

# How to Perform Pre-Winter Chemical Storage & Spill Response Preparedness Review



Winter conditions can play havoc with your hazardous chemical storage and spill response operations. Common risks:

- Freezing temperatures can damage containers, piping, valves, and seals.
- Temperature-sensitive products may become unstable or unusable.
- Snow, ice, blocked access routes, and heating failures can complicate spill response.

Changes to inventory, staffing, and operating schedules can add further risk. That's why you should treat pre-winter chemical review as more than just a routine inspection. Use it as an opportunity to identify and correct deficiencies before winter conditions make them harder to manage. In performing [Pre-Winter Chemical Storage & Spill Response Review](#), focus on five things.

## 1. Verify Chemical Temperature & Storage Arrangements

**Step 1.** Review the safety data sheets (SDSs), supplier instructions, and storage requirements for each hazardous product exposed to winter conditions.

**Step 2.** Identify products that must be kept within specified temperature ranges, containers, or equipment susceptible to freezing and products whose properties or handling requirements change with temperature.

**Step 3.** Verify that heating, insulation, and temperature-monitoring arrangements are appropriate for each of the above-identified products.

**Step 4.** Verify that indoor storage areas will remain adequately heated in case a shutdown or equipment failure occurs.

## **2. Inspect Chemical Containment & Transfer Equipment**

**Step 1.** Examine chemical containers, drums, tanks, valves, hoses, piping, seals, and connections for deterioration, leaks, or damage that could worsen in cold conditions.

**Step 2.** Check secondary containment for cracks, accumulated water, ice, or snow, and confirm that it can perform its intended function.

**Step 3.** Verify that drains and isolation points are accessible and appropriately controlled.

**Step 4.** Where freezing could compromise containment or transfer equipment, document completion of the required protective measures.

## **3. Confirm Chemical Spill Response Readiness**

**Step 1.** Verify that all necessary spill kits are in place and contain materials suitable for the chemicals actually stored.

**Step 2.** Verify that you have the necessary spill response equipment and that it will remain serviceable in expected temperatures.

**Step 3.** Verify that required respiratory protection and other personal protective equipment (PPE) is available and suitable for the task.

**Step 4.** Verify that snow, ice, stored materials, or locked access points won't prevent responders from reaching spill-control equipment.

**Step 5.** Review arrangements for safely isolating leaks and protecting drains or other routes by which a release could spread.

## **4. Clarify Chemical Spill Response Limits & Escalation Procedures**

**Step 1.** Confirm that workers know when they can safely undertake a limited response and when they must withdraw, isolate the area, and call in trained responders or emergency services.

**Step 2.** Review spill response procedures for chemical exposure, evacuation, notification, and emergency access.

**Step 3.** Ensure that response protocols account for slippery surfaces, freezing temperatures, poor ventilation, low visibility, and other potentially hazardous winter conditions.

## **5. Review Allocation of Reporting & Disposal Responsibilities**

**Step 1.** Confirm that workers know whom to notify—internally and externally—if a chemical spill or emergency occurs.

**Step 2.** Confirm that there's a designated competent internal emergency response person in place to make decisions about how to manage contaminated absorbents, cleanup materials, and recovered chemicals.

**Step 3.** Confirm that there's a process for determining whether the spill must be reported to government authorities in accordance with Occupational Health and Safety (OHS), environmental, and other applicable laws.

## **Takeaway: Turn Chemical Review into an Action Plan**

To maximize compliance leverage, create a paper trail of your pre-winter hazardous chemical inventory review that includes a record of

- Each deficiency you identify.
- The risks the deficiency creates.
- The person responsible for correcting the deficiency and deadline.
- For deficiencies that can't be corrected immediately, the interim measures taken to control the risks.
- The final corrective actions taken and when they were implemented.
- The follow-up steps to review and verify the effectiveness of corrective measures.

Finally, be sure to repeat relevant checks after events that could compromise hazardous chemicals storage and spill response occur, such as heating failures, extended shutdowns, and significant changes to chemical inventory, storage equipment, or storage locations.