

Dual Agent Commercial Kitchen Fire Suppression Systems - Interpretation

Purpose

To clarify requirements of the sprinkler licensing in Minnesota Statute § 299M and how it applies to dual agent (wet chemical and water assisted) commercial kitchen exhaust hood fire extinguishing systems.

Interpretation

The State Fire Marshal (SFM) division has reviewed dual agent commercial kitchen fire suppression systems consisting of a wet chemical agent connected to a constant water supply and how Minnesota Statute § 299M applies to their installation.

Background

These systems are usually activated by thermal links in the kitchen hood ductwork. The system then provides an approximate 10 second supply of wet chemical solution through a series of pre-engineered piping and nozzles. After the wet chemical discharge, the system then provides continuous water through the same nozzles to provide a “cooling” effect.

Question: Because these systems can use fire sprinkler system water for part of their operation, are they required by Minnesota Statute § 299M to be installed by a licensed sprinkler contractor?

Response: The answer is NO, based on the following reasons:

1. Because these systems use a unique design (wet chemical and water) approach for extinguishing fires, they do not resemble traditional sprinkler systems.
2. The system is designed to be fed from a “domestic” water supply or a wet pipe fire sprinkler system.

Requirements

While the SFM believes that this system does not fall under the jurisdiction of Minnesota Statute § 299M, the following conditions shall be met:

1. The installed systems shall comply in all respects to UL listings 300 and 2092.
2. Plans shall be submitted for approval by the local authority having jurisdiction (AHJ), where applicable, before installation begins.
3. Wet chemical systems may be connected to either the domestic OR sprinkler system depending upon its listing. If connected to a sprinkler system, the connection may only be



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- done by a certified journeyman sprinkler fitter under a sprinkler contractor licensed under Minnesota Statute § 299M.03.
4. The water supply shall be analyzed and confirmed to be adequate for proper system operation before the plans are submitted to the local AHJ.
 5. The pre-engineered piping and nozzles shall be confirmed as the proper size (based on the existing water supply) to the local AHJ.
 6. Installing technicians shall be factory trained and certified for the type of system.
 7. The tie-in to the domestic water system shall be done by personnel licensed under Minnesota Statute § 326.37 through 326.45 (licensing of plumbers).
 8. The installation shall comply with 2020 edition of Minnesota State Fire Code Section 904.12.

