

Fatal Alert

On the morning of September 14 2016, two outside operators for a gas plant were assigned to change the filters in the course and fine filters of the inlet system in a building. Employee 1 worked on the course as employee 2 worked on the fine. When employee 1 finished first he stated to employee 2 that he was going to check the differential pressure in the vault filter as instructed by the lead operator in the control room. When employee 2 finished his filter he radioed employee 1 for permission to remove the energy isolation and put the filters back on line. Employee 1 did not respond to the radio so employee 2 went outside the building. On exiting the building employee 2, noticed a large vapor and gas cloud. He called the control room to inform the lead operator of the release. The lead asked if he could isolate the release and employee 2 said he could not safely isolate the release and evacuated the area to the control room. Using the yard security camera the lead operator and employee 2 noticed what appeared to be employee 1 on the north side of the vault filter lying on the ground. The lead operator initiated a total plant shut down to isolate the release. The release continued to grow, and gas monitors started to alarm in the plant. The lead operator and employee 2 left the control room and drove away from the facility per the emergency response plan. The leak was successfully isolated and employee 1 was found lying next to the vault filter. A two-inch drain valve on the filter had been opened under operational pressure. The drain line attached to the opened valve rotated on its axis, striking employee 1 in the head.

Significant factors

- The drain line that struck employee 1 was not secured.
- The valve was not safe from inadvertent opening through a slip or fall.
- The PSM process was not followed when the vault filter was installed.

Recommendations

- The employer should evaluate the design and valve handle placement.
- The employer should evaluate the use of threaded unsecured piping in the drain system.
- The employer should evaluate there PSM audit process.