

**MINNEAPOLIS FIRE DEPARTMENT
FIRE PREVENTION BUREAU POLICY # 9-5
FIRE SAFETY SYSTEMS ACCEPTANCE TEST PROCEDURES**

Original Issue 2-1996

Last Revision 7-25-06

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ISSUE:

All new fire safety systems are to be tested (commissioned) to assure that they operate correctly.

CODE REQUIREMENTS:

The MSFC indicates that the fire marshal is to witness the testing of required fire safety systems. Specific standards dictate the requirements for the testing of each type of system.

PROBLEM:

This policy outlines the responsibilities of MFD fire inspectors witnessing tests and lists the general procedures for commissioning the various fire safety systems.

ACCEPTABLE MEANS of COMPLIANCE:

FPB responsibilities:

Fire inspectors only witness tests and do not perform the tests or provide any equipment that is needed for testing. Fire inspectors are not trouble shooters and do not do inspections to provide punch-lists for contractors or owners.

Prior to a FPB inspector witnessing a test, the contractor is to provide a written statement that all of the device in the system have been tested and operate correctly. If it becomes apparent during the witnessing of a test that the system is not completely operational, the test is to be terminated and rescheduled for a later date.

Requirements by type of system:

Fire Pumps:

1. The following contractors are to be present at the test:
 - a. Fire protection contractor
 - b. Pump supplier
 - c. Electrical contractor (for pumps driven by electrical motors)
2. Test procedure:
 - a. The pump is to be tested at churn (no flow), 100% capacity and 150% capacity (if the water supply will provide the quantity necessary for the 150% flow).
 - b. When the pump has 2 electric power sources, the transfer switch is to be tested with the pump under load and the emergency generator in the non-running, auto-start position. The primary power source is to be shutoff at its connection to the electric service.
 - c. The low suction pressure control device is to be tested and adjusted to maintain at least a 10 psi positive pressure at the pump.

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Fire Alarm and Communication Systems:

1. The following contractors are to be present at the test:
 - a. Alarm contractor
 - b. Fire protection contractor
 - c. HVAC contractor (when detectors are located in or control HVAC devices or systems).

The witnessed test might not involve all of the system components and may only consist of spot checking zones and devices.

Fire Suppression Systems:

1. Each system is to be tested in accordance with the appropriate NFPA standard.
2. All devices and systems which are controlled by the activation of the suppression system are to be tested by activating the system.

Smoke Control Systems:

1. The following contractors are to be present at the test:
 - a. The system designer (fire protection engineer or mechanical engineer)
 - b. General contractor
 - c. HVAC contractor
 - d. Electrical contractor
 - e. Fire alarm contractor
2. Prior to the final test, an independent testing and balancing contractor is to test the system and provide a written report indicating that the system operates correctly and performs as designed.
3. The test is to be performed in accordance with the approved testing procedure developed by the fire protection or mechanical engineer.

Emergency Generators:

1. The acceptance tests of emergency generators are normally done by the electrical inspector. The fire inspector is to verify that the tests were done and witnessed.
2. The testing of systems (fire pumps, smoke control, etc.) which are connected to the generator are to include portions of those tests on emergency power and automatic transfer of power under load.