

# Notifiable incident

**Incident ID** [5498](#)

**Duty holder:** INPEX Operations Australia Pty Ltd  
**Facility/Activity:** CPF Ichthys Explorer  
**Facility type:** Other platform with accommodation facilities when drilling/workover facilities are not in commission

Incident details	
<b>Division</b>	Occupational Health and Safety
<b>Notification type</b>	Incident
<b>Incident date</b>	19/07/2018 12:00 PM (WST)
<b>Notification date</b>	19/07/2018 07:05 PM (WST)
<b>NOPSEMA response date</b>	19/07/2018 07:45 PM (WST)
<b>Received by</b>	
<b>Nearest state</b>	WA
<b>Initial category type</b> <i>(based on notification)</i>	Dangerous Occurrence
<b>Initial category</b> <i>(based on notification)</i>	Damage to safety-critical equipment
<b>3 Day report received</b>	22/07/2018
<b>Final report received</b>	14/08/2018
<b>All required data received</b>	14/08/2018
<b>Final category type</b> <i>(based on final report)</i>	Dangerous Occurrence
<b>Final category</b> <i>(based on final report)</i>	Damage to safety-critical equipment
<b>Brief description</b>	OHS-DSCE failure to meet active fire protection standard
<b>Location</b>	Deck
<b>Subtype/s</b>	Facility integrity
<b>Summary</b> <i>(at notification)</i>	Failure of automatic operation of fire and gas system. A routine maintenance, function test of the paint store water mist system, identified that remote action solenoid were faulty on return to service. OIM stated that there is no immediate threat as solenoids may be released at local control panel, However the failure means that the facility does not meet the active fire protection performance standard that the system can be operated automatically through the fire and gas system.

<b>Details</b> <i>(from final report)</i>	<p>Failure of automatic operation of fire and gas system. A routine maintenance, function test of the paint store water mist system, identified that remote action solenoid were faulty on return to service. OIM stated that there is no immediate threat as solenoids may be released at the local control panel. However, the failure means that the facility does not meet the active fire protection performance standard that the system can be operated automatically through the fire and gas system.</p> <p>At the commencement of the 6 monthly S01029 02 Offshore Water Mist System Inspection and Dry Function Test on the CPF HPU ROOM C01 Water Mist System the test was unsuccessful due to solenoid failure. Given that this failure prevented the system from meeting the performance standard I/CPF/MI-01.01 Active Fire Protection, a focused campaign was initiated to systematically function test all water mist packages on the facility. During this testing campaign the same solenoid failure was repeated on the following packages;</p> <p>HPU Room Column 1 (*)  HPU Room Column 4  Paint Store (*)  MEG Pumps  Fire Water Pump C</p> <p>(*) manual activation associated HPU Col 1 and Paint Store were previously advised to NOPSEMA via Dangerous Occurrence Notice on 20 and 22 July respectively.</p> <p>The solenoid failure was attributed to a combination of either contamination from the instrument tubing making its way into the solenoid or incorrect adjustment post leaving the factory. It was identified post failure of the solenoids that the instrument tubing contained within the packages had not been cleaned thoroughly, with swarf and filings found in the tubing. On disassembly of the Bi-fold solenoids it was found there had been moisture in the valve and corrosion was evident. Slight corrosion on the plunger pin has caused the sticky sliding operation. Rust particles were also evident on plunger surface.</p> <p>All replacement solenoids were bench tested in workshop and once re-instated into service the 6 monthly solenoid function test was completed to provide assurance the issue has been rectified. All water mist packages are now in compliance with the performance standard I/CPF/MI-01.01 Active Fire Protection.</p>
<b>Immediate cause/s</b>	Solenoid Failure.
<b>Root cause/s</b>	ED - DESIGN - Design specs - problem not anticipated
<b>Root cause description</b>	<p>O-ring damage due to manufacturing/design issue.</p> <p>Moisture ingress caused corrosion and damage to internal components</p> <p>Minor debris within water mist tubing</p>

<b>Duty inspector recommendation</b>	
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<b>Date</b>	19/07/2018
<b>Duty inspector</b>	[REDACTED]
<b>Recommendation</b>	Do not conduct Major Investigation
<b>Reasoning</b>	Does not meet MI threshold based on information received
<b>Supporting considerations</b>	

<b>Major investigation decision</b>	
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<b>Date</b>	23/07/2018
<b>Decision</b>	Do not conduct Major Investigation
<b>Reasoning</b>	Does not meet MI threshold based on information received
<b>Supporting considerations</b>	

<b>Non-major investigation review and recommendation</b>	
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<b>Date</b>	23/07/2018
<b>Inspector</b>	[REDACTED]
<b>Risk gap</b>	Moderate
<b>Type of standard</b>	Established
<b>Initial strategy</b>	Investigate

Recommended follow up strategy	
<b>Recommended strategy</b>	Investigate
<b>Supporting considerations</b>	<p>The water mist system associated with this notification is for coverage of the paint store. The routine CFT of water mist system has identified that the remote solenoid valve unable to re-seat post testing, hence the system can not be placed on auto mode but the system can be activated by manual mode at local control panel. The downgraded arrangement means that facility does not meet the active fire protection performance standard and to be operated automatically through the fire and gas system and a TOP is in place. There was a similar (identical fault - TBC) reported on the water mist coverage for HPU room in column 01. I have checked with INPEX and INPEX has confirmed that the investigation commenced and their TA was involved due to possible identical design faults.</p> <p>I recommend this incident to be followed up in the next planned inspection PI 1776 in Sept 2018. [REDACTED]</p>

Non-major investigation decision	
<b>Date</b>	23/07/2018
<b>RoN</b>	[REDACTED]
<b>RoN review result</b>	Agree with recommendation
<b>Strategy decision</b>	Investigate
<b>Supporting considerations</b>	

Associated inspection	
<b>Inspection ID</b>	1776