

Categorical Waiver Available:

1. Medical Gas Master Alarms

The 1999 NFPA 99, *Health Care Facilities Code* is cross-referenced in the 2000 LSC and, as a result, it contains requirements applicable to providers and suppliers who must meet the 2000 edition of the LSC under our regulations. The 1999 NFPA 99, sections 4-3.1.2.2(b)(2) requires medical gas master alarms to be located in two separate locations and section 4-3.1.2.2(a)(9) does not allow a centralized computer as a substitute for any medical gas alarm panel. The use of computers to continuously monitor critical signals has increased in health care facilities and the use of computers to monitor medical gas can improve surveillance and shorten response time. As a result, the 1999 NFPA 99 provision required under the 2000 LSC is not only outmoded and unduly burdensome to providers and suppliers, but also arguably less efficient in promoting fire safety. As a result, in the 2005 edition of NFPA 99, the NFPA began to permit a centralized computer system to be substituted for one of the master alarms, and this policy is continued in section 5.1.9.4 of the 2012 NFPA 99. Accordingly, we are permitting a waiver to allow a centralized computer system to substitute for one of the Category 1 medical gas master alarms, but only if the provider/supplier is in compliance with all other applicable 1999 NFPA medical gas master alarm provisions, as well as with section 5.1.9.4 of the 2012 NFPA 99.

2012 NFPA 99, Section 5.1.9.4, Master Alarms by Computer Systems. Computer systems used as substitute master alarms as required by section 5.1.9.2.1(2), shall have the mechanical and electrical characteristics described in 5.1.9.4.1 and the programming characteristics described in 5.1.9.4.2.

5.1.9.4.1 Computer systems used to substitute for alarms shall have the following mechanical and electrical characteristics:

- (1)** The computer system shall be in continuous uninterrupted operation and provided with power supplies as needed to ensure such reliability.
- (2)** The computer system shall be continuously attended by responsible individuals or shall provide remote signaling of responsible parties (e.g., through pagers, telephone auto-dialers, or other such means).
- (3)** Where computer systems rely on signal interface devices (e.g., electronic interfaces, other alarm panels, 4 mA to 20 mA cards), such interfaces shall be supervised such that failure of the device(s) shall initiate an alarm(s).
- (4)** If the computer system does not power the signaling switches/sensors from the same power supply required in section 5.1.9.4.1(1), the power supply for the signaling switches/sensors shall be powered from the life safety branch of the emergency electrical system as described in Chapter 6.
- (5)** Computer systems shall be permitted to communicate directly to the sensors/switches in 5.1.9.2.3 in the same manner as an alarm panel if operation of another alarm panel(s) is not impaired.

(6) Communication from the computer system to the signaling switches or sensors shall be supervised such that failure of communication shall initiate an alarm.

(7) Computer systems shall be provided with an audio alert per 5.1.9.1(3), except the audio alert shall be permitted to be only as loud as needed to alert the system operator.

(8) The facility shall ensure compliance with 5.1.9.1(12).

Section 5.1.9.4.2 The operating program(s) for computer systems used to substitute for alarms shall include the following:

(1) Medical gas alarms shall be allocated the priority of a life safety signal.

(2) A medical gas alarm signal shall interrupt any other activity of a lesser priority to run the alarm algorithm(s).

(3) The alarm algorithm shall include activation of an audible alert, activation of any remote signaling protocol, and display of the specific condition in alarm.

(4) The alarm algorithm shall provide for compliance with sections 5.1.9.1(1), 5.1.9.1(2), 5.1.9.1(3), 5.1.9.1(5), 5.1.9.1(6), and 5.1.9.1(8).