SUGGESTIONS FOR CONDUCTING THE FIRE PROTECTION EQUIPMENT INSPECTION

WEEKLY CHECKLIST

The following should be completed weekly.

Water Supply, Sectional and Sprinkler System Control Valves

- Identify each fire protection valve. Where valves are not already identified, establish an identification system such as numbers for sprinkler control valves and letters for all other valves. Use of building or area numbers as prefixes will aid in identifying the area controlled by each valve.
- Visually inspect each valve to make sure it is open and sealed. Mark the form accordingly.
- If a valve is found unsealed, confirm that it is open by turning the valve wrench or wheel to the full open position. The wrench or wheel should then be backed off slightly and the valve resealed. Where possible, a drain test should be performed downstream of the valve to confirm that it is open. See Quarterly Checklist, first paragraph, third bullet, for the specific test procedure. If a valve is locked, it should also be sealed.
- If a valve is found shut, investigate the reason for the closure and promptly have it opened if appropriate. Follow AXA XL Risk Consulting's RSVP (Restore Shut Valves Promptly) Procedures. (See *OVERVIEW* Section 1 [PRC.1.1.0].) Indicate the reason for the closure under the Additional Comments and Recommendations section on the form.

Wet Pipe, Dry Pipe, Deluge and Pre-Action Sprinkler Systems

- Check each dry pipe system for adequate air pressure. This pressure should be 20 psi (1.4 bar) above the trip pressure of the dry pipe valve. The AXA XL Risk Consulting's representative can identify the trip pressure. If the pressure is low, it should be corrected.
- Check each deluge or pre-action system for proper supervisory air pressure.
- Check the temperature in buildings protected by wet pipe sprinkler systems and in enclosures containing dry pipe, deluge and pre-action valves. The temperature in these areas is considered adequate if it is at least 40°F (4.4°C). During periods of extremely cold weather, such as when temperatures remain below freezing for an extended period, temperatures should be checked daily.

Public Water Supply

- Indicate whether the public water supply is in service. Record the static pressure reading of the public water supply. If the reading is below normal, make an appropriate notation on the form. Where private pumps, gravity tanks or pressure tanks supply the same system, take the static pressure reading on the public water supply side of the check valve. If not already provided, a pressure gauge should be installed at that location.
- Confirm that the backflow preventer is in operational condition. For reduced pressure assemblies and reduced pressure detector assemblies, ensure the differential-sensing valve relief port is not continuously discharging.
- Manually check the fire department connections for conditions noted on the inspection form. If caps are missing from the inlets, confirm that there is no debris in the piping up to the check valve before reinstalling the caps.

Fire Pumps

- Suitably identify each fire pump at the facility.
- Complete a fire pump checklist for each pump.

Water Supply Tanks

- Identify the tanks by number or other suitable means.
- Visually examine each tank for leaks or structural problems, such as external corrosion, broken ladders and broken tie rods.
- Check the water level of each tank to verify that it is full. Gravity and suction tanks should be overflowed when weather permits.
- During cold weather, verify on a daily basis that the heater is operational and record the water temperature. Tank water temperature should be at least 42°F (5.5°C) at all times.

Automotive Fire Apparatus

- Determine that each piece of apparatus is ready for immediate use, making an appropriate notation on the inspection form.
- Prepare an Automotive Fire Apparatus Checklist for each unit. PRC.1.12.0.C contains a suggested checklist. This checklist should be customized for each piece of apparatus.

Special Extinguishing Systems

- Identify all special extinguishing systems by the hazard protected or other suitable means.
- Indicate the type of system. Types include carbon dioxide, dry chemical, foam, foam-water, halon or other clean agent systems, explosion suppression and spark extinguishing systems.
- Inspect each system to be sure it is in service.
- Indicate the date the system was last serviced.
- Indicate the date the system was last tested.

Fire Doors

- Ascertain that all fire doors and shutters are in good condition. Test the action of automatic sliding and counter-balanced doors by manually raising the counterweight to see if the door closes. The metal cladding on the doors should be inspected to make sure it has not been damaged. All necessary hardware, including latches, guides and thresholds where provided, should be inspected.
- Complete a fire door checklist.

MONTHLY CHECKLIST

The following should be completed monthly.

Wet Pipe, Dry Pipe, Deluge and Pre-Action Sprinkler Systems

- Visually spot check the condition of pipe hangers, piping and fittings. Look for corrosion, stock too close, missing hangers and material hanging from sprinkler piping.

Fire Pumps

- Complete the fire pump checklist for each pump.

Fire Extinguishers, Inside Hose Connections and Standpipes

- Inspect each fire extinguisher, inside hose connection and standpipe to determine that the unit is in service and accessible.

- Complete a Fire Extinguisher and Inside Hose Connection Report form. PRC.1.12.0.D contains a suggested form. This form may be customized as necessary.

Hydrants, Hose Houses, and Monitor Nozzles

- Identify each hydrant, hose house and monitor nozzle at the facility.
- Check each monitor nozzle and hydrant to be sure that it is accessible and properly drained. Hydrant caps should be easily removable and hose gate valves should be free to turn. In cold weather, the hose gate valves should be left half-open to prevent damage from freezing.
- One way to determine if the hydrant is drained is to remove a hydrant cap and strike the opening smartly with the palm of the hand. A deep, hollow sound indicates a drained barrel.
- Make sure that the locking mechanism for each monitor nozzle operates freely. Nozzle tips should turn freely. Where monitor nozzles are pre-aimed and pre-adjusted, the settings should be visually checked to verify that they are proper.
- Check the equipment in each hose house to be certain that it is adequate and in good condition. A list of the equipment that should be present should be posted inside each hose house.

Fire Doors

- Ascertain that all fire doors and shutters are in good condition. Test the action of automatic sliding and counter-balanced doors by manually raising the counterweight to see if the door closes. Operate the fire doors occasionally by disconnecting the fusible links. The metal cladding on the doors should be inspected to make sure it has not been damaged. All necessary hardware, including latches, guides and thresholds where provided, should be inspected. The checklist should be completed.
- Make certain that automatic closing mechanisms are operable. Fusible links should be checked to be sure that they are free of paint and other foreign material. Other releasing devices should be tested to verify their operability.
- Inspect the area around vents to be sure that clearance is available to allow full operation. Explosion vents should be unobstructed and the path of the vents is clear of material that could become missiles.

Protective Signaling Systems

- Test the systems in accordance with the instructions contained in the NFPA 72 and PRC.11.1.1.0. Such tests will verify the proper operation of alarm, supervisory and trouble signals.
- When possible accompany the protective signaling system contractors when they examine equipment and perform tests.

QUARTERLY CHECKLIST

The following should be completed quarterly.

Wet Pipe, Dry Pipe, Deluge and Pre-Action Sprinkler Systems

- Identify all sprinkler systems by number, area protected or other suitable means.
- Test all sprinkler system alarms using proper test connections and procedures.

***CAUTION**: Before starting the test, notify the fire department and the central, remote or proprietary station alarm service as necessary*.

Test wet pipe sprinkler system alarms using the inspector's test connection to simulate the operation of a single sprinkler head. This connection is normally located near the end of the system. In a multi-story building, the connection is usually found on the top floor. Dry pipe, deluge and pre-action sprinkler system alarms are tested by opening the alarm test bypass valve. When

testing the alarm for a dry pipe system, hold in the plunger on the automatic drain from the dry pipe valve as the bypass valve is slowly opened.

***CAUTION**: While a trickle of water from the automatic drain is normal, a heavy flow could result in the accidental tripping of the dry pipe valve. When a heavy flow is noted, the bypass valve should be shut immediately*.

- Conduct a "drain test" on each system to determine if the valves controlling the sprinkler systems are open.

***CAUTION**: Before opening the drain valve, make certain that the fire department and appropriate alarm service have been notified and that the drain is clear and discharges to a safe location*.

To conduct this test, read "static" and "flowing" pressures on the gauge connected below each wet pipe, dry pipe, deluge or pre-action valve. Open the system drain valve fully and flow water until the pressure stabilizes. Record this flowing pressure.

Close the drain valve slowly to avoid creating an artificially high pressure due to water hammer. Then record the static pressure. Static pressure taken during this test may vary slightly from the pressure of previous tests due to normal variations in water supply usage.

The difference between the static and flowing pressures represents the pressure loss between the supply and the riser gauge connection with water discharging through the fully open drain valve. This differential is important and should approximate the differential recorded on the RSVP riser label. If the differential increases materially from that shown on the label, the cause should be investigated. If the static pressure does not return promptly to normal, the reason should be determined and corrective action taken as necessary.

Fire pumps should be left on during drain tests. This will ensure the integrity of vital water supplies should a fire occur during these tests.

Fire Pumps

- Complete the fire pump checklist for each pump.

Protective Signaling Systems

- The systems should be tested in accordance with the instructions contained in the NFPA 72. Such tests will verify the proper operation of alarm, supervisory and trouble signals.

Other Protection Deficiencies

- Check for deficiencies in the items listed.
- Note the location of the deficiencies.

Record the deficiencies or recommendations, which should be called to the attention of the reviewer.