

Get Out and Stay Out!

April 2024



Figure 1. Employees evacuated from food processing plant

On January 28, 2021, liquid nitrogen overflowed from an immersion freezer located inside a food processing facility in Gainesville, Georgia. The incident resulted in 6 fatalities and four injuries. The release began while maintenance workers were troubleshooting the freezer. Liquid nitrogen was released, vaporized, and accumulated inside the room which had no mechanical ventilation. The two maintenance workers who were troubleshooting the freezer were fatally asphyxiated from the nitrogen vapor.

The uncontrolled liquid nitrogen release went undetected for 30 to 60 minutes until another worker looked for the maintenance workers and saw a 4ft (1.2 meter) high vapor cloud filling the room. This worker reported the incident to management, who initiated an evacuation. During the building-wide evacuation, at least 14 other employees, including management, responded to the incident by either investigating the freezer room or attempting to rescue coworkers. As a result, four additional employees were fatally asphyxiated. Three other employees and a firefighter were treated for asphyxiation symptoms.

For additional details see US Chemical Safety Board report No. 2021-03-I-GA

Did You Know?

- Areas where hazardous gases are stored, processed, or generated as a by-product should be ventilated to prevent exposure to the gas.
- A gas detection and alarm system designed for the specific gases should be installed to monitor the area and notify personnel when high levels are present.
- People working in or near these areas should wear personal gas monitors that can detect and alert them of high concentrations of the hazardous gas.
- Many hazardous gas-related fatalities occur when others attempt to rescue a coworker in a toxic or oxygen deficient atmosphere. No one should enter a potentially hazardous space without proper permits, preparation, and breathing apparatus.
- Evacuation alarms notify people that a serious event has occurred. The proper response must be communicated to employees, visitors and contractors in their site safety orientation.

What Can You Do?

- Know where nitrogen or other hazardous gases are being used in your area. If you see potential release points such as open pipes, relief discharges request a work order to have them capped or properly vented.
- If you work in an area where hazardous gases are present, know the alarm signals for the hazardous gas detection systems used there.
- When a detection alarm sounds, do not wait or try to investigate, evacuate the area immediately. Only personnel properly trained and with the correct PPE should be allowed to investigate until the area is safe.
- If there are visitors or contractors working in a hazardous area, confirm they know how to safely evacuate.
- Once you are in the designated safe area, stay there! Leaving the area could expose you to a fatal dose of toxic material.
- The only safe time to return to the area is after the 'all-clear' status has been announced.

Know your emergency evacuation procedures and follow them !