



Priority Learning Moment

Industry-Submitted Incident Notification

IN-016-2026 | Maintenance Sour Gas Release

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

Incident Description:

Sour gas release and worker exposure when conducting preventative maintenance on a level switch.

What Was the Problem:

The process connection joining the electronic housing to the column was loose.

What Happened:

A worker was completing a preventative maintenance check on a level switch. To conduct this task, the electrical cover on the switch needed to be removed to verify that the switch was tripping. As the worker attempted to remove the electrical cover, a very small volume of gas was released from the connection where the level switch was loosely connected to the flange on the level column.

What Was the Impact:

The worker was exposed to sour gas, with the worker's personal gas monitor recording 99.9 ppm H₂S (the H₂S sensor on the personal monitor over-ranges at 99.9 ppm).

Causes:

The process connection joining the electronics housing to the float chamber is sealed using a gasket and secured by tightening the process-connection nut to 225 ft-lbs. The bottom half of the electronics housing is held to the process connection nut with a set screw, whose purpose is only to keep the bottom electronics housing from rotating while the top cover is removed for access.

The following scenarios describe how this connection could loosen and result in a leak:



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1. Improper factory torque on the process connection.
2. Electronic housing rotated during installation without loosening the set screw.
This scenario is considered unlikely because:
 - a. No practical way to apply significant torque to the electronic housing
 - b. No visible signs of forced rotation during the investigation

Corrective Actions:

- Source and purchase a torque tool to enable the site to torque the e-tube assembly prior to installation. Once torqued, the torque location will be marked on the e-tube for future reference.
- Update preventative maintenance to include caution statement from manufacturer regarding the hazards of loosening the housing and to verify the torque markings still line up prior to executing work.
- Communicate learning to targeted teams.

Incident Learning:

Response to Events Matter

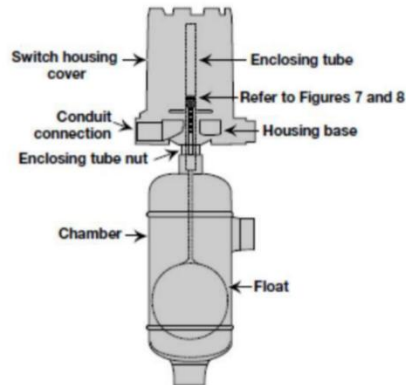
- The worker immediately evacuated the building to a safe area and reported the event to operations and site leadership. An immediate response occurred from the site to ensure the worker's safety and well being. An occupational health nurse was contacted, and the worker was taken to a clinic within hours of the event occurring.
- Appropriate management of the event occurred to isolate the leak, freeze the scene and initiate the investigation process.

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Close up image of assembly



Drawing of assembly with internal components

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](#).