## Automatic Sprinkler Systems

# Contractor's Material and Test Certificate for Aboveground Piping

### PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

**Property Name:** _____ **Date:** _____

**Property Address:** _____

| | | | |
|---|---|---|---|
| **Plans** | Accepted by approving authorities (names) _____ | | |
| | Address _____ | | |
| | Installation conforms to accepted plans | ☐ Yes | ☐ No |
| | Equipment used is approved. If no, explain deviations _____ | ☐ Yes | ☐ No |
| **Instructions** | Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? | ☐ Yes | ☐ No |
| | If no, explain _____ | | |
| | Have copies of the following been left on the premises? | ☐ Yes | ☐ No |
| | 1. System components instructions | ☐ Yes | ☐ No |
| | 2. Care and maintenance instructions | ☐ Yes | ☐ No |
| | 3. NFPA 25 | ☐ Yes | ☐ No |
| **Location of system** | Supplies buildings _____ | | |

**Sprinklers**

| Make | Model | Year of manufacture | Orifice size | Quantity | Temperature rating |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | |
|---|---|
| **Pipe and fittings** | Type of pipe _____ |
| | Type of fittings |

**Alarm valve or flow indicator**

| Alarm device | | | Maximum time to operate through test connection | |
|---|---|---|---|---|
| **Type** | **Make** | **Model** | **Minutes** | **Seconds** |
| | | | | |
| | | | | |

**Dry pipe operating test**

| Dry valve | | | Q.O.D | | |
|---|---|---|---|---|---|
| **Make** | **Model** | **Serial No.** | **Make** | **Model** | **Serial No.** |
| | | | | | |

| | Time to trip through test connection[1,2] | | Water pressure | Air pressure | Trip point air pressure | Time water reached test outlet[1,2] | | Alarm operated properly | |
|---|---|---|---|---|---|---|---|---|---|
| | **Minutes** | **Seconds** | **psi** | **psi** | **psi** | **min.** | **sec.** | **Yes** | **No** |
| Without Q.O.D | | | | | | | | ☐ | ☐ |
| With Q.O.D | | | | | | | | ☐ | ☐ |

If no explain: _____

**Deluge and preaction valves**

Operation ☐ Pneumatic ☐ Electric ☐ Hydraulic

Piping supervised ☐ Yes ☐ No Detecting media supervised ☐ Yes ☐ No

Does valve operate from the manual trip, remote, or both control ☐ Yes ☐ No

Is there an accessible facility in each circuit for testing? ☐ Yes ☐ No

If no, explain _____

Make _____ Model _____

Does each circuit operate supervision loss alarm? ☐ Yes ☐ No

Does each circuit operate valve release? ☐ Yes ☐ No

Maximum time to operate release _____ Minutes _____ Seconds

**Pressure reducing valve test**

Location and floor _____

Make and model _____

Setting _____

| | Static pressure | | Residual pressure (flowing) | | Flow rate |
|---|---|---|---|---|---|
| | Inlet (psi) | Outlet (psi) | Inlet (psi) | Outlet (psi) | Flow (gpm) |
| | | | | | |

**Test description**

Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.6 bar) for 2 hours or 50 psi (3.4 bar) above static pressure excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.

Pneumatic: Establish 40 psi (2.7 bar) air pressure and measure drop, which shall not exceed 1½ psi (0.1 bar) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1½ psi (0.1 bar) in 24 hours.

[1] Measured from time inspector's test connection is opened
[2] NFPA 13 only requires the 60-second limitation in specific sections

| | |
|---|---|
| **Tests** | All piping hydrostatically tested at ( _____ bar) for _____ hours<br>If no, state reason _____<br>Dry piping pneumatically ☐ Yes ☐ No<br>Equipment operates ☐ Yes ☐ No |
| | Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? ☐ Yes ☐ No |
| | Drain test: Reading of cutoff gauge located near water supply test connection: _____ psi ( _____ bar)<br>Residual pressure with valve in test connection open wide: _____ psi ( _____ bar)<br>Underground mains and lead-in connections to system risers flushed before connection made to sprinkler piping<br>Verified by copy of the Contractor's Material and Test Certificate for Underground Piping ☐ Yes ☐ No ☐ Other<br>Explain:<br>Flushed by installer of underground sprinkler piping ☐ Yes ☐ No<br>If powder-driven fasteners are used in concrete, has representative sample testing been satisfactorily completed? ☐ Yes ☐ No<br>If no, explain _____ |

| **Blank testing gaskets** | Number used | Locations | Number removed |
|---|---|---|---|
| | | | |

| | |
|---|---|
| **Welding** | Welding piping ☐ Yes ☐ No<br>If yes . . . |
| | Do you certify as the sprinkler contractor that welding procedures used complied with the minimum requirements of AWS B2.1, ASME Section IX *Welding and Brazing Qualifications*, or other applicable qualification standard as required by the AHJ? ☐ Yes ☐ No |
| | Do you certify that the welding was performed by welders or welding operators qualified in accordance with the minimum requirements of AWS B2.1, ASME section IX *Welding and Brazing Qualifications*, or other applicable qualification standard as required by the AHJ? ☐ Yes ☐ No |
| | Do you certify that the welding was conducted in compliance with a documented quality control procedure to ensure that (1) all discs are retrieved; (2) that openings in piping are smooth, that slag and other welding residue are removed; (3) the internal diameters of piping are not penetrated; (4) completed welds are free from cracks, incomplete fusion, surface porosity greater than $^{1}/_{16}$ in. diameter, undercut deeper than the lesser of 25% of the wall thickness or $^{1}/_{32}$ in.; and (5) completed circumferential butt weld reinforcement does not exceed $^{3}/_{32}$ in.? ☐ Yes ☐ No |
| **Cutouts (discs)** | Do you certify that you have a control feature to ensure that all cutouts (discs) are retrieved? ☐ Yes ☐ No |
| **Hydraulic data nameplate** | Nameplate provided ☐ Yes ☐ No<br>If no, explain |
| **Remarks** | Date left in service with all control valves open _____ |

**Form 4**

| | | | |
|---|---|---|---|
| **Signatures** | Name of sprinkler contractor _____ | | |
| | **Tests witnessed by** | | |
| | The property owner or their authorized agent (signed) | Title | Date |
| | For sprinkler contractor (signed) | Title | Date |

**Additional explanations and notes:**