NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

**Tuesday e-Tech Alert**
**April 26, 2005**

## NFPA 25 Proposals Wanted

NFPA 25 – *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems* is entering an amendment cycle. The deadline for submitting proposals is May 27, 2005. NFSA members with suggestions for improving the document are invited to submit suggestions to NFSA staff via fleming@nfsa.org. Public proposals can now be made directly to NFPA online through the NFPA website at www.nfpa.org. Choose "Codes and Standards" from the main menu, then "Code Development Process" and "Proposals (ROP) and Comments (ROC)."

## Underground Piping Questions

The NFSA is currently conducting a 10-part internet-based seminar series focusing on the 2002 edition of NFPA 13. This edition of the Tuesday e-Tech Alert shares a few of the questions raised by participants during the seventh seminar in the series, which addressed Chapter 10 – Underground Piping:

### 1. Sectional Valves on Underground

Q: Are sectional valves are required on an underground piping loop serving multiple risers?

A: NFPA 13 has no specific requirements, but NFPA 24 (6.5.1 in the 2002 edition) states: "Large, private, fire service mains shall have sectional controlling valves at appropriate points to permit sectionalizing the system in the event of a break or to make repairs or extensions." Placing sectional valves between risers would be considered acceptable.

### 2. Interior Loops

Q: Can we install a private fire loop inside a large building instead of a private underground fire loop outside the building?

A: Yes, the water supply piping for fire protection systems can be installed above the ground as long as it is protected against damage and protected from freezing. However, it should be noted that some insurers prefer an exterior underground loop.

### 3. Thrust Block Calculations

Q: Should the thrust block calculation be provided as part of the plan review information?

A: Yes. Even though this information is not specifically required, it is important information for the plan reviewer. This is the subject of a proposed change to the next edition of NFPA 13.

**4. Allowable Leakage While Testing Underground**

Q: When testing underground piping, there is an allowable leakage depending on the number of joints, but no pressure loss allowed. How is this possible?

A: The underground hydrostatic test is intended to confirm that the piping is tight with little or no leakage. Section 10.10.2.2.4(4) states that the amount of leakage in buried piping shall be measured at the specified test pressure by pumping from a calibrated container. This indicates that the pressure is to be held at or above the test pressure by periodically pumping from the calibrated container, which is then used to determine if the leakage is in compliance with the allowable leakage per the number of joints.

**5. Wrapping of Underground Galvanized Piping**

Q: Does galvanized steel pipe have to be wrapped for underground use?

A: Yes. Steel pipe is allowed underground only for fire department connections, and only if both internally galvanized and externally coated and wrapped (Section 10.1.3). External galvanizing is not permitted to substitute for coating and wrapping.

**6. Underground Velocity Limits**

Q: Is there a velocity limit for underground piping?

A: Not per the NFPA standards. However, velocity limits may be imposed by project specifications, manufacturers literature, or insurance or governmental authorities based on potential scouring of lining materials, restraint, or other concerns.

**Upcoming NFSA Technical Tuesday Online Seminar:**

**NFPA 13 Chapters 11, 13 and 17 – Design Approaches and Special Occupancies**
**Instructor: Russell P. Fleming, P.E.**
**Date: May 10, 2005**

Chapter 11 contains the rules for the traditional occupancy hazard fire control approach found within NFPA 13 and applicable to non-storage situations. Chapter 13 contains rules relating to sprinkler protection taken from other specialty codes and standards, and which take precedence over the normal criteria of the standard. Chapter 17 on Marine Systems similarly represents special occupancy criteria.

This is the eighth in the series of ten seminars dedicated to an in-depth review of the 2002 edition of NFPA 13. Participants develop an appreciation for the way in which the material is organized in the 2002 edition while learning more about the background of the rules themselves. The level of all seminar topics is considered intermediate.

Information and registration for these seminars are available at www.nfsa.org.