# Notifiable incident

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| **Incident ID** | 5417 |
| **Duty holder:** | INPEX Operations Australia Pty Ltd |
| **Facility/Activity:** | Ichthys Venturer |
| **Facility type:** | Floating production storage and offloading facility |

| **Incident details** | |
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| **Division** | Occupational Health and Safety |
| **Notification type** | Incident |
| **Incident date** | 21/05/2018 12:55 PM (WST) |
| **Notification date** | 21/05/2018 03:40 PM (WST) |
| **NOPSEMA response date** | 21/05/2018 03:59 PM (WST) |
| **Received by** | [redacted] |
| **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** | 24/05/2018 |
| **Final report received** | 21/06/2018 |
| **All required data received** | 21/06/2018 |
| **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-INERGEN Release in aft machinery spaces |
| **Location** | Engine room |
| **Subtype/s** | Emergency response |
| **Summary** *(at notification)* | Operator advised that during the recovery from a planned aft ESD1, the INERGEN system was discharged into several technical rooms in the aft machinery space. The GA was activated and a full muster occurred.<br><br>[redacted] attempted to contact the operator on 21 and 22 May and was not able to speak to the OIM. A message was left on 22 May to call him back. |
| **Details** *(from final report)* | Operator advised that during the recovery from a planned aft ESD1, the INERGEN system was discharged into several technical rooms in the aft machinery space. The GA was activated and a full muster occurred.<br><br>[redacted] attempted to contact the operator on 21 and 22 May and was not able to speak to the OIM. A message was left on 22 May to call him back.<br><br>A successful planned ESD 1 - Aft machinery space was conducted, which involved the tripping of the Aft UPS system and the entire Aft ICSS system. During the recovery process, a release of inergen occurred in the Aft machinery space technical rooms. No injury to personnel.<br><br>S060-AH-PST-10043 - Inergen Performance Standard – not being met post this event. This is due to depletion of the inergen supply to the Aft machinery space. Replacement cylinders sourced and being installed. |
| **Immediate cause/s** | The power recovery had reached the stage of where the ICSS controllers were being restored. During this power recovery sequence, the inergen release was activated despite it being inhibited from the FGOP. Detailed technical analysis required to determine cause. |

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| **Root cause/s** | ED - DESIGN - Design specs - problem not anticipated, HPD - PROCEDURES - Wrong - situation not covered |
| **Root cause description** | Equipment Difficulty – Design – Design Specs – Problem not anticipated.<br>Unintended firing of Fire Gas System (FGS) controller digital outputs during controller system re-boot from Black Start, where the digital output block is in a separate controller from the INERGEN Fire Fighting Logic block.<br><br>Procedures – Wrong – Situation not covered. The INERGEN System was not mechanically isolated during the test as it was not believed to be required; it was inhibited via the Fire Gas Operation Panel (FGOP) key switch in the Central Control Room. |

| **Duty inspector recommendation** | |
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| **Date** | 22/05/2018 |
| **Duty inspector** | [redacted] |
| **Recommendation** | Do not conduct Major Investigation |
| **Reasoning** | Does not meet MI threshold based on information received |
| **Supporting considerations** | |

| **Major investigation decision** | |
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| **Date** | 22/05/2018 |
| **Decision** | Do not conduct Major Investigation |
| **Reasoning** | Does not meet MI threshold based on information received |
| **Supporting considerations** | |

| **Non-major investigation review and recommendation** | |
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| **Date** | 28/05/2018 |
| **Inspector** | [redacted] |
| **Risk gap** | Moderate |
| **Type of standard** | Established |
| **Initial strategy** | Investigate |

| **Recommended follow up strategy** | |
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| **Recommended strategy** | Investigate |
| **Supporting considerations** | Relevant incident history - NMI 5428 - GA due to false indication; NMI 5383 - GA due to false fire alarm; NMI 5336 - GA due to false indication of deluge discharge. There is a pattern of false alarms and inadvertent activation of fire systems.<br>https://www.nist.gov/sites/default/files/documents/el/fire_research/R0301006.pdf states that although Inergen is generally a safe medium, in that it does not create an irrespirable atmosphere when activated, "The only possible concern with INERGEN is in over-concentration applications which could result in CO2 concentrations in excess of 56%. At these levels of CO2, the onset of asphyxiation occurs and at<br>8-9% unconsciousness can result. This is an engineering and applications problem and suitable safeguards such as system commissioning discharge testing can validate that the level is as designed."<br>Because the facility is still commissioning, and because the release occurred without the usual muster and head-count process beforehand, there is a risk gap and workers may have been exposed to a dangerous substance. Established standard - as per the facility scope of validation. |

| **Non-major investigation decision** | |
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| **Date** | 28/05/2018 |
| **RoN** | [redacted] |
| **RoN review result** | Agree with recommendation |
| **Strategy decision** | Investigate |
| **Supporting considerations** | |

| **Associated inspection** | |
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| **Inspection ID** | 1780 |