

NEAR MISS - ROOT CAUSE ANALYSIS

Purging High Pressure Gas

Description of Incident:

While purging air and nitrogen from a storage line, two employees were sprayed with fluid that came out of the purge point. The employees had purged at least 6 or 7 other lines prior to this one without any problem. Anticipating the possibility of fluids, they first checked the drip tank and found little evidence of fluids in this particular section of line. The first time they opened the purge point, they performed their CGI test and had no indication of fluid in the system, but during the second CGI test, the employee standing closest to the purge point was blasted in the face with fluid.

It is not clear how much pressure was behind the fluid when it came out of the purge point. The storage field typically operates around 800 PSI but the valve upstream of the purge point was only partially opened at the time of the incident. The purge point where the fluid escaped was about waist-high. When there was only gas exiting from the purge point the employees had no problem, but when the fluid came out they found that they were actually standing “in the line of fire.”

Both employees were wearing eye protection as required at the time of the incident. The employee most affected by the fluid indicated his face was red and irritated for a few days after the incident. He was certain that his eyes would have been injured if he had not been wearing eye protection.



Root Cause:

1. Wet storage field produces fluid on occasion. This cannot be avoided, but must be managed.
2. Proximity of purge point to employees performing CGI test

Action Plan to Prevent Recurrence:

1. Install a stack or 90 degree ell to vent purged gas, fluids, or other hazards away from employees.
2. Supervisor review procedures and potential hazards during pre-inspection and at shift kick-off meeting prior to purging operations.
3. Engineering and Operations review O&M manual pertaining to purging and blow down procedures to ensure they are adequate and understood by Operations personnel.