



CITY OF BLOOMINGTON
Fire Prevention Division

STATEMENT OF POLICY

Policy #: BFP-0009	Water-based Kitchen Hood Fire Protection		
Reviewed and Approved By: Gene Dugal	Title: Fire Marshal	Effective Date: September 1, 2008	Revised Date:

PURPOSE:

To provide for uniform application of MSFC provisions relating to the use of automatic sprinklers for the protection of commercial cooking equipment as required by MSFC (07) Section 904.2.1.1.

**PROTECTION OF COOKING HOODS
WITH WATER BASED SYSTEMS**

Water based extinguishing systems used to protect commercial cooking equipment and the hood/exhaust systems in which they are installed shall comply with the following:

1. For pre-engineered fire protection ventilation systems, it is the responsibility of the manufacturer to establish baseline requirements for fire protection for its hood systems. It is the responsibility of the project engineer to ensure that the system is installed in accordance with its listing and manufacturer’s instructions. The sprinkler contractor or project engineer is responsible for the proper design and installation of the sprinkler protection for the exhaust duct, unless that portion of the protection is also part of the previously mentioned pre-engineered systems.
2. As a minimum, the sprinkler system must be designed to an Ordinary Hazard Group I classification. When the listing or installation documents indicate a flow rate higher than Ordinary Hazard Group I, it shall be provided. All sprinkler heads must be listed or approved for the purpose for which they are used. They must be installed in accordance with the manufacturer’s instructions and designed to an adequate water supply.
3. Minimum design criteria must be based on the flow from 10 heads or 50% of the heads located under the hood, whichever is greater, plus the head in the duct collar must be calculated to be flowing. Sprinkler heads in the ductwork, past the collar head, do not have to be calculated. If the hood ends up being in the hydraulically most remote area of a sprinklered building, the kitchen hood demand must be added to the sprinkler demand of the entire remote area.
4. Kitchen cooking equipment located in a sprinklered building would not be considered to be obstructions to floor protection, but rather treated the same as furnishings or appliances (e.g. refrigerator, chest-type freezer, etc).
5. In a sprinklered building, if the approved hood and plenum fire protection system covers all appliances and floor surfaces under the hood, such protection shall be considered to meet the requirements of NFPA 13 (2002 edition), Section 7-9. No additional sprinklers are

required under the hood to meet floor protection requirements. If, however, the cooking equipment is not protected with a fixed extinguishing system (e.g. no grease laden vapors produced) or the hood system does not extend to all appliances and floor surfaces beneath the hood, and the hood creates an obstruction to adjacent ceiling sprinklers, sprinklers from the ceiling system shall be extended through the hood to protect the floor area below the hood.

6. The City of Bloomington Fire Prevention Division will accept a hose bib with a hose to an open floor drain as an alarm test connection to meet the requirements of NFPA 13 (2002 edition.).
7. Sprinklers must be installed throughout the exhaust duct as specified in NFPA 13 (2002 edition), Section 7-9.
8. The exhaust fan must continue to operate on activation of the extinguishing system protecting kitchen cooking equipment.
9. Water-based systems for the protection of commercial cooking equipment shall be inspected at a minimum of every six months and after activation.

Note: The GEM ® Protectospray, Type EA-1, automatic spray nozzles for deep fat fryers are currently “de-listed”. The City of Bloomington Fire Prevention Division will approve their use over deep fat fryers if they are designed and installed in accordance with technical data sheet TD725. See NFPA 13, 3.2.1, 2002 Edition, definition of “Approved”.