

# SANTA ROSA FIRE DEPARTMENT

## FIRE PREVENTION BUREAU

### PLAN REVIEW CHECKLIST

July 1, 2010



## CLEAN AGENT FIRE EXTINGUISHING SYSTEM NFPA 2001

Address:		Permit #:
Inspector:	Date:	Status:
Inspector:	Date:	Status:
<b>A-Approved; AC-Approved w/comments; I-Incomplete; D-Denied</b>		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

### FILE REVIEW

- FEES – Permit fees entered in Permits Plus. 3<sup>rd</sup> or greater checks require an hourly fee for the review.
- Equipment is listed for intended use and compatible with the system, specification data sheets and CA State Fire Marshal listing are required.

### Permit Information

Clean Agent Fire Extinguishing Systems shall be designed and installed in accordance with NFPA 2001, 2008 Edition.

Working plans shall be submitted for approval to the Santa Rosa Fire Department before any equipment is installed. A completed Permit and Plan Review Application Form and fees shall be submitted along with not less than three (3) sets of plans and calculations as required. A Santa Rosa Tax Certificate, current appropriate contractor's license and proof of worker's compensation insurance shall be provided or shall be on file at the time of application.

Any deviation from plans as submitted during the installation requires Fire Department approval. Plans shall include the information specified below and failure to provide all of the required information may result in the plans being rejected. Rejected plans will be returned with a Plan Review Correction Form. Review the form and make the required additions/changes which shall be clouded for identification. Provide a legend to describe the addition or change. Allow ten (10) working days for review of submitted plans.

Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor and shall show the following data: (NFPA 2001 Ch. 5 – 5.1.2.1)

<b>Y</b>	<b>N</b>	<b>General</b>
----------	----------	----------------

- |    |                          |                          |  |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Name of owner and occupant.  |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Location, including street address.                                    |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Point of compass and symbol legend.                                    |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Location and construction of protected enclosure walls and partitions. |

Plan Review Checklist  
Clean Agent Suppression System

- | Y   | N                        | General                  |  |
|-----|--------------------------|--------------------------|--|
| 5.  | <input type="checkbox"/> | <input type="checkbox"/> | Location of fire walls.  |
| 6.  | <input type="checkbox"/> | <input type="checkbox"/> | Enclosure cross section, full height of schematic diagram, including location and construction of building floor/ceiling assemblies above and below, raised access floor and suspended ceiling.  |
| 7.  | <input type="checkbox"/> | <input type="checkbox"/> | Agent being used.  |
| 8.  | <input type="checkbox"/> | <input type="checkbox"/> | Design extinguishing or inerting concentrations.   |
| 9.  | <input type="checkbox"/> | <input type="checkbox"/> | Description of occupancies and hazard being protected, designating whether or not the enclosure is normally occupied.  |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | For an enclosure protected by a clean agent fire extinguishing system an estimate of the maximum positive and negative pressure, relative to ambient pressure, expected to be developed upon the discharge of agent.   |
| 11. | <input type="checkbox"/> | <input type="checkbox"/> | Description of exposures surrounding the enclosure.  |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | Description of the agent storage containers used including internal volume, storage pressure, and volume at standard conditions of temperature and pressure.   |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | Description of nozzles used including size, orifice port configuration and equivalent orifice area.  |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | Description of pipe and fittings used including material specifications, grade and pressure rating.  |
| 15. | <input type="checkbox"/> | <input type="checkbox"/> | Description of wire or cable used including classification, gauge, shielding, number of strands in conductor, conductor material, and color coding schedule. Segregation requirements of various system conductors shall be clearly indicated. The required method of making wire termination shall be detailed.   |
| 16. | <input type="checkbox"/> | <input type="checkbox"/> | Description of the method of detector mounting.  |
| 17. | <input type="checkbox"/> | <input type="checkbox"/> | Equipment schedule or bill of materials for each piece of equipment or device showing name, manufacture, model or part number, quantity and description.   |
| 18. | <input type="checkbox"/> | <input type="checkbox"/> | Plan view of protected area showing enclosure partitions (full and partial height); agent distribution system including agent storage containers, piping and nozzles; type of pipe hangers and rigid pipe supports; detection, alarm, and control system including all devices and schematic of wiring interconnection between them; end of line device locations; location of controlled devices such as dampers and shutters; and instructional signage. |
| 19. | <input type="checkbox"/> | <input type="checkbox"/> | Isometric view of agent distribution system showing the length and diameter of each pipe segment; node reference numbers relating to the flow calculations; fittings including reducers and strainers; and orientation of tees, nozzles including size, orifice port configuration, flow rate and equivalent orifice area.   |
| 20. | <input type="checkbox"/> | <input type="checkbox"/> | Scale drawing showing the layout of the annunciator panel graphics.  |
| 21. | <input type="checkbox"/> | <input type="checkbox"/> | Detail of each unique rigid pipe support configuration showing method of securement to the pipe and the building structure.  |
| 22. | <input type="checkbox"/> | <input type="checkbox"/> | Detail of the method of container securement showing method of securement to the container and the building structure.   |
| 23. | <input type="checkbox"/> | <input type="checkbox"/> | Complete step-by-step description of the system sequence of operations, including functioning of abort and maintenance switches, delay timers, and emergency power shut down.  |

Plan Review Checklist  
Clean Agent Suppression System

- | <b>Y</b>                     | <b>N</b>                 | <b>General</b>  |
|------------------------------|--------------------------|---|
| 24. <input type="checkbox"/> | <input type="checkbox"/> | Point-to-point wiring schematic diagrams showing all circuit connections to external or add-on relays.  |
| 25. <input type="checkbox"/> | <input type="checkbox"/> | Complete calculations to determine enclosure volume, quantity of clean agent, and size of backup batteries and method used to determine number and location of audible and visual indicating devices, and number and location of detectors.     |
| 26. <input type="checkbox"/> | <input type="checkbox"/> | Warning and instruction signs shall be noted on the plans, located at entrances to and inside of protected areas. The safety sign format, color and the letter style of the signal words shall be in accordance with ANSI Z535. (4.3.5.5.2)     |
| 27. <input type="checkbox"/> | <input type="checkbox"/> | Details of any special features.  |
| 28. <input type="checkbox"/> | <input type="checkbox"/> | Pressure relief vent area, or equivalent leakage area, for the protected enclosure to prevent development, during system discharge, of a pressure difference across the enclosure boundaries that exceeds a specified enclosure pressure limit. |