

## CHAPTER 5 EXHAUST SYSTEMS

**SECTION 502** is amended as follows:

**502.6 Dry cleaning plants.** Ventilation in dry cleaning plants shall be in accordance with Sections 502.6.1 and 502.6.2, ~~adequate to protect employees and the public in accordance with this section and DOL 29 CFR Part 1910.1000, where applicable.~~

~~**502.7.1 During construction.** Ventilation shall be provided for operations involving the application of materials containing flammable solvents in the course of construction, alteration or demolition of a structure.~~

~~**502.7.7 Floor resurfacing operations.** To prevent the accumulation of flammable vapors during floor resurfacing operations, mechanical ventilation at a minimum rate of 1 cfm/ft<sup>2</sup> [0.00508 m<sup>3</sup>/(s · m<sup>2</sup>)] of area being finished shall be provided. Such exhaust shall be by approved temporary or portable means. Vapors shall be exhausted to the exterior of the building.~~

**502.19 Indoor firing ranges.** Ventilation shall be provided in an approved manner in areas utilized as indoor firing ranges. ~~Ventilation shall be designed to protect employees and the public in accordance with OSHA 29 CFR 1910.1025 where applicable.~~

**SECTION 504** is amended as follows:

**504.6 Domestic clothes dryer ducts.** Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of 4 inches (102 mm) in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be limited to single lengths not to exceed 8 feet (2438 mm) ~~and shall be listed and labeled for the application.~~ Transition ducts shall not be concealed within construction.

**SECTION 506** is amended as follows:

~~**506.3.3.1 Grease duct test.** Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed in the presence of the code official. Ducts shall be considered to be concealed where installed in shafts or covered by coatings or warps that prevent the ductwork from being visually inspected on all sides. The permit holder shall be~~

~~responsible to provide the grease duct leakage test. A light test or an approved equivalent test method shall be performed to determine that all welded and brazed joints are liquid tight. A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of duct work to be tested. The lamp shall be open so as to emit light equally in all direction perpendicular to the duct work.~~

~~A test shall be performed for the entire duct system, including the hood to duct connection. The ductwork shall be permitted to be tested in sections, provided that every joint is tested.~~

**506.3.7.1 Grease diverter.** Where a centrifugal fan with horizontal discharge is located outside the building, such fan shall be provided with a duct or duct fitting connected to the fan outlet that diverts the discharge from the grease exhaust duct system in an upward direction. Such diverter duct or fitting shall comply with the following:

1. The duct or duct fitting shall be constructed of metal as set forth in Chapter 6.
2. The maximum total developed length of the duct or duct fitting measured along the centerline shall not exceed three times the vertical dimension of the fan outlet.
3. The duct or duct fitting shall be provided with openings at the lowest point to permit drainage of grease to an approved collection device.

**SECTION 507** is amended as follows:

~~**507.2.1.1 Operations.** Type I hood systems shall be designed and installed to automatically activate the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock with the cooking appliances, by means of heat sensors or by means of other approved methods.~~

**507.9 Clearances for Type I hood.** A Type I hood shall be installed with a clearance to combustibles of not less than 18 inches (457 mm). This clearance may be reduced to 3 inches (76 mm), provided the combustible material is protected with materials as specified for one-hour fire-resistive construction on the hood side. Hoods less than 12 inches (305 mm) from the ceiling or wall shall be flashed solidly with materials of the thickness specified in Section 507.4 or materials conforming to one-hour fire-resistive construction.

**Exception:** Clearance shall not be required from gypsum wallboard attached to noncombustible structures provided that a smooth, cleanable, nonabsorbent and non-combustible material is installed between the hood and the gypsum wallboard over an area extending not less than 18 inches (457 mm) in all directions from the hood.

**SECTION 509** is amended as follows:

**509.1 Where required.** Commercial food heat-processing appliances required by Section 507.2.1 to have a Type I hood shall be provided with an approved automatic fire suppression system complying with ~~the *International Building Code* and the *International Fire Code*.~~ Sections 509.2 through 509.5.

**509.2 Type of system.** The automatic fire suppression system shall be of a type recognized for protection of commercial cooking appliance and exhaust systems of the type and arrangement protected. Pre-engineered automatic dry- and wet-chemical fire suppression system shall be tested in accordance with UL 300. Automatic fire suppression systems, including pre-engineered and engineered dry- and wet-chemical fire-suppression systems, shall be listed and labeled for specific use as protection for commercial cooking operations and shall be installed in accordance with Section 304.1. Automatic fire suppression systems of the following types shall be installed in accordance with the referenced standard indicated:

1. Carbon-dioxide extinguishing system, NFPA 12.
2. Automatic sprinkler system, NFPA 13.
3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
4. Dry-chemical extinguishing systems, NFPA 17.
5. Wet-chemical extinguishing systems, NFPA 17A.

**509.3 System actuation.** Each automatic fire suppression system shall have both automatic and manual actuation means. A manual actuation device shall be located at or near a means of egress from the cooking area, a minimum of 10 feet (3048 mm) and a maximum of 20 feet (6096 mm) from the kitchen exhaust system. The manual actuation device shall be located a minimum of 4 feet 6 inches (1372 mm) and a maximum of 5 feet (1524 mm) above the floor. The manual actuation shall require a maximum force of 40 pounds (178 N) and a maximum movement of 14 inches (356 mm) to actuate the fire suppression system.

**Exception:** Automatic sprinkler systems shall not be required to be equipped with manual actuation means.

**509.4 System interconnection.** The actuation of the automatic fire suppression system shall automatically shut down the fuel or electrical power supply to the cooking appliances. The fuel and electrical power supply reset shall be manual.

**509.5 System test and inspection.** The automatic fire suppression system shall be acceptance-tested in accordance with the fire prevention code and installation standard listed in Section 509.3, and with the manufacturer's instructions.

**SECTION 514** is amended as follows:

**514.1 General.** Energy recovery ventilation systems shall be installed in accordance with this section. Where required for purposes of energy conservation, energy recovery ventilation systems shall also comply with the *International Energy Conservation Building Code*.