

# Step Change Safety Alert Template



## Alert Title

Gas leak from high pressure gas compressor recycle line

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

## Incident Date

31/07/2013

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

## Location Type

FPSO

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

## Specific Equipment Involved

Gas Compression [GC]: HP compressor recycle line

*Give as much detail as possible about the equipment involved*

## Description of What Happened

An abseil technician reported a leak to the control room. An operations technician was then sent to check the source. The source was found to be a "pinhole leak" on the HP gas compressor recycle pipe work.

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

## Cause of Incident

CO2 corrosion/preferential weld corrosion caused the failure at the junction of Carbon Steel and Duplex pipe work

*Build from OIR/12 checklist*

## Incident Consequences

6.78kg of methane gas released. GPA manually initiated, all personnel mustered. Oil process shut in, Gas train shut down and blown down.

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

## Lessons Learned

Although this was a repeat of a similar incident which occurred in 2011, the recommendations from that event failed to prevent the second failure.

The assumption that the H<sub>2</sub>S scavenger wasn't a factor in the first incident's corrosion led to the perception that the failure of the second carbon steel pipe would take longer to occur when in fact, the use of a quill injection point has led to overdosing of H<sub>2</sub>S Scavenger, most likely making the corrosion worse.

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

## Recommendations/Actions

Carry out routine "Time of Flight Diffraction" inspection testing on a quarterly basis until the pipe work is changed out to duplex steel

H<sub>2</sub>S scavenger should be changed out for one that does not break down into organic acids at process conditions.

Change the quill Injector to an atomiser type, minimising the chance of overdosing Scavenger in the future

*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*