

POSITION STATEMENT

SWITCHING VAPORIZERS FOR MEDICAL GAS SUPPLY SYSTEMS

Question

Do NFPA 99, *Health Care Facilities Code*, and NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, require the use of vaporizer switching in bulk medical supply systems [1, 2]?

Answer

Earlier versions of NFPA 99 have some vaporizer requirement language that is not clear, but the language in the current versions of NFPA 55 (where the requirements have been moved) and NFPA 99 is more well-defined. NFPA 99, 2012 Edition and NFPA 55, 2013 Edition are the current versions at the time of this position statement [1, 2].

The 2005 Edition of NFPA 99, *Standard for Health Care Facilities* has wording that points toward the use of switching vaporizers as shown in Section 5.1.3.4.13.10(3), see the following excerpt [3]¹:

5.1.3.4.13* Bulk Cryogenic Liquid Systems.

5.1.3.4.13.10 Where vaporizers are required to convert cryogenic liquid to the gaseous state, the vaporizer units shall conform to the following:

- (1) Be permitted to operate by either ambient heat transfer or external thermal source (e.g., electric heater, hot water, steam)
- (2) Be designed to provide adequate capacity for the customer's peak and average flowrates under local conditions, seasonal conditions for weather and humidity, and structures that obstruct air circulation flow and sunlight
- (3) Have piping and manual/automatic valving configured in such a manner that operating vaporizer(s) or sections of the vaporizer can be switched to nonoperating vaporizer or section of the vaporizer to de-ice through a valving configuration that assures continuous flow to the facility through either or both vaporizers and/or sections of the vaporizer if valving switchover partially hangs up or fails

The 2012 Edition of NFPA 99 now points to NFPA 55 for bulk medical supply systems as shown in Section 5.1.3.5.12.1, see the following excerpt [1]¹:

5.1.3.5.12* Bulk Cryogenic Liquid Systems.

5.1.3.5.12.1 Bulk cryogenic liquid storage systems shall be in accordance with NFPA 55, *Compressed Gases and Cryogenic Fluids Code*.

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