Notifiable incident

| Incident ID | <u>5237</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 | 23/01/2018 06:39 PM (WST) |
| Notification date | 23/01/2018 10:22 PM (WST) |
| NOPSEMA response date | 24/01/2018 07:14 AM (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 | 25/01/2018 |
| Final report received | 30/01/2018 |
| All required data received | 30/01/2018 |
| 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-Fire alarm activation in fire pump C compartment |
| Location | Deck |
| Subtype/s | Alarm, Emergency response, Muster |
| Summary (at notification) | Operator advised that an indication of fire was identified in the fire pump C compartment. This initiated a GA, Muster and ESD1. |
| | Emergency generator and fire pumps started. ERT deployed. No fire detected. |
| | Fault later traced to card fault on local F&G panel in fire pump compartment. |
| | Muster stood down at 1914hrs and operations restored. No HC's onboard due to hook up and commissioning activities. |

| Details (from final report) | Operator advised that an indication of fire was identified in the fire pump C compartment. This initiated a GA, Muster and ESD1. |
|---------------------------------------|--|
| | Emergency generator and fire pumps started. ERT deployed. No fire detected. |
| | Fault later traced to card fault on local F&G panel in fire pump compartment. |
| | Muster stood down at 19:14 hours and operations restored. No HC's onboard due to hook up and commissioning activities. |
| | At 18:39 a General Alarm was triggered due to indication of High Gas (S830DXS207 – FU) in Fire Water Generator (FWG) Room C in aft Machinery space. Facility Emergency Shut Down (ESD) 1 in non- hazardous areas (S820SD102). FPSO Venturer and accommodation support vessel Jascon 25 facilities mustered, all persons were accounted for. ERT mobilised to investigate and found no indication of fire. Muster on FPSO stood down at 19:14 hours. Main power generators started at 20:40 hours. Facility returned to normal status and an investigation commenced. |
| | Presently FWP C is out of service, under an ISSOW long term isolation. The cause of the ESD1 was indicated gas inside FWP C room. This ESD1 executive action was caused by the HIMATRIX HIMA PLC receiving low volts. The 24vdc supply that supplies the PLC (either from external source, or FWP Generator) was measured at 17.5vdc, causing all outputs to a 0 safe state (trip). At the CPU cabinet of the FWP C, the RPE found that the 690vac was not present. At SWR5 +A10EA01 S-790-EC-001-C (Fire Water Pump C control panel breaker) there was a trip indication on its module. This was probably caused by a previous ESD1 signal some time ago, which was not reset. This breaker is an auto re-close, so unable to explain as to why it was in a tripped condition. This was investigated and confirmed with the ABB vendor. For an auto re-close, the breaker has to be in a soft local mode, which it was as per ABB MNSIS HMI. Once voltage was restored, the battery chargers restarted charging the batteries. Cycled power on HIMATRIX HIMA PLC, program restarted. Earlier short term corrective actions have been closed out (applying MOS and troubleshooting Generator C UCP electrical supply). |
| Immediate cause/s | High Gas Alarm indications in Fire Water Generator pump "C" room. HIMA card went into fault. |
| Root cause/s | ED - TOLERABLE FAILURE |
| Root cause description | Possible loss of external power supply to battery chargers. FWP C is out of service and battery chargers were not being charged by external source or FWP generator supply (* note there is a changeover switch from generator supply to external supply). The 24vdc supply that supplies the PLC (either from external source, or FWP Generator) was measured at 17.5vdc, causing all outputs to a 0 safe state (trip). Further the 690vac supply was not present at the CPU cabinet. Trip indication on the module in SWR5 +A10EA01 S-790-EC-001-C (Fire Water Pump C Control Panel breaker) owing to potentially a previous ESD 1 signal not reset |

| Duty inspector recommendation | |
|-------------------------------|--|
| Date | 24/01/2018 |
| Duty inspector | |
| Recommendation | Do not conduct Major Investigation |
| Reasoning | Does not meet MI threshold based on information received |
| Supporting considerations | |

| Major investigation decision | |
|------------------------------|--|
| Date | 24/01/2018 |
| Decision | Do not conduct Major Investigation |
| Reasoning | Does not meet MI threshold based on information received |
| Supporting considerations | |

| Non-major investigation re- | view and recommendation |
|-----------------------------|--|
| Date | 24/01/2018 |
| Inspector | |
| Risk gap | None |
| Type of standard | Established |
| Initial strategy | Inclusion in annual stats/data analysis |
| Recommended follow up st | rategy |
| Recommended follow up st | Тасеву |
| Recommended strategy | Inclusion in annual report stats / data analysis |
| Supporting considerations | The notification includes confirmation of false fire alarm from defective card. The facility has been mustered in the past due to other false alarm. The facility is still in commissioning phase and a number of system glitches ,equipment faults and tuning / adjustments will be progressive resolved over the period. |
| | Reviewed final report - The Fire Water Pump C control panel breaker was found not re-set from last trip. Stated corrective action is to ensure breakers' (re-set) checks of all FWPs in the updated post recovery ESD 1 recovery procedure. |
| | Additional note:- FWP C is out of service, under an ISSOW long term isolation. The cause of the ESD1 was indicated gas inside FWP C room. This ESD1 executive action was caused by |

the HIMATRIX HIMA PLC receiving low volts. The cause of the problem pointing to control panel breaker not re-set from previous trip. Corrective action is to update breakers' checks of all FWPs to the post recovery ESD 1 recovery

corrective action is to update breakers' checks of all FWPs to the post recovery ESD 1 recovery procedure.

It should be noted that the facility has 2x100% FW coverage. There are 4 FW pumps. Outage of 1 FW pump has not compromised AFP coverage & PS not deviated. The FWP C outage was diesel driver damage due to restricted cooling water flow caused by dislodged sight glass flapper.

| Non-major investigation decision | |
|----------------------------------|--|
| Date | 29/01/2018 |
| RoN | |
| RoN review result | Agree with recommendation |
| Strategy decision | Inclusion in annual report stats / data analysis |
| Supporting considerations | |

| Associated inspection | |
|-----------------------|--|
| Inspection ID | |