Riser valve(s) shall be labeled in substance as follows:

RISER FOR THE (GAS/VACUUM NAME) SERVING (NAME OF THE AREA/BUILDING SERVED BY THE PARTICULAR RISER).

Service valve(s) shall be labeled in substance as follows:

SERVICE VALVE FOR THE (GAS/VACUUM NAME) SERVING (NAME OF THE AREA/BUILDING SERVED BY THE PARTICULAR VALVE).

[NFPA 99:5.1.11.2.6]

1323.0 Alarms.

Master, area, and local alarm systems used for medical gas and vacuum systems shall include the following [NFPA 99:5.1.9.1]:

(1) Separate visual indicators for each condition monitored, except as permitted for local alarms that are displayed on master alarm panels.

(2) Visual indicators that remain in alarm until the situation that has caused the alarm is resolved.

(3) A cancelable audible indication of each alarm condition that produces a sound with a level of not less than 80 decibels at 92cm (3 ft.).

(4) A means to visually identify a lamp or LED failure.

(5) Visual and audible indication that the wiring to an alarm initiating device is disconnected.

(6) Labeling of each indicator, indicating the condition monitored.

(7) Labeling of each alarm panel for its area of surveillance.

(8) Reinitiation of the audible signal if another alarm condition occurs while the audible alarm is silenced.

(9) Power for master and area alarms from the life safety branch of the emergency electrical system.

(10) Power for local alarms, dew point sensors, and carbon monoxide sensors permitted to be from the same essential electrical branch as is used to power the air compressor system.

(11) Wiring from switches or sensors that is supervised or protected as required by Section 517.30(C)(3) of NFPA 70, *National Electrical Code* or equivalent International Standard(s) approved by the Authority Having Jurisdiction, for emergency system circuits.

(12) Assurance by the responsible authority of the facility that the labeling of alarms, where room numbers or designations are used, is accurate and up-to-date.

(13) Provisions for automatic restart after a power loss of ten seconds (e.g., during generator startup) without giving false signals or requiring manual reset.

1323.1 Functioning of alarm components shall be verified in accordance with testing and monitoring requirements of the manufacturer and the Authority Having Jurisdiction.

1324.0 Medical Air System.

Medical air compressors shall be installed in a well-lit, ventilated, and clean location and shall be accessible. The location shall be provided with drainage facilities. The medical air compressor area shall be located separately from medical gas cylinder system sources, and shall be readily accessible for maintenance.

1324.1 Medical air compressors shall be sufficient to serve the peak calculated demand with the largest single compressor out of service. In no case shall there be less than two compressors. [NFPA 99:5.1.3.5.11.2]

Medical air compressor systems shall consist of the following:

(1) An automatic means to prevent backflow from on-cycle compressors through off-cycle compressors.

(2) A manual shutoff valve to isolate each compressor from the centrally piped system and from other compressors for maintenance or repair without loss of pressure in the system.

(3) Intake filter-mufflers of the dry type.

(4) Pressure relief valves set at 50 percent above line pressure.

(5) Piping between the compressor and the source shutoff valve compatible with oxygen that does not contribute to contaminant levels. [NFPA 99:5.1.3.5.3.2]

(6) Materials and devices used between the medical air intake and the medical air source valve shall be permitted to be of any design or construction appropriate for the service, as determined by the manufacturer. [NFPA 99:5.1.3.5.3.2]

1324.2 The medical air compressors shall draw their air from a source of clean air located where no contamination is anticipated from engine exhausts, fuel storage vents, medical-surgical vacuum system discharges, particulate matter, or odor of any type. [NFPA 99:5.1.3.5.13.1]

1324.3 Compressor intake piping shall be hard-drawn seamless copper, and one of the following:

(1) ASTM B 819, *Standard Specification for Seamless Copper Tube for Medical Gas Systems*, medical gas tube or equivalent International Standard(s) approved by the Authority Having Jurisdiction.