

Notifiable incident

Incident ID [5586](#)

Duty holder: INPEX Operations Australia Pty Ltd
Facility/Activity: Ichthys Venturer
Facility type: Floating production storage and offloading facility

Incident details	
Division	Occupational Health and Safety
Notification type	Incident
Incident date	21/09/2018 07:15 AM (WST)
Notification date	21/09/2018 09:58 AM (WST)
NOPSEMA response date	21/09/2018 10:12 AM (WST)
Received by	[REDACTED]
Nearest state	WA
Initial category type <i>(based on notification)</i>	Dangerous Occurrence
Initial category <i>(based on notification)</i>	Damage to safety-critical equipment
3 Day report received	24/09/2018
Final report received	18/10/2018
All required data received	18/10/2018
Final category type <i>(based on final report)</i>	Dangerous Occurrence
Final category <i>(based on final report)</i>	Damage to safety-critical equipment
Brief description	OHS-DSCE - Solenoid failure on deluge
Location	Deck
Subtype/s	Valve failure
Summary <i>(at notification)</i>	<p>During routine maintenance testing of the firewater deluge two solenoid failed on the sub deluge skid #5, cargo deck area 2.</p> <p>2 failures cause automatic system to fail (not activate from CCR).</p> <p>Manual release has been tested and is functional.</p> <p>Incident commend and ERP team notified.</p> <p>Rectification is ongoing today.</p> <p>Non compliance with active fire protection performance standard.</p>
Details <i>(from final report)</i>	<p>During routine maintenance testing of the firewater deluge two solenoid failed on the sub deluge skid #5, cargo deck area 2.</p> <p>2 failures cause automatic system to fail (not activate from CCR).</p> <p>Manual release has been tested and is functional.</p> <p>Incident commend and ERP team notified.</p> <p>Rectification is ongoing today.</p> <p>No compliance with active fire protection performance standard.</p> <p>During routine maintenance (function testing) of the fire water deluge skid, we experienced solenoid failures on the fire deluge skid for Sub Deluge Zone 5 (Cargo deck area 2) which has resulted in this zone being unable to be activated from Central Control Room (CCR).</p> <p>Manual release in field has been tested and functions correctly. The Incident Command and Emergency Response Teams were informed.</p> <p>Rectification of solenoid faults on solenoid valves S-790-DXV-017 and S-790-DXV-037 for deluge skids S-790-Y-001-B and S-790-Y-001-A, Sub Deluge Zone 5 - Cargo deck area 2 has commenced.</p> <p>Function testing of deluge skids remains ongoing for all skids, total 16.</p>

Immediate cause/s	Equipment failure - Solenoid failure.
Root cause/s	ED - DESIGN - Design specs - problem not anticipated
Root cause description	<p>A preliminary non-conformance report has found the following: The valves had failed due to water ingress. The built up/deposit from the water ingress had meant on certain instances, the armature plate is not moving freely, hindering the pull in and drop out of the valve. The coil was also found to be damaged as a result. The water ingress could be caused by a number of reasons.</p> <ol style="list-style-type: none"> 1. Solenoid covers possibly left open during construction and yard phase. 2. Degradation of the rubber washer which lead to water ingress via the solenoid cover.

Duty inspector recommendation

Date	21/09/2018
Duty inspector	[REDACTED]
Recommendation	Do not conduct Major Investigation
Reasoning	Does not meet MI threshold based on information received
Supporting considerations	Wait for 3 days report.

Major investigation decision

Date	21/09/2018
Decision	Do not conduct Major Investigation
Reasoning	Does not meet MI threshold based on information received
Supporting considerations	

Non-major investigation review and recommendation

Date	25/09/2018
Inspector	[REDACTED]
Risk gap	Moderate
Type of standard	Established
Initial strategy	Investigate

Recommended follow up strategy

Recommended strategy	Investigate
Supporting considerations	Deluge is an MAE control, therefore consequence of failure is serious. Likelihood increases from remote to possible. Therefore, risk gap = moderate, Established standard - Class rules & SoV. No relevant history, recommend investigate at next PI.

Non-major investigation decision

Date	27/09/2018
RoN	[REDACTED]
RoN review result	Agree with recommendation
Strategy decision	Investigate
Supporting considerations	Agreed.

Associated inspection

Inspection ID	1794
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