

## 1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.2.a, 5.1.2.b, 5.1.3, 5.1.4)

This standard identifies the requirements governing ceiling tiles, the installation/maintenance of portable fire extinguishers, and the establishment/integrity/operability of building fire barriers (i.e., fire walls, fire doors, fire dampers, smoke dampers, and fire stops).

These requirements apply to all Washington River Protection Solutions LLC (WRPS)-managed facilities, operations, and activities, as well as leased facilities (to the extent that building owners must be notified of extinguishers or fire barriers in need of repair or maintenance).

Subcontractor-owned and privately-owned vehicles are exempted from the fire extinguisher requirements of this WRPS Standard.

Rental equipment shall not be delivered with subcontractor-owned fire extinguishers. If, after delivery of the rented equipment, a fire extinguisher is required, the extinguisher will be supplied, inspected, and maintained by WRPS personnel.

## 2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

## 3.0 STANDARD

The following requirements apply to building ceiling tiles, fire extinguishers, and building fire barriers as described in the subsections below.

### 3.1 Building Ceiling Tiles

The emphasis on ceiling tiles being in place in building with fire protection suppression systems is because the sprinkler is set off by heat. Since heat rises, the heat will bypass the sprinkler going into the space above the missing tile. The fire will be well established before the sprinkler finally gets enough heat to melt the fusible link or break the glass bulb initiating water flow. Once a fire is well established, the chances of a sprinkler system controlling the fire and preventing total loss are almost zero. Statistics indicate that most fires with unimpaired suppression systems are controlled with four sprinkler heads or less, so getting the system to activate as soon as possible is a necessity.

1. Ceiling tiles shall be maintained in place in structures with fire protection suppression systems.

Cracked ceiling tiles can be utilized as long as there are no holes or gaps when the tile is fitted together in the supporting strut.

2. If equipment installation or maintenance requires removal of ceiling tiles, the WRPS Fire Protection Engineer shall be notified for any compensatory measures that may be required.
3. Ceiling tiles shall be replaced immediately after the installation or maintenance task is

finished.

Ceiling tiles in structures without fire protection suppression systems are not covered under this standard but are recommended to be in place for the comfort of the occupants.

### **3.2 Fire Extinguishers**

1. The location and type of portable fire extinguishers shall be in accordance with the requirements of NFPA 10. The Tank Operations Contractor (TOC) fire protection engineer shall approve initial location and any relocation/removal of portable fire extinguishers.
2. Portable fire extinguishers shall be conspicuously marked and identifiable.
3. Portable fire extinguishers shall not be obstructed or obscured from view, and clear access to the portable fire extinguishers shall always be maintained.
4. Portable fire extinguishers shall be mounted on hangers or stored in cabinets (except for wheeled types).
5. Portable fire extinguishers used for welding/cutting operations are not required to be secured at the location of the welding or cutting.

Vehicles/forklifts not being used off road are not required to have a fire extinguisher. If a decision is made to supply a fire extinguisher as a safety precaution, the fire extinguisher shall be maintained in accordance with TFC-ESHQ-FP-STD-04 testing and inspection requirements. Vendor supplied fire extinguishers shall be replaced with fire extinguishers supplied by WRPS Purchasing and tagged by the Hanford Fire Department.

6. Portable fire extinguishers provided for vehicles shall be mounted or otherwise safely secured.

Vendor supplied fire extinguishers shall be replaced with fire extinguishers supplied by WRPS Purchasing and tagged by the Hanford Fire Department.

7. Portable fire extinguishers shall be inspected and maintained in accordance with TFC-ESHQ-FP-STD-04:
  - Inspection forms shall be maintained according to TFC-PLN-13.
  - Portable fire extinguishers shall be maintained fully charged and operable at all times and are required to be retested or removed from service before their hydrostatic test date.
  - Immediate corrective action shall be taken for portable fire extinguishers identified as having a deficiency (e.g., empty, not mounted, missing, broken seal, etc.).
8. Employees shall receive general fire extinguisher training as required in TFC-PLN-13.

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This training is provided:

- On initial employment
  - Annual refresher training for employees who may use a portable fire extinguisher (received in HGET)
  - Annual hands-on training for employees designated to use a portable fire extinguisher as part of an emergency action plan or a fire watch (such as for a welding/cutting operation).
9. The TOC fire protection engineer shall approve all portable fire extinguisher purchase orders. New Halon fire extinguishers shall not be requested or purchased (in accordance with DOE directive).

### **3.3 Fire Barriers**

1. Fire barriers shall be installed when required by NFPA 101<sup>®</sup>, building code, or, if applicable, the facility fire hazard analysis.
2. All modifications or additions that affect new or existing fire barriers shall be reviewed and approved by the TOC fire protection engineer.
3. Fire or smoke dampers shall be held open only with approved operating devices.
4. Fire doors shall not be chocked or blocked open. Fire doors that are normally in the closed position may be held open if continuously attended by a fire watch or alternate compensatory measures are in place and approved by the TOC fire protection engineer.

Some fire doors are specifically designed to be held open with automatic closing devices such as fusible links or smoke detector hold-open magnets. Keep these areas clear to allow the door to close.

5. The locations and boundaries of all fire barriers within a building shall be identified on drawings.
6. Fire doors and fire/smoke dampers should also be identified in the field to help facilitate testing and maintenance.

Fire doors/windows shall meet the requirements in NFPA 80.

7. Informational signs may be attached to fire doors.
  - The area of these signs shall not exceed five percent of the door face area.
  - The signs shall not obstruct any windows on the doors.
  - The signs shall be attached with an adhesive.
  - The signs shall not be nailed, screwed, or tacked to fire doors.
8. All fire barrier penetrations shall be provided with approved, through-penetration fire

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stops and/or protected by approved operable fire doors, fire dampers, or fire windows having the appropriate fire-resistive ratings.

9. Security systems shall not interfere with or affect the operation or integrity of fire doors (e.g., latch mechanisms), fire dampers, fire windows, or other fire protection system components.
10. Immediate action shall be taken to resolve any fire barrier deficiencies or impairments. Compensating measures determined by the TOC fire protection engineer (in conjunction with the Fire Marshal) shall be implemented in accordance with TFC-ESHQ-FP-STD-04.

**4.0 DEFINITIONS**

There are no definitions required by this standard.

**5.0 SOURCES****5.1 Requirements**

1. 10 CFR 851, "Worker Safety and Health Program."
2. 29 CFR 1910, "Occupational Safety and Health Standards."
  - a. Section 157(g)(1). "Portable Fire Extinguishers."
  - b. Section 157(g)(2) "Portable Fire Extinguishers."
3. DOE O 420.1B, "Facility Safety."
4. ENS-ENG-IP-05 R0, "ORP Fire Protection Program."

**5.2 References**

1. "International Building Code."
2. National Fire Protection Association, Standard 10 (NFPA 10), "Portable Fire Extinguishers."
3. NFPA 80, "Fire Doors and Fire Windows."
4. NFPA 101<sup>®</sup>, "Life Safety Code<sup>®</sup>."
5. TFC-ESHQ-FP-STD-04, "Fire Protection System Inspection, Testing, Maintenance, and Discrepancies Management."
6. TFC-PLN-13, "Fire Protection Program."