

January, 2013  
BUILDING DIVISION

# ***FIRE EXTINGUISHING SYSTEMS FOR COMMERCIAL COOKING EQUIPMENT***

Restaurant operators and owners should be aware that **all** existing fire extinguishing systems for commercial cooking equipment had to be upgraded to meet the new ULC/ORD-1254.6 standards by December 31, 2000.

Restaurant cooking surfaces, deep fat fryers, broilers and similar equipment have been traditionally protected by fixed fire extinguishing systems. These systems have included dry chemical, wet chemical, carbon dioxide and automatic sprinkler systems. Fixed fire extinguishing systems have controls that shut off the fuel supply valves as the extinguishing agent discharges onto the protected equipment. These systems have served the restaurant industry well over the last three to four decades.

Recent changes in cooking practices have necessitated improvements in the technology needed to extinguish cooking-area fires. Examples of such developments are the introduction of high-efficiency fryers and, in response to health concerns, increased use of vegetable oils for frying. These changes have rendered many of the existing systems obsolete. The saponification process used in dry chemical systems does not work with vegetable shortening. High-efficiency fryers are better insulated than older models, and their side heating elements keep hot liquid circulating longer than the older bottom elements do. As a result, extinguishment is more difficult and re-ignition is more likely.

**This bulletin is to clarify the current requirements of the City of Surrey. Engineers and Designers are to be aware that fire extinguishing systems are to be designed to meet the requirements of ULC/ORD-C1254.6-1995, and, if the building has a fire alarm system, the commercial cooking fire extinguishing system shall be connected and annunciated as a separate zone.**

Engineers and Designers are to be aware that to date, no dry chemical fire extinguishing system has successfully passed the upgraded testing requirements, whereas certain wet chemical systems have been found to meet the new requirements. In some cases, existing wet chemical systems can be upgraded to meet these requirements.

In the City of Surrey, all ventilation and fire extinguishing systems for commercial cooking equipment are to be designed and installed under the supervision of a professional engineer. A building permit is required together with mechanical drawings and Schedule B for "Mechanical" and "Fire Suppression" disciplines. Schedule C-B from the engineer will be required to be submitted to the City before final approval to use the equipment is granted.

For replacement or upgrade of an existing fire extinguishing system, a building permit together with sealed drawings and Schedule B will be required. Any existing non-code conforming feature of the ventilation and the fire extinguishing systems for the commercial cooking equipment shall be identified on the drawings and any hazardous condition shall be upgraded to meet the current requirements of the NFPA 96 standard and the B.C. Building Code.