

**Description:**

The purpose of the section is to highlight the current applicable UMCP Design Standards for design and installation of Wet Chemical Fire Suppression/Extinguishing systems.

**Related Sections:**

- TBD

**Effective Date:**

July 10, 2009

**Applicable Standards:**

The installation of new wet chemical fire extinguishing systems shall comply with the following:

- Factory Mutual Engineering And Research Corporation (FM) Approval Guide
- NFPA 17A -- Wet Chemical Extinguishing Systems
- NFPA 70 -- National Electrical Code
- NFPA 72 -- National Fire Alarm Code
- NFPA 96 -- Ventilation Control and Fire Protection of Commercial Cooking Operations
- Underwriters Laboratories Inc. (UL) Fire Protection Equipment Directory
- UL 300 -- Fire Testing of Fire Extinguishing System for Protection of Restaurant Cooking Areas.

**General Requirements:**

- Installation drawings, shop drawings, and as built drawings shall be prepared, by or under the supervision of, an individual who is experienced with the types of works specified herein, and is currently certified by the National Institute for Certification in Engineering Technologies (NICET) as an engineering technician with minimum Level III certification in Special Hazard System program.
- Contractor shall submit data for approval showing the name and certification of all involved individuals with such qualifications at or prior to submittal of drawings.

**Products**

- **Pre-Engineered Wet Chemical Fire Extinguishing Systems**
  - Systems shall comply with NFPA 17A and NFPA 96, except as modified herein.
  - Piping and accessories within the hood shall be stainless steel or chrome plated.
  - All other piping shall be galvanized malleable iron or galvanized steel, painted to match the adjacent surface chrome or nickel plated or stainless steel or black steel painted to match the adjacent surface.
  - Exhaust hoods with grease extractors UL listed or FM approved are not required to have protection downstream of the grease extractors.
  - Provide systems for protection of new or existing cooking equipment, including exhaust hoods and ducts for cooking equipment requiring protection by NFPA 96.
- **System Controls**
  - Each system shall be mechanically actuated by fusible links and by remote manual actuation stations connected to the extinguishing system release mechanisms by stainless steel cables.
  - Arrange each system to automatically shut off the flow of fuel and electrical power to cooking appliances as indicated [and to automatically actuate the building fire alarm fire alarm system as indicated.
  - Electrical power to hood exhaust fans shall not be shut off unless specifically required by the UL listing or FM approval.
- **Identification Signs**
  - Provide red rigid plastic signs with engraved 6 mm (0.25 inch) high white lettering at each remote manual actuation station.
  - Sign legends shall be "Fire Extinguishing System" followed by a brief description of the equipment protected.

### Tests and Inspection

- A representative of UMCP/FM will witness formal tests and approve systems before acceptance. Submit a written request for formal inspection at least 7 working days prior to inspection date.
- An experienced technician regularly employed by the system installer shall be present during the inspection.
- At the inspection, repeat any or all of the required tests as directed.
- Provide plastic containers, hose fittings, and hose at each nozzle to capture the wet chemical and discharge each system to demonstrate uniform distribution of the wet chemical among the nozzles.
- Furnish compressed air, nitrogen, wet chemical equipment, and personnel for the tests.
- Refill and reset systems after tests have been completed.