

Step Change Safety Alert Template



Alert Title

Gas release from choke valve stem

What leaked and where from? E.g.: "Lube oil leak from compressor system open vent"

Incident Date

18th of September 2013 at 11:30 AM

The date on which the incident occurred, not when this form was completed

Location Type

Normally Unmanned Installation (NUI)

E.g. Floating/Fixed Production, Drill Rig, Vessel, etc.

Specific Equipment Involved

Choke valve

Give as much detail as possible about the equipment involved

Description of What Happened

During normal production an automatic ESD activated due to confirmed gas (2 acoustic leak detectors activated). The site near the detectors was inspected and a gas leakage was found at a well choke valve. The header valves were closed and the well was isolated. The installation (excluding the isolated well) was put back into service and there was no activation of the acoustic leak detectors.

After testing (onshore) the valve appeared to be leaking along the gland. The valve was demounted and damage due to wear to the stem of the plug is identified which leads to the leakage. The cause is irregularities on the stem which can be felt and are partly observable. There is also wear on the gland gasket which leads to leakage. As part of the onshore testing the leak rate along the stem was determined at 1.836 m³/h which roughly corresponds to 0.4 gram per second. The leak rate observed during the test in combination with the distance between the valve and leak detectors would be too low to result in a confirmed gas.

Be as detailed as possible. Give equipment history and approximate time(s) of actions/occurrences related to the incident

Cause of Incident

Wear on valve stem and gland.

Build from OIR/12 checklist

Incident Consequences

Near Miss, excessive emission, event led to Production deferment due to closed in well

Include the release itself and any subsequent emergency actions/dangerous occurrences

Lessons Learned

- After activation of an ESD it can be hard to find the cause for detection activation as the process is no longer in a steady state and the cause itself may also be dynamic in nature.
- Despite of yearly infrared imaging leak surveys by an external party, sufficient time has passed for a 0.4 gram per second leak to form due to wear.
- Leak rates which can be unacceptable from an environmental point of view may still be too small to be picked up by the Fire and Gas detection system.

Include a few bullet points clarifying what was learned from the incident

Recommendations/Actions

- When potential leak paths are identified which can develop to excessive emission within the leak survey interval, those items should be considered for additional periodic testing, e.g. by gas leak soap test.

Include a few bullet points stating any recommendations/actions that will be made/taken as a result of the lessons learned

Contact Details (Optional)

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