FIRE EQUIPMENT MANUFACTURERS' ASSOCIATION

Discharging Wet Chemical Agent When Performing an Acceptance Test

FEMA Opposes Discharging Extinguishing Agent When Performing a Full System Discharge Test for the Installation Approval of a Pre-Engineered Wet Chemical Suppression System

FEMA advises against performing a full system discharge test using extinguishing agent on a pre-engineered wet chemical restaurant system unless required by the system manufacturer or by the Authority Having Jurisdiction, as long as the recharge procedures are followed as outlined in the manufacturer's installation, maintenance and recharge manuals. Years of field experience with this type of test has shown that the cost and unintended consequences far outweigh any benefit.

The requirements for the approval of the system installation are specified in NFPA 17A, 2021. The processes for testing the operation of the system and the pipe integrity do not contain any requirements for discharging the contents of the wet chemical containers. The Standard does provide procedures on what sections of the system need to be tested and how to approve the integrity of the system piping. The pipe testing methods specify that nitrogen or dry air shall be used to verify the integrity. This section does not contain any alternative methods other than what is cited below.

NFPA 17A, 7.4.4.2, 2021 A test using nitrogen or dry air shall be performed on the piping network at a pressure not to exceed the normal operating pressure of the extinguishing system.

A full system discharge test using extinguishing agent can be problematic because it may increase the possibility of residual extinguishing agent in the discharge piping system following the test. Extinguishing agent that is not completely flushed from the piping after a discharge has the potential to cause corrosion and interfere with future system operation and performance. Improperly flushed discharge piping has proven to be one of the leading causes of improper system operation.

Additionally, a full system discharge test with agent is wasteful and places a considerable and unnecessary economic burden on the end user. As an alternative, the manufacturer's technical manual should be followed for the proper procedure for system installation approval. FEMA encourages the careful inspection of these systems by the Authority Having Jurisdiction to verify that the installed system is in full compliance with the system manufacturer's technical manual.

Founded in 1930, the Fire Equipment Manufacturers' Association is an international, non-profit trade association dedicated to manufacturing commercial fire protection equipment to serve as the first line of defense against fire in its early stages.

For more information and a list of current FEMA members, visit the FEMA website at www.femalifesafety.org.

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