Prevention Of Freeze-Ups

Water pipes, process equipment, and buildings are subject to freeze-ups when temperatures dip below freezing. Water leaks caused by freezing and bursting pipes can damage buildings and contents and interrupt your business. An effective freeze-up prevention program should include these elements:

**Preventive Maintenance and Contingency Planning**
- Identify lines of authority and personnel assignments.
- List telephone numbers for internal staff and external contacts (water, electric, gas, contractors, equipment suppliers).
- Conduct a physical survey of the facility, looking for freeze-up hazards.
- Provide periodic program review and employee training.

**Winterizing Inspections**
- List, inspect, and maintain process equipment and building utilities if they:
  - Contain water that is to be drained before the onset of cold weather.
  - Contain water that is protected by anti-freeze solutions. (Use a hydrometer to check the solution's freezing point annually.)
  - Are in unheated areas containing water.
- Inspect process equipment for proper lubrication in cold weather operation.
- Monitor products in unheated areas subject to freezing.
- Survey buildings and equipment to find insulation and heat tracing deficiencies. Check for unwanted outside air; look for vents and openings in windows, walls, roofs, or floors.
- Drain low point drains (drum drips) on dry-pipe sprinkler systems to remove water that may be present from condensation or accidental trips.
- Provide adequate heat (40 degrees F) for dry-pipe valve rooms, pump rooms, and water tanks.
- Place non-freeze fire extinguishers, (dry chemical, carbon dioxide) in areas subject to freezing.

**Temperature Monitoring**
- Appoint individuals to monitor weather reports. Establish guidelines to alert management and maintenance personnel.
- Maintain indoor temperatures of 40°F (or higher). Provide adequate heating throughout areas susceptible to freezing, such as in stairwells, above dropped ceilings, and attic spaces.
- Put thermometers in key areas throughout the site.
- Monitor boilers and other facility heat supply sources, using personnel and/or supervisory devices.

**Snow and Ice Removal**
- Remove snow from roofs, hydrants, sprinkler control valves, and roadways.
- Maintain drains clear of snow and ice. Maintain clear paths to the drains.

**Unattended Buildings**
- Monitor building temperature via supervisory devices, which should transmit to a location with 24-hour attendance.
- Have security or maintenance personnel conduct periodic rounds to monitor indoor temperatures.
- Maintain the outside of the facility. Repair broken windows and doors.