

# FocusOn **FACILITIES**

## Preventing Frozen Pipes

*By Howard McKew, P.E., C.P.E.*

Cold temperatures can reach areas of your facility that you cannot see or seldom visit, such as:

- Crawl spaces;
- Closets;
- Enclosed spaces (e.g., attics, lofts, roof spaces); and
- Isolated storage areas.

Cold weather preparedness is important to help reduce potential interruptions and related losses resulting from cold temperatures.

### **Domestic Water Piping**

In severe cold, water pipes have the potential to freeze and break. If safe to do so, make sure pipes that are located in isolated and/or poorly heated spaces are shut off and drained or protected with a supplemental heating source.

### **Protect Your Fire Protection Sprinklers**

Fire protection sprinkler systems are dependent on the ability of water to flow freely when needed. Ensure that wet piping systems, which may be subject to cold temperatures, are sufficiently heated to prevent freezing.

Severe cold weather can also delay the response time of the local fire department; therefore, it is imperative to properly maintain your fire protection systems.

Lastly, if heating is lost in a building protected by wet sprinklers, it should be restored immediately. Only after exhausting all options to re-establish sufficient heat, sprinkler systems should be shut off



and completely drained. If this is necessary, be sure to take appropriate precautions, including notifying local fire officials.

Some prevention strategies to consider:

- Properly insulate and/or provide approved heat tracing for water-filled pipes located in exterior walls or unheated spaces.
- Drain any piping that is not required during the winter months, if possible
- Maintain a minimum temperature of 40° F (4.4° C) in building areas with processes susceptible to freezing, wet-pipe sprinkler systems, fire pump houses and dry-pipe valve enclosures.
- Ensure that anti-freeze sprinkler systems have

sufficient concentration (appropriate specific gravity readings) of antifreeze to withstand freezing weather.

- Inspect dry systems to help ensure air settings are correct, air maintenance systems are in good operating condition, and any pipe closets are well insulated. If any heat tape or heating systems are being used, ensure that they are UL-listed for this specific purpose and are in good operating condition. Dry-pipe sprinkler systems low points and auxiliary drains should be opened and drained of any water or condensation.
- Any branch lines on wet sprinkler systems exposed or subject to extreme cold weather should be insulated and heat traced. Electric heat tracing should be UL-listed for this specific purpose.
- Fire pump test headers should be checked to ensure they have been properly drained.
- Fire pump and dry-pipe sprinkler system equipment rooms should be checked routinely to ensure the heaters are in good operating condition.
- The use of low temperature supervision can help to ensure rooms are being properly heated.

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