



PETROLEUMSTILSYNET

Statoil Petroleum AS

4035 Stavanger

Vår saksbehandler
Øyvind Lauridsen

Deres ref.
AU-DPN OE OSE-00222

Vår ref. (bes oppgitt ved svar)
Ptil 2013/832/ØyL/OvH/ED/OAB

Dato

Investigation report following a hydrocarbon leak on Oseberg A on 17 June 2013 and notification of order (activity 001053028)

A hydrocarbon leak occurred on Oseberg A on 17 June 2013.

Oseberg A was in normal operation when the incident occurred. One of the operations under way was gas injection in well B-41, while well B-45 was producing to the test separator. B-41 and B-45 are tandem wells.

Unstable flow (slugging) from B-45 caused the test manifold to shut down as a result of high pressure. Because B-41 and B-45 are tandem wells, gas injection was not sufficiently isolated from the test manifold, which meant that pressure in the manifold was further increased by the injection system. Pressure from the manifold was bled off to the flare. This caused a hole to be eroded in the blowdown line.

The central control room received the first gas alarm at about 07.04. Immediately afterwards, plant operators confirmed the presence of gas in the module.

Manual level 2.0 emergency shutdown (ESD) was activated by the control room at 07.06. This disconnected ignition sources, shut down, and initiated pressure blowdown of the process plant. Because the leak occurred in the flare system, gas continued to flow out into the module until the blowdown was completed.

The emergency response organisation mobilised and personnel mustered.

About 85kg of gas was released. The initial leak rate was roughly 0.1kg/s.

Nobody was injured in the incident. Production was shut down for four days.

The potential consequences are considered to have been explosion and fire, confined to the module where the incident occurred. Had there been personnel in the immediate vicinity of the leak point, lives could have been lost.

The Petroleum Safety Authority Norway (PSA) has investigated the incident. Our report is attached.

Serious breaches of the regulations have been identified. See chapter 6 of the report. The nonconformities from regulatory requirements involve:

- inadequate overpressure protection of the test manifold
- lack of risk assessment in using the equalising and blowdown system for gas injection
- inadequate work processes for operating wells and process plant
- deficiencies in the inspection programme
- design deficiencies for dealing with sand production.

The investigation has revealed that key work processes for operating the Oseberg field centre are inadequate. Several of these activities are pursued in normal operations and have continued for a number of years without the work processes being risk assessed, updated or prepared, and we hereby give notice of the following order:

Pursuant to section 69 of the framework regulations on administrative decisions, see sections 8, 11 and 13 of the management regulations on internal requirements, the basis for making decisions and decision criteria, and work processes respectively, and sections 24, 27 and 30 of the activities regulations on procedures, critical activities and safety-clearance of activities respectively, Statoil is ordered to review, risk-assess and update work processes for operation of the wells and process plant on the Oseberg field centre, see chapters 6.1.2 and 6.1.3 of the report.

The deadline for compliance with the order is 31 Mars 2014. We must be informed when the order has been complied with.

Possible comments on the order must be received by us no later than 15 January 2014.

The report contains identified nonconformities in addition to the ones which form the basis for this notification of an order, and we would request a description of how these nonconformities will be dealt with. In addition, the report contains observations on conditions with a potential for improvement and other observations, and we request your assessment of these.

We would ask for a response to this letter by 31 March 2014. We also request that this letter and report are made known to union officials, including the safety delegates.

The report will be published on our website on 8 January 2014.

Yours faithfully

Kjell Marius Auflem, by authority
supervision coordinator

Øyvind Lauridsen
principal engineer

This letter has been approved electronically in the PSA and accordingly bears no signatures

Attachment: Investigation report