

**UNIVERSITY OF ROCHESTER  
ENVIRONMENTAL HEALTH & SAFETY**

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|--|------------------------------------|
| <b>Policy No.: FS017-B</b>                     | <b>Approved by: Mark Cavanaugh</b> |
| <b>Title: Sprinkler ACF Main Drain Testing</b> | <b>Date: 11/19/2020</b>            |
| <b>Revision No.: 2</b>                         | <b>Page 1 of 5</b>                 |
| <b>Prepared by: Scott Miller</b>               |                                    |

**I. PURPOSE**

This procedure identifies how to conduct a sprinkler system main drain test for ACF sprinkler system. This test requires two FSU personnel to complete. One in the fire pump room and one in WCC stairwell G-0700NW.

**II. PERSONNEL AFFECTED**

Fire Safety Unit (FSU)

**III. DEFINITIONS**

EH&S- Environmental Health and Safety Department of the University of Rochester

Fire Safety Unit – Representatives of the University Fire Marshal’s Office out of the EH&S department.

**IV. RESPONSIBILITIES**

The Fire Safety Unit representative conducting this test is responsible for following the proper procedures related to sprinkler 2” main drain test and for contacting Public Safety when the test begins and ends. Failure to do so may result in injury, damage or prevent the proper operation of equipment.

**V. PROCEDURES**

- A. Contact the University Public Safety Communications Center and advise them you will be testing the sprinkler system main drain in ACF and WCC and to ignore water flow alarms from those fire alarm panels.
- B. Contact facilities work center (ext. 34567) and advise them you will testing the sprinkler system main drain in ACF and WCC.
- C. Disable ACF (room 1-1017) and WCC (room 1-0709) fire alarm panels per the fire alarm disconnect/reconnect procedures.
- D. Proceed to the ACF fire pump room (room G-1475A).
- E. Shut both the fire pump and the jockey pump off for the test per “Fire Pump disconnect” procedure.
- F. Close pet cock and remove the gauge from the supply side. Open pet cock and purge any excess debris/air from the port before installing the calibrated gauge.

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| <b>Revision No.: 2</b>                         | <b>Page 2 of 5</b>                 |
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- G. Install calibrated gauge on the supply side.
- H. Proceed to WCC G-0700 NW stairwell and open Butter fly valve FPV-04-G-0700NW and close Butter fly valve FPV-03-G-0700NW. Connect a short length of 2 ½ inch hose between the 2” valve on the stand pipe system to the valve for the discharge. Verify no one is sitting on the bench at the drain discharge outside the door from the stairwell.
- I. Open the 2” standpipe valve in G-0700NW stairwell to release the pressure from the weekly pump test to street pressure. Person in the fire pump room will monitor the pressure.
- J. Close the 2” standpipe valve.
- K. Observe and document the static pressure on the supply side and Start Test Time on Appendix 1.
- L. Open the 2” standpipe valve fully and watch the supply side calibrated pressure gauge to see how much lower the pressure drops. When the pressure stabilizes, note and document the residual pressure on Appendix 1.
- M. When the pressure gauge stops dropping and stabilizes, close the standpipe valve fully, note the time on Appendix 1 as Time Test Completed.
- N. Watch the calibrated gauge as it returns to match the actual street pressure and record static pressure and time on Appendix 1 under Time System Stabilized.
- O. The flow-testing portion is completed.
- P. The pressure should not drop 10%. If so, refer to Fire Marshal. Example: Street pressure is 60 psi X 10 % = 6 psi. The calibrated gauge should not drop past 54 psi during the stabilized timed flow test.
- Q. In stairwell WCC G-0700 NW close Butter fly valve FPV-04-G-0700NW, and open Butter fly valve FPV-03-G-0700NW
- R. Once the main drain is closed, turn the jockey pump back on and wait for the system pressure to return to normal. **Caution:** If the fire pump is turned on, it will activate and slam the system pressure quickly and possibly cause damage and/or multiple flow alarms.

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| <b>Revision No.: 2</b>                         | <b>Page 3 of 5</b>                 |
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- S. Remove the calibrated gauge from the street side. Open the pet cock and purge any excess debris/air from the port before re-installing the system gauge.
- T. Complete the Main Drain-UR test form (Appendix 1). Turn this form into the Fire Marshal for review.
- U. Once the entire system pressure is returned to normal, turn the fire pump back on and return WCC (1-0709) and AC F (1017) fire alarm panels back to normal per the system disconnect/reconnect procedures.
- V. Contact the University Public Safety Communication Center and advise them the test is completed.
- W. Contact facilities work center (ext. 34567) and advise them the test is completed.

**VI. REFERENCES**

NFPA 25 (2017) Standard for Inspection, Testing and Maintenance of Water-Based Fire Protection Systems

**VII. APPENDICES/FORMS**

Appendix 1 – (I:/fire/Main Drain/Main Drain Blank Form.xls)

**VIII. REVISION HISTORY**

| Date       | Revision No. | Description                                     |
|------------|--------------|---|
| 4/18/2013  | New          | Initial development of this policy              |
| 8/17/2017  | 1            | Complete re-write                               |
| 11/19/2020 | 2            | Triennial review and updated reference edition. |

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| <b>Revision No.: 2</b>                         | <b>Page 4 of 5</b>                 |
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**Appendix 1**

DATE \_\_\_\_\_ BUILDING \_\_\_\_\_

SYSTEM \_\_\_\_\_ LOCATION \_\_\_\_\_

TEST POINT \_\_\_\_\_ TEST FREQUENCY \_\_\_\_\_

VALVE MODEL \_\_\_\_\_ VALVE NUMBER \_\_\_\_\_

**TEST INFORMATION**

STATIC PRESSURES  PSI (BELOW CHECK VALVE)

RESIDUAL PRESSURES  PSI (BELOW CHECK VALVE)

SYSTEM FLUSHED  YES  NO PIPING SATISFACTORY  YES  NO

SYSTEM INSPECTED  YES  NO VALVE OPERATED  YES  NO

START TEST TIME  STOP TEST TIME

RECOVERY TIME  TIME SYSTEM STABILIZED

FINAL STATIC PRESSURE  PSI

**SPRINKLER HEAD INFORMATION**

SPARE HEADS PROVIDED  YES  NO CHANGING TOOLS  YES  NO

CLEAN OF DEPOSITS  YES  NO SPECIAL HEADS IDENTIFIED  YES  NO

NUMBER OF HEADS  PENDANT PENDANT HEADS GREATER THAN 8' AFF HAVE CAGES  YES  NO

UPRIGHT

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SIDEWALL

**SPRINKLER SIGNAGE INFORMATION**

|                                       |  |  |  |
|---------------------------------------|--|--|--|
| FLOW DIRECTION LABELS<br>ON PIPING    | <input type="checkbox"/> YES <input type="checkbox"/> NO | SIGNAGE IDENTIFYING<br>AREA<br>OF PROTECTION | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| HYDRAULIC<br>CALCULATIONS<br>ON RISER | <input type="checkbox"/> YES <input type="checkbox"/> NO | FIRE DEPT CONNECTION<br>PROPERLY IDENTIFIED  | <input type="checkbox"/> YES <input type="checkbox"/> NO |

**COMMENTS/CORRECTIVE ACTIONS**

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INSPECTOR