

SPRINKLER SYSTEM PM CHECKLIST SAND2012-2931P

BUILDING: 959

Quarterly Inspection: ☐

Annual Inspection: ☐

MAXIMO PM WORK ORDER NUMBER: _____

Maintenance Zone: 6

INSPECTOR(S): _____ COMPLETION DATE: _____

FIRE PROTECTION ENGINEER REVIEW: _____ DATE: _____

Transmitter: 0959	Area: TA2	MAXIMO #: 1113079	Maint. Zone: 6	NO ACTION Phone #: 284-9649
Building(s): 928, 958, 958H, 959, TP261,262,264,265	FACP: EST QS4-12	Configuration: Addressable		

DISABLING FACP INPUTS/OUTPUTS

NACs: SW1 - Disable NACs

HVAC Controls: n/a

Elevator Controls: n/a

Misc. Controls: n/a

Waterflow Devices: M141: Building 928 Riser Pressure Switch
M137: Building 959 Riser Pressure Switch
M139: Building 958 Riser Pressure Switch
M143: Building 958H Riser Pressure Switch

Tampers: M144: Building 958H RPBFP OS&Y, Valve Tampers
M140: Building 958 Low Air Pressure Switch

SPECIAL INSTRUCTIONS

958 SPRINKLER SYSTEM AIR COMPRESSOR:
Location: Equipment Room (MAXIMO# 1029160)
AC Circuit: Panel A, Ckt.# 38

SPRINKLER SYSTEM IMPAIRMENT INSTRUCTIONS

QUARTERLY / ANNUAL MAINTENANCE: (future)

1. Put FACP in "NO ACTION".
2. Activate SW1 to disable NAC circuits.
3. Perform maintenance per the requirements on the MAXIMO Job Plan(s) and document results.
4. After maintenance, restore all disable points and NAC circuits to operation and take FACP off of "NO ACTION".

SPRINKLER SYSTEM OUTAGE:

1. Post Fire Protection Impairment Permit on FACP and verify there is no hot work underway in areas to be impacted by sprinkler outage.
2. Notify EOC and Security of outage to sprinkler riser and to disregard the sprinkler tamper supervisories that will occur.
3. Disable the following impacted water flow detection devices on the riser being serviced to prevent evacuating building:

M141: Building 928 Riser Pressure Switch
M137: Building 959 Riser Pressure Switch
M139: Building 958 Riser Pressure Switch
M143: Building 958H Riser Pressure Switch

4. Perform maintenance per the requirements on MAXIMO Job Plan(s) and document results.
5. After maintenance, restore all disabled points to operation and remove impairment permit.
6. Notify EOC and Security that sprinkler riser has been restored to normal operation.

BUILDING 959 - ELECTRICAL CHECKLIST

ALM = ALARM SPV = SUPERVISORY TBL = TROUBLE NAC = BELLS/STROBES ACTIVATED

Fire alarm signals generated during tests are received and documented in the fire alarm monitoring station's software.

Sprinkler Water Flow Detection

INPUT ID	POINT/ZONE DESCRIPTOR	FIELD DEVICES	PHOENIX SIGNAL	ZONE	ALM	SPV	TBL	NAC
M137	M137 Bldg 959 Water Flow Alarm	WTM, WPS	Sprinkler Flow	137		XXX	XXX	
M139	M139 Bldg 958 Water Flow Alarm	WTM, WPS	Sprinkler Flow	139		XXX	XXX	
M141	M141 Bldg 928 Water Flow Alarm	WTM, WPS	Sprinkler Flow	141		XXX	XXX	
M143	M143 Bldg 958H Water Flow Alarm	WTM, WPS	Sprinkler Flow	143		XXX	XXX	

Sprinkler Supervisories

INPUT ID	POINT/ZONE DESCRIPTOR	FIELD DEVICES	PHOENIX SIGNAL	ZONE	ALM	SPV	TBL	NAC
M140	M140 Bldg 958 Low Air Pressure	WTM, APS	Low Pressure	140	XXX		XXX	XXX

M144	M144 Bldg 958H Valve Tamper	WTM, 3TS	Valve Tamper	144	XXX	XXX	XXX
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BUILDING 928 - SPRINKLER RISER PM CHECKLIST

N.E. EQUIPMENT ROOM RISER #1 R-0928-01

MAXIMO #: 1105925

QUARTERLY TESTS

Pressure Above Valve: _____ psi
 Pressure Below Valve: _____ psi N/A
 Main Drain Test Residual Pressure: _____ psi
 Inspector's Test Trip Time: _____ seconds
 Valve to Alarm Open: YES NO N/A
 Water Motor Gong / Bell Operates: YES NO N/A
 Dry Pipe Compressed Nitrogen Cylinder PSI: _____ psi N/A

QUARTERLY INSPECTIONS

<u>Sprinkler Riser</u>	YES	NO	N/A
Alarm devices - free of damage:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic data nameplate on riser:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retard chamber/alarm drains not leaking:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gauges - normal water pressure maintained:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Fire Department Connections (FDC)</u>			
Visible and accessible:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coupling/swivels operate correctly:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plugs/caps are in place:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gaskets are not damaged:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification signs are in place:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ball drip valve is functional:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FDC clapper is functional:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SEMIANNUAL TESTS

Water Flow Alarm Time to FACP: _____ seconds
 FACP Alarm Point: M141

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Backflow preventer - test: N/A. Tests performed on different W.O.
 Backflow preventer - flow test: _____

DRY / PREACTION SYSTEM ANNUAL TESTS

Pilot Line Low Air Alarm Pressure: _____ psi
 Pilot Line Trip Pressure: _____ psi
 System Low Air Alarm Pressure: _____ psi
 Tripped System Air Pressure: _____ psi
 System Trip Time: _____ sec.
 Priming Water - Test Level: YES NO N/A

ANNUAL INSPECTIONS

<u>Sprinklers (visible)</u>	YES	NO	N/A
No damage or leaks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free of corrosion, foreign material, or paint:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Installed in proper orientation:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluid in glass bulbs:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Pipes and Fittings (visible)</u>			
In good condition/no external corrosion:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No leaks or mechanical damage:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct alignment - no external loads:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hangers/seismic bracing not damaged, loose:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BUILDING 928 - CONTROL VALVE PM CHECKLIST

QUARTERLY INSPECTIONS

<u>Control Valves</u>	YES	NO	N/A
Accessible:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free from damage or leaks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper signage:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SEMIANNUAL TESTS

Valve supervisory tamper switches function: ☐ ☐ ☐

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Lubricate operating stems of OS&Y valves: YES NO N/A
 All control valves operated through full range of motion and returned to normal position to test operation / distribute lubricant: YES NO N/A

ANNUAL MAINTENANCE

# of Turns to Fully Close Valve	# of Turns to Fully Open Valve
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QUARTERLY INSPECTION

MAXIMO #	FA Point	Location	Type	Open	Shut	Locked	Close Valve	Open Valve
1105931		Outside NE	PIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

BUILDING 958 - SPRINKLER RISER PM CHECKLIST

EQUIPMENT ROOM RISER #1 R-0958-01

MAXIMO #: 1106333

QUARTERLY TESTS

Pressure Above Valve: _____ psi
 Pressure Below Valve: _____ psi N/A
 Main Drain Test Residual Pressure: _____ psi
 Inspector's Test Trip Time: _____ seconds
 Valve to Alarm Open: YES NO N/A
 Water Motor Gong / Bell Operates: YES NO N/A
 Dry Pipe Compressed Nitrogen Cylinder PSI: _____ psi N/A

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Backflow preventer - test: N/A. Tests performed on different W.O.
 Backflow preventer - flow test: _____

DRY / PREACTION SYSTEM ANNUAL TESTS

Pilot Line Low Air Alarm Pressure: _____ psi
 Pilot Line Trip Pressure: _____ psi
 System Low Air Alarm Pressure: _____ psi
 Tripped System Air Pressure: _____ psi
 System Trip Time: _____ sec.
 Priming Water - Test Level: YES NO N/A

QUARTERLY INSPECTIONS

Sprinkler Riser YES NO N/A
 Alarm devices - free of damage: ☐ ☐ ☐
 Hydraulic data nameplate on riser: ☐ ☐ ☐
 Retard chamber/alarm drains not leaking: ☐ ☐ ☐
 Gauges - normal water pressure maintained: ☐ ☐ ☐
Fire Department Connections (FDC)
 Visible and accessible: ☐ ☐ ☐
 Coupling/swivels operate correctly: ☐ ☐ ☐
 Plugs/caps are in place: ☐ ☐ ☐
 Gaskets are not damaged: ☐ ☐ ☐
 Identification signs are in place: ☐ ☐ ☐
 Ball drip valve is functional: ☐ ☐ ☐
 FDC clapper is functional: ☐ ☐ ☐

ANNUAL INSPECTIONS

Sprinklers (visible) YES NO N/A
 No damage or leaks: ☐ ☐ ☐
 Free of corrosion, foreign material, or paint: ☐ ☐ ☐
 Installed in proper orientation: ☐ ☐ ☐
 Fluid in glass bulbs: ☐ ☐ ☐
Pipes and Fittings (visible)
 In good condition/no external corrosion: ☐ ☐ ☐
 No leaks or mechanical damage: ☐ ☐ ☐
 Correct alignment - no external loads: ☐ ☐ ☐
 Hangers/seismic bracing not damaged, loose: ☐ ☐ ☐

SEMIANNUAL TESTS

Water Flow Alarm Time to FACP: _____ seconds
 FACP Alarm Point: M139

BUILDING 958 - CONTROL VALVE PM CHECKLIST

QUARTERLY INSPECTIONS

Control Valves YES NO N/A
 Accessible: ☐ ☐ ☐
 Free from damage or leaks: ☐ ☐ ☐
 Proper signage: ☐ ☐ ☐

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Lubricate operating stems of OS&Y valves. ☐ ☐ ☐
 All control valves operated through full range of motion and returned to normal position to test operation / distribute lubricant: ☐ ☐ ☐

SEMIANNUAL TESTS

Valve supervisory tamper switches function: ☐ ☐ ☐

ANNUAL MAINTENANCE

MAXIMO #	FA Point	Location	Type	QUARTERLY INSPECTION			ANNUAL MAINTENANCE	
				Open	Shut	Locked	# of Turns to Fully Close Valve	# of Turns to Fully Open Valve
1105916		S.E. Yard	PIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1105924		Equipment Rm	Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

BUILDING 958H - SPRINKLER RISER PM CHECKLIST

ROOM 1 RISER #1 R-0958H-01

MAXIMO #: 1112111

QUARTERLY TESTS

Pressure Above Valve: _____ psi
 Pressure Below Valve: _____ psi N/A
 Main Drain Test Residual Pressure: _____ psi
 Inspector's Test Trip Time: _____ seconds
 Valve to Alarm Open: YES NO N/A
 Water Motor Gong / Bell Operates: YES NO N/A
 Dry Pipe Compressed Nitrogen Cylinder PSI: _____ psi N/A

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Backflow preventer - test: N/A. Tests performed on different W.O.
 Backflow preventer - flow test: _____

DRY / PREACTION SYSTEM ANNUAL TESTS

Pilot Line Low Air Alarm Pressure: _____ psi
 Pilot Line Trip Pressure: _____ psi
 System Low Air Alarm Pressure: _____ psi
 Tripped System Air Pressure: _____ psi
 System Trip Time: _____ sec.
 Priming Water - Test Level: YES NO N/A

QUARTERLY INSPECTIONS

Sprinkler Riser YES NO N/A
 Alarm devices - free of damage: ☐ ☐ ☐
 Hydraulic data nameplate on riser: ☐ ☐ ☐
 Retard chamber/alarm drains not leaking: ☐ ☐ ☐
 Gauges - normal water pressure maintained: ☐ ☐ ☐
Fire Department Connections (FDC)
 Visible and accessible: ☐ ☐ ☐
 Coupling/swivels operate correctly: ☐ ☐ ☐
 Plugs/caps are in place: ☐ ☐ ☐
 Gaskets are not damaged: ☐ ☐ ☐
 Identification signs are in place: ☐ ☐ ☐
 Ball drip valve is functional: ☐ ☐ ☐
 FDC clapper is functional: ☐ ☐ ☐

ANNUAL INSPECTIONS

Sprinklers (visible) YES NO N/A
 No damage or leaks: ☐ ☐ ☐
 Free of corrosion, foreign material, or paint: ☐ ☐ ☐
 Installed in proper orientation: ☐ ☐ ☐
 Fluid in glass bulbs: ☐ ☐ ☐
Pipes and Fittings (visible)
 In good condition/no external corrosion: ☐ ☐ ☐
 No leaks or mechanical damage: ☐ ☐ ☐
 Correct alignment - no external loads: ☐ ☐ ☐
 Hangers/seismic bracing not damaged, loose: ☐ ☐ ☐

SEMIANNUAL TESTS

Water Flow Alarm Time to FACP: _____ seconds
 FACP Alarm Point: **M143**

BUILDING 958H - CONTROL VALVE PM CHECKLIST

QUARTERLY INSPECTIONS

Control Valves YES NO N/A
 Accessible: ☐ ☐ ☐
 Free from damage or leaks: ☐ ☐ ☐
 Proper signage: ☐ ☐ ☐

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Lubricate operating stems of OS&Y valves. ☐ ☐ ☐
 All control valves operated through full range of motion and returned to normal position to test operation / distribute lubricant: ☐ ☐ ☐

SEMIANNUAL TESTS

Valve supervisory tamper switches function: ☐ ☐ ☐

ANNUAL MAINTENANCE

MAXIMO #	FA Point	Location	Type	<u>QUARTERLY INSPECTION</u>			<u>ANNUAL MAINTENANCE</u>	
				Open	Shut	Locked	# of Turns to Fully Close Valve	# of Turns to Fully Open Valve
1110880		N.E. Yard	PIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1112114	M144	Room 1	Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1112113	M144	Room 1	Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1112112	M144	Room 1	RPBFP OS&Y #1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1112112	M144	Room 1	RPBFP OS&Y #2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

BUILDING 959 - SPRINKLER RISER PM CHECKLIST

EAST RISER #1 R-0959-01
MAXIMO #: 1033909
QUARTERLY TESTS

Pressure Above Valve: _____ psi
 Pressure Below Valve: _____ psi N/A
 Main Drain Test Residual Pressure: _____ psi
 Inspector's Test Trip Time: _____ seconds
 Valve to Alarm Open: YES NO N/A
 Water Motor Gong / Bell Operates: YES NO N/A
 Dry Pipe Compressed Nitrogen Cylinder PSI: _____ psi N/A

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Backflow preventer - test: N/A. Tests performed on different W.O.
 Backflow preventer - flow test: _____

DRY / PREACTION SYSTEM ANNUAL TESTS

Pilot Line Low Air Alarm Pressure: _____ psi
 Pilot Line Trip Pressure: _____ psi
 System Low Air Alarm Pressure: _____ psi
 Tripped System Air Pressure: _____ psi
 System Trip Time: _____ sec.
 Priming Water - Test Level: YES NO N/A

QUARTERLY INSPECTIONS

Sprinkler Riser YES NO N/A
 Alarm devices - free of damage: ☐ ☐ ☐
 Hydraulic data nameplate on riser: ☐ ☐ ☐
 Retard chamber/alarm drains not leaking: ☐ ☐ ☐
 Gauges - normal water pressure maintained: ☐ ☐ ☐
Fire Department Connections (FDC)
 Visible and accessible: ☐ ☐ ☐
 Coupling/swivels operate correctly: ☐ ☐ ☐
 Plugs/caps are in place: ☐ ☐ ☐
 Gaskets are not damaged: ☐ ☐ ☐
 Identification signs are in place: ☐ ☐ ☐
 Ball drip valve is functional: ☐ ☐ ☐
 FDC clapper is functional: ☐ ☐ ☐

ANNUAL INSPECTIONS

Sprinklers (visible) YES NO N/A
 No damage or leaks: ☐ ☐ ☐
 Free of corrosion, foreign material, or paint: ☐ ☐ ☐
 Installed in proper orientation: ☐ ☐ ☐
 Fluid in glass bulbs: ☐ ☐ ☐
Pipes and Fittings (visible)
 In good condition/no external corrosion: ☐ ☐ ☐
 No leaks or mechanical damage: ☐ ☐ ☐
 Correct alignment - no external loads: ☐ ☐ ☐
 Hangers/seismic bracing not damaged, loose: ☐ ☐ ☐

SEMIANNUAL TESTS

Water Flow Alarm Time to FACP: _____ seconds
 FACP Alarm Point: **M137**

BUILDING 959 - CONTROL VALVE PM CHECKLIST

QUARTERLY INSPECTIONS

Control Valves YES NO N/A
 Accessible: ☐ ☐ ☐
 Free from damage or leaks: ☐ ☐ ☐
 Proper signage: ☐ ☐ ☐

ANNUAL TESTS

Perform quarterly/ semiannual tests: YES NO N/A
 Lubricate operating stems of OS&Y valves. ☐ ☐ ☐
 All control valves operated through full range of motion and returned to normal position to test operation / distribute lubricant: ☐ ☐ ☐

SEMIANNUAL TESTS

Valve supervisory tamper switches function: ☐ ☐ ☐

ANNUAL MAINTENANCE

MAXIMO #	FA Point	Location	Type	<u>QUARTERLY INSPECTION</u>			<u>ANNUAL MAINTENANCE</u>	
				Open	Shut	Locked	# of Turns to Fully Close Valve	# of Turns to Fully Open Valve
1033872		West	PIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1033884		1" East	Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
1033885		2-1/2" East	Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

PM NOTES:

1. Main drain residual pressure test results should not differ more than 10% from previous test results.
2. Perform main drain test annually for sprinkler risers without backflow preventers.
3. Water flow alarm must be received at fire alarm control panel (FACP) within 90 seconds of Inspector Test valve activation.
4. Dry system must deliver water to Inspector's Test (IT) connection within 90 seconds of opening IT valve.

COMMENTS:

