

The Life Safety Connection



Life Safety Items Obvious to the Public

Affects: All Facilities

The 2012 edition of NFPA 101, *Life Safety Code* states:

4.6.12.3 Existing life safety features obvious to the public, if not required by the *Code*, shall be either maintained or removed.

There is nothing in the Life Safety Code that prevents additional life safety features from being installed in a building. (Remember, the *Code* only provides minimum standards.) The *Code* directs that nonrequired life safety features that are obvious to the public be either maintained or removed to prevent false expectations or a false sense of security by building occupants.

For example, a 90-minute fire-rated door assembly has been installed in a location that

The Life Safety Connection is published by:

Division of Life Safety and Construction
 North Dakota Department of Health
 600 E. Boulevard Ave., Dept. 301
 Bismarck, N.D. 58505-0200
 Phone: 701.328.2352
 Fax: 701.328.1890
 Web: www.ndhealth.gov/LifeSafety

Mylynn Tufte, MBA, MSIM, BSN State Health Officer
 Darleen Bartz, Ph.D., Chief, Health Resources Section
 Monte Engel, Director, Life Safety and Construction
 Cheryl Kruger & Jill Yri, Newsletter Designers

If you would like to be added to or removed from our mailing list, please contact us at lsc@nd.gov.

In This Issue:

Life Safety Items Obvious to the Public	1
3-Year, 4-Hour Generator Testing	2
GFCI Outlets Near Sinks	2
Temperature Ratings of Sprinklers	3
Maintenance of Sprinklers	3
Smoke Detector Spacing	4
Labeling of FACP and Breaker	4
Fire Extinguisher Mounting Heights	4

does not require a rated door. However, due to the tag on the door, it is obvious to the public this is a fire-rated door. Therefore, this door requires periodic testing, inspection, or operation to ensure its maintenance and must be tested, inspected, or operated as required by the *Code*. So, even though a door in this location is not required to be fire-rated, one has been installed and must be inspected, tested, and maintained in accordance with all requirements for a fire-rated door.

In another example, smoke detectors have been installed in a large room even though it is not a requirement of the *Code*. These smoke detectors are obvious to the public. Therefore, these smoke detectors are subject to the minimum spacing requirements at installation and the ongoing inspection, testing, and maintenance requirements are the same as other required smoke detectors installed elsewhere in the building.

In a third example, existing fire or smoke dampers may have been installed in locations

(continued on page 3)

3-Year, 4-Hour Generator Testing

Affects: Hospitals and Nursing Facilities

All hospitals and nursing facilities have an emergency generator to provide back-up power in the event of loss of normal power. The emergency generator must comply with NFPA 110, *Standard for Emergency and Standby Power Systems*.

Required maintenance and testing of the emergency generator is found in Chapter 8, Routine Maintenance and Operational Testing.

8.4.9 Level 1 Emergency Power Supply Systems (EPSS) shall be tested at least once within every 36 months. (Level 1 systems are installed where failure of the equipment to perform could result in loss of human life or serious injuries.)

8.4.9.1 Level 1 EPSS shall be tested continuously for the duration of its assigned class.

8.4.9.2 Where the assigned class is greater than 4 hours, it shall be permitted to terminate the test after 4 continuous hours. (Health care occupancies require a Class X system of undefined time, but greater than 48 hours.)

8.4.9.3 The test shall be initiated by operating at least one transfer switch (ATS) test function and then by operating the test function of all remaining ATSs, or initiated by opening all switches or breakers supplying normal power to all ATSs that are part of the EPSS being tested.

8.4.9.4 A power interruption to non-EPSS loads shall not be required.

8.4.9.5 The minimum load for this test shall be as specified in 8.4.9.5.1, 8.4.9.5.2, or 8.4.9.5.3.

8.4.9.5.1 For a diesel-powered emergency power supply (EPS), loading shall be not less than 30 percent of the nameplate kW rating of the EPS. A supplemental load bank shall be permitted to be used to meet or exceed the 30 percent requirement.

8.4.9.5.2 For a diesel-powered EPS, loading shall be that which maintains the minimum exhaust gas temperatures as recommended by the manufacturer.

8.4.9.5.3 For spark-ignited EPSSs, loading shall be the available EPSS load.

8.4.9.6 The test required in 8.4.9 shall be permitted to be combined with one of the monthly tests required by 8.4.2 and one of the annual tests required by 8.4.2.3 as a single test.

8.4.9.7 Where the test required in 8.4.9 is combined with the annual load bank test, the first 3 hours shall be at not less than the minimum loading required by 8.4.9.5 and the remaining hour shall be at not less than 75 percent of the nameplate kW rating of the EPS.

What does this mean for you? The emergency generator must be tested every 3 years for a minimum of 4 continuous hours, including the operation of all automatic transfer switches. The test can be combined with the monthly 30-minute test and the annual 1.5-hour test.

CMS adopted the 2012 edition of NFPA 101, *Life Safety Code*, on July 5, 2016. Therefore, by July 5, 2019 (3 years after adoption), you need to have completed the above testing to meet the requirement for a 4-hour load test every 3 years.

GFCI Outlets Near Sinks

Affects: All facilities

The Division of Life Safety and Construction has noticed plan submittals, along with existing facilities, having outlets within 6 feet of the edge of a sink or lavatory that are not ground-fault circuit-interrupter protected. NFPA 70, *National Electrical Code*, addresses locations where ground-fault circuit-interrupter protection is required.

Section 210.8 of the 2011 edition of NFPA 70 states that ground-fault circuit-interruption for personnel shall be provided as required in 210.8 (A) through (C). The ground-fault circuit-interrupter shall be installed in a readily accessible location. In general terms, ground-fault circuit-interrupter protection is required where all 15- and 20-amp receptacles are installed within 6 feet of the outside edge of the sink.

Temperature Ratings of Sprinklers Based on Distance From Suspended Horizontal Discharge Unit Heaters

Affects: Facilities with an NFPA 13 Sprinkler System

NFPA 13, *Standard for the Installation of Sprinkler Systems*, requires high-temperature-rated sprinklers within a 7 ft. radius cylinder extending 7 ft. above and 2 ft. below horizontal discharge unit heaters.

NFPA 13 also requires intermediate-temperature-rated sprinklers within a 7 ft. to 20 ft. radius pie-shaped cylinder extending 7 ft. above and 2 ft. below horizontal discharge heaters on the discharge side; also a 7 ft. radius cylinder more than 7 ft. above horizontal discharge unit heaters.

See Table 8.3.2.5(a) for these requirements, along with those for unit heaters with vertical downward discharge.

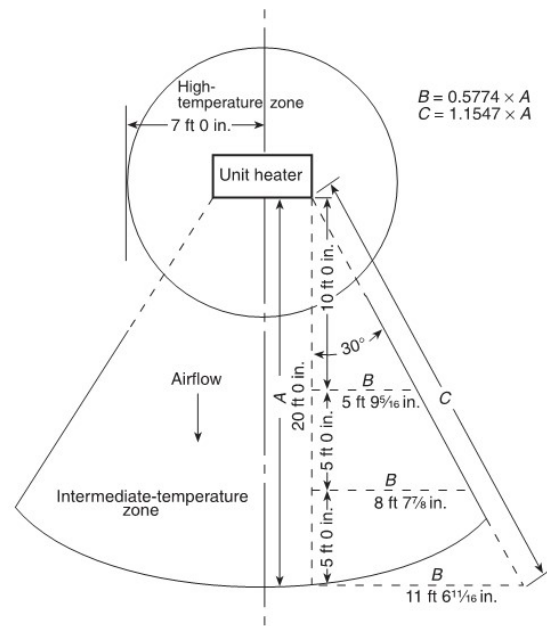


Figure 8.3.2.5 High-Temperature and Intermediate-Temperature Zones at Unit Heaters

Maintenance of Sprinklers

Affects: All Facilities

NFPA 25, *Standard for the Installation of Sprinkler Systems*, states sprinklers shall be inspected from the floor level annually. While conducting your inspection, ensure the sprinklers are free of corrosion, foreign materials, paint, any physical damage, and are installed in the correct orientation. This inspection is to determine if the sprinklers can perform properly.

Foreign materials such as paint or excessive dust build up can insulate the frangible bulbs or thermal linkages, affecting the sprinkler's ability to properly activate. These materials could also impede the sprinkler's water distribution pattern, making the sprinkler less effective in controlling or containing a fire.

This required annual inspection should be included in the facility's environmental rounds policy and procedure and conducted by appropriate personal. When dust or foreign material is observed on sprinklers, this can be addressed using compressed air or by a vacuum as long as the equipment does not touch the sprinkler.



Paint on this sprinkler cover plate can affect the sprinkler's ability to properly activate and needs to be replaced.

Life Safety Items (cont'd)

that are not required by the *Code*. These dampers are not obvious to the public and could be taken out of service if they are not needed. However, before taking any life safety feature out of service, extreme care needs to be exercised to ensure the feature is not required, was not originally provided as an alternative or equivalent, or is no longer required due to other new requirements in the current *Code*.

Smoke Detector Spacing

Affects: All Facilities

If your facility has smoke detection installed anywhere in the facility, there is something you want to remember as far as installation of the detector in relation to an air-flow source. The *Life Safety Code* states life safety features, whether required or not, obvious to the public shall be installed, maintained, and tested in accordance with the *Code*.

NFPA 72, *National Fire Alarm and Signaling Code*, addresses the installation of smoke detectors.

17.7.4.1* In spaces served by air-handling systems, detectors shall not be located where airflow prevents operation of the detectors.

A.17.7.4.1 Detectors should not be located in a direct airflow or closer than 36 in. from an air

supply diffuser or return air opening. Supply or return sources larger than those commonly found in residential and small commercial establishments can require greater clearance to smoke detectors. Similarly, smoke detectors should be located farther away from high velocity air supplies.

Smoke detectors located within 36 inches of an airflow source, (supply, return, and exhaust vents for the HVAC system; ceiling fans; etc.) will be cited as a deficiency.

Also, a reminder that if your facility has been cited for a deficiency at a specific location, it is the responsibility of the facility to ensure the entire building is in compliance throughout for like issues.

Labeling of FACP and Breaker

Affects: All facilities

An update to the 2010 edition of NFPA 72, *National Fire Alarm and Signaling Code*, is fire alarm control panel circuit identification and accessibility. Section 10.5.5.2 addresses these requirements.

The location of the dedicated branch circuit disconnecting means (the breaker) must be permanently identified at the fire alarm control panel (FACP). One way to accomplish this would be to identify the FACP breaker's room and electrical panel with a label or permanent marker in an obvious location on the FACP.

The FACP breaker must also be labeled. It must have a red marking (such as a red breaker or red electrical tape) and be identified as "FIRE ALARM CIRCUIT". Also, the breaker shall be accessible to authorized personnel only. This can be accomplished with a lock-on device on the FACP breaker.

Fire Extinguisher Mounting Heights

Affects: All facilities

According to the 2010 edition of NFPA 10, *Standard for Portable Fire Extinguishers*, fire extinguishers not exceeding 40 lb shall be installed so that the top of the fire extinguisher is not more than 5 ft above the floor. Fire extinguishers greater than 40 lb (except wheeled types) shall be installed so that the top of the fire extinguisher is not more than 3¹/₂ ft above the floor.

In no case shall the clearance between the bottom of the portable fire extinguisher and the floor be less than 4 in.

These requirements can be found in Subsection 6.1.3.8, Installation Height.

Newsletter Ideas

If there is a topic you would like to see addressed in future editions of this newsletter, please email us at lsc@nd.gov and we will consider your submission for future publication.