

Step Change Safety Alert Template



Alert Title

Gas turbine tripped due to an indication of gas inside the enclosure

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

Incident Date

22/01/2013

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

Location Type

Fixed Production

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

Specific Equipment Involved

Bleed valve on double block and bleed

Give as much detail as possible about the equipment involved

Description of What Happened

The gas turbine tripped due to an indication of gas inside the enclosure. The air inside the enclosure is monitored by three gas detector heads on an aspirator loop. This loop samples the air exiting the turbine enclosure HVAC duct. All three gas heads registered gas. Prior to the trip, the turbine was running on diesel with the fuel gas warming through to the flare system. The area technician changed over the fuel duty to gas via the control panel located in the generator control room. Immediately after, the generator tripped on gas detection.

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

Cause of Incident

An inspection of the gas system highlighted that the probable causes of the leak was located between the high speed shut off valve and the fuel gas metering valve. The block & bleed (DB&B) valve was found to have the bleed valve not fully closed with no plug fitted in the port.

Build from OIR/12 checklist

Incident Consequences

The gas turbine tripped.

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

Lessons Learned

No reason for the plug being removed and the valve being opened could be found from the recent works scope. Plug possibly removed during commissioning to connect a test instrument and not replaced
Plug possibly was not tight when fitted and vibrated out along with the valve vibrating open. No plug found on the floor, however during the check on additional instruments post incident, another nearby DB&B had a loose bleed plug. It was also found during the investigation that the Engineering work pack for a recent controls upgrade showed instrumentation had open ended tubing fitted to the vent ports, but no caps were fitted. Caps / plugs must be fitted to open ended ports.

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

Recommendations/Actions

Bleeds plugs and vent ports to be checked on instrument lines which have had recent invasive work.
Bleed plugs fitted to instrument lines during a recent controls upgrade are to be checked to ensure they are still secure 2 months after the incident.
Discuss the incident with teams to highlight the importance that if a line is left open as a vent then it must be added to the isolation certificate. The importance of making sure that plugs / caps are fitted to all bleed ports should also be discussed.
Ensure a bleed plug check is completed on all future instrument engineering scopes.
Bleed plugs must be fitted in accordance to manufacturers recommendations.

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