



PREVENTION MANUAL

FIRE EXTINGUISHING SYSTEMS

405.22 CLEAN AGENT VENTILATION

EFFECTIVE: JANUARY 2009

SCOPE

Exhaust ventilation for clean agent fire extinguishing systems.

PURPOSE

The purpose of this policy is to clarify the Department's requirements regarding the provision of independent and dedicated exhaust ventilation for clean agent fire extinguishing systems.

BACKGROUND

National Fire Protection Association Standard 2001, states, "[That] Suitable safeguards shall be provided..." The appendix elaborates with items that may include, "Provision of means for prompt ventilation of such areas. Forced ventilation will often be necessary. Care should be taken to readily dissipate hazardous atmospheres and not merely move them to another location."

REQUIREMENTS

Although the above referenced appendix section recommends clean agent system be provided with a built-in ventilation system to evacuate discharged agent, the fire department has determined this is unnecessary as noted below.

1. The products of combustion (from a fire) are a far more serious threat to the health and safety of those exposed in both sprinklered and unsprinklered environments, than to those exposed to the products of decomposition of a properly designed and installed clean agent automatic extinguishing system.
2. Independent ventilation is not required for automatic fire sprinkler systems.
3. Clean agent automatic extinguishing systems are designed to produce "no observable adverse effects levels" (NOAEL) to humans at concentrations necessary to extinguish a fire.

4. Clean agent extinguishing system discharges are relatively rare.
5. Clean agent automatic extinguishing systems are required to be provided with an alarm to warn of both pre-discharge and discharge conditions. All personnel should have been evacuated prior to discharge.
6. All firefighting personnel who may enter any area where a clean agent automatic extinguishing system may have been discharged are required to use SCBAs or other approved PPE.
7. The fire department will not permit a building to be re-occupied after a clean agent extinguishing system has discharged until it is safe to do so.
8. The California Building Code -Certificate of Occupancy is based on the building having the amount of openings required to provide adequate ventilation and access. These resources will be used following a fire and/or discharge of system(s).
9. Fire department engine companies are equipped with ventilation fans for use in dissipating products of combustion or accidental discharge of gases.

The Fire Marshal (or designee) may require additional ventilation when deemed necessary.