

Job Planning Package [Click the ? for online help](#)

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| Service Request # S435635 | Facility: EMSL | Location: Entire | Funding WP: F08104 (Engineering Only) |
| Request Subject: | EMSL FP Waterflow Testing | | |
| Description: | Prepare HFD test package and perform quarterly sprinkler system waterflow testing. | | |
| Justification: | | | |
| Systems Affected: | Alarms-Fire Alarm, Water-Fire Protection | | |

JPP Type, Hold Points and Comments

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| UseCategory | Mandatory |
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Basis for Planning

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| Special Instructions: | This form is used to identify hazards, associated mitigation actions (in addition to those contained in the EMSL Lab Handbook for this space) and provide additional information and/or sequential work steps necessary to complete this task. All staff involved in this task are to completely review this checklist prior to performing any work. If there are any questions immediately contact your Supervisor or the Building Manager. If an activity cannot be performed as required by this checklist, secure the activity and report to your supervisor. |
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Work

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| Operating Requirements to communicate to Contractor | Yes | Specify Requirements | Test Personnel to be escorted by Building Power Operators during performance of testing. |
| Other Design Basis Documents: | Yes | | |
| Specific Design Information: | H-3-302162, H-3-302164, H-3-302165 and H-3-302167 through H-3-302170 | | |

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| Work to be Performed By: | Other Plant Forces | | |
| Authorization for Shop/Field Work: | Field Work | Authorized By: | User Facilities Core Team |

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| Work Description | Other | Testing will require outages and must be approved and scheduled through the EMSL Building Manager. |
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Lock and Tag Requirements

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| Instructions: |
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Permits and Plans

Outage Permit

Job Site Prep

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| Documented Pre-job Meeting | Yes | |
| Procedures | Yes | HFD Operating Procedure HFD-EMSL-PYRO-MXL. |

Personnel Requirements

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| Special Training Requirements | Yes | EMSL Orientation |
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Job Hazards and Control Methods

Hazards:

Control Methods: Outage Permit Required

Work Activity

| Step Number | Define Work Activity |
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| 1 | Inform City of Richland Fire Department, as responding agency, per HFD Operating Procedure HFD-EMSL-PYRO-MXL. |

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| 2 | Notify EMSL Control Room staff (376-5506) and lobby staff (372-2567) of testing to be conducted. Inform lobby staff to place testing sign over RCC-1 in lobby. |
| 3 | Place EMSL Fire Alarm in test configuration per attached EMSL Fire Alarm System Configuration Model for Maintenance/Testing. Notify EMSL Building Manager or Point-of-Contact of any discovered discrepancies from test procedure immediately. |
| 4 | Check each drain location outside building to assure splash blocks are properly positioned under drain connections. Tests for each riser may be performed in any order, provided that all procedure steps for any riser are completed prior to proceeding to next riser. |
| 5 | Riser 1: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves (2), and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet. Confirm with EMSL kitchen staff that operations have not been affected. If kitchen operations have been affected contact the Building Manager or POC. Restart excess pressure pump and verify shut-off at 100-120 psig. |
| 6 | Riser 2: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves (2), and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet. Confirm with POC that computer operations have not been affected. Restart excess pressure pump and verify shut-off at 120-140 psig. |
| 7 | Riser 3: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves, and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory |

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| | <p>performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet.</p> |
| 8 | <p>Dry Riser 4: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Conduct a water flow alarm test by opening (fully) the alarm test valve until a system fire alarm is confirmed. Verify satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Verify that alarm message on provided data sheet was received. Record the time to alarm and any remarks on the provided data sheet.</p> |
| 9 | <p>Riser 5: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves, and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet.</p> |
| 10 | <p>Riser 6: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves, and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet.</p> |
| 11 | <p>Riser 7: Conduct a riser flow pressure test by first verifying supply pressure is normal (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves, and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet.</p> |
| | <p>Riser 8: Conduct a riser flow pressure test by first verifying supply pressure is normal</p> |

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| 12 | (55-90 psig) and main drain discharge is clear of personnel and equipment. Open fully the main drain valve and note the residual (flow) pressure indicated on the supply side pressure gauge and close the valve. Record this value on provided data sheet. Note if residual pressure is less than 45 psig contact the Building Manager or POC. Review EMSL Water Flow Test Data Sheet to determine the location of inspector's test valves, and message for expected alarms. Conduct a water flow alarm test by verifying the discharge area is clear of personnel and equipment and splash blocks are properly positioned. Open (fully) the inspectors test valve, carefully timing the duration until a system fire alarm is confirmed (maximum 90 seconds) and noting satisfactory performance of water motor alarm. Close inspectors test valve after alarm is verified. Record the time to alarm and any remarks on the provided data sheet. |
| 13 | Return building to operational status by following procedure outlined in EMSL Fire Alarm System Configuration Model for Maintenance/Testing. Verify with Point-of-Contact that system is fully operational and returned to service. |

Approvals

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| Building Manager | <u>Pete Rojas</u> | Date: <u>9-6-00</u> |
| Facility Project Manager | <u>[Signature]</u> | Date: <u>9/6/00</u> |
| Safety: Fire | <u>[Signature]</u> | Date: <u>9/7/00</u> |
| Safety: Industrial Hygiene | <u>[Signature]</u> | Date: <u>9/6/00</u> |
| Work Control Specialist | <u>[Signature]</u> | Date: <u>9/6/00</u> |