

## CONFINED SPACE INCIDENT 3D-ANIMATED RE-ENACTMENT VIDEO

This video is the result of a creative sentencing project in partnership with the Government of Alberta and a company that experienced an incident involving nitrogen gas in a confined space. It is designed to encourage conversations about confined spaces, their hazards and emergency response.

Review the video at your workplace and discuss how these types of incidents could occur, what safeguards are in place and if they are sufficient to keep you safe.

### DISCUSS THE FOLLOWING QUESTIONS:

**Nitrogen hazard** - When could nitrogen or other asphyxiants impact you in your work? What actions could have been taken to ensure site personnel understood the nitrogen hazards?

**Critical steps** - What action or inaction triggered immediate, irreversible and intolerable harm resulting in the death of the three workers? Review the critical barriers in the example bowtie: [Confined Space Nitrogen Asphyxiation Bowtie](#)

**Managing hazardous energy** - How would lock-out/tag-out (LOTO) have affected the way work was getting done? What could the operators teach us about how LOTO would change their work, including challenges it would bring?

**Managing change** - Adding another cooling cycle was a key change leading to this incident. How could change impact you and what systems exist in your company to manage change?

**Confined space** - The company in the incident expanded from smaller coolers accessible by hand to large coolers requiring physical entry. This change created a new confined space hazard. How did this process and equipment change contribute to the incident? How could entry into this confined space be eliminated?

**Complexity** - Along with managing the change of the extra cooling cycle, what addition to the process would make the position of the gate valves more apparent?

**Gas detection and risk normalization** - How could factors like temperature push personnel away from consistent gas monitor use? Would gas monitoring have prevented this tragedy for all the workers in this incident? What else could alert workers to the presence of nitrogen?

**Emergency response** - The surviving worker was trained on the seven-step initial response strategy (H<sub>2</sub>S Alive®) at their previous employer. How could this training have impacted their response to call for help rather than entering the cooler? What factors were barriers to conducting a safe rescue? What is your emergency plan? Is it sufficient?

**Capacity to fail safely** - How did the design of the confined space and related equipment lack capacity to fail safely? Can you fail safely with the confined-space safeguards (controls) currently in place?

**Life saving rules** - Which of the 10 Life Saving Rules apply to this incident?

**Reflection** - What can you do today to prevent a similar tragedy?

**Capacity to fail safely** – is defined as a system of safeguards that protect a worker from serious injury or illness that are not subject to human error or mistakes e.g., vehicle air bag in case of a vehicle collision, confined space mechanical ventilation during occupancy in case of the presence of a hazardous substance.

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### ADDITIONAL ESC RESOURCES:

01



[Confined Space Resources](#)

02



[Confined Space Entry and Monitor Course](#)

03



[H<sub>2</sub>S Alive<sup>®</sup> Course](#)

04



[Life Saving Rules](#)

05



[Building Capacity to Manage Pressure Course](#)

06



[Gas Detection Course](#)

07



[Energy Wheel Awareness Video](#)

08



[Potentially Serious Incidents](#)

09



[Human and Organizational Performance Video](#)

10



[Psychological Health and Safety Resource Centre](#)