



NATIONAL FIRE PROTECTION ASSOCIATION

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NFPA® 25 eForms

Overview: Any form, whether produced commercially or developed independently, can be used to document inspection, testing, and maintenance activities, provided it details the activity sufficiently to verify compliance with NFPA 25. Many people assume that NFPA 25 requires a specific series of forms to be filled out; however, in reviewing the standard, it is completely devoid of forms. This absence of forms in the standard is not intended to lessen the importance of recording ITM data, but rather it allows the owners and inspectors the flexibility to use their own project management programs, software, and ITM forms to track their ITM work. This handbook contains several examples of sample forms that can be used for recording system information or documenting completed ITM tasks.

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Using NFPA eForms

The NFPA eForms are PDF versions of frequently used forms from an NFPA standard or handbook. These forms are intended for use on computers and mobile devices and allow the user to fill in the form fields electronically and then save, email, print, or even text message.

Features of the forms include:

- Spell check
- An assortment of PDF tools, including highlighting, commenting, and signing electronically
- Easy file sharing or printing
- **button** that contains additional overview information about each form

The forms can be used with any PDF reader application for computer or mobile device; however, some functionality may be limited depending on the application used.

All available forms for a particular standard or handbook are compiled into one PDF. An active Internet connection is not needed to fill in and save the forms once they are stored on your device.

To Use:

1. Open the forms in your preferred PDF reader.
2. Select the field in which you would like to enter content by clicking on it with your mouse cursor. For touch screens and mobile devices, use your finger or a stylus to select.
3. Type in the desired content. For date fields, use the format mm/dd/yyyy. On some devices, date fields will have a scroll bar from which value can be selected. As long as spell check is enabled on your device, as you type your device will bring any misspellings to your attention.
4. Use the *tab* button to go to the next field or use the mouse cursor to select the field. Use the *shift + tab* buttons or the mouse to go back to the previous field. On a mobile device, there will be *next* and *previous* buttons on the keyboard that you may also use. You do not need to enter content in every field.
5. To delete content from a field either use the backspace button on your keyboard or use the reset button that some of the applications include.
6. You may add a logo to the forms. Recommended placement is on the top right of the form (a placeholder is shown). Insert the logo into this PDF by copying the logo from another application (Word, Paint, Photoshop, etc.) and then choosing paste on the placeholder. The logo then can be resized and repositioned with the mouse.
7. Once completed, you can save, email, print, or text message the form using your device settings.

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WET PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Property Name:

Inspector:

Property Address:

Contract No.:

Property Phone Number:

Date:

Inspection Frequency:	Daily	Weekly	Monthly	Quarterly	Annually	Five Years
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Inspections: Daily

Valve (Cold Weather/Heating Season Only)

Yes	No	N/A	Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)
-----	----	-----	--

Inspections: Weekly

Backflow

Yes	No	N/A	Isolation valves are in open position and locked or supervised
Yes	No	N/A	RPA and RPDA — differential-sensing relief valve operating correctly

Master Pressure-Regulating Device

Yes	No	N/A	Downstream pressures are in accordance with design criteria	psi
Yes	No	N/A	Supply pressure is in accordance with design criteria	psi
Yes	No	N/A	Free of damage or leaks	
Yes	No	N/A	Trim in good operating condition	

Control Valves

Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Sealed
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage

Inspections: Monthly

Yes	No	N/A	Gauges are in good operating condition
Yes	No	N/A	Gauges — normal unsupervised air and nitrogen pressure maintained
			psi

Control Valves (Locked or Supervised)

Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Locked or supervised
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Accessible
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage

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WET PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Quarterly

Alarm Valves/Riser Check

Yes	No	N/A	Gauges — normal water pressure maintained
Yes	No	N/A	Free of damage
Yes	No	N/A	In appropriate open or closed position
Yes	No	N/A	Retard chamber/alarm drains not leaking

Control Valves (Electronically Supervised)

Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Electronically supervised
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage

Fire Department Connections

Yes	No	N/A	Visible and accessible
Yes	No	N/A	Coupling/swivels operate correctly
Yes	No	N/A	Plugs/caps are in place
Yes	No	N/A	Gaskets are not damaged
Yes	No	N/A	Automatic Drain Valve in place and operating properly
Yes	No	N/A	Identification signs are in place
Yes	No	N/A	Interior is clear of obstructions (unless locked)
Yes	No	N/A	Clapper(s) operates correctly
Yes	No	N/A	Check valve is not leaking
Yes	No	N/A	Visible piping supplying the fire department connection is undamaged

Pressure-Reducing Valve

Yes	No	N/A	In the open position and not leaking
Yes	No	N/A	Maintaining downstream pressure
Yes	No	N/A	In good condition, with hand wheel installed and unbroken

Inspections: Annual

Hydraulic design information sign is securely attached to riser and legible

WET PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			Sprinklers (visible)
Yes	No	N/A	No damage or leaks
Yes	No	N/A	Free of corrosion, foreign material, or paint
Yes	No	N/A	Installed in proper orientation
Yes	No	N/A	Fluid in glass bulbs
Yes	No	N/A	Spare sprinklers — proper number and type, including installation wrench
Yes	No	N/A	No paint or coating other than that applied by the manufacturer
Yes	No	N/A	Loading — sprinklers are free of dust
Yes	No	N/A	Escutcheons/cover plates are present and installed correctly
Yes	No	N/A	Minimum clearance between sprinklers and storage
			Hangers/Seismic Bracing
Yes	No	N/A	Not damaged or loose
			Pipes and Fittings (visible)
Yes	No	N/A	In good condition and no external corrosion
Yes	No	N/A	No leaks or mechanical damage
Yes	No	N/A	Correct alignment — no external loads
Yes	No	N/A	Heat trace per manufacturer's requirements
			Building
Yes	No	N/A	Wet piping not exposed to freezing temperatures
			Fire Department Connections
Yes	No	N/A	Interior of connection with locked plugs or caps is free of obstructions
Inspections: Five Years			
Yes	No	N/A	Alarm valve interior including strainers, filters, and restriction orifice
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Obstruction inspection — no foreign or obstructing material found
Yes	No	N/A	Backflow — internal inspection
Test: Quarterly			
Yes	No	N/A	Alarm devices — water motor gong
Yes	No	N/A	Main drain test — if the sole supply is through a backflow preventer or pressure-reducing valve
			Static psi Residual psi
Yes	No	N/A	Do main drain test results differ more than 10% from previous test?
			Master Pressure-Regulating Device
Yes	No	N/A	Partial flow test performed to exercise valve
Test: Semiannual			
Yes	No	N/A	Alarm device (vane, paddle, and pressure switch type) — inspector's test or bypass opened and observed flow
Yes	No	N/A	Valve supervisory switch(es) function

WET PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual

Yes	No	N/A	All control valves operated through full range of motion and returned to normal position
Yes	No	N/A	Backflow — forward flow test at a minimum flow rate of the system demand
Yes	No	N/A	Valve status test performed
Yes	No	N/A	Antifreeze solution has been tested
Yes	No	N/A	Sprinkler pressure-reducing valve — partial flow test
Yes	No	N/A	Supervisory switch(es) function

Main Drain Test

Yes No N/A Static psi Residual psi
Do main drain test results differ more than 10% from previous test?

Master Pressure-Regulating Device

Full flow test compared to previous test results

Test: Five Years

Yes	No	N/A	Gauges tested or replaced
Yes	No	N/A	Sprinkler pressure-reducing valve — full flow test compared to previous test results

Fire Department Connections

Yes No N/A Piping from fire department connection to fire department connection check valve has been hydrostatically tested at 150 psi (10 bar) for at least 2 hours

Routine Maintenance

Yes No N/A Sprinklers tested or replaced per appropriate testing schedule
Yes No N/A OS&Y — stems lubricated annually

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

WET PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers a 6-month period.

Year:

System:

Location:

General

1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.
 2. Gauges for dry, preaction, and deluge systems must be inspected for normal air and water pressures.
 - 3–6. Record pressure readings in psi (bar). A loss of more than 10% should be investigated.
 7. Record any notes about the system that the inspector believes to be significant. Place a number in the box and corresponding note in space provided below.

Notes:



DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Property Name:	Inspector:					
Property Address:	Contract No.:					
Property Phone Number:	Date:					
Inspection Frequency:	Daily	Weekly	Monthly	Quarterly	Annual	Five-Year
Inspections: Daily		Dry Pipe Valve (Cold Weather/Heating Season Only)				
Yes	No	N/A	Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)			
Inspections: Weekly		Backflow				
Yes	No	N/A	Isolation valves — open position and locked or supervised			
Yes	No	N/A	RPA and RPDA — differential-sensing relief valve operating correctly			
		Control Valves				
Yes	No	N/A	In the correct (open or closed) position			
Yes	No	N/A	Sealed			
Yes	No	N/A	Accessible			
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches			
Yes	No	N/A	Free from damage or leaks			
Yes	No	N/A	Proper Signage			
		Dry Pipe Valve				
Yes	No	N/A	Enclosure, where equipped with low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)			
		Master Pressure-Regulating Device				
Yes	No	N/A	Downstream pressures are in accordance with design criteria psi			
Yes	No	N/A	Supply pressure is in accordance with design criteria psi			
Yes	No	N/A	Free of damage or leaks			
Yes	No	N/A	Trim in good operating condition			
Inspections: Monthly						
Yes	No	N/A	Gauges are in good operating condition			
Yes	No	N/A	Gauge on system side of dry valve reads proper ratio of air or nitrogen (when not supervised) psi			
Yes	No	N/A	Gauge on quick-opening device reads the same as system side dry valve gauge (when not supervised) psi			
		Control Valves (Locked or Supervised)				
Yes	No	N/A	In the correct (open or closed) position			
Yes	No	N/A	Locked or supervised			
Yes	No	N/A	Accessible			
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches			
Yes	No	N/A	Free from damage or leaks			
Yes	No	N/A	Proper signage			

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DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Monthly

Dry Pipe Valves

Yes	No	N/A	Exterior is free of damage
Yes	No	N/A	Trim valves are in correct (open or closed) position
Yes	No	N/A	Intermediate chamber is not leaking

Inspections: Quarterly

Yes	No	N/A	Waterflow alarm and supervisory devices are free of damage
Yes	No	N/A	Gauge on supply side of dry valve reads normal psi
Yes	No	N/A	Gauge on system side of dry valve reads proper ratio of air or nitrogen when supervised at a constantly attended location psi
Yes	No	N/A	Gauge on quick-opening device reads the same as system side dry valve gauge when supervised at a constantly attended location psi

Fire Department Connections

Yes	No	N/A	Visible and accessible
Yes	No	N/A	Coupling/swivels operate correctly
Yes	No	N/A	Plugs/caps are in place
Yes	No	N/A	Gaskets are not damaged
Yes	No	N/A	Identification signs are in place
Yes	No	N/A	Automatic drain valve in place and operational
Yes	No	N/A	Clapper operates correctly
Yes	No	N/A	Interior is clear of obstructions (unless locked)
Yes	No	N/A	Check valve is not leaking
Yes	No	N/A	Visible piping supplying the fire department connection is undamaged

Pressure-Reducing Valve

Yes	No	N/A	In the open position and not leaking
Yes	No	N/A	Maintaining downstream pressure
Yes	No	N/A	In good condition, with handwheel installed and unbroken

Control Valves (Electronically Supervised)

Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Electronically supervised
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage



DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual

Yes	No	N/A	Hydraulic design information sign is securely attached to riser and legible
Sprinklers (visible)			
Yes	No	N/A	No damage or leaks
Yes	No	N/A	Free of corrosion, foreign material, or paint
Yes	No	N/A	Installed in proper orientation
Yes	No	N/A	Fluid in glass bulbs
Yes	No	N/A	Spare sprinklers — proper number and type, including installation wrench
Yes	No	N/A	No paint or coating other than that applied by the manufacturer
Yes	No	N/A	Loading — sprinklers are free of dust
Yes	No	N/A	Escutcheons/cover plates are present and installed correctly
Yes	No	N/A	Minimum clearance between sprinklers and storage
Hangers/Seismic Bracing			
Yes	No	N/A	Not damaged or loose
Pipes and Fittings			
Yes	No	N/A	In good condition and no external corrosion
Yes	No	N/A	No leaks or mechanical damage
Yes	No	N/A	Correct alignment and no external loads
Fire Department Connections			
Yes	No	N/A	Interior of connection with locked plugs or caps is free of obstructions
Dry Pipe Valve			
Yes	No	N/A	Interior inspection following trip test
Building			
Yes	No	N/A	Prior to onset of freezing weather, all openings are closed, and water-filled pipe is not exposed to freezing temperatures
Yes	No	N/A	Heat trace per manufacturer's instructions
Yes	No	N/A	Low temperature alarm is free of physical damage

Inspections: Five Year

Yes	No	N/A	Obstruction inspection — no foreign or obstructing material is found
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Internal inspection of dry pipe valve strainers, filters, and orifices
Yes	No	N/A	Internal inspection of backflow

Test: Quarterly

Yes	No	N/A	Alarm devices — water motor gong
Yes	No	N/A	Main drain test — if the sole supply is through a backflow preventer or pressure-reducing valve
Static psi			Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?
Yes	No	N/A	Priming water — test level
Yes	No	N/A	Quick-opening device tested

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DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Quarterly			Master Pressure-Regulating Device						
Yes	No	N/A	Partial flow test performed to exercise valve						
Test: Semiannual									
Yes	No	N/A	Valve supervisory switch(es) function						
Yes	No	N/A	Alarm devices — inspector's test or bypass opened and observed waterflow						
Test: Annual									
Yes	No	N/A	Supervisory switch functions						
Yes	No	N/A	Low temperature alarm (if installed) at the beginning of heating season						
Yes	No	N/A	Low air alarm — test per manufacturer's instructions						
Yes	No	N/A	Automatic air pressure maintenance device						
Yes	No	N/A	All control valves operated through full range of motion and returned to normal position						
Yes	No	N/A	Backflow preventer — forward flow test at a minimum flow rate of the system demand						
Yes	No	N/A	Valve status test performed						
Yes	No	N/A	Pressure reducing valve partial flow test						
Main Drain Test									
			Static psi	Residual psi					
Yes	No	N/A	Do results differ by more than 10% from previous test?						
Dry Pipe Valve Trip Test (Partial Flow)									
			Water pressure	(psi)	Air pressure	(psi)			
			Tripping air pressure	(psi)	Trip time	(sec)			
Yes	No	N/A	Results comparable to previous tests						
Master Pressure-Regulating Device									
Yes	No	N/A	Full flow test performed and compared to previous test results						
Test: Three Years									
Dry Pipe Valve Trip Test (Full Flow)									
			Water pressure	(psi)	Air pressure	(psi)			
			Tripping air pressure	(psi)	Trip time	(sec)			
			Water delivery time	(min.)					
Yes	No	N/A	Results comparable to previous years						
Yes	No	N/A	Dry pipe system tested for leakage						
Test: Five Years									
Yes	No	N/A	Gauges tested or replaced						
Yes	No	N/A	Sprinkler pressure-reducing valve — flow test performed and compared to previous results						
Fire Department Connections									
Yes	No	N/A	Piping from fire department connection to fire department connection check valve has been hydrostatically tested at 150 psi (10 bar) for at least 2 hours						

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DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Routine Maintenance

Yes	No	N/A	Sprinklers tested or replaced per appropriate testing schedule
Yes	No	N/A	OS&Y — stems lubricated annually
Yes	No	N/A	Operate all auxiliary drains after operation and before freezing conditions

Comments:

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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DRY PIPE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers a 6-month period.

Year:

System:

Location:

General

1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.
 2. Gauges for dry, preaction, and deluge systems must be inspected for normal air and water pressures.
 - 3-6. Record pressure readings in psi (bar). A loss of more than 10% should be investigated.
 7. Record any notes about the system that the inspector believes to be significant. Place a number in the box and corresponding note in space provided below.

Notes:

PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

**PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING,
AND MAINTENANCE (Continued)**

Inspections: Quarterly			Control Valves (Electronically Supervised)
Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Electronically supervised
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage
Inspections: Annual			
Yes	No	N/A	Hydraulic design information sign is securely attached to riser and legible
Sprinklers (visible)			
Yes	No	N/A	No damage or leaks
Yes	No	N/A	Free of corrosion, foreign material, or paint
Yes	No	N/A	Installed in proper orientation
Yes	No	N/A	Fluid in glass bulbs
Yes	No	N/A	Spare sprinklers — proper number and type, including installation wrench
Yes	No	N/A	Loading — sprinklers are free of dust
Yes	No	N/A	No paint or coating other than that applied by the manufacturer
Yes	No	N/A	Escutcheons/cover plates are present and installed correctly
Yes	No	N/A	Minimum clearance between sprinklers and storage
Hangers/Seismic Bracing			
Yes	No	N/A	Not damaged or loose
Pipes and Fittings			
Yes	No	N/A	In good condition and no external corrosion
Yes	No	N/A	No leaks or mechanical damage
Yes	No	N/A	Correct alignment and no external loads
Fire Department Connections			
Yes	No	N/A	Interior of connection with locked plugs or caps is free of obstructions
Preaction/Deluge Valve			
Yes	No	N/A	Interior inspection following trip test
Yes	No	N/A	Detection device condition inspection
Building			
Yes	No	N/A	Prior to onset of freezing weather, all openings are closed and water-filled pipe is not exposed to freezing temperatures
Yes	No	N/A	Heat trace is per manufacturer's instructions
Yes	No	N/A	Low temp alarm is free of physical damage



PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Five Years

Yes	No	N/A	Obstruction inspection — no foreign or obstructing material is found
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Internal inspection of preaction/deluge valve strainers, filters, restricted orifices, and diaphragm chambers
Yes	No	N/A	Internal inspection of valves that can be reset without removal of faceplate
Yes	No	N/A	Internal inspection of backflow

Test: Quarterly

Yes	No	N/A	Alarm devices — water motor gong
Yes	No	N/A	Detection system low air pressure supervisory device
Yes	No	N/A	Main drain test, if the sole supply is through a backflow preventer or pressure-reducing valve
		Static psi	Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?
Yes	No	N/A	Priming water — test level
Yes	No	N/A	Low air alarm — test per manufacturer's instructions
		Master Pressure-Regulating Device	
Yes	No	N/A	Partial flow test performed to exercise valve

Test: Semiannual

Yes	No	N/A	Valve supervisory switch(es) function
Yes	No	N/A	Alarm devices — inspector's test or bypass opened and observed waterflow

Test: Annual

Yes	No	N/A	Valve supervisory switch(es) function
Yes	No	N/A	Low temperature alarm (if installed) at the beginning of heating season
Yes	No	N/A	All control valves operated through full range of motion and returned to normal position
Yes	No	N/A	Pressure reducing valve partial flow test
Yes	No	N/A	Automatic air maintenance device functional
Yes	No	N/A	Valve status test performed
Yes	No	N/A	Backflow preventer — forward flow test at a minimum flow rate of the system demand
		Main Drain Test	
		Static psi	Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?



PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual			Full Flow Trip Test (Deluge Valve)			
Yes	No	N/A	Unobstructed discharge from all nozzles			
			Pressure reading at deluge valve	psi		
Yes	No	N/A	Compare if pressure readings to hydraulic design/water supply meets requirements			
Yes	No	N/A	Manual release functions correctly			
Yes	No	N/A	Valve status test performed			
Yes	No	N/A	Pressure reading at most remote nozzle or sprinkler	psi		
Yes	No	N/A	Air maintenance device functions correctly (if provided)			
Preaction Partial Flow Trip Test						
Yes	No	N/A	Preaction valve — trip test with partially open control valve			
			Water pressure	(psi)	Air pressure	(psi)
			Tripping air pressure	(psi)	Trip time	(sec)
			Water delivery time	(min.)		
Yes	No	N/A	Results compared to previous results			
Test: Three Year			Preaction Full Flow Trip Test			
			Preaction valve — trip test with open control valve			
			Water pressure	(psi)	Air pressure	(psi)
			Tripping air pressure	(psi)	Trip time	(sec)
			Water delivery time	(min.)		
Yes	No	N/A	Results compared to previous results			
Yes	No	N/A	Preaction system tested for air leakage			
Test: Five Years						
Yes	No	N/A	Gauges tested or replaced			
Yes	No	N/A	Sprinkler pressure-reducing valve — flow test and comparable to previous results			
Fire Department Connections						
Yes	No	N/A	Piping from fire department connection to fire department connection check valve has been hydrostatically tested at 150 psi (10 bar) for at least 2 hours			
Routine Maintenance						
Yes	No	N/A	Sprinklers/pilot sprinklers tested or replaced per appropriate testing schedule			
Yes	No	N/A	OS&Y — stems lubricated annually			
Yes	No	N/A	Leaks causing drops in supervisory air pressure or electrical malfunctions causing alarms fixed			
Yes	No	N/A	Interior of valve cleaned after trip test and internal inspection			
Yes	No	N/A	Operate axillary drains after system operation and before freezing conditions			



PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers a 6-month period.

Year: **System:**

Location:

General

1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.
 2. Gauges for dry, preaction, and deluge systems must be inspected for normal air and water pressures.
 - 3–6. Record pressure readings in psi (bar). A loss of more than 10% should be investigated.
 7. Record any notes about the system that the inspector believes to be significant. Place a number in the box and corresponding note in space provided below.

Notes:



STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Name of Property:

Inspector:

Address:

Contract No.:

Property Phone Number:

Date:

Inspection Frequency:	Daily	Weekly	Monthly	Quarterly	Annual
	Five-Year				

Inspections: Daily

Dry/Deluge Valve (Cold Weather/Heating Season Only)

Yes	No	N/A	Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)
-----	----	-----	--

Inspection: Weekly

Backflow

Yes	No	N/A	Isolation valves — open position and locked or supervised
-----	----	-----	---

Yes	No	N/A	RPA and RPDA — differential-sensing relief valve operating correctly
-----	----	-----	--

Control Valves

Yes	No	N/A	In the correct (open or closed) position
-----	----	-----	--

Yes	No	N/A	Sealed
-----	----	-----	--------

Yes	No	N/A	Accessible
-----	----	-----	------------

Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
-----	----	-----	---

Yes	No	N/A	Free from damage or leaks
-----	----	-----	---------------------------

Yes	No	N/A	Proper signage
-----	----	-----	----------------

Dry/Deluge Valve

Yes	No	N/A	Enclosure, where equipped with low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)
-----	----	-----	--

Master Pressure-Regulating Device

Yes	No	N/A	Downstream pressures are in accordance with design criteria	psi
-----	----	-----	---	-----

Yes	No	N/A	Supply pressure is in accordance with design criteria	psi
-----	----	-----	---	-----

Yes	No	N/A	Free of damage or leaks
-----	----	-----	-------------------------

Yes	No	N/A	Trim in good operating condition
-----	----	-----	----------------------------------

Inspections: Monthly

Yes	No	N/A	Gauges are operable and not physically damaged
-----	----	-----	--

Yes	No	N/A	Gauges — normal air or nitrogen pressure maintained (not supervised)
-----	----	-----	--

Yes	No	N/A	Gauge on system side of dry valve reads proper ratio of air or nitrogen (not supervised) psi
-----	----	-----	--

Yes	No	N/A	Gauge on quick-opening device reads the same as system side dry valve gauge (not supervised) psi
-----	----	-----	--

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STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Quarterly

			Hose Valves
Yes	No	N/A	Caps are in place and not damaged
Yes	No	N/A	Hose threads are not damaged
Yes	No	N/A	Valve handles are present and not damaged
Yes	No	N/A	Gaskets are not damaged or deteriorated
Yes	No	N/A	Valves are not leaking
Yes	No	N/A	Valves are not obstructed
Yes	No	N/A	Valves are capable of normal operation

Fire Department Connections

Yes	No	N/A	Visible and accessible
Yes	No	N/A	Couplings/swivels operate correctly
Yes	No	N/A	Plugs/caps are in place
Yes	No	N/A	Gaskets are not damaged
Yes	No	N/A	Identification signs are in place
Yes	No	N/A	Check valve is not leaking
Yes	No	N/A	Automatic drain valve in place and operating properly
Yes	No	N/A	FDC clapper is functional
Yes	No	N/A	Interior is clear of obstructions (unless locked)
Yes	No	N/A	Visible piping supplying the fire department connection is undamaged

Inspections: Annual

Yes	No	N/A	Dry pipe valve interior inspection following trip test
Yes	No	N/A	Deluge valve interior inspection following trip test
Yes	No	N/A	Hydraulic design information attached securely and legible

Hose Cabinet

Yes	No	N/A	Visible and accessible
Yes	No	N/A	No damaged or corroded components
Yes	No	N/A	Cabinet door is not difficult to open and opens fully
Yes	No	N/A	Glass is not broken
Yes	No	N/A	Glass break device is present and attached
Yes	No	N/A	Cabinet is properly identified
Yes	No	N/A	Lock (in break-glass type) is functional
Yes	No	N/A	Contents are present and accessible

Fire Department Connections

Yes	No	N/A	Interior of connection with locked plugs or caps is free of obstructions
-----	----	-----	--



STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			Nozzle (Inspected per NFPA 1962)
Yes	No	N/A	Hose nozzle is present
Yes	No	N/A	Gasket is not missing or deteriorated
Yes	No	N/A	Nozzle is not obstructed
Yes	No	N/A	Nozzle operates smoothly
			Hose (Inspected per NFPA 1962)
Yes	No	N/A	No mildew, cuts, abrasions, and deterioration
Yes	No	N/A	Gaskets are not missing or deteriorated
Yes	No	N/A	Threads on coupling are not incompatible
Yes	No	N/A	Hose connected to hose rack nipple or valve
Yes	No	N/A	Hose test is to date
Yes	No	N/A	Hose has been reracked, rereeled, or rerolled
			Hose Storage Device
Yes	No	N/A	Visible and accessible
Yes	No	N/A	Not damaged and operates correctly
Yes	No	N/A	Hose is properly racked or rolled
Yes	No	N/A	Nozzle clip in place and nozzle correctly contained
Yes	No	N/A	If installed in cabinet, will swing out at least 90 degrees
			Hose Connections
Yes	No	N/A	Valve cap(s) are not missing or damaged
Yes	No	N/A	Fire hose connection is not damaged
Yes	No	N/A	Valve handles are not missing or damaged
Yes	No	N/A	Cap gaskets are not missing or deteriorated
Yes	No	N/A	Valve is not leaking
Yes	No	N/A	Valve does not have any visible or physical obstruction
Yes	No	N/A	Pressure reducing device is not missing
Yes	No	N/A	Manual, semiautomatic, or dry standpipe valves operate smoothly
Yes	No	N/A	Valve is not damaged



STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			Pipe and Fittings
Yes	No	N/A	In good condition with no external corrosion
Yes	No	N/A	No leaks or mechanical damage
Yes	No	N/A	Correct alignment with no external loads
Yes	No	N/A	Control valves are not damaged
Yes	No	N/A	No missing or damaged supporting devices
Building			
Yes	No	N/A	Prior to onset of freezing weather, all openings are closed and water-filled pipe is not exposed to freezing temperatures
Yes	No	N/A	Heat trace is per manufacturer's instructions
Yes	No	N/A	Low temp alarm is free of physical damage
Inspection: Five Year			
Yes	No	N/A	Obstruction inspection — no foreign or obstructing material found
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Backflow — internal inspection
Yes	No	N/A	Internal inspection of dry pipe and preaction/deluge valve strainers filters and orifices
Test: Quarterly			
Yes	No	N/A	Alarm devices — water motor gong
Yes	No	N/A	Main drain test — if the sole supply is through a backflow preventer or pressure-reducing valve
			Static psi: Residual psi:
Yes	No	N/A	Do results differ by more than 10% from previous test?
Yes	No	N/A	Priming water level tested
Yes	No	N/A	Quick-opening device tested
Master Pressure-Regulating Device			
Yes	No	N/A	Partial flow test performed to exercise valve
Test: Semiannual			
Yes	No	N/A	Valve supervisory switch(es) functioning
Yes	No	N/A	Alarm devices (vane and pressure switch type) — inspector's test or bypass opened and observed waterflow

STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual

Yes	No	N/A	Supervisory switch functioning
Yes	No	N/A	Automatic air pressure maintenance device functioning
Yes	No	N/A	Backflow preventer — forward flow test at a minimum flow rate of the system demand
Yes	No	N/A	Valve status test performed
Yes	No	N/A	Low temperature alarm (if installed) at the beginning of heating season
Yes	No	N/A	Low air alarm tested per manufacturer's instructions
Yes	No	N/A	Partial flow test for hose connection and hose rack assembly pressure regulating device
Yes	No	N/A	Hose valves — Class I and Class III — fully open and close valves
Yes	No	N/A	Hose nozzle — per NFPA 1962 (tested at same frequency as the hose it is attached)

Main Drain Test

			Static psi	Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?	
Yes	No	N/A	All control valves operated through full range of motion and returned to normal position	
Dry Pipe Valve Trip Test (Partial Flow)				
			Water pressure	(psi) Air pressure (psi)
			Tripping air pressure	(psi) Trip time (sec)

Yes	No	N/A	Results compared to previous test
-----	----	-----	-----------------------------------

Deluge Valve Full Flow Trip Test

			Pressure reading at deluge valve	psi
Yes	No	N/A	Compare if pressure readings to hydraulic design/water supply meets requirements	
Yes	No	N/A	Air maintenance device (if provided) works correctly	

Master Pressure-Regulating Device

Yes	No	N/A	Full flow test performed and compared to previous test
-----	----	-----	--

Tests: Three Years

Yes	No	N/A	Hose hydrostatically tested in accordance with NFPA 1962 (for hose older than 5 years)
Yes	No	N/A	Hose valves — Class II — fully open and close valves

Dry Pipe Valve Full Flow Trip Test

			Water pressure	(psi)	Air pressure	(psi)
			Tripping air pressure	(psi)	Trip time	(sec)
			Water delivery time	(min.)		(sec)
Yes	No	N/A	Results comparable to previous years			
Yes	No	N/A	Dry pipe system tested for leakage			



STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Five Years

Yes	No	N/A	Gauges tested or replaced
Yes	No	N/A	Hydrostatic test (manual and semiautomatic dry only)
Yes	No	N/A	Flow test (all automatic systems)
			Static pressure (psi)
			Total flow (gpm)
			Pressure at topmost outlet (psi)
Yes	No	N/A	Hose connection pressure-reducing/restricting valves — flow test
Fire Department Connections			
Yes	No	N/A	Piping from fire department connection to fire department connection check valve has been hydrostatically tested at 150 psi (10 bar) for at least 2 hours
Routine Maintenance			
Yes	No	N/A	Re-rack hose with folds in different position annually
Yes	No	N/A	Drain water from all low point drains in dry systems prior to freezing temperatures
Yes	No	N/A	OS&Y — stems lubricated annually
Yes	No	N/A	Lubricate, repair, or replace hose valves that do not open smoothly or fully

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:



STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Hose Connection Reducing/Restricting Valves — Flow Test

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STANDPIPE AND HOSE SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers weekly inspections over a 6-month period.

Year: **System:**

Location:

General

1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.
 2. Record any notes about the system that the inspector believes to be significant.

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WATER SPRAY SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Name of Property:	Inspector:				
Address:	Contract No.:				
Property Phone Number:	Date:				
Inspection Frequency:	Daily	Weekly	Quarterly	Semiannual	Annual
Inspections: Daily		Deluge Valve (Cold Weather/Heating Season Only)			
Yes	No	N/A	Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)		
Inspections Weekly		Backflow			
Yes	No	N/A	Isolation valves — open position and locked or supervised		
Yes	No	N/A	RPA and RPDA — differential-sensing relief valve operating correctly		
		Control Valves			
Yes	No	N/A	In the correct (open or closed) position		
Yes	No	N/A	Sealed		
Yes	No	N/A	Accessible		
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches		
Yes	No	N/A	Free from damage or leaks		
Yes	No	N/A	Proper signage		
		Deluge Valve			
Yes	No	N/A	Enclosure, where equipped with low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)		
Inspections: Monthly					
Yes	No	N/A	Gauges are operable and not physically damaged		
Yes	No	N/A	Gauges — normal air or nitrogen pressure maintained (not supervised) psi		
		Control Valves (Locked or Supervised)			
Yes	No	N/A	In the correct (open or closed) position		
Yes	No	N/A	Locked or supervised		
Yes	No	N/A	Accessible		
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches		
Yes	No	N/A	Free from damage or leaks		
Yes	No	N/A	Proper signage		
		Deluge Valve			
Yes	No	N/A	Free from physical damage or leaks		
Yes	No	N/A	Electrical components are in service		
Yes	No	N/A	Trim valves are in the correct (open or closed) position		
Yes	No	N/A	Valve seat is not leaking		
Yes	No	N/A	Detection system gauge (if provided) — normal pressure is being maintained		

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WATER SPRAY SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Monthly			UHSWSS Detectors	
Yes	No	N/A	Free of physical damage	
Yes	No	N/A	Optical detectors (where used) — lenses clean	
Inspections: Quarterly				
Yes	No	N/A	Gauges — normal supply water pressure is being maintained	psi
Yes	No	N/A	Gauges — normal air or nitrogen pressure maintained when supervised at a constantly attended location	psi
Control Valves (Electronically Supervised)				
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Electronically supervised	
Yes	No	N/A	Accessible	
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches	
Yes	No	N/A	Free from damage or leaks	
Yes	No	N/A	Proper signage	
Drainage				
Yes	No	N/A	Method is in good operating condition	
Yes	No	N/A	Retention embankments or dikes are in good condition	
Inspections: Annual			Support/Hangers	
Yes	No	N/A	In good condition (no missing or damaged paint or coating, rust, or corrosion)	
Yes	No	N/A	Securely attached to structure and piping	
Yes	No	N/A	No damaged or missing hangers, braces, and support	
Pipes and Fittings				
Yes	No	N/A	In good condition with no external corrosion	
Yes	No	N/A	No leaks or mechanical damage	
Yes	No	N/A	Correct alignment with no external loads	
Yes	No	N/A	Low point drains maintained and in proper working order	
Yes	No	N/A	Rubber-gasketed fittings in good condition	
Nozzles				
Yes	No	N/A	In place, aimed, and pointed in the direction intended	
Yes	No	N/A	Free from external loading and corrosion	
Yes	No	N/A	Caps or plugs are in place (where required)	

Note:

For fire pumps refer to NFPA 25, Chapter 8, and the appropriate inspection forms.

For water storage tanks refer to NFPA 25, Chapter 9, and the appropriate inspection forms.

For detection systems refer to *NFPA 72® National Fire Alarm and Signaling Code*, and the appropriate inspection forms.

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WATER SPRAY SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			Deluge Valve
Yes	No	N/A	Inspection following trip test
Yes	No	N/A	Detection device in good condition
Building			
Yes	No	N/A	Prior to onset of freezing weather, all openings are closed and water-filled pipe is not exposed to freezing temperatures
Yes	No	N/A	Heat trace is per manufacturer's instructions
Yes	No	N/A	Low Temp alarm is free of physical damage
Inspections: Five Years			
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Backflow — internal inspection
Yes	No	N/A	Internal inspection of deluge valve strainers, filters, restricted orifices, and diaphragm chambers
Test: Quarterly			
Yes	No	N/A	Alarm devices — water motor gong
Yes	No	N/A	Main drain test, if sole supply is through a backflow preventer or pressure-reducing valve
		Static psi	Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?
Yes	No	N/A	Deluge valve priming water level tested
Yes	No	N/A	Low air alarm tested per manufacturer's instructions (if provided)
Test: Semiannual			
Yes	No	N/A	Valve supervisory switch(es) function
Yes	No	N/A	Alarm devices — inspector's test or bypass opened and observed waterflow
Test: Annual			
Yes	No	N/A	Supervisory switch(es) function
Yes	No	N/A	Low temp alarm (if installed) at the beginning of heating season
Main Drain Test			
		Static psi	Residual psi
Yes	No	N/A	Do results differ by more than 10% from previous test?
Yes	No	N/A	All control valves operated through full range of motion and returned to normal position
Full Flow Trip Test (Deluge Valve)			
Yes	No	N/A	Unobstructed discharge from all nozzles
		Pressure reading at most remote nozzle	psi
		Pressure reading at deluge valve	psi

WATER SPRAY SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual			Full Flow Trip Test (Deluge Valve)	
Yes	No	N/A	Compare pressure readings to hydraulic design and water supply meets requirements	
Yes	No	N/A	Manual release functions correctly	
Yes	No	N/A	Valve status test performed	
Yes	No	N/A	Nozzle spray patterns and direction verified	
Yes	No	N/A	Air maintenance device functions correctly	
Yes	No	N/A	Mainline strainer flushed after trip test	
Yes	No	N/A	Backflow — forward flow test at a minimum flow rate of the system demand	
Yes	No	N/A	Detection system tested in accordance with <i>NFPA 72</i> ®	
			System Response Time	
Yes	No	N/A	Heat detection responded in	sec
Yes	No	N/A	Flammable gas detection responded in	sec
			Discharge Time	
Yes	No	N/A	Time lapse between operation of detection systems and water delivery time to protected area	sec
Yes	No	N/A	UHSWSS/response time does not exceed 100 milliseconds	
Routine Maintenance				
Yes	No	N/A	OS&Y — stems lubricated annually	

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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WATER SPRAY SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers a 6-month period.

Year: **System:**

Location:

Inspection

Weekly

General

1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.
 2. If all nozzles are in good condition and not blocked, note "yes" in block. If not, see that corrections are made and briefly describe under "notes."
 3. Assure valve enclosure is maintained above 40°F (4°C).
 4. Assure deluge or preaction valve is free of damage, trim valves are in proper position, and electrical components are operational.
 5. Record any notes about the system that the inspector believes to be significant.

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WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Date: Inspector: System:

Location:

General

System designation

Building

Location of control valve

Has system been modified since last inspection? Yes No

What is hazard protected?

Valves

How are valves supervised? Sealed Locked Tamper switch

Are valves identified with signs? Yes No

Detection System (if any)

When was the detection system last inspected?

Operating Instructions

Are operating instructions present? Yes No

Notes



WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

<p>Name of Property:</p> <p>Address:</p> <p>Property Phone Number:</p> <p>Inspection Frequency:</p>	<p>Inspector:</p> <p>Contract No.:</p> <p>Date:</p> <p>Daily</p> <p>Weekly</p> <p>Monthly</p> <p>Quarterly</p> <p>Semiannual</p>																																																																																										
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<p>Inspections: Daily</p> <p>Valve (Cold Weather/Heating Season Only)</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Yes</td> <td style="width: 15%;">No</td> <td style="width: 15%;">N/A</td> <td>Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)</td> </tr> </table> <p>Inspections: Weekly</p> <p>Backflow</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Yes</td> <td style="width: 15%;">No</td> <td style="width: 15%;">N/A</td> <td>Isolation valves — open position and locked or supervised</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>RPA and RPDA — differential-sensing relief valve operating correctly</td> </tr> </table> <p>Control Valves</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Yes</td> <td style="width: 15%;">No</td> <td style="width: 15%;">N/A</td> <td>In the correct (open or closed) position</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>Sealed</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>Accessible</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>Post Indicator Valves (PIVs) are provided with correct wrenches</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>Free from damage or leaks</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>N/A</td> <td>Proper signage</td> </tr> </table> <p>Dry/Deluge Valve/Preaction</p> <table border="0" style="width: 100%; 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WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Monthly			Standby Pump	
Yes	No	N/A	Compressed gas supply inlet air pressure	psi
Yes	No	N/A	Outlet water pressure	psi
Yes	No	N/A	Inspect and empty the moisture trap, oil injection (pneumatic)	
Yes	No	N/A	Oil level on air regulator unit	
System Control Valves (Locked or Supervised)				
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Locked or supervised	
Yes	No	N/A	Accessible	
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches	
Yes	No	N/A	Free from damage or leaks	
Yes	No	N/A	Proper signage	
Inspections: Quarterly				
Yes	No	N/A	Gauges — normal air or nitrogen pressure maintained when supervised at a constantly attended location	psi
Yes	No	N/A	Gauge on system side of dry valve reads proper ratio of air or nitrogen when supervised at a constantly attended location	psi
Yes	No	N/A	Gauge on quick-opening device reads the same as system side dry valve gauge when supervised at a constantly attended location	psi
Yes	No	N/A	Gauge on supply side of valve reads normal	psi
Yes	No	N/A	Water supply pressure	psi
Yes	No	N/A	Water storage cylinder (high pressure) water level is full (unsupervised)	
Yes	No	N/A	Additive storage cylinder in good condition	
Yes	No	N/A	Water recirculation tank — water level is full (supervised)	
Yes	No	N/A	Compressed gas cylinder properly secured	
Yes	No	N/A	Waterflow alarm and supervisory device is free of damage	
Yes	No	N/A	Hydraulic design information sign is securely attached to riser and legible	
Alarm Valves/Riser Check				
Yes	No	N/A	Gauges — normal water pressure maintained	
Yes	No	N/A	Free of damage	
Yes	No	N/A	In appropriate open or closed position	
Yes	No	N/A	Accessible	
Yes	No	N/A	Retard chamber/alarm drains not leaking	
Control Valves (Electronically Supervised)				
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Electronically Supervised	
Yes	No	N/A	Accessible	

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WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Quarterly

Control Valves (Electronically Supervised)

Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage
Pressure-Reducing Valve			
Yes	No	N/A	In the open position and not leaking
Yes	No	N/A	Maintaining downstream pressure
Yes	No	N/A	In good condition, with hand wheels installed and unbroken

Inspections: Semiannual

Yes	No	N/A	Manually operated indicating valves are in proper position	
Yes	No	N/A	Pressure in electronically supervised and monitored gas cylinder	psi (bar)
Yes	No	N/A	Water storage cylinder (high pressure) water level is full (supervised)	
Yes	No	N/A	Pneumatically operated valves and tubing inspected	
Yes	No	N/A	Water quality checked (first year)	
Yes	No	N/A	Additive agent level is full	
Yes	No	N/A	Enclosure integrity verified	

Inspections: Annual

Yes	No	N/A	Hoses are not damaged
Yes	No	N/A	Water quality checked (after first year)
Yes	No	N/A	Low temperature alarm is in good condition
Nozzles			
Yes	No	N/A	No signs of physical damage, corrosion, or leaking
Yes	No	N/A	No loss of fluid in glass bulb heat responsive element
Yes	No	N/A	Loading — free of dust
Yes	No	N/A	No paint or coating unless applied by the manufacturer
Yes	No	N/A	Correct orientation
Yes	No	N/A	Correct number and type of spare water mist nozzles
Hangers, Braces, and Support			
Yes	No	N/A	Not damaged, loose, or unattached



WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			High-Pressure Water Storage Cylinder
Yes	No	N/A	Properly secured
Yes	No	N/A	Vent plug is not ruptured or damaged
Yes	No	N/A	Filters are clean
Yes	No	N/A	Inspect cylinder capacity and pressure rating
Yes	No	N/A	Check cylinder compliance specification
Yes	No	N/A	Cylinder pressure on discharge psi (bar)
Yes	No	N/A	Water recirculation tank supports and attachments in good condition
Yes	No	N/A	Water recirculation tank clean filters, strainers, and cyclone separator
Piping, Tubing, and Fittings			
Yes	No	N/A	Free of mechanical damage
Yes	No	N/A	Free of leakage
Yes	No	N/A	Free of external loads
Yes	No	N/A	Missing or damaged paint or coatings
Yes	No	N/A	Free of corrosion or rust
Yes	No	N/A	Misalignment or trapped sections
Yes	No	N/A	Low point drains not damaged or corroded
Compressed Gas Cylinders			
Yes	No	N/A	Inspect cylinder capacity and pressure rating
Yes	No	N/A	Check cylinder compliance specification
Yes	No	N/A	Compressed gas meets specifications
Inspection: Five Years			
Yes	No	N/A	Alarm valve — interior including strainers, filters, and restricted orifices
Yes	No	N/A	Obstruction inspection — no foreign or obstructing material found
Yes	No	N/A	Check valve — internal moves freely and in good condition
Yes	No	N/A	Backflow — internal inspection
Yes	No	N/A	Compressed gas cylinder exterior inspection
Test: Quarterly			
Yes	No	N/A	Water mist system operated by pressurized gas cylinders or pressurized vessels, nozzles flow upon operation
Test: Semiannual			
Yes	No	N/A	Alarm device — vane and pressure switch type
Yes	No	N/A	Valve supervisory switch(es) function
Yes	No	N/A	Pneumatic slave valve and cycle on off valve test



WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual

Yes	No	N/A	Supervisory switch(s) function			
Yes	No	N/A	Water supply tested	psi	gpm	minute duration
Yes	No	N/A	Additive agent quality tested			
Yes	No	N/A	Additive agent injection — full discharge test			
Yes	No	N/A	Valve status test			
Yes	No	N/A	Standby pump operated			
Yes	No	N/A	All control valves operated through full range of motion and returned to normal position			
Backflow						
Yes	No	N/A	Forward flow test at a minimum flow rate of the system demand			
Master Pressure-Regulating Valve						
Yes	No	N/A	Full flow test compared to previous test results			
Water Recirculation Tank						
Yes	No	N/A	Operational test per manufacturers instructions			
Yes	No	N/A	Float-operated valve functions			
Yes	No	N/A	Pressure at outlet during discharge	psi		
Yes	No	N/A	Backflow preventer functions			
Pneumatic Valves						
Yes	No	N/A	Solenoid release for electronic and manual release			
Full Flow Trip Test						
Yes	No	N/A	Unobstructed discharge from all nozzles			
Yes	No	N/A	Pressure reading at control valve	psi		
Yes	No	N/A	Detection system response time	sec		
Yes	No	N/A	Detection system tested in accordance with NFPA 72®			
Yes	No	N/A	Ventilation system interlocks tested			
Yes	No	N/A	Fuel/lubrication system interlocks tested			

Test: Five Years

Yes	No	N/A	Gauges tested or replaced
Yes	No	N/A	DOT, CTC, or similar compressed gas/water cylinder retesting
Yes	No	N/A	Hose hydrostatic test



WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Routine Maintenance

Yes	No	N/A	OS&Y — stems lubricated annually
Yes	No	N/A	Flush mainline strainer after each test
Yes	No	N/A	Evaluate additives per manufacturer
Yes	No	N/A	Drain and refill water tank annually
Yes	No	N/A	Rebuild pneumatically operated standby pump every 5 years
Yes	No	N/A	Inspect representative sample of operated water mist nozzles after activation

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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WATER MIST SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Name of Property:

Inspector:

Address:

Contract No.:

Property Phone Number:

Date:

Inspection Frequency: **Weekly** **Monthly** **Quarterly** **Annual** **Other**

This form covers weekly inspections over a 6-month period.

Year: **System:**

Location:

General:

1. Check that water tank is full if water level not supervised.
 2. Check air pressure gauge to confirm that adequate air pressure is being maintained.
 3. Check air pressure gauge to confirm that adequate air pressure is being maintained by the compressor.
 4. Record any notes about the system that the inspector believes to be significant.

Y = Satisfactory

N = Unsatisfactory (explain below)

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FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE

Date:

Inspector:

System:

Location:

General

System designation

Building

Location of control valve

Has system been modified since last inspection? Yes No

What is hazard protected?

Valves

How are valves supervised? Sealed Locked Tamper switch

Are valves identified with signs? Yes No

Fire Department Connections

Location

Are identification signs provided? Yes No

Operating Instructions

Are operating instructions present? Yes No

Notes:





FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Property Name:

Inspector:

Property Address:

Contract No.:

Property Phone Number:

Date:

Inspection Frequency:

Daily

Weekly

Monthly

Quarterly

Annual

Five-Year

Inspections: Daily

Valve (Cold Weather/Heating Season Only)

Yes

No

N/A

Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)

Inspections: Weekly

Backflow

Yes

No

N/A

Isolation valves — open position and locked or supervised

Yes

No

N/A

RPA and RPDA — differential-sensing relief valve operating correctly

Control Valves

Yes

No

N/A

In the correct (open or closed) position

Yes

No

N/A

Sealed

Yes

No

N/A

Accessible

Yes

No

N/A

Post Indicator Valves (PIVs) are provided with correct wrenches

Yes

No

N/A

Free from damage or leaks

Yes

No

N/A

Proper signage

Deluge/Preaction Valve

Yes

No

N/A

Enclosure, where equipped with low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C)

Master Pressure-Regulating Device

Yes

No

N/A

Downstream pressures are in accordance with design criteria

psi

Yes

No

N/A

Supply pressure is in accordance with design criteria

psi

Yes

No

N/A

Free of damage or leaks

Yes

No

N/A

Trim in good operating condition

Inspections: Monthly

Yes

No

N/A

Gauges are in good operating condition

Yes

No

N/A

Gauges — normal air or nitrogen pressure maintained when not supervised at a constantly attended location

psi

Yes

No

N/A

Gauge on system side of dry valve reads proper ratio of air or nitrogen when not supervised at a constantly attended location

psi

Yes

No

N/A

Gauge on quick-opening device reads the same as system side dry valve gauge when not supervised at a constantly attended location

psi

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FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Quarterly			Pressure-Reducing Valve
Yes	No	N/A	In the open position and not leaking
Yes	No	N/A	Maintaining downstream pressure
Yes	No	N/A	In good condition, with handwheels installed and unbroken
			Foam Concentrate Strainer(s)
Yes	No	N/A	Blow-down valve closed and plugged
			Drainage
Yes	No	N/A	Method — in good operating condition
Yes	No	N/A	Retention embankments or dikes are in good condition
			Control Valves (Electronically Supervised)
Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Electronically supervised
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage
Inspections: Annual			
Yes	No	N/A	Low temperature alarm free of damage
			Support/Hangers
Yes	No	N/A	In good condition (no missing or damaged paint or coating, rust, or corrosion)
Yes	No	N/A	No damaged or missing hangers bracing and support
Yes	No	N/A	Securely attached to structure and piping
			Pipes and Fittings
Yes	No	N/A	In good condition and no external corrosion
Yes	No	N/A	No leaks or mechanical damage
Yes	No	N/A	Correct alignment — no external loads
Yes	No	N/A	Low point drains maintained and in proper working order
Yes	No	N/A	Rubber-gasketed fittings in good condition
			Sprinklers (visible)
Yes	No	N/A	No damage or leaks
Yes	No	N/A	Free of corrosion, foreign material, or paint
Yes	No	N/A	Fluid in glass bulbs
Yes	No	N/A	Spare sprinklers — proper number and type, including installation wrench
Yes	No	N/A	Loading — sprinklers are free of dust
Yes	No	N/A	Escutcheons/cover plates are present and installed correctly
Yes	No	N/A	Clearance — minimum clearance between sprinklers and storage



FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Annual			Backflow Preventer			
Yes	No	N/A	Forward flow test at a minimum flow rate of the system demand			
Master Pressure-Regulating Device						
Yes	No	N/A	Full flow test compared to previous test results			
Full Flow Test (Deluge Valve)						
Yes	No	N/A	Unobstructed discharge from all nozzles/position correctly			
Yes	No	N/A	Pressure reading at deluge valve			
Yes	No	N/A	Pressure reading at most remote nozzle of sprinkler			
Yes	No	N/A	Air maintenance functions correctly (if provided)			
Preaction Partial Trip Test						
			Water pressure	(psi)	Air pressure	(psi)
			Tripping air pressure	(psi)	Trip time	(sec)
			Water delivery time	(min.)		(sec)
Foam Concentrate Strainer(s)						
Yes	No	N/A	In proper working condition			
Operational Test						
Yes	No	N/A	Foam-water system(s) responded as designed			
			Discharge time	(min.)		(sec)
Yes	No	N/A	Manual actuation device functions as intended			
Concentration Test						
Yes	No	N/A	Foam sample measured			
Yes	No	N/A	Foam concentration within 10% of acceptance test results			
Yes	No	N/A	Foam concentrate not more than 10% below minimum design standard			

Test: Three Years

Preaction Valve Trip Test Open Control Valve

			Water pressure	(psi)	Air pressure	(psi)
			Tripping air pressure	(psi)	Trip time	(sec)
			Water delivery time	(min.)		
Yes			Results compared to previous results			
Yes			Preaction system tested for air leakage			

FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Five Years

Yes	No	N/A	Gauges tested or replaced
-----	----	-----	---------------------------

Routine Maintenance

Yes	No	N/A	OS&Y — stems lubricated annually
Yes	No	N/A	Proportioned ball drip disassembled, cleaned, and reassembled every five years. Date:
Yes	No	N/A	Foam concentrate tank drained and flushed every ten years. Date:
Yes	No	N/A	Foam concentrate tank inspected internally and externally for corrosion every ten years. Date:
Yes	No	N/A	Foam concentrate tank hydrostatically tested every ten years. Date:
Yes	No	N/A	Bladder tank proportioner sight glass cleaned every ten years. Date:
Yes	No	N/A	Balancing valve diaphragm flushed every five years. Date:
Yes	No	N/A	Pressure vacuum vents serviced every five years. Date:

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:



FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

This form covers monthly inspections for a 1-year period.

Year: **System:**

Location:

General

1. If fire department connections are unobstructed and in good condition, note "OK" in block. If not, see that corrections are made and briefly describe under "notes."
 2. If valves are locked, note "yes" in this block. If any are not locked, relock and note "relocked" in this block.
 3. Assure alarm devices are free of physical damage and electrical connections are secure. If so, note "OK" in blank. If not, see that corrections are made and briefly describe them under "notes."
 4. Record water pressure. If there is a difference of 10% or more, investigate cause, evaluate impact to system operation, and briefly describe under "notes."
 5. Note "OK" if system operating instructions are posted. If not, see that corrections are made and briefly describe under "notes."
 6. Inspect nozzles for proper orientation, blockage, and caps (if provided) are in place.
 7. Inspect all valves on portioning system for proper position.
 8. Inspect foam concentrate tank to ensure it is full and there is no serious corrosion.
 9. Record any notes about the system that the inspector believes to be significant.

Y = Satisfactory

N = Unsatisfactory (explain below)

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FOAM-WATER SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Notes (9)

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PRIVATE FIRE SERVICE MAINS INSPECTION, TESTING, AND MAINTENANCE

Name of Property:	Inspector:			
Address:	Contract No.:			
Property Phone Number:	Date:			
Inspection Frequency:	Weekly	Monthly	Quarterly	Semiannual
	Annual	Five-Year		
Inspections: Weekly		Control Valves		
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Sealed	
Yes	No	N/A	Accessible	
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches	
Yes	No	N/A	Free from damage or leaks	
Yes	No	N/A	Proper signage	
		Backflow		
Yes	No	N/A	Isolation valves are in open position and locked or supervised	
Yes	No	N/A	RPA and RPDA - differential-sensing relief valve operating correctly	
Inspections: Monthly		Control Valves (Locked or Supervised)		
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Locked or supervised	
Yes	No	N/A	Accessible	
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches	
Yes	No	N/A	Free from damage or leaks	
Yes	No	N/A	Proper signage	
Inspections: Quarterly		Control Valves (Electronically Supervised)		
Yes	No	N/A	In the correct (open or closed) position	
Yes	No	N/A	Electronically supervised	
Yes	No	N/A	Accessible	
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches	
Yes	No	N/A	Free from damage or leaks	
Yes	No	N/A	Proper signage	
		Fire Department Connections		
Yes	No	N/A	Visible and accessible	
Yes	No	N/A	Coupling/swivels operate correctly	
Yes	No	N/A	Plugs/caps are in place	

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PRIVATE FIRE SERVICE MAINS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Quarterly			Fire Department Connections
Yes	No	N/A	Gaskets are not damaged
Yes	No	N/A	Automatic drain valve in place and operating properly
Yes	No	N/A	Identification signs are in place
Yes	No	N/A	Interior is clear of obstructions (unless locked)
Yes	No	N/A	Clapper(s) operates correctly
Yes	No	N/A	Check valve not leaking
Yes	No	N/A	Visible piping supplying the fire department connection is undamaged
			Hose Houses
Yes	No	N/A	Accessible
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	No missing equipment
			Dry Hydrant
Yes	No	N/A	Water supply is not deteriorated in pond, stream, or cistern.
Yes	No	N/A	Vegetation cleared 3 ft (0.9 m) radius from hydrant
Inspections: Semiannual			Monitor Nozzles
Yes	No	N/A	Not leaking
Yes	No	N/A	Free of damage
Yes	No	N/A	Free of corrosion
			Dry Hydrants
Yes	No	N/A	Reflective material marking and signage is in accordance with 8.4.7 of NFPA 1142
Inspections: Annual			Hydrants (Dry Barrel and Wall Type)
Yes	No	N/A	Accessible
Yes	No	N/A	Barrel is free of water and ice
Yes	No	N/A	Barrel drains properly
Yes	No	N/A	Not leaking
Yes	No	N/A	Barrel is free of cracks
Yes	No	N/A	Outlets are not excessively tight and lubricated
Yes	No	N/A	Nozzle threads are not worn
Yes	No	N/A	Operating nut is not worn
Yes	No	N/A	Operating wrench is available
Yes	No	N/A	Free of detrimental corrosion

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PRIVATE FIRE SERVICE MAINS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Inspections: Annual			Hydrants (Wet Barrel)
Yes	No	N/A	Accessible
Yes	No	N/A	Not leaking
Yes	No	N/A	Barrel is free of cracks
Yes	No	N/A	Outlets not excessively tight and lubricated
Yes	No	N/A	Nozzle threads are not worn
Yes	No	N/A	Operating nut is not worn
Yes	No	N/A	Operating wrench is available
			Fire Department Connections
Yes	No	N/A	Interior of connection with locked plugs or caps is free of obstructions
			Mainline Strainers
Yes	No	N/A	Not plugged or fouled
Yes	No	N/A	Free of corrosion
Yes	No	N/A	No damaged parts
			Pipe and Fittings (exposed)
Yes	No	N/A	Not leaking
Yes	No	N/A	Free of damage and corrosion
Yes	No	N/A	Hangers intact and not damaged
Inspections: Five Years			
Yes	No	N/A	Backflow - internal inspection
Yes	No	N/A	Check valve - internal moves freely and in good condition
Yes	No	N/A	Backflow - forward flow test at minimum flow rate of the system demand
Test: Annual			Monitor Nozzles
Yes	No	N/A	Flow test until all foreign material has cleared (not less than one minute)
Yes	No	N/A	Operated through full range of motion
			Dry Hydrant
Yes	No	N/A	Flow Test
			Hydrants
Yes	No	N/A	Flow test until all foreign material has cleared (not less than one minute)
Yes	No	N/A	Barrel drains within 60 minutes
			Hydrant Isolation Valve
Yes	No	N/A	Operated through full range of motion
Yes	No	N/A	Status test (verify valve is in the open position)

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PRIVATE FIRE SERVICE MAINS INSPECTION, TESTING, AND MAINTENANCE (Continued)

Test: Five Years			Piping (Exposed and Underground)
Yes	No	N/A	Flow test piping at rate anticipated during a fire
Yes	No	N/A	Flow test results comparable to previous test
Maintenance: Annual			Fire Department Connections
Yes	No	N/A	Piping from fire department connection to fire department connection check valve hydrostatically tested at 150 psi (10 bar) for at least 2 hours
Maintenance: Annual			Mainline Strainers
Yes	No	N/A	Removed, inspected, and cleaned
Maintenance: Annual			Hydrants
Yes	No	N/A	Lubricate stems, caps, plugs, and threads
Yes	No	N/A	Accessible (no snow, ice, or other material)
Yes	No	N/A	Protected from damage
Maintenance: Annual			Monitor Nozzles
Yes	No	N/A	Lubricate per manufacturer's recommendations

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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PRIVATE FIRE SERVICE MAINS HYDRANT FLOW TEST REPORT



Name of Property:

Address:

Tested by:

Date:

Contract No.:

Time:

Weather conditions:

Location of test:

Residual hydrant location:

Elevation:

Flow hydrant(s) location:

Elevation:

Static pressure (residual hydrant):

psi

Residual pressure (residual hydrant):

psi

Nozzle size (flow hydrant):

in. (mm)

Nozzle coefficient (flow hydrant):

Pitot pressure(s):

psi

Projected results:

qpm (L/min) @ 20 psi

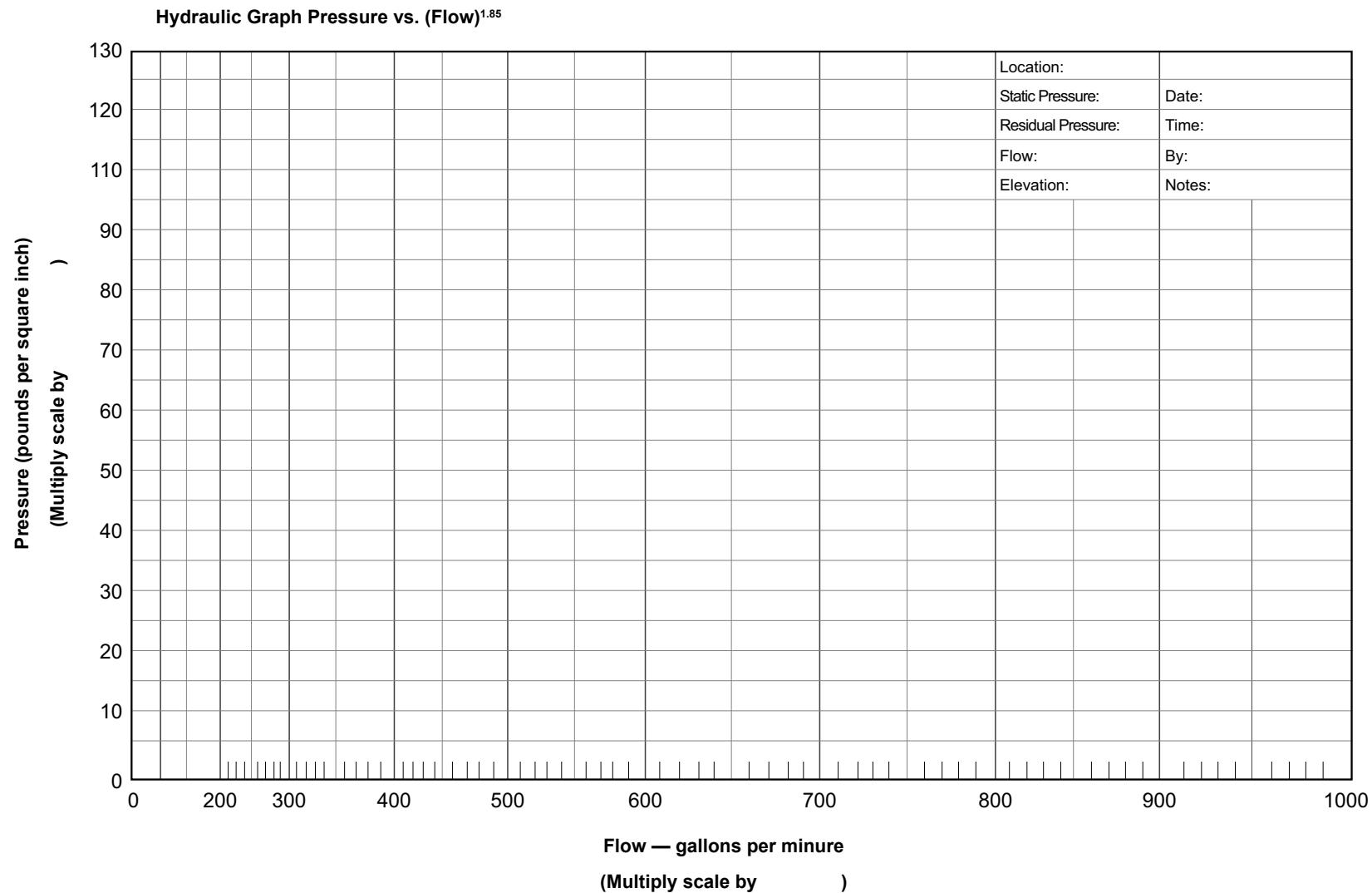
Remarks:

PRIVATE FIRE SERVICE MAINS HYDRANT FLOW TEST REPORT (Continued)

Location Map (N.T.S.) — show line sizes and distances, show valves and hydrant branch sizes, indicate north, show flow hydrants, and show location of static and residual hydrant.



PRIVATE FIRE SERVICE MAINS HYDRANT FLOW TEST REPORT (Continued)



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WATER STORAGE TANKS INSPECTION

Name of Property:

Inspector:

Address:

Contract No.:

Property Phone Number:

Date:

Inspection Frequency:

Daily

Weekly

Monthly

Quarterly

Annual

Five-Year

Inspections: Daily

(Cold Weather/Heating Season Only)

Yes

No

N/A

Heating system (when not supervised)

Inspections: Weekly

Control Valves

Yes

No

N/A

In the correct (open or closed) position

Yes

No

N/A

Sealed

Yes

No

N/A

Accessible

Yes

No

N/A

Post Indicator Valves (PIVs) are provided with correct wrenches

Yes

No

N/A

Free from damage or leaks

Yes

No

N/A

Proper signage

(Cold Weather/Heating Season Only)

Yes

No

N/A

Record Water temperature (when not supervised)

Yes

No

N/A

Record water temperature (supervised systems)

Inspections: Monthly

Yes

No

N/A

Gauges are in good operating condition

Control Valves (Locked or Supervised)

Yes

No

N/A

Water temperature (supervised systems)

Yes

No

N/A

In the correct (open or closed) position

Yes

No

N/A

Locked or supervised

Yes

No

N/A

Accessible

Yes

No

N/A

Post Indicator Valves (PIVs) are provided with correct wrenches

Yes

No

N/A

Free from damage or leaks

Yes

No

N/A

Proper signage

Water Level

Yes

No

N/A

Water level (unsupervised) full

Inspections: Quarterly

Yes

No

N/A

Gauges — normal water pressure maintained

Yes

No

N/A

Water level (supervised) full

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WATER STORAGE TANKS INSPECTION (Continued)

Inspections: Quarterly			Tank Exterior Inspection
Yes	No	N/A	Exterior of tank, supporting structure, vents, foundation, and catwalks or ladders are in good condition
Yes	No	N/A	Area is free of combustible storage, trash, debris, brush, or material that could present a fire exposure hazard
Yes	No	N/A	Area is free of accumulation of material on or near parts that could result in accelerated corrosion or rot
Yes	No	N/A	Tank and support are free of ice buildup
Yes	No	N/A	Exterior sides and top of embankments supporting coated fabric tanks are free of erosion
(Cold Weather/Heating Season Only)			
Yes	No	N/A	Heating system (supervised systems)
Control Valves (Electronically Supervised)			
Yes	No	N/A	In the correct (open or closed) position
Yes	No	N/A	Electronically supervised
Yes	No	N/A	Accessible
Yes	No	N/A	Post Indicator Valves (PIVs) are provided with correct wrenches
Yes	No	N/A	Free from damage or leaks
Yes	No	N/A	Proper signage
Surrounding Area			
Yes	No	N/A	Free of combustibles
Yes	No	N/A	Free of material that could accelerate corrosion or rot
Yes	No	N/A	Free of ice buildup
Yes	No	N/A	Embankments (for coated fabric tank) free of erosion
Inspections: Annual			
Yes	No	N/A	Hoops and grillage (wooden tanks) are in good condition
Yes	No	N/A	Painted/coated surfaces are in good condition
Yes	No	N/A	Expansion joints are not cracked or leaking
Inspections: Three Years			Steel Tank Interior Inspection (Without Corrosion Protection)
Yes	No	N/A	Silt has been removed for underwater evaluation
Yes	No	N/A	Interior surfaces are free of pitting, corrosion, spalling, or other forms of deterioration
Yes	No	N/A	Interior is free of waste material, aquatic growth, and debris
Yes	No	N/A	Interior coating is intact
Yes	No	N/A	Tank floor is free of dents
Yes	No	N/A	Heating system and components are in good condition
Yes	No	N/A	Anti-vortex plate is in good condition and is not obstructed



WATER STORAGE TANKS INSPECTION (Continued)

Inspections: Five Years			Interior Inspection (All Other Tank Types)
Yes	No	N/A	Silt has been removed for underwater evaluation
Yes	No	N/A	Interior surfaces are free of pitting, corrosion, spalling, or other forms of deterioration
Yes	No	N/A	Interior is free of waste material, aquatic growth, and debris
Yes	No	N/A	Interior coating is intact
Yes	No	N/A	Tank floor is free of dents
Yes	No	N/A	Heating system and components are in good condition
Yes	No	N/A	Anti-vortex plate is in good condition and is not obstructed
			Check Valves
Yes	No	N/A	Check valve — internal moves freely and in good condition
Test Prior to Heating Season			Tank Heating System
Yes	No	N/A	In proper working order
Yes	No	N/A	Low water temperature signals
Yes	No	N/A	High water temperature signals
Test: Monthly			Water Temperature
Yes	No	N/A	Low temperature alarm is working correctly
Yes	No	N/A	High temperature limit switch is working correctly
Test: Semiannual			Valve Status
Yes	No	N/A	High and low water level signals work correctly
Test: Annual			Automatic Tank Fill Valve
Yes	No	N/A	Operated through its full range of motion
Yes	No	N/A	Status test to verify valve(s) is in the open position
			Automatic Tank Fill Valve
Yes	No	N/A	Valve actuated by lowering water level
Yes	No	N/A	Measure and record refill rate
Test: Five Years			
Yes	No	N/A	Level indicators are accurate and move freely
Yes	No	N/A	Gauges tested or replaced
Maintenance			
Yes	No	N/A	Tank maintained full or at designated water level
Yes	No	N/A	Hatch covers in the roofs and the door at the top of frost-proof castings kept securely fastened
Yes	No	N/A	Waste material in or on the tank
Yes	No	N/A	Clean strainers quarterly

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WATER STORAGE TANKS INSPECTION (Continued)

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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FIRE SPRINKLER SYSTEM HAZARD EVALUATION

Changes in building occupancy, use, or process, or material used or stored, create the need for evaluation of the installed fire protection systems. This form is intended to identify and evaluate such changes and should be completed only by an individual properly qualified in the area of system design.

Owner:

Owner's address:

Property being evaluated:

Property address:

Date of work:

(All responses refer to the current hazard evaluation performed on this date.)

Section 1. Identification of Sprinklered Occupancy and Storage Hazards

(Use additional pages as needed.)

Area of Property (List nonsprinklered areas separately in Section 3.)	Type of System and Sprinklers	Design Capability of System	Hazard Protected (Uses or storage arrangements, including commodity)	Improvements Needed to Address Hazard
1.				
2.				
3.				
4.				
5.				

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FIRE SPRINKLER SYSTEM HAZARD EVALUATION (Continued)

Section 2. Evaluation of Protection

For each area of the property evaluated in Section 1, please answer the following questions with a “yes,” “no,” “N/A,” or “?” and explain all “no” and “?” responses below by row and column identification:

Answer the following for each identified property area:	1	2	3	4	5
a. Are all sprinklers the correct type for their application?					
b. Are the obstructions to sprinklers in all areas within acceptable limits for the specific types of sprinklers used?					
c. Are hazards associated with all occupancy areas consistent with hazards typical for that occupancy hazard classification?					
d. Are stockpiles of combustibles located within occupancy areas limited to appropriate heights?					
e. Are miscellaneous and dedicated storage areas properly identified and managed?					
f. Are all dedicated storage areas protected in accordance with the proper storage configuration and commodity classification?					
g. Is the storage or use of flammable liquids, combustible liquids, or aerosol products in any area properly addressed?					
h. Is all idle pallet storage properly protected?					
i. Is there any presence of nitrate film, pyroxylin plastic, compressed or liquefied gas cylinders, liquid or solid oxidizers, or organic peroxide formulations except where specifically addressed by appropriate protection measures?					
j. Are all sprinklers spaced appropriately for the hazard and the type of sprinkler?					
k. Do the available sources of heat and cooling appear adequate for the type of system and temperature rating of sprinklers?					

Explanation of “no” and “?” answers:

Examples:

b2 — no — Obstructions to ESFR sprinklers exceed currently accepted standards.

e3 — ? — Owner must provide information on type of plastic involved in product before evaluation can be finalized.



FIRE SPRINKLER SYSTEM HAZARD EVALUATION (Continued)

Section 3. Evaluation of Unsprinklered Areas

Area of Property for Which Protection Is Not Provided	Basis of Lack of Protection (if known)	Basis for Omission Under Current Codes/Standards
1.		
2.		
3.		
4.		
5.		

Section 4. Water Supply Evaluation

If this hazard evaluation is the result of a reduction in the residual pressure during routine inspections, explain the results of the investigation made to determine the reasons for this change:

Explain the basis of continued acceptability of the water supply or proposed improvements:



FIRE SPRINKLER SYSTEM HAZARD EVALUATION (Continued)

Section 5. Hazard Evaluator's Information and Certification

Evaluator:

Company:

Company address:

I state that the information on this form is correct at the time and place of my review of my evaluation.

Is this hazard evaluation completed? (Note: All "?" must be resolved.) Yes No

Explain if answer is not "yes":

Have deficiencies in protection been identified that should be improved or corrected? Yes No

Summarize improvements of corrections needed:

Signature of Evaluator:

Date:

License or Certification Number (if applicable):

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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 the property owner or their authorized agent. 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						
New installation? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Modification? If yes, complete applicable portions of the form. <input type="checkbox"/> Yes <input type="checkbox"/> No						
Provide a description of the scope of work on page 3.						
Plans	Accepted by approving authorities (names)					
	Address					
	Installation conforms to accepted plans <input type="checkbox"/> Yes <input type="checkbox"/> No Equipment used is approved <input type="checkbox"/> Yes <input type="checkbox"/> No If no, explain deviations					
Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, explain					
	Have copies of the following been left on the premises? <input type="checkbox"/> Yes <input type="checkbox"/> No 1. System components instructions <input type="checkbox"/> Yes <input type="checkbox"/> No 2. Care and maintenance instructions <input type="checkbox"/> Yes <input type="checkbox"/> No 3. NFPA 25 <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Location of system					
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 ^{a,b}	Water pressure	Air pressure	Trip point air pressure	Time water reached test outlet ^{a,b}	Alarm operated properly
	Minutes	psi	psi	psi	Minutes	Seconds
	Without Q.O.D.					
	With Q.O.D.					

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^a Measured from time inspector's test connection is opened.

^b NFPA 13 only requires the 60-second limitation in specific sections.



CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING (Continued)

Deluge and preaction valves	Operation		<input type="checkbox"/> Pneumatic		<input type="checkbox"/> Electric		<input type="checkbox"/> Hydraulic		
	Piping supervised		<input type="checkbox"/> Yes <input type="checkbox"/> No		Detecting media supervised		<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Does valve operate from the manual trip, remote, or both control stations? <input type="checkbox"/> Yes <input type="checkbox"/> No								
	Is there an accessible facility in each circuit for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No				If no, explain _____				
	Pressure-reducing valve test	Make	Model	Does each circuit operate supervision loss alarm?		Does each circuit operate valve release?		Maximum time to operate release	
				Yes	No	Yes	No	Minutes	Seconds
Backflow device forward flow 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	Indicate means used for forward flow test of backflow device: _____								
	When means to test device was opened, was system flow demand created? <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> N/A								
	Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.8 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.3 bar) for 2 hours. Differential dry pipe valve 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.								
	All piping hydrostatically tested at _____ psi (____ bar) for _____ hours Dry piping pneumatically tested <input type="checkbox"/> Yes <input type="checkbox"/> No Equipment operates properly <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, state reason _____		
	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? <input type="checkbox"/> Yes <input type="checkbox"/> No								
	Drain test	Reading of gauge located near water supply test connection: _____ psi (____ bar)			Residual pressure with valve in test connection open wide: _____ psi (____ bar)				
	Underground mains and lead-in connections to system risers flushed before connection made to sprinkler piping								
	Verified by copy of the Contractor's Material and Test Certificate for Underground Piping. Flushed by installer of underground sprinkler piping				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		Other Explain _____		
	If powder-driven fasteners are used in concrete, has representative sample testing been satisfactorily completed?						If no, explain _____		
Blank testing gaskets	Number used		Locations				Number removed		
	Welding piping <input type="checkbox"/> Yes <input type="checkbox"/> No								
	Do you certify as the sprinkler contractor that welding procedures used complied with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standard as required by the AHJ?							<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Do you certify that all welding was performed by welders or welding operators qualified in accordance with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standard as required by the AHJ?							<input type="checkbox"/> Yes <input type="checkbox"/> 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 $\frac{1}{16}$ in. (1.6 mm) diameter, undercut deeper than the lesser of 25% of the wall thickness or $\frac{1}{32}$ in. (0.8 mm); and (5) completed circumferential butt weld reinforcement does not exceed $\frac{1}{32}$ in. (2.4 mm)?							<input type="checkbox"/> Yes <input type="checkbox"/> No	

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CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING (Continued)

Cutouts (discs)	Do you certify that you have a control feature to ensure that all cutouts (discs) are retrieved?		
Hydraulic data nameplate	Nameplate provided <input type="checkbox"/> Yes <input type="checkbox"/> No		If no, explain
Sprinkler contractor removed all caps and straps? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Remarks	Date left in service with all control valves open		
Signatures	Name of sprinkler contractor		
	Tests witnessed by		
	Title		Date
	The property owner or their authorized agent (signed)		Title

Additional explanations and notes:

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CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND 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		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Equipment used is approved If no, state deviations		<input type="checkbox"/> Yes	<input type="checkbox"/> 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?			
	If no, explain			
	Have copies of appropriate instructions and care and maintenance charts been left on premises? If no, explain		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Location	Supplies buildings			
Underground pipes and joints	Pipe types and class	Type joint		
	Pipe conforms to _____ standard	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Fittings conform to _____ standard	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	If no, explain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Test description	Joints needing anchorage clamped, strapped, or blocked in accordance with _____ standard			
	If no, explain			
	<u>Flushing:</u> Flow the required rate until water is clear as indicated by no collection of foreign material in burlap bags at outlets such as hydrants and blow-offs. Flush in accordance with the requirements of 6.10.2.1.3.			
	<u>Hydrostatic:</u> All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi (13.8 bar) or 50 psi (3.4 bar) in excess of the system working pressure, whichever is greater, and shall maintain that pressure ± 5 psi (0.34 bar) for 2 hours.			
<u>Hydrostatic Testing Allowance:</u> Where additional water is added to the system to maintain the test pressures required by 6.10.2.2.1, the amount of water shall be measured and shall not exceed the limits of the following equation (for metric equation, see 6.10.2.2.6):				
$L = \frac{SD\sqrt{P}}{148,000}$				
L = testing allowance (makeup water), in gallons per hour				
S = length of pipe tested, in feet				
D = nominal diameter of the pipe, in inches				
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)				
Flushing tests	New underground piping flushed according to _____ standard by (company)			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	If no, explain			
	How flushing flow was obtained		Through what type opening	
	<input type="checkbox"/> Public water <input type="checkbox"/> Tank orreservoir <input type="checkbox"/> Fire pump		<input type="checkbox"/> Hydrant butt <input type="checkbox"/> Open pipe	
Lead-ins flushed according to _____ standard by (company)				
<input type="checkbox"/> Yes <input type="checkbox"/> No				
If no, explain				
How flushing was obtained		Through what type opening		
<input type="checkbox"/> Public water <input type="checkbox"/> Tank orreservoir <input type="checkbox"/> Fire pump		<input type="checkbox"/> Y connectionto flange andspigot <input type="checkbox"/> Open pipe		

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CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING (Continued)

Hydrostatic test	All underground piping hydrostatically tested at _____ psi for _____ hours		Joints covered <input type="checkbox"/> Yes <input type="checkbox"/> No	
Leakage test	Total amount of leakage measured _____ psi for _____ hours			
	Allowable leakage _____ psi for _____ hours			
Forward flow test of backflow preventer	Forward flow test performed in accordance with 6.10.2.5.2: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Hydrants	Number installed	Type and make	All operate satisfactorily <input type="checkbox"/> Yes <input type="checkbox"/> No	
Control valves	Water control valves left wide open If no, state reason <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Hose threads of fire department connections and hydrants interchangeable with those of fire department answering alarm <input type="checkbox"/> Yes <input type="checkbox"/> No			
Remarks	Date left in service			
Signatures	Name of installing contractor			
	Tests witnessed by			
	For property owner (signed)	Title	Date	
For installing contractor (signed)	Title	Date		

Additional explanation and notes:





FIRE PUMP WEEKLY INSPECTION

Property Name: _____ Inspector: _____

Property Address: _____ Contract No.: _____

Property Phone Number: _____ Date: _____

Inspections: Weekly

Pump House

- | | | | |
|-----|----|-----|---|
| Yes | No | N/A | Heat in pump room is 40°F (4°C) or higher |
| Yes | No | N/A | Ventilation louvers are free to operate |
| Yes | No | N/A | Excessive water does not appear on the floor |
| Yes | No | N/A | Coupling guard is in place |
| Yes | No | N/A | Heat in pump room is not less than 70°F (21°C) for diesel engine pump without engine heater |

Pump Systems

- | | | | |
|-----|----|-----|---|
| Yes | No | N/A | Pump suction, discharge, and bypass valves are open |
| Yes | No | N/A | No piping or hoses leak |
| Yes | No | N/A | Fire pump leaking one drop of water per second at seals |
| Yes | No | N/A | Suction line pressure is within acceptable range |
| Yes | No | N/A | System line pressure is within acceptable range |
| Yes | No | N/A | Suction reservoir is full |
| Yes | No | N/A | Wet pit suction screens are unobstructed and in place |
| Yes | No | N/A | Waterflow test valves are in closed position, hose connection valve is closed, and the line to test valves is free of water |

Electrical Systems

- | | | | |
|-----|----|-----|--|
| Yes | No | N/A | Controller pilot light (power on) is illuminated |
| Yes | No | N/A | Transfer switch normal power light is illuminated |
| Yes | No | N/A | Isolating switch for standby power is closed |
| Yes | No | N/A | Reverse-phase alarm light is not illuminated |
| Yes | No | N/A | Normal-phase rotation light is illuminated |
| Yes | No | N/A | Oil level in vertical motor sight glass is within acceptable range |
| Yes | No | N/A | Pressure maintenance (jockey) pump has power |

Diesel Engine Systems

- | | | | |
|-----|----|-----|---|
| Yes | No | N/A | Diesel fuel tank is at least two-thirds full |
| Yes | No | N/A | Controller selector switch is in "auto" position |
| Yes | No | N/A | Voltage readings for batteries (2) are within acceptable range |
| Yes | No | N/A | Charging current readings are within acceptable range for batteries |
| Yes | No | N/A | Pilot lights for batteries are "on" or battery failure pilot lights are "off" |



FIRE PUMP WEEKLY INSPECTION (Continued)

Inspections: Weekly

Yes	No	N/A	All alarm pilot lights are "off"
Yes	No	N/A	Record engine running time from meter
Yes	No	N/A	Oil level is within acceptable range in right angle gear drive pumps
Yes	No	N/A	Crankcase oil level is within acceptable range
Yes	No	N/A	Cooling water level is within acceptable range
Yes	No	N/A	Electrolyte level in batteries is within acceptable range
Yes	No	N/A	Battery terminals are free of corrosion
Yes	No	N/A	Water-jacket heater is operational
Yes	No	N/A	Battery cranking voltage exceeds 9 volts for a 12 volt system and 18 volts for a 24 volt system (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Water pump(s) is not leaking (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Jacket water heater operational (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Flexible hose and connections are in good operating condition (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Check lube oil heater for operation (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Oil lube level is within acceptable range (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Check for water in diesel fuel tank (Alternative ITM A.8.1.1.2)
Steam System			
Yes	No	N/A	For steam-driven pumps, steam pressure is within acceptable range
Exhaust System			
Yes	No	N/A	Examine exhaust system for leaks (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Drain condensate trap (Alternative ITM A.8.1.1.2)

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

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FIRE PUMP WEEKLY OPERATING TESTS

Property Name: _____ Inspector: _____

Property Address: _____ Contract No.: _____

Property Phone Number: _____ Date: _____

Inspections: Weekly

Pump Systems

Yes	No	N/A	Record pump starting pressure _____ psi
Yes	No	N/A	Operate fire pump for 10 minutes (30 minutes for diesel pump)
Yes	No	N/A	Check packing gland tightness (slight leak at no flow)
Yes	No	N/A	Record suction pressure from gauge in _____ psi
Yes	No	N/A	Record discharge pressure from gauge in _____ psi
Yes	No	N/A	Adjust gland nuts if necessary
Yes	No	N/A	Check for unusual noise or vibration
Yes	No	N/A	Check packing boxes, bearings, or pump casing for overheating
Yes	No	N/A	Record pressure switch or pressure transducer and compare with pump discharge gauge
Yes	No	N/A	Record pumps highest _____ psi and lowest _____ psi pressure on the fire pump control log
Yes	No	N/A	Circulation relief valve functions correctly
Yes	No	N/A	Check fuel system solenoids for proper operation (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Check tank float switch for proper operation (Alternative ITM A.8.1.1.2)

Electrical Systems

Yes	No	N/A	Record time controller is on first step (for reduced voltage or reduced current starting)
Yes	No	N/A	Observe time for motor to accelerate to full speed
Yes	No	N/A	Record time pump runs after starting for pumps having automatic stop feature

Diesel Engine Systems

Yes	No	N/A	Record time for diesel engine to crank
Yes	No	N/A	Record time for diesel engine to reach running speed
Yes	No	N/A	Check oil pressure gauge, speed indicator and water and oil temperatures while engine is running
Yes	No	N/A	Check heat exchanger for cooling water flow
Yes	No	N/A	Operate speed governor (internal combustion engine only)

Steam System

Yes	No	N/A	Observe the time for turbine to reach running speed
Yes	No	N/A	Record steam pressure for steam-operated pumps
Yes	No	N/A	Check steam trap
Yes	No	N/A	Check steam relief valve

Record any notes that the inspector believes to be significant in the corresponding action's comments field.

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FIRE PUMP WEEKLY OPERATING TESTS (Continued)

Comments

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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FIRE PUMP MONTHLY INSPECTION, TESTING, AND MAINTENANCE

Property Name: _____

Inspector: _____

Property Address: _____

Contract No.: _____

Property Phone Number: _____

Date: _____

Frequency: Monthly

Action

Electric Fire Pump

Yes	No	N/A	Test	Non-flow test — operate 10 minutes
Yes	No	N/A	Test	Record pump starting pressure
Yes	No	N/A	Test	Check packing gland tightness (slight leak at no flow)
Yes	No	N/A	Test	Record suction pressure from gauge _____ psi (bar)
Yes	No	N/A	Test	Record discharge pressure from gauge _____ psi (bar)
Yes	No	N/A	Test	Adjust gland nuts if necessary
Yes	No	N/A	Test	Check for unusual noise or vibration
Yes	No	N/A	Test	Record pressure switch or pressure transducer and compare with pump discharge gauge
Yes	No	N/A	Test	Record pumps highest _____ psi and lowest _____ psi pressure on the fire pump control log
Yes	No	N/A	Test	Circulation relief valve functions correctly
Yes	No	N/A	Test	Record time controller is on first step (for reduced voltage or reduced current starting)

Electrical System

Yes	No	N/A	Test	Exercise isolating switch and circuit breaker (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Circuit breakers or fuses (Alternative ITM A.8.1.1.2)

Battery System

Yes	No	N/A	Inspect	Case exterior clean and dry (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Test	Specific gravity or state of charge (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Charger and charge rate (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Equalize charge (Alternative ITM A.8.1.1.2)



FIRE PUMP MONTHLY INSPECTION, TESTING, AND MAINTENANCE (Continued)

Comments:

Comments:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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FIRE PUMP QUARTERLY INSPECTION, TESTING, AND MAINTENANCE

Property Name: _____

Inspector: _____

Property Address: _____

Contract No.: _____

Property Phone Number: _____

Date: _____

Frequency: Quarterly

Action

Diesel Engine System

Fuel

Yes	No	N/A	Clean	Strainer, filter, or dirt leg, or combination thereof (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect/Change/Test	Crankcase breather (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Clean	Water strainer (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Insulation and fire hazards (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Terminals clean and tight (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Wire chafing where subject to movement (Alternative ITM A.8.1.1.2)

Comments:

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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FIRE PUMP SEMIANNUAL INSPECTION, TESTING, AND MAINTENANCE

Property Name: _____ Inspector: _____

Property Address: _____ Contract No.: _____

Property Phone Number: _____ Date: _____

Frequency: Semiannual			Action	Electric Fire Pump System
				Electrical System
Yes	No	N/A	Test	Operate manual starting means (Alternative ITM A.8.1.1.2)
				Diesel Engine System
				Cooling System
Yes	No	N/A	Test	Antifreeze protection level (Alternative ITM A.8.1.1.2)
				Exhaust System
Yes	No	N/A	Inspect	Flexible exhaust section (Alternative ITM A.8.1.1.2)
				Electrical System
Yes	No	N/A	Inspect/Test	Operation of safeties and alarms (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Clean	Boxes, panels, and cabinets (Alternative ITM A.8.1.1.2)

Comments:

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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FIRE PUMP ANNUAL INSPECTION, TESTING, AND MAINTENANCE

Property Name: _____

Inspector: _____

Property Address: _____

Contract No.: _____

Property Phone Number: _____

Date: _____

Frequency: Annual			Action	Electric Fire Pump
Pump System				
Yes	No	N/A	Inspect/Change (as needed)	Lubricate bearings
Yes	No	N/A	Test	Power transfer switch
Yes	No	N/A	Inspect	Check parallel and angular alignment
Yes	No	N/A	Test	Main relief valve
Yes	No	N/A	Inspect	Check flexible hoses and connections
Yes	No	N/A	Inspect	Check plumbing parts — inside and outside panels
Yes	No	N/A	Inspect	Check pump shaft end play
Yes	No	N/A	Inspect/Change	Check accuracy of pressure gauges and sensors
Yes	No	N/A	Inspect	Pump coupling alignment
Mechanical Transmission				
Yes	No	N/A	Change	Lubricate coupling (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Change	Lubricate right angle gear drive (Alternative ITM A.8.1.1.2)
Electrical System				
Yes	No	N/A	Inspect	Corrosion on printed circuit boards
Yes	No	N/A	Inspect	Cracked cable/wire insulation
Yes	No	N/A	Test	Electronic control module (ECM)
Yes	No	N/A	Maintenance	Sacrificial anode
Yes	No	N/A	Test	Trip circuit breaker (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect/Test	Operate emergency manual starting means (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Lubricate mechanical moving parts (except starters and relays) (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Calibrate pressure switch settings (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Lubricate motor bearings (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Leaks in plumbing parts (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Signs of water on electrical parts (Alternative ITM A.8.1.1.2)

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FIRE PUMP ANNUAL INSPECTION, TESTING, AND MAINTENANCE (Continued)

Frequency: Annual				Diesel Engine System
				Pump System
Yes	No	N/A	Test	Main relief valve
				Fuel
Yes	No	N/A	Test	Diesel fuel
Yes	No	N/A	Test	Fuel pump alarm signals
Yes	No	N/A	Maintenance	Active fuel maintenance system
Yes	No	N/A	Clean	Change fuel filter every 50 operating hours or annually
Yes	No	N/A	Clean	Water/foreign material in tank (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect/Test	Tank vents and overflow piping unobstructed
Yes	No	N/A	Inspect	Fuel tank piping (Alternative ITM A.8.1.1.2)
				Lubrication System
Yes	No	N/A	Change	Oil change (50 hour maximum)
Yes	No	N/A	Change	Oil filter(s) (50 hour maximum)
				Cooling System
Yes	No	N/A	Maintenance	Replace circulating water filter
Yes	No	N/A	Test	Supervisory signal for high cooling water temperature
Yes	No	N/A	Inspect	Antifreeze (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Clean	Heat exchanger (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect/Change	Duct work/louvers (Alternative ITM A.8.1.1.2)
				Exhaust System
Yes	No	N/A	Inspect	Check exhaust system and drain condensate trap
Yes	No	N/A	Test	Check for excessive backpressure
Yes	No	N/A	Inspect	Hangers and support in good condition (Alternative ITM A.8.1.1.2)
				Battery System
Yes	No	N/A	Maintenance	Check specific gravity, state of charge, and charger rates
Yes	No	N/A	Maintenance	Clean terminals
Yes	No	N/A	Maintenance	Check battery cranking voltage exceeds 9 volts for a 12 volt system and 18 volts for a 24 volt system
Yes	No	N/A	Maintenance	Ensure only distilled water is used



FIRE PUMP ANNUAL INSPECTION, TESTING, AND MAINTENANCE (Continued)

Frequency: Annual				Electrical System
Yes	No	N/A	Inspect	Corrosion on printed circuit boards
Yes	No	N/A	Test	Electrical control module (ECM)
Yes	No	N/A	Inspect	Tighten control and power wiring connectors (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Voltmeter and ammeter for accuracy (5%) (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Cracked cable/wire insulation (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Leaks in plumbing parts (Alternative ITM A.8.1.1.2)
Yes	No	N/A	Inspect	Signs of water on electrical parts (Alternative ITM A.8.1.1.2)

Comments:

Signature:

Date:

Contractor Name:

Contractor Address:

License/Certification No.:

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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FIRE PUMP ANNUAL PERFORMANCE TEST

Contractor Information

Name: _____

Address: _____

Phone: _____

Fax: _____

Job Name: _____

Job No.: _____

Test Date: _____

Test performed for:

Test location:

Test Method:

Test header

Flow meter to drain or suction reservoir

Flowmeter back to suction (closed-loop metering)

Pump Nameplate Information: _____

Make: _____

Model: _____

Stages: _____

Coupling: _____

SN: _____

Imp. Diam.: _____

Speed: _____

Rating Capacity: _____

Rated Pressure: _____

Motor Nameplate Information: _____

Make: _____

SN: _____

Volts: _____

Amps: _____

Frame: _____

Speed: _____

HP: _____

Water Supply Type:**Pump Controller Nameplate Information:** _____

Make: _____

Model: _____

SN: _____

Time set for _____ minutes

Turns on at: _____

Turns off at: _____



FIRE PUMP ANNUAL PERFORMANCE TEST (Continued)

Pressure Maintenance Pump Nameplate Information: _____

Make: _____

Model: _____

SN: _____

Speed: _____

HP: _____

Volts: _____

Pressure Maintenance Pump Controller Nameplate Information: _____

Make: _____

Model: _____

SN: _____

Turns on at: _____

Turns off at: _____

Flow Test

- | | | |
|--|-----|----|
| A. Is a copy of the manufacturer's certified pump test curve attached? | Yes | No |
| B. Test results compared to the manufacturer's certified pump test curve? | Yes | No |
| C. Gauges and other test equipment calibrated? | Yes | No |
| D. No vibrations that could potentially damage any fire pump component? | Yes | No |
| E. The fire pump performed at all conditions without objectionable overheating of any component? | Yes | No |
| F. For each test, record the required information for each load condition using the following formulas (or other acceptable methods) and tables: | | |

$$P_{\text{Net}} = P_{\text{Discharge}} - P_{\text{Suction}}$$

$$Q = 29.83 cd^2 P^{0.5}$$

$$Pv = 0.43352V^2/(2g) = (Q^2)/(890.47D^4)$$

where:

- P_{Net} = net pump pressure (psi)
- $P_{\text{Discharge}}$ = total pressure at the pump discharge (psi)
- P_{Suction} = total pressure at the pump suction (psi)
- Q = flow through a circular orifice (gpm)
- c = nozzle discharge coefficient
- d = nozzle orifice diameter (in.)
- P = pressure measured on gauge (pitot)
- Pv = velocity pressure (psi)
- V = velocity of liquid (ft/sec)
- g = gravitational constant (32.174 ft/sec)
- D = internal pipe diameter (in.)



FIRE PUMP ANNUAL PERFORMANCE TEST (Continued)

Test	Pump speed (rpm)	Suction pressure (psi)	Discharge pressure (psi)	Nozzle size (in.)						Flow (gpm)	Net pressure (psi)	Rpm adjusted net pressure	Rpm adjusted flow (psi)	Suction velocity pressure (psi) ¹	Discharge velocity pressure (psi) ¹	Velocity adjusted pressure (psi) ¹	Oil pressure (psi) ²	Exhaust back pressure (in. Hg) ²	Diesel water temperature ²	Cooling loop pressure (psi) ²												
				Nozzle coefficient																												
				Pitot readings (psi)																												
				1	2	3	4	5	6																							
0%																																
25%																																
50%																																
75%																																
100%																																
125%																																
150%																																
0%																																
100%																																
150%																																
Pump is				constant speed				variable speed																								

Notes:

¹Velocity pressure adjustments provide a more accurate analysis in most cases and as a minimum should be included whenever the pump suction and discharge diameters are different and the pump fails by a narrow margin. The actual internal diameter of the pump suction and discharge should be obtained from the manufacturer.

²These readings are applicable to diesel engine pumps only. Recording these readings is not specifically required in Chapter 14.



FIRE PUMP ANNUAL PERFORMANCE TEST (Continued)

For electric motor–driven pumps also record:

Test	Voltage			Amperes		
	L1-L2	L2-L3	L1-L3	L1	L2	L3
0%						
25%						
50%						
75%						
100%						
125%						
150%						
0%						
100%						
150%						

G. For electric motors operating at rated voltage and frequency, is the ampere demand less than or equal to the product of the full load ampere rating times the allowable service factor as stamped on the motor nameplate? Yes No N/A

H. For electric motors operating under varying voltage:

1. Was the product of the actual voltage and current demand less than or equal to the product of the rated full load current times the rated voltage times the allowable service factor? Yes No N/A
2. Was the voltage always less than 5% above the rated voltage during the test? Yes No N/A
3. Was the voltage always less than 10% above the rated voltage during the test? Yes No N/A

I. Did engine-driven units operate without any signs of overload or stress? Yes No N/A

J. Was the engine overspeed emergency shutdown tested? Yes No N/A

K. Was the governor set to properly regulate the engine speed at rated pump speed? Yes No N/A

L. Did the gear drive assembly operate without excessive objectionable noise, vibration, or heating? Yes No N/A

M. Was the fire pump unit started and brought up to rated speed without interruption under the conditions of a discharge equal to peak load? Yes No N/A

N. Did the fire pump performance equal the manufacturer's factory curve within the accuracy limits of the test equipment? Yes No N/A

O. Did the electric motor pumps pass phase reversal test on normal and alternate (if provided) power? Yes No N/A



FIRE PUMP ANNUAL PERFORMANCE TEST (Continued)

Multiple Pump Operation

- A. fire pumps are required to operate in series in parallel N/A to meet the maximum fire protection demand.
B. Record the following information for each of the pumps operating simultaneously

C. Did the fire pump performance equal the manufacturer's factory curve within the accuracy limits of the test equipment during the multiple test?

Yes No N/A

Additional Tests

Transfer Switch

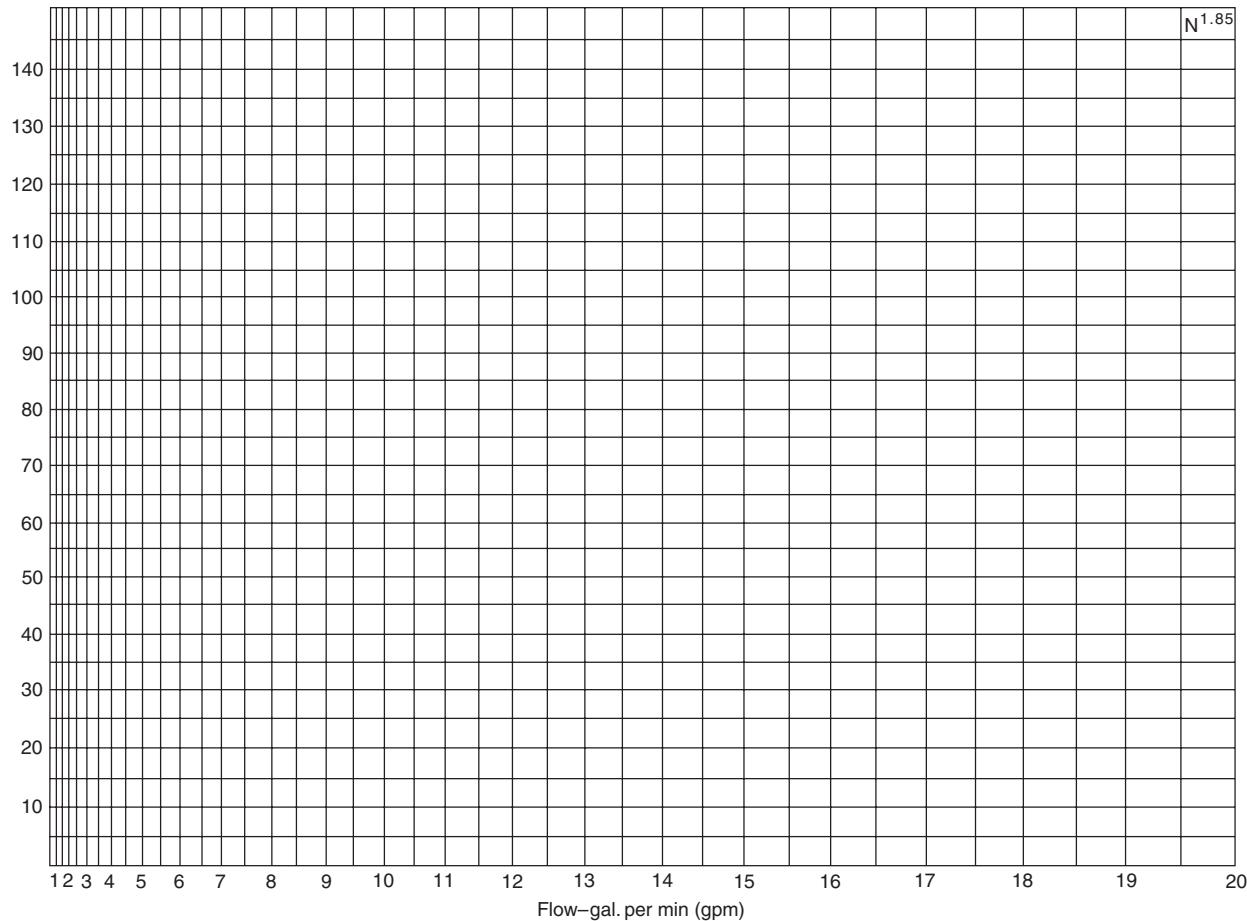
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FIRE PUMP ANNUAL PERFORMANCE TEST (Continued)

Yes	No	N/A	Pump room temperature control is functioning and being maintained at appropriate temperatures
Yes	No	N/A	Parallel and angular alignment of the pump verified
Yes	No	N/A	Fire pump supplies 100 percent of the rated flow
Yes	No	N/A	Net pressure at each flow point is at least 95% of either the original manufacturers pump curve, original unadjusted field test curve, or test curve generated from the fire pump nameplate.



Comments

Controller: Work shall be completed, to the extent that such work can be completed without opening an energized electric motor-driven fire pump controller.

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POSSIBLE CAUSES OF PUMP TROUBLES

Fire pump troubles	Suction		Pump															Driver and/or Pump		Driver											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Excessive leakage at stuffing box																															
Pump or driver overheats																															
Pump unit will not start																															
No water discharge																															
Pump is noisy or vibrates																															
Too much power required																															
Discharge pressure not constant for same gpm																															
Pump loses suction after starting																															
Insufficient water discharge																															
Discharge pressure too low for gpm discharge																															

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