



+

Qenos Pty Ltd
471-513 Kororoit Creek Road
Altona VIC 3018
Telephone (03) 9258 7204

To : Anita Scordia EPA Victoria **Date:** 17 August 2018
From: Les Harman Qenos Senior Environmental Adviser **Pages:** 2
Subject: Quench Tower Safety Valve discharge to atmosphere containing > 20 kgs of Butadiene

Date: 3rd July 2018

Qenos Incident Report: 304451. C-701 Trip

EPA Reference No: 200195074 **Date:** 3/7/2018

Nature of Incident: The Pressure Safety Valve (PSV) on the quench tower in SCAL-2 discharged for an estimated 9 minutes when the SCAL-2 charge gas compressor was shutdown. The discharge was calculated to contain 42 kg of butadiene exceeding the 20 kg reporting limit contained in the Qenos EMS. The discharge isn't a Licence non-compliance however Qenos EMS requires us to report it to EPA and our community liaison committee.

Incident Summary:

The SCAL-2 Charge Gas compressor slowed to minimum speed when the panel operator erroneously closed the Compressor speed Control when he mistook it for a different controller that he intended to close. The compressor was unable to generate enough pressure to send the feed forward through the unit at minimum speed, which caused the pressure to increase in the Quench Tower causing the PSV to discharge.

The sudden loss of feed through the plant caused multiple impacts through the SCAL-2 plant. The shift elected to proceed to a SCAL-2 plant shutdown to regain full operational control of the process. This involved shutting down all compressors, isolating sections of the plant and reducing furnace feed-rates to minimum as the first hold point.

The PSV on the Quench tower was discharging until the furnace feed rates were reduced to within the capacity of the Quench Tower pressure controller which was discharging to the flare. The PSV discharge for nine minutes with a calculated total discharge of 1900 kg that included 42 kg of butadiene.

Despite a thorough review, the investigation could not establish how the experienced operator operated the incorrect instrument. The instrument he wanted to operate is on a different display group and the instrument identifiers M7001C which he operated and T7118C which he intended to operate are quite different. The only similarity is that they are in the same position in their individual display groups.



Environment Assessment

Environmental impact:

The net impact is an increase in Qenos emissions. No odours or offsite exposures expected as the PSV discharges at an elevated location and disperses. Modelling of the leak shows that the plume does not reach ground level. The release is included in Qenos APS emissions table and NPI report

Qenos Risk Assessment:

Likelihood:	A	<= 0.1 per annum
Consequence:	IV	No off site impact
Risk Rating:	5	Low residual risk

CAUSES AND ACTIONS

CAUSE:

Changes were intended to be made to F731 FG controller (T7118C) however operating moves were actually made to C701 speed override control. It could not be established how this error was made.

Action	Discuss the incident with the operator involved.	Status	Due 31 July 2018 (Completed)
Action	Review incident with shift groups via training day or other discussion forum	Status	Due 29 Nov 2018
Action	Review control system options to determine if a system/additional control can be implemented to reduce the risk of error. Note, any such system will need to be robust under a range of normal and upset conditions, allowing moves to be made as quickly as required to prevent escalation of problems during upset conditions.	Status	Due 21 Feb 2019