



STATE OF LOUISIANA
DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS

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GOVERNOR

OFFICE OF STATE FIRE MARSHAL

COL. PAUL W. FONTENOT
DEPUTY SECRETARY

MEMORANDUM

TO: Hood Suppression Contractors
Fire Marshal Review Staff
Fire Marshal District Offices

FROM: Jerry W. Jones, Chief Architect *JW*

SUBJECT: Dry Chemical Extinguishing Systems, Impact of
New UL 300 Standard

DATE: February 15, 1995

As most of you are aware, Underwriters Laboratory has developed a new UL 300 Standard for the testing and listing of hood suppressions systems. This standard was developed in response to changes in technology in the marketplace. New cooking equipment has been developed utilizing more efficient burners resulting in higher heating rate for cooking oils. Fryers are also better insulated which retards the normal rapid cooling rate of cooking oils below their auto-ignition temperatures, therefore making these fire more difficult to distinguish without re-ignition.

The new UL 300 Standard addresses these issues mandating more difficult test for fryers, griddles, ranges, certain types of broilers and newly added woks. The new UL 300 Standard required manufacturers to be in compliance by November 21, 1994. In other words, products manufactured after November 21, 1994 must specifically comply with this standard. According to most manufacturers, products in inventory which were manufactured prior to the compliance deadline in accordance with the prior UL listed design and installation parameters, may be installed until January 31, 1995. As most of you are aware, dry chemical systems are not expected to be capable of meeting the UL 300 requirements for fryers and certain other appliances. This is not to imply that dry chemical systems are altogether antiquated. The UL 300 Standard has not affected testing for hoods, ducts, plenums and certain charbroilers. Therefore, dry chemical may still be usable for some applications and could be used in combination with wet systems.

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IMPACT ON EXISTING SYSTEMS - The Office of the State Fire Marshal will not require existing systems to be upgraded to comply with the UL 300 Standard. If the cooking equipment is to be re-configured or additional appliances are added such as a deep fat fryer, existing dry chemical systems will not be allowed to be extended unless in compliance with the new UL 300 Standard. Otherwise, the pre-engineered system will no longer be listed and therefore in violation of NFPA 96:7-2.2.

CODE REQUIREMENTS - The new UL 300 Standard is a test standard developed by Underwriters Laboratories. The UL 300 Standard is not referenced by NFPA 96. One might ask, "how does the new UL 300 Standard come into play?"

Most hood fire suppression systems are pre-engineered systems that are installed in accordance with the manufacturer's installation manuals. These design and installation manuals are based on specific tests performed by testing labs. These tests are the UL 300 Standard, therefore pursuant to NFPA 96:7-2.2, these types of systems must be listed. NFPA 96:7-2.2 reads:

Fixed automatic fire extinguishing systems required by 7-2.1 shall be either:

- (a) Automatic fire extinguishing systems specifically listed for the hazard and installed in accordance with the terms of their listing, the manufacturer's instructions, and NFPA 17, Standard for Dry Chemical Extinguishing Systems, or NFPA 17A, Standard for Wet Chemical Extinguishing Systems, or
- (b) Other automatic extinguishing systems installed in compliance with the provisions of the following standards, where applicable: NFPA 12, Standard on Carbon Dioxide Extinguishing Systems, NFPA 13, Standard for the Installation of Sprinkler Systems, NFPA 16, Standard on the Installation of Deluge Foam/Water Sprinkler and Foam/Water Spray Systems, NFPA 17, Standard for Dry Chemical Extinguishing Systems.

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Therefore, as you can see from 7-2.2 (a), pre-engineered hood suppression systems shall be listed which requires compliance with the new UL 300 Standard. However, under Part (b) if a dry chemical system is specifically engineered to comply with NFPA 17, the potential still exists that a dry chemical system would be acceptable pursuant to NFPA 96. However, it is unclear at this point whether insurance carriers will still allow such an installation that has not been specifically demonstrated to comply with UL 300. It is also unclear whether the manufacturers of dry chemical extinguishing agents will even allow use of their product in a dry chemical hood suppression system that does not comply with the UL 300 Test Standard. As previously stated, a majority if not all hood suppression systems are "pre-engineered" systems in accordance with the manufacturer's design and installation manuals. Therefore, products manufactured after November 21, 1994 must comply with the new UL 300 Test Standard, otherwise UL listing is not allowed and therefore the pre-engineered system would be in violation of NFPA 96:7-2.2 (a). Existing product in inventory for new installation after January 31, 1995 according to the manufacturers will not be allowed to be installed in a new installation or be allowed to be installed as a modification to an existing installation.

To reiterate, be advised that this office will not require existing installations which are not modified to be brought into compliance with the new UL 300 Standards since they were originally installed pursuant to the previous UL 300 Test Standard. Modifications or additions to existing hood suppression systems will require the systems to be upgraded to the new UL 300 Standard. Nozzles cannot be added to an existing dry chemical system after January 31, 1995 due to the fact that the manufacturers have indicated that such modifications would violate their listing.

Please understand that this issue was not brought about by actions of the State Fire Marshal's Office but by Underwriters Laboratories and the manufacturers in response to specific hazards inherent in commercial cooking appliance fires and "worst" case fire extinguishing scenarios. This office must reflect and enforce the requirements of NFPA 96 and the limitations of the listings by Underwriters Laboratories. We do not have the authority to "make this problem go away". We do not have the authority to grandfather the existing inventories you may have in stock. This office did not antique those inventories.

JWJ/adg

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