



Priority Learning Moment

Industry-Submitted Incident Notification

IN-019-2026 | Sour Gas Release

This Priority Learning Moment has been submitted to Energy Safety Canada by a company wishing to share a safety lesson.

Overview:

Operations was in the process of depressuring a cooler that had a suspected leak. The operator was using a steam hose to thaw some ice that had accumulated in an elbow. This steam also cleared a blockage in the upstream isolation valve, allowing for an uncontrolled release of H₂S. One operator was in the immediate area and was able to egress safely.

Prior to the event, operations had tightened the drain valve, which appeared closed, followed by the removal of the drain plug off the elbow (see image). The lower elbow had visual ice accumulation. In order to depressurize the cooler, operations required a length of hose to tie the line into flare. Due to the ice in the elbow, the decision was made to steam the elbow to clear the ice. When the operator added steam to the elbow, the line heated up, inevitably allowing for the blockage in the valve to free. The valve then allowed sour product at up to 6,200 kPa of 1.5% H₂S to be released to atmosphere.



Low Point Drain



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Contributing Factors:

- Location is a low-point dead-leg without any mitigation (heat trace or insulation).
- Hazard of ice blocking the valve was not identified. No formal risk assessment was completed for the task.
- Sour piping system was not tied into flare to allow depressurization and purging into a closed system.

Required Actions:

- Operations must complete risk assessments for all tasks not covered by practices or procedures.
- All sites should review and evaluate low points for potential freeze concerns.
- Follow Breaking Integrity requirements outlined in H₂S Code of Practice (Use of Respiratory Protective Equipment).

Learning Together

Energy Safety Canada (ESC) facilitates the sharing of safety knowledge to support industry-wide learning and continuous improvement. By making lessons learned and leading practices accessible, ESC helps organizations of all sizes learn from one another and strengthen safe work performance.

This resource is intended to support learning and informed decision-making. Every organization is responsible for determining how the information applies to its own operations. For the full legal disclaimer, visit energysafetycanada.com/legal.

Share a Priority Learning Moment

Every lesson shared has the potential to prevent an incident. If your organization has a Priority Learning Moment, [we'd like to hear from you](#).