## Notifiable incident

Incident ID	<u>5119</u>
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	29/10/2017 10:34 AM (WST)			
Notification date	29/10/2017 01:25 PM (WST)			
NOPSEMA response date	29/10/2017 03:15 PM (WST)			
Received by				
Nearest state	WA			
Initial category type (based on notification)	Dangerous Occurrence			
Initial category (based on notification)	Unplanned event - implement emergency response plan			
3 Day report received	01/11/2017			
Final report received	28/11/2017			
All required data received	28/11/2017			
Final category type (based on final report)	Dangerous Occurrence			
Final category (based on final report)	Unplanned event - implement emergency response plan			
Brief description	OHS - UPE - Unplanned muster in response to fire alarm			
Location	Engine room			
Subtype/s	Muster, Alarm			
Summary (at notification)	Full muster initiated by fire Alarm - subsequently found no fire , Alarm triggered by steam. At 10:34 there was an indication of fire in Fire Water Generator Room C. An operator adjacent to the room, and vision on camera indicated a mist but no fire. Nonetheless an full muster was held, emergency diesel generators and the 2 fire water generators were activated, and the ERT was stood up. The ERT again check the camera vision of the room and then entered but found no indication of fire. The alarm is thought to have been cause by steam with traces of oil. On confirmation of no fire the muster was stood down Facility is now back to normal.			

<b>Details</b> (from final report)	Full muster initiated by Fire Alarm - subsequently found no fire , Alarm triggered by steam. At 10:34 there was an indication of fire in Fire Water Generator Room C. An operator adjacent to the room, and vision on camera indicated a mist but no fire. Nonetheless an full muster was held, emergency diesel generators and the 2 fire water generators were activated, and the ERT was stood up. The ERT again check the camera vision of the room and then entered but found no indication of fire. The alarm is thought to have been cause by steam with traces of oil. On confirmation of no fire the muster
	was stood down Facility is now back to normal. Initial report states:- At 10:34hrs WST the General Alarm was initiated due to indication of fire in Fire Water Generator'C' room. The generator was running at the time, as requested to start, due to Main Power Generator B had tripped. Personnel on board commenced mustering. A surveillance camera located in the room showed no indication of fire but indicated a mist in the room. This was also substantiated by a utility operator who, on his way to muster, looked through the window of the room. Also an external alarm panel indicated low water level in the cooling expansion tank. Facility mustered all persons were accounted for. When the Emergency Response Team had mustered, they were deployed to set up a forward command post outside the generator room. Once the mist had dissipated, the ERT entered the room and no evidence of fire was found. Water and oil was found on the machinery and floor. Initial indications were that the engine had over heated and the water and oil was released from the engine cooling system and engine oil sump. At 11:34 WST the muster was stood down and an investigation commenced. Note: Fire Water Pumps A and B are available to start on demand.
	The engine failure was a consequence of exceeding the normal operating temperature of the engine, due to the loss of sea water cooling flow to the jacket water heater exchanger (S -790-G-001- C_HR-01). It was determined that physical mechanical failure of a flow glass indicator flapper (S-790-SP-001-C) in the jacket water cooling line, resulted in the flapper blocking a downstream restriction orifice (S-790- RO-331) to the return line overboard. Immediate action was taken to inspect and remove the flow gauge indicators from the cooling water circuit of each fire water pump on the FPSO (Site Change SC-80090). See also NOPSEMA notification 'Failure to meet Performance Standard FWPs' submitted 24 November 2017. The investigation is ongoing, including identifying the root causes and suitable actions to address those root causes and prevent recurrence.
Immediate cause/s	Initial indications were that the engine had over heated and the water and oil was released from the engine cooling system and engine oil sump.
Root cause/s	ED - PREVENTIVE MAINTENANCE - PM NI - PM for equip NI
Root cause description	loss of sea water cooling flow to the jacket water heater exchanger

Duty inspector recommendation	
Date	29/10/2017
Duty inspector	
Recommendation	Do not conduct Major Investigation
Reasoning	Does not meet MI threshold based on information received
Supporting considerations	

Major investigation decision		
Date	30/10/2017	
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	30/10/2017	
Inspector		
Risk gap	None	
Type of standard	Established	
Initial strategy	Inclusion in annual stats/data analysis	

Recommended follow up strategy		
Recommended strategy	Inclusion in annual report stats / data analysis	
Supporting considerations	There were past F&G false alarms on the facility. This incident was triggered by gas alarm & resulted in facility muster. The gas alarm in the FW pump room C was confirmed by the ERT as a false alarm.	
	The final report report indicates FW driver overheated due to cooling water flow restriction (flapper from CW sight glass dislodged due to corrosion and subsequently blocking flow path) and steam/oil from sump triggered F&G alarms.	

Non-major investigation decision			
Date	31/10/2017		
RoN			
RoN review result	Agree with recommendation		
Strategy decision	Inclusion in annual report stats / data analysis		
Supporting considerations			