Combustible Material Storage in Equipment Rooms

OVERVIEW

The policy in this section (SPPM 8.14) provides fire safety and property loss prevention requirements for equipment rooms to mitigate risk, property damage, and interruptions in the continuity of business operations.

For general requirements regarding storage of combustible materials, see SPPM 8.15.

Scope

Equipment rooms are defined as:

- Boiler rooms;
- Mechanical rooms; and
- Electrical rooms.

Equipment rooms contain critical equipment and systems which are sensitive to damage caused by smoke, liquid, natural hazards, and fire.

Prohibiting Storage of Combustible Materials

Combustible materials stored in equipment rooms present a life safety hazard to first responders, as well as to maintenance and authorized personnel. Storage of combustible commodities can limit the required ready access for personnel to easily reach critical controls, such as power or equipment disconnects, in case of an emergency.

Electrical Service Equipment Clearances and Space

Maintain adequate clearances and working space around electrical service equipment to provide:

- Physical separation of any storage material from heat-producing electrical devices and equipment to minimize the possibility of ignition; and
- Adequate workspace to perform maintenance and repair work safely.
- Emergency access to electrical disconnects.

Fire Protection

Fire protection for equipment rooms may include a variety of fire suppression systems including but not limited to automatic sprinkler systems and water mist systems. These systems are designed to extinguish or control a fire according to the area, density, and hazard which includes the equipment in the room. Introducing additional combustibles and commodities into the
Combustible Material Storage in Equipment Rooms

Fire Protection (cont.)

The room will diminish the effectiveness of the fire suppression system.

Where the fire hazard exceeds that of a typical nonstorage occupancy, enhanced sprinkler protection may be needed, and the sprinkler system’s performance may become more sensitive to specific automatic sprinkler attributes. Examples of these increased fire hazards include the following:

- Stored materials exceeding designed storage capacities
- Combustible deposits, such as dust, lint, oil, or other residues
- Ignitable liquids

Legal

The requirements in this section (SPPM 8.14) are supported by codes, standards, and recommendations from:


  - **315.3.3 Equipment rooms.** Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in *fire command centers* as specified in IFC Section 508.1.5.

  - **604.3 Working space and clearance.** A working space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches (762 mm), the working space shall be not less than the width of the equipment. Storage of materials shall not be located within the designated working space.

EXCEPTIONS:

- Where other dimensions are required or allowed by NFPA Standard 70.

- Access openings into attics or under-floor areas that provide a minimum clear opening of 22 inches (559 mm) by 30 inches (762 mm).
Combustible Material Storage in Equipment Rooms

Legal (cont.)

- National Fire Protection Association (NFPA)
  - NFPA 70 National Electric Code
- Factory Mutual (FM) Global
  - FM Global Property Loss Prevention Data Sheets 3-26: Fire Protection for Nonstorage Occupancies

RESPONSIBILITY

University personnel, suppliers, and contractors, must contribute to eliminating combustible material storage in equipment rooms. Examples of combustible materials include, but are not limited to:

- Wood;
- Paper;
- Cardboard;
- Packaging materials;
- Combustible liquids; and
- Solvents (flash point over 100°F / 38°C).

See also SPPM 8.12 regarding flammable/combustible liquid storage.

HAZARD CONTROL

The following combustible material hazard controls apply to equipment rooms.

Combustible material must **not** be:

- Stored in:
  - Boiler rooms;
  - Mechanical rooms; or
  - Electrical rooms.

- Staged in an equipment room.
  - Locate new equipment with packaging awaiting installation in storage and staging areas separate from equipment rooms (i.e., where fire involving the storage will not expose critical equipment).
  - **NOTE:** Maintenance supplies for the equipment in the mechanical room may be staged for use on that equipment. Items may include, but are not limited to:
Combustible Material Storage in Equipment Rooms

HAZARD CONTROL (cont.)

- Filters (in packaging)
- Belts
- Replacement parts
- Regular maintenance items

- Stored within the designated working spaces and clearances required in front of electrical service equipment.

An absolute minimum amount of combustibles required for essential operations (e.g., paper records, manuals, and drawings) may be stored in a small work room in a fully-enclosed noncombustible cabinets or cases.