



# Clark County Fire Department

## FIRE PREVENTION BUREAU

4701 W. Russell Road • Las Vegas, NV 89118

**John Steinbeck, Fire Chief**

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## PERMIT GUIDE

### COMMERCIAL COOKING AUTOMATIC EXTINGUISHING SYSTEMS

### WET CHEMICAL

This guide is to assist in the permitting process for commercial cooking automatic extinguishing systems-wet chemical. A construction permit is required for the installation per section 105.7.1 of the IFC.

**Wet Chemical Systems are required per IFC Section 904.2.2/NFPA 96 Section 10.1.**

- For cooking equipment that produces grease-laden vapors having a Type I Hood.
- For associated fume incinerators, thermal recovery, pollution control units (PCU) and odor control units (OCU) connected to the exhaust duct.

**Note:**

- Appliances (such as barbeques and smokers) using solid fuel such as wood shall have a separate hood and duct system.
- All grease ducts that exceed 75 feet in length must be protected by an approved sprinkler system. Refer to Sprinkler per NFPA 13 Permit Guide for submittal information.
- Any modifications to an existing wet chemical system will require a new submittal. This includes adding additional coverage, modifying, or relocating appliances, changes in cooking media, or modifications to hood, plenum, or duct systems.
- Provide manufacturers listing documentation for smoker boxes that are UL listed for use without a separate hood and duct system.
- Systems installed in buildings with a fire alarm system shall be interconnected with the fire alarm system.
- Submittals of systems using electronic detection are to include details of the fire alarm interconnection.

**APPLICABLE CODES:**

The following codes and standard apply to this permit:

- *Standard for Ventilation and Fire Protection of Commercial Cooking Operations* NFPA 96, 2017 edition
- *Standard for Wet Chemical Extinguishing Systems*, NFPA 17A 2017 edition
- *International Fire Code*, (IFC) 2018 edition
- *Clark County Fire Code Amendments*, (CCFC) 2018 edition

**Link to CCFC:** See the amendments to codes and standards using the link below:

[https://cms8.revize.com/revize/clarknv/Building%20&%20Fire%20Prevention/Codes/ClarkCounty\\_FireCodeAmendments2018.pdf?t=1598331770575&t=1598331770575](https://cms8.revize.com/revize/clarknv/Building%20&%20Fire%20Prevention/Codes/ClarkCounty_FireCodeAmendments2018.pdf?t=1598331770575&t=1598331770575)

**SUBMITTAL REQUIREMENTS:**

**BOARD OF COUNTY COMMISSIONERS**

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**These submittal requirements are not all inclusive, nor are they a limit to the extent of the information, etc., which may be necessary to properly evaluate the submitted plans and documents. Not all items may apply to your project.**

**PLANS: To be designed to an indicated scaled or dimensioned and saved to a PDF file.**

- Plans shall include all information applicable to project per section 6.3 of NFPA 17A and section 904.12 of the IFC.
- Systems must be a pre-engineered wet chemical system tested in accordance to UL 300.
- State the specific design manual (Examples; Amerex, Ansul, Badger, Buckeye, Kidde, Pyro-Chem or Range Guard). Systems will be evaluated per their specific manuals. Fire Prevention may request a copy of the manual from the submitter. Data is always needed for PCU submittals.
- Provide support documentation from the suppression system manufacturer in cases when the equipment protected is not covered in a manual.
- Plans to be reviewed and signed by the contractor. Include the licensee's name, contractor's license number, Nevada State Fire Marshal number, and signature.
- Plans examiner may require additional manufacturer's specification sheets.

**PLAN CHECK LIST:**

**A. SYSTEM:**

- Provide the type of system- make and model.
- Provide the total number of nozzles and flow numbers per cylinder(s).
- Show the location and size(s) of all cylinder(s) and release mechanism(s). If electronic detection system is utilized and detectors come from Fire Alarm system a separate fire alarm permit is needed.
- Show plan and isometric views of the piping and detection lines. Ensure the dimensions of all piping including diameters, lengths, and fittings from the manifold tank(s) to nozzles are provided.
- Include nozzle model numbers, flow numbers, direction of discharge, angle, spacing away from the appliance, and the locations within the plenum or duct.

**B. HOOD:**

- Provide type of Filter Bank; Single or V-configuration.
- Include dimensions of hood, plenum and duct opening.

**C. APPLIANCES:**

- Provide the identification and dimensions for all appliances. Include the dimensions of drip boards and/or back-shelves when provided.
- Provide the dimensions and separation distances between appliances.
- If applicable; provide the arrangement of nozzles and fusible elements within PCU or OCU units.

**D. ACTIVATION:**

- Provide information on system interlock with fuel shut-offs, ventilation, door closer/shutters, openings and smoke and heat vents. Include the type of fuel shut-off device (gas or electrical) and provide location.
- Provide information on alarm and warning signs, and monitoring. If provided include location and connection to the fire alarm system. Include the type of alarm signal.

Permit Guide: Commercial Cooking Automatic Extinguishing Systems – Wet Chemical, (cont'd)

- Please Note: Hood systems installed in buildings with fire alarm systems shall be interfaced with the fire alarm system.
- The cooking exhaust fan is not required to be shut down upon activation.
- Provide the location for the manual pull station in relation to the path of egress from the kitchen. Include the distance and detail for installation. Refer to IFC 904.12.1.