## EL SEGUNDO FIRE DEPARTMENT Fire Prevention Division

# Regulations E-2-a Standards for Wet Agent Chemical Extinguishing Systems for Commercial Cooking Operations

#### I. INTRODUCTION

- A. <u>Purpose:</u> The purpose of this regulation is to establish a consistent regulatory standard for wet agent chemical extinguishing systems for commercial cooking operations.
- B. <u>Scope:</u> These regulations apply to every building and other structure hereafter constructed and to those existing structures designated by the Fire Chief. Wet agent chemical extinguishing systems are required for commercial cooking operations that produce grease-laden vapors.
- C. <u>Authority:</u> El Segundo Municipal Code Sections 13-10-1 and 13-10-2, California Fire Code, Chapter 1, Division II, Section 102.9 and 104.1

#### II. RESPONSIBILITY

- A Individuals, Companies and Corporations that have commercial cooking equipment and operations shall be responsible for compliance with this regulation.
- B. The Fire Prevention Division of the El Segundo Fire Department shall approve all wet agent chemical extinguishing systems for commercial cooking operations.

#### II. POLICY

The California Fire Code, Section 904.2.1 requires that all commercial kitchen exhaust hood and system required to have a Type I hood shall be protected by an approved automatic fire extinguishing system.

All automatic fire extinguishing systems installed to protect commercial cooking operations system must meet requirements identified in California Code of Regulations, Title 19, Section 904 and California Fire Code Sections 904.3 through 904.5.

#### III. REQUIREMENTS

### I. Required plan information

Prior to installing, adding to, and/or altering any fire extinguishing system, hood, plenum and/or ducts used for commercial cooking, plans shall be submitted to the fire department for review and approval. Required plans shall provide information and/or drawings for the following:

#### 1. Contractor information

a. Provide installation company license information, name, address, telephone number

#### 2. Location

- a. Site plan identifying the building location in the city.
- b. Plot plan of the building, identifying the room where the commercial cooking operation is being conducted.
- c. Plot plan of the room, identifying the following:
  - (1) The location of the cooking equipment; identify the types of each equipment and size of each protected area.
  - (2) The separation between fryers and open-flame appliances.
  - (3) The hood and duct dimensions
  - (4) Fire extinguishing equipment
  - (5) Exit path from the room where the commercial cooking operation is being conducted.

#### 3. Fire extinguishing system

- a. Type and size of system to be installed with the manufacturer's specifications for installation and operation.
- b. Piping plans shall indicate pipe schedule, length, elbows, unions, etc. and configuration of the piping installation.
- c. The system nozzle data, including nozzle types used, the installation height above the protected equipment and manufacturer's model number.
- d. The fusible link locations and temperature.
- e. Configuration of means by which system is activated, automatic and manual. Show the location of the manual release station and the location of the electrical and gas shut down/trip devices.
- f. Identify on the plans that that all electrical fixtures, equipment and gas fueled equipment under the hood is to shut down upon fire extinguishing system activation.
- g. Identify on the plans if the building has a fire alarm system

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installed, that activation of the hood fire extinguishing system will cause an alarm activation of the building fire alarm system

- 3. Hood and/or Plenum, Ducting
  - a. Identify the hood and plenum sizes.
  - b. Where installed, identify the location of joints or bends.
  - c. A note that make-up air shall stay on unless required to be shut off by the hood fire extinguishing system manufacturer.

### II. Requirements and limitations

Approval and acceptance of the system is subject to compliance with the listed requirements, plan check approval, and approval by field inspection and necessary tests. Plans shall be submitted to the Fire Prevention Division through the El Segundo Department of Planning and Building Safety. Approval of plans and specifications shall not constitute a waiver or approval to violate any Code, Ordinance or requirement.

#### III. Installation

No installation shall differ from the approved plans without written Fire Department approval and the submission of as built plans. All hood and extinguishing systems shall meet the adopted California Fire Code and National Fire Protection Association Standard 17A.

#### IV. Acceptance tests

The completed system shall be tested by qualified personnel and witnessed by the El Segundo Fire Department, Fire Prevention Division personnel.

- 1. Approval tests shall include the following:
  - A discharge/function test of expellant gas using dry nitrogen only through the piping and nozzles by activation of manual pull station.
  - b. A second function test performed by cutting a test link at the terminal detector to simulate automatic activation.
  - c. Verify shut down of the natural gas fuel supply and shut down of all electrical fixtures and equipment under the hood area.
  - d. Make-up air shall stay on unless required to be shut off by the hood fire extinguishing system manufacturer.

#### V. Servicing

1. Extinguishing Systems

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a. Inspection and servicing of fire extinguishing systems shall be made by properly trained and qualified personnel possessing a license by the State Fire Marshal or a California State Contractors License Board C-16 License. Service shall be performed at least every six months and follow the manufacturer's requirements. A written record of the tests shall be maintained by the occupant.

## 2. Hood and Duct Systems

a. Hoods, grease removal devices, fans, ducts, and other appurtenances shall be cleaned at frequent intervals to prevent grease build up.

Any system modifications due to a change with the commercial cooking must be approved by the Fire Prevention Division. A final inspection and successful system test(s) are necessary before approval/acceptance of system operation can be issued.

Issue Date: May 13, 2014

Approved By: //James Carver

Fire Marshal