

Step Change Safety Alert Template



Alert Title

Gas leak from fitting on xmas tree

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

Incident Date

6th May 2012

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

Location Type

Fixed Production platform

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

Specific Equipment Involved

Xmas tree

Give as much detail as possible about the equipment involved

Description of What Happened

During commissioning of a new well, a small leak was discovered at the pressure testing vent port of the xmas tree. The xmas tree was a brand new piece of equipment being brought into service. On discovery of the leak during commissioning, the wellhead was closed in to isolate the leak and investigation commenced.

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

Cause of Incident

During installation of the xmas tree, a seal ring became dislodged from its retaining groove giving rise to a leak path through the pressure testing vent port. It is thought that the seal became dislodged due to vertical misalignment between the tree and well head.

The incident occurred because of the combination of two factors. Firstly, the failure of the metal to metal seal between the tubing hanger and the xmas tree (also known as the SRL seal) to maintain a gas type seal in spite of being positively hydraulically pressure tested. And secondly, the high pressure valve (autoclave fitting) that is installed on the outside of the vent port, which acts as a secondary barrier, had not been correctly closed after completing a pressure test on the SRL seal. It was found to be only finger tight.

Build from OIR/12 checklist

Incident Consequences

The consequences were limited to a small release that was detected by personnel during commissioning and equipment was isolated. The leak was of an amount that did not instigate registration or executive action of the emergency shutdown system.

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

Lessons Learned

- *It is important to take the time to ensure that commissioning activities are appropriately and adequately planned and completed. Some quick and simple checks prior to brining the equipment into service could have prevented this small leak.*

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

Recommendations/Actions

- Ensure well handover documents are robust
- Include in internal 'lessons learned' database for forthcoming drilling programmes for an item highlighting the importance of closing the autoclave fitting on the vent port. Also to include the installation of a pressure gauge to allow monitoring of the pressure.
- Investigate the option to design a 'pull down' tool for installation of xmas trees to ensure alignment.

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

Contact Details (Optional)

If you would like your submission to be anonymous, leave this section blank