



**MINNESOTA DEPARTMENT OF PUBLIC SAFETY**  
**State Fire Marshal Division**

**INTERPRETATION**

Interpretation # INTERP FP-03 (2007)	Subject Interpretation: Chemical-based Kitchen Hood Fire Suppression Systems		
Reviewed and Approved By: Jerry Rosendahl	Title: State Fire Marshal	Effective Date: July 10, 2007	Revised Date: July 10, 2007

**APPLIES TO:**

All Inspection Personnel, Inspection Supervisors, Code/Plans Specialists.

**PURPOSE:**

To provide for uniform interpretation and enforcement of the requirements for commercial kitchen hood fire-extinguishing systems as required by MSFC (07) Section 609.2 and 904.11.

**SECTION 1 —CHEMICAL-BASED KITCHEN HOOD SYSTEMS**

Approved fire-extinguishing systems shall be installed for the protection of commercial-type food heat-processing equipment located inside structures that produce grease laden vapors. Operations that produce grease laden vapors include frying (deep-fat, range-top, or griddle frying), grilling, broasting, large rotisserie and broiling. The following operations are not considered to produce grease laden vapors: baking, heating, warming, steaming, and microwaving.

In cases where the cooking operations take place rarely (once a month or less), the inspector is authorized to not require the installation of the extinguishing system if no obvious or distinct hazard exists with the cooking operation. An example of this would be a church kitchen where cooking is done on an irregular and infrequent basis.

When an extinguishing system is installed, a means of shutting off the fuel supply (either electricity or gas) to the cooking appliances is required. If the fuel supply is gas (natural or LP), a manual reset valve is required so that the gas supply is not restored to the appliance without a suitable pilot light. In the case of newly installed extinguishing systems, all electrical receptacles located under the hood are also required to be shut down upon activation of the extinguishing system.

**SECTION 2 – UL 300 EXTINGUISHING SYSTEMS**

The State Fire Marshal Division has received many questions on whether an existing non-UL 300 hood suppression system may remain in service. It is the State Fire Marshal Division Policy to allow these older systems to remain in service as long as they were installed, are inspected, and are maintained in accordance with their original listing and the manufacturer’s instructions. We base this decision on an Underwriter’s Laboratories (U/L) interpretation given in 1996 to the National Restaurant Association. U/L’s response stated:

*“While we believe the requirements contained in UL 300 offer an enhanced level of safety for fire suppression equipment intended for the protection of restaurant cooking areas, extinguishing system hardware authorized to have a UL Listing Mark and manufactured prior to the effective date of November 21, 1994, continues to be UL Listed provided that it is installed, inspected, and maintained in accordance with the manufacturer’s instructions referenced on the name plate”.*

On the contrary, all newly installed cooking suppression systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. Other types of automatic fire-extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations [MSFC (07) Section 904.11].

### **SECTION 3 – EXPLANATORY MATERIAL**

- UL300, *Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas*, is a performance-based test method used to evaluate fixed fire-extinguishing systems. It addresses fire testing of restaurant cooking appliances as well as splash hazards that may develop on appliances such as deep fat fryers, range tops and woks.
- The development of new “higher efficiency” appliances, the use of vegetable shortening rather than animal fat and more accurate detector reaction time prompted the issuance of the UL 300 standard. The new requirements include specific appliance heat-up and cool-down rates, fuel auto-ignition temperatures and a longer, two-minute preburn.
- Existing extinguishing system units maintain their UL Listing provided they have been installed, are inspected and are maintained according to the product label and NFPA requirements, and are acceptable to the Authority Having Jurisdiction.
- Only wet chemical extinguishing systems units are UL Listed for protection of restaurant cooking areas.
- Extinguishing system units not tested in accordance with the current edition of UL 300 need not necessarily be replaced. Ultimately this decision is up to the local AHJ. Manufacturers recommend upgrading if there have been significant changes to the original installation of the cooking appliances being protected, especially the replacement of older deep fat fryers with newer types. As stated above, the State Fire Marshal Division allows systems not tested in accordance with the current edition of UL300 to remain in service as long as the product has been installed, is inspected and is maintained in accordance with the product label and state codes.