

Get Out and Stay Out

April 2024



▲ Employees evacuated from a food processing facility after a fatal nitrogen release. *Image credit: Scott Rogers/The Times via Associated Press.*

On Jan. 28, 2021, liquid nitrogen overflowed from an immersion freezer located inside a food processing facility in Gainesville, GA. Six employees were killed and four were injured. 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 30–60 min until another worker looked for the maintenance workers and saw a 4-ft-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. See the U.S. Chemical Safety and Hazard Investigation Board (CSB) report No. 2021-03-I-GA for more information about the incident.

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 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 the 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 or 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 properly trained personnel with the correct personal protective equipment (PPE) should be allowed to investigate until the area is safe.
- If there are visitors or contractors working in a hazardous area, confirm that 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!