



Safety Alert 12

Failure to Follow Safe Systems of Work (PTW)

What happened?

A recent incident involving two hydrocarbon releases from a bleed plug on a test header isolation valve has highlighted the importance of conducting appropriate reviews prior to re-commissioning mothballed equipment and following a Permit to Work (PTW) system.

Piping, manifolds and a production pipeline were being prepared to be flushed with water to allow for inspection and replacement of a section of piping. During attempts to open a valve on a mothballed test header, a plug shot out of the valve body, narrowly missing a person standing nearby. The person was sprayed in the face and chest with a mixture of warm oil and gas from the leak, but was not injured. People in the immediate area evacuated to the top deck of the monopod platform and contacted the control room on a neighbouring platform to isolate the system.

A helicopter was scheduled to return personnel to the nearby platform, so efforts were made to plug the weeping bleed port. However, it was also decided to proceed with the flushing operation prior to arrival of the helicopter.

After the initial incident, it was assumed that the test header isolation valve was closed and a decision was made to repressurise the line. This resulted in a second and larger hydrocarbon release from the bleed port as personnel were fitting a replacement plug. The release activated a gas detector which caused a shutdown on the monopod.

Fortunately, there were no injuries or ignition of the gas. The valve bleed port was then plugged and residual pressure vented to atmosphere via the fixed vent system.

What went wrong?

Investigation found that the review conducted to bring the valve back into service was inadequate and did not identify the need to replace the bleed plug. A previous incident involving corrosion of a bleed plug prompted the replacement a number of plugs on operating valves. However, as this particular valve was mothballed at the time, the plug was not replaced.

Following the initial release, the permit to work was not reviewed to ensure that:

- fitting of a new valve plug was addressed;
- isolation and venting of gas trapped in the system;
- new or changed hazards were identified;
- adequate controls were in place for the work; and
- there were clearly defined and communicated process steps.

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There was a lack of communication between the control room and personnel in the field such that people were not made aware of what actions had been taken or were about to be taken.

Key Lessons:

- Mothballed equipment should be thoroughly inspected and, where necessary, should be tested and verified prior to bringing it back into service. Review processes should be robust enough to ensure lessons from previous incidents are considered.
- After any accident or dangerous occurrence, work should stop to allow for a thorough investigation of the causes prior to continuing.
- If work activities change as a result of an event, it is important to ensure that any new or changed hazards are identified and that these changes are considered in a PTW (including hazard identification and risk assessment) before proceeding.

Contact

For further information email alerts@nopsa.gov.au and quote Alert 12.