Step Change Safety Alert Template

Alert Title

Significant hydrocarbon gas release from xmas tree adaptor flange

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

Incident Date

February 2012

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

Location Type

Fixed production installation

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

Specific Equipment Involved

Wellhead

Give as much detail as possible about the equipment involved

Description of What Happened

Whilst running in a tool with an ambient Down Hole Safety Valve, a gas leak (@140 Bar) occurred at the tree swab valve adaptor flange. The tool was immediately withdrawn (which had travelled approx 5.5m into the well bore). The upper master walve was closed immediately and the gas leak stopped approximately 5-7 seconds later. The Ops Techs then manually closed the lower master valve and swab valves. After which the tree was vented and an isolation certificate applied.

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

Cause of Incident

The investigation revealed that 6 of the 12 bolts on the adaptor flange were only hand tight

Build from OIR/12 checklist

Incident Consequences

Hydrocarbon release

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

Lessons Learned

- The importance of verifying integrity of equipment by inspection and leak testing after equipment is installed, even if the equipment supplier provides suitable and sufficient documentation in the relation to the equipment factory testing.

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

Recommendations/Actions

- Replace gasket and torque flange to correct settings supplied by OEM. Check all other bolting on tree to ensure torque settings correspond with those supplied by OEM. Undertake pressure test of the tree.
- Review and update xmas tree commissioning procedure to ensure suitable and sufficient commissioning / pre-use checks are carried out which includes site pressure testing and bolt torque certification.
- Conduct a study to identify an improved method of physically identifying fastenings/flange torque status.
- Ensure all relevant personnel are briefed on incident and the importance of tracking equipment and following materials management procedures.
- Update Leak Testing, Service Testing and Inert Gas Purging Procedure to include section on N2/He leak test on Xmas Tree boundary prior to production start-up.

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