An introduction from George Mills, MBA, FASHE, CEM, CHFM, CHSP, director, Department of Engineering, The Joint Commission: This column clarifies standards expectations and provides strategies for challenging compliance issues, primarily in life safety and the environment of care, but also in the vital area of emergency management. You may wish to share the ideas and strategies in this column with your organization’s leadership. This month, I enlisted James Woodson, engineer in the Department of Engineering with The Joint Commission, to further explore the aspects and issues related to this topic.

Environment of Care (EC) Standard EC.02.03.05 pertains to how and when health care organizations need to maintain fire safety equipment and building features. This is a vital standard that needs to be explored in greater detail. This column has periodically visited this standard and detailed each of its elements of performance (EPs).

Recently, we evaluated and provided compliance recommendations for EPs 14 through 16, which concern the testing of gaseous automatic fire-extinguishing systems used in controlled environments, and the checking and upkeep of portable fire extinguishers that staff can use to protect occupants and facility contents in the event of a fire. This time around, we will scrutinize EPs 17 through 20, and EP 25.

**EP 17** Hose tests every 5 and 3 years
The hospital conducts hydrostatic tests on standpipe occupant hoses 5 years after installation and every 3 years thereafter. The completion date of the tests is documented.

**EP at a glance**
Fire hoses installed within your facility need to be ready for use by either the fire department or trained personnel. Fire hoses can have a short shelf life if not maintained properly, as they are easily susceptible to damage. Therefore, they are to be hydrostatically tested at regular intervals.

**Survey activity**
During the document review session, the surveyor will ask if your facility has fire hoses installed. If there are provisions for fire hoses in the building, but they are not present because your local fire marshal requires them to be removed (many fire departments prefer to use their own hoses), your organization must obtain a letter from the fire marshal authorizing this arrangement. If hoses are installed, hydrostatic testing procedures are located in National Fire Protection Association (NFPA) Standard 1962, 1998 edition. Service test pressures are typically stenciled on the hose. Proof of testing is needed for each installed hose section.

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**EP 18** Tests for fire and smoke dampers
The hospital operates fire and smoke dampers 1 year after installation and then at least every 6 years to verify that they fully close. The completion date of the tests is documented.

Fire dampers are designed to help stop the spread of fire in ducts, ventilation, and heating and air conditioning systems.

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is documented. Note: The initial test that must occur 1 year after installation applies only to dampers installed on and after January 1, 2008.

EP at a glance
Proper operability of fire and smoke dampers is essential to prevent fire and smoke from traveling throughout the building via the heating, ventilating, and air-conditioning (HVAC) systems. Consequently, they need to be tested and maintained periodically. Finding these dampers in system ductwork can be challenging, but they must be identified and their locations recorded. Also, if a damper fails the test, your organization needs to repair it in a timely manner.

Survey activity
During the document review session, the surveyor will ask if you have an inventory of dampers or a drawing with their locations indicated. The required one-year post-installation test would be the one-year anniversary month plus or minus 30 days, and although hospitals are required to test the dampers every six years thereafter, other nonhospital health care facilities require testing every four years thereafter. The surveyor will ask for documentation of this testing.

The scope of the test includes a validation of damper access, inspection of the physical condition, validation of proper release and full closure, and restoration of the make-ready for actuation condition (a new fusible link for a fire damper, and the actuator connected and operable for a smoke damper).

In addition, during the building inspection tour, the surveyor may randomly select installed dampers and check that they are properly documented in your inventory and maintenance records. Some dampers may be inaccessible, in which case a Plan for Improvement (PFI) needs to be established in the organization’s electronic Statement of Conditions. Inaccessible dampers can often be corrected during renovations, repairs, or construction. If a PFI has been established for out-of-reach dampers, but your organization is not expected to meet the PFI completion date, a deadline extension needs to be requested.

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- NFPA 80 Standard for Fire Doors and Other Opening Protectives, 2007 edition (Section 19.4.1.1) and NFPA 105, 2007 edition (Section 6.5.2).

EP 19 Annual auto smoke-detection shutdown device tests
Every 12 months, the hospital tests automatic smoke-detection shutdown devices for air-handling equipment. The completion date of the tests is documented.

EP at a glance
If the fire alarm system is activated and programmed to shut down the ventilation system, the appropriate programmed air-handling unit should also shut down. As with dampers, this prevents fire and smoke from traveling throughout the building via the HVAC systems. Testing of this function is closely aligned to this standard’s EP 3, which mandates the testing of duct detectors. When a detector is activated, which is an input (initiation) to the fire alarm system, it shuts down selected air handlers, which is one of the primary outputs (resulting actions).

Be aware that it’s easy to confuse EP 19 with EP 3, as each requires the testing of different devices, but are two different functions of the same process (continued on page 10)
Clarifications and Expectations: Testing and Maintaining Hoses, Dampers, Doors, and Other Fire Safety Equipment (continued from page 7)

that must be validated, therefore individually documented.

Survey activity
During the document review session, the surveyor will ask for the report verifying the annual testing and shutdown of the air-handling equipment. The surveyor wants to check, for each detector that is triggered/activated, if the appropriate air handler(s) shuts down as programmed.

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EP 20 Yearly testing of sliding and rolling fire doors
Every 12 months, the hospital tests sliding and rolling fire doors for proper operation and full closure. The completion date of the tests is documented.

Proper fire prevention and response equipment and procedures can save lives in an emergency.

EP at a glance
Rolling and sliding doors located in a fire barrier are normally in the open position but are required to close during a fire event. However, when these doors are not tied into the fire alarm system, they are a self-contained unit and are designed to close automatically in a fire. As with fire dampers, it’s important to know the location of, inventory, and annually test these doors.

Closure of these doors is typically initiated when a fusible link is released by heat, which releases the door-closing mechanism. Proper testing involves temporarily removing the fusible link to ensure that the door operates as designed and fully closes.

Lastly, although this EP doesn’t cover sliding and rolling smoke doors activated by detectors, they also need to be tested and maintained according to manufacturer recommendations.

Survey activity
During the document review session, a surveyor may ask if any sliding and rolling fire/smoke doors exist and if they have been tested yearly. Be prepared to furnish testing documentation for each unique door assembly.

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- NFPA 80, 1999 edition (Section 15-2.4).

EP 25 Keeping records of maintenance, testing, and inspection for related equipment
For hospitals that use Joint Commission accreditation for deemed status purposes: Documentation of maintenance, testing, and inspection activities for fire alarm and water-based fire protection systems includes the following:
- Name of the activity
- Date of the activity
- Required frequency of the activity
- Name and contact information, including affiliation, of the person who performed the activity
- NFPA standard(s) referenced for the activity
- Results of the activity.

EP at a glance
This EP serves as your organization’s guide to a complete fire safety system report and ensures that your report will validate compliance.

Among this EP’s bulleted items, some can be grouped into similar categories to save time and simplify reporting; for example, the “name and contact information” can actually be the same person for the whole report, which means this name only has to be listed once at the report’s beginning.

Survey activity
During the document review session of a deemed organization, the surveyor will make sure that all the aforementioned items are covered. There also needs to be an inventory of each device described by any EP that falls within the EC.02.03.05 standard, as well as a result of the activity for each of these items. In addition, if any device fails a test, there needs to be a timely correction or PFI generated (see EC.02.05.05).

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- Refer to the individual EPs in this standard to determine the appropriate NFPA reference corresponding to each device/component/equipment being tested, maintained, and inspected.

The heat is on
To have a thorough and complete inventory, if you make any changes within your facility, it’s essential to edit that inventory to match the built conditions. Also, before activating any device, pretest it to ensure that it’s working properly in accordance with standard EC.02.05.05, EP 1; likewise, if you remove a device, delete it from your inventory.