5 Main Valve.** A shutoff valve shall be provided in the main supply line inside of the building, except where one or more of the following conditions exist:
- (1) The source and source valve are located inside the building served.
- (2) The source system is physically mounted to the wall of the building served and the pipeline enters the building in the immediate vicinity of the source valve. [NFPA 99:5.1.4.5]
 - **1319.5.1** The main line valve shall be located to permit access by authorized personnel only (i.e., by locating above a ceiling or behind a locked access door). [NFPA 99:5.1.4.5.1]
 - **1319.5.2** The main line valve shall be located on the facility side of the source valve and outside of

- the source room, enclosure, or where the main line first enters the building. [NFPA 99:5.1.4.5.2]
- **1319.5.3** The main line shall be labeled in accordance with Section 1322.0. [NFPA 99:5.1.4.5.3 and 5.1.11.2.4]
- **1319.6 Riser Valve.** Each riser supplied from the main line shall be provided with a shutoff valve adjacent to the riser connection. Riser valves shall be permitted to be located above ceilings, but shall remain accessible and not be obstructed. [NFPA 99:5.1.4.6, 5.1.4.6.1]
- **1319.7 Zone Valve.** Station outlets/inlets shall be supplied through a zone valve as follows:
- (1) The zone valve shall be placed such that a wall intervenes between the valve and outlets/inlets that it controls.
- (2) The zone valve shall serve only outlets/inlets located on that same story. [NFPA 99:5.1.4.8]
 - **1319.7.1** Zone valves shall be readily operable from a standing position in the corridor on the same floor they serve. [NFPA 99:5.1.4.8.1]
 - **1319.7.2** Zone valves shall be so arranged that shutting off the supply of medical gas or vacuum to one zone will not affect the supply of medical gas or vacuum to another zone or the rest of the system. [NFPA 99:5.1.4.8.2]
- **1319.8 Service Valves.** Service valves shall be placed in the branch piping prior to any zone valve box assembly on that branch. [NFPA 99:5.1.4.7.2]
 - **1319.8.1** Only one service valve shall be required for each branch off of a riser regardless of how many zone valve boxes are installed on that lateral. [NFPA 99:5.1.4.7.1]
 - **1319.8.2** Service valves shall be installed to allow servicing or modification of lateral branch piping from a main or riser without shutting down the entire main, riser, or facility. [NFPA 99:5.1.4.7]

1320.0 Pressure-Regulating Equipment.

- **1320.1** Pressure-regulating equipment shall be installed in the supply main upstream of the final line-pressure valve. Where multiple piping systems for the same gas at different operating pressures are required, separate pressure-regulating equipment, relief valves, and source shutoff valves shall be provided for each pressure.
- **1320.2** Each central supply system shall have a pressure-relief valve set at 50 percent above normal line pressure, installed downstream of the pressure regulator and upstream of any shutoff valve. This pressure-relief valve shall be permitted to be set at a higher pressure, provided another pressure-relief