Hopewell Valley Bureau of Fire Safety
201 Washington Crossing Pennington Rd
Titusville, NJ 08560
609-730-8156 fax 609-730-1563

Water Mist Systems

Inspection, Testing, and Maintenance of Water Mist Systems

Name of Property: _____ **Inspector:** _____

Address: _____ **Contract No.:** _____

Phone Number: _____ **Date:** _____

This Report Covers: ☐ **Monthly** ☐ **Quarterly** ☐ **Annual**
☐ **Other**

Inspections

Monthly

☐ Yes ☐ No ☐ N/A Water storage tank—sight glass valves are open

☐ Yes ☐ No ☐ N/A Water circulation tank—water level is full (unsupervised)

Compressed Gas Cylinders

☐ Yes ☐ No ☐ N/A Cylinder pressure _____ psi (bar) unsupervised

☐ Yes ☐ No ☐ N/A Cylinder control valve is open

☐ Yes ☐ No ☐ N/A Plant air, compressor, and receiver (supervised)

Air pressure _____ psi (bar)

Standby Pump

☐ Yes ☐ No ☐ N/A Compressed gas supply inlet air pressure _____ psi (bar)

Outlet water pressure _____ psi (bar)

Pneumatic Valves

☐ Yes ☐ No ☐ N/A Cylinder valves in correct (open or closed) position

☐ Yes ☐ No ☐ N/A Master release valves in correct (open or closed position)

System Control Valves

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

☐ Yes ☐ No ☐ N/A Sealed, locked, or supervised

☐ Yes ☐ No ☐ N/A Accessible

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

☐ Yes ☐ No ☐ N/A Proper signage

Nozzles

☐ Yes ☐ No ☐ N/A In place, pointed in the intended direction, and free from external loading and corrosion

☐ Yes ☐ No ☐ N/A Blow-off cap (if required) in place and free to operate

Fire Pumps—Electrical Systems

☐ Yes ☐ No ☐ N/A Exercise isolating switch

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☐ Yes ☐ No ☐ N/A Circuit breakers and circuit breaker fuses

Fire Pumps—Battery Systems

☐ Yes ☐ No ☐ N/A Remote corrosion, case clean and dry

☐ Yes ☐ No ☐ N/A Specific gravity/state or charge

☐ Yes ☐ No ☐ N/A Charter/charge rate

☐ Yes ☐ No ☐ N/A Equalize charge

Quarterly

☐ Yes ☐ No ☐ N/A Water supply pressure _____ psi

☐ Yes ☐ No ☐ N/A Water storage tank—water level is full

☐ Yes ☐ No ☐ N/A Water tank pressure _____ psi

☐ Yes ☐ No ☐ N/A Water storage cylinder (high pressure) water level is full (unsupervised)

☐ Yes ☐ No ☐ N/A Additive storage cylinder general condition

☐ Yes ☐ No ☐ N/A Water recirculation tank—water level is full (supervised)

☐ Yes ☐ No ☐ N/A Compressed gas cylinder support frame and restraints

☐ Yes ☐ No ☐ N/A Compressed gas cylinder pressure _____ psi

☐ Yes ☐ No ☐ N/A Moisture trap and oil injection in good condition

☐ Yes ☐ No ☐ N/A Release valve tubing in good condition

Pipe and Fittings

☐ Yes ☐ No ☐ N/A Free of mechanical damage

☐ 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

Semi-annual

☐ Yes ☐ No ☐ N/A Water supply source in good condition

☐ Yes ☐ No ☐ N/A Water tank valves and appurtenances in good condition

☐ Yes ☐ No ☐ N/A Water storage cylinder is full

☐ Yes ☐ No ☐ N/A Additive agent level is full

☐ Yes ☐ No ☐ N/A Air compressor/receiver capacity checked

☐ Yes ☐ No ☐ N/A Enclosure integrity verified

Annual

☐ Yes ☐ No ☐ N/A Water supply source in good condition

☐ Yes ☐ No ☐ N/A Interior of water tank inspected

☐ Yes ☐ No ☐ N/A Water quality checked

☐ Yes ☐ No ☐ N/A Water temperature _____ °F (_____ °C)

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High-Pressure Water Storage Cylinder

☐ Yes ☐ No ☐ N/A Support frame/restraints in good condition

☐ Yes ☐ No ☐ N/A Vent plugs function during refiring

☐ Yes ☐ No ☐ N/A Filters on refill connection in good condition

☐ Yes ☐ No ☐ N/A Water recirculation tank supports and attachments in good condition

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

☐ Yes ☐ No ☐ N/A Air supply moisture content acceptable

Test

Quarterly

☐ Yes ☐ No ☐ N/A Test start/stop pressure settings for standby pump

_____ psi start _____ psi stop

Annual

☐ 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

Water Recirculation Tank

☐ Yes ☐ No ☐ N/A Low water level alarm functions

☐ 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

☐ Yes ☐ No ☐ N/A Air supply capacity and duration tested

Pump Performance Test

Use Form 19, Fire Pumps Annual Performance Tests

Pneumatic Valves

☐ Yes ☐ No ☐ N/A Solenoid release of master valve functions

☐ Yes ☐ No ☐ N/A Manual release of master valve functions

☐ Yes ☐ No ☐ N/A Slave valves operate correctly

☐ Yes ☐ No ☐ N/A All pneumatic cylinder release valves reset

☐ Yes ☐ No ☐ N/A On-off cycling of valves tested

☐ Yes ☐ No ☐ N/A All control valves operated through full range of motion and returned to normal position

☐ Yes ☐ No ☐ N/A Range of motion and returned to normal position

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☐ Yes ☐ No ☐ N/A Trip test of dry and preaction water mist system

Full Flow Trip Test

☐ Yes ☐ No ☐ N/A Unobstructed discharge from all nozzles

☐ Yes ☐ No ☐ N/A Pressure reading at control valve

☐ 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

☐ Yes ☐ No ☐ N/A Cylinders—hydrostatic test every 5-½ years

Maintenance

Semi-annual

☐ Yes ☐ No ☐ N/A Air supply filters and moisture traps cleaned

☐ Yes ☐ No ☐ N/A Water recirculation tank filters, strainers and cyclone separator cleaned

	Check	Change	Clean	Test
Pump System				
Lubricate bearings	☐	☐	☐	☐
Check pump shaft end play	☐	☐	☐	☐
Pressure gauge/sensors (check accuracy)	☐	☐	☐	☐
Pump coupling alignment	☐	☐	☐	☐
Electrical System				
Trip circuit breaker	☐	☐	☐	☐
Operate manual starting means	☐	☐	☐	☐
Operate emergency manual starting means	☐	☐	☐	☐
Tighten electrical connections (as necessary)	☐	☐	☐	☐
Lubricate mechanical moving parts (except starters and relays)	☐	☐	☐	☐
Calibrate pressure	☐	☐	☐	☐
Switch settings	☐	☐	☐	☐
Lubricate motor bearings	☐	☐	☐	☐

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Comments

Company _____ DFS-P# _____

Technician Name _____ Phone _____ Fax _____

Signature_____ Date _____

Business Representative _____ Phone_____

Signature _____ Date _____