

Notifiable incident

Incident ID [6371](#)

Duty holder: Shell Australia Pty Ltd
Facility/Activity: Prelude FLNG
Facility type: Floating liquefied natural gas facility

Incident details	
Division	Occupational Health and Safety
Notification type	Incident
Incident date	05/02/2020 06:00 PM (WST)
Notification date	06/02/2020 05:31 AM (WST)
NOPSEMA response date	06/02/2020 07:02 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>	Unplanned event - implement emergency response plan
3 Day report received	08/02/2020
Final report received	05/03/2020
All required data received	05/03/2020
Final category type <i>(based on final report)</i>	Dangerous Occurrence
Final category <i>(based on final report)</i>	Unplanned event - implement emergency response plan
Brief description	OHS - UPE Precautionary Medivac
Location	
Subtype/s	Emergency response
Summary <i>(at notification)</i>	IP reported to Medic at start of night shift with Cognitive (blurred vision) and balance issues Decision made to send IP to Charles Gardener Hospital for check up ERP initiated Helicopter departing Broome at 0600 hrs 6 February. Possible side effects of dehydration. Details from further investigation to be included in 3 day report
Details <i>(from final report)</i>	<p>IP reported to Medic at start of night shift with Cognitive (blurred vision) and balance issues Decision made to send IP to Charles Gardener Hospital for check up ERP initiated Helicopter departing Broome at 0600 hrs 6 February. Possible side effects of dehydration. Details from further investigation to be included in 3 day report</p> <p>** As Supplied by Duty Holder**</p> <p>Brief description of incident - IP reported to Prelude medic with symptoms of mild headache and blurred vision. All tests and observations taken onboard normal however in consultation with onshore consulting Doctor, further assessment required onshore. Medevac was requested and activated.</p> <p>Work or activity being undertaken at time of incident - Routine work duties.</p> <p>What are the internal investigation arrangements? Offshore and onshore medical assessments to be completed. Consultation with Shell Health and onshore medical support. Five (5) whys investigation to be completed.</p> <p>Action taken to make the work-site safe - IP reported to Prelude medic. Review and assessment undertaken. Onshore doctor recommendation to initiate a precautionary medevac. Further onshore</p>

medical review and assessment to be conducted in Perth.

Details of any disturbance of the work site - Not applicable.

How effective was the emergency response? Medical emergency response plan (MERP) activated.

Details of injury - IP reported to Prelude medic with symptoms of mild headache and blurred vision.

Details of job being undertaken - Normal daily duties – Production Lead Technician

Immediate action taken/intended, if any, to prevent recurrence of incident;

Action - Initiated medevac from Prelude Prelude. Responsible - OIM/Medevac provider. Completion Date - 06/02/2020

Action - Arrange for Perth medical assessment. Responsible - Medevac provider. Completion Date - 06/02/2020

What were the immediate causes of the incident? Unknown under medical review and investigation.

** As Supplied by Duty Holder**

Has the investigation been completed? Yes

Root cause 1 - IP was required to undertake extended period of emergency response activities (in the 48 hours prior to the medical presentation), including prolonged wearing of firefighting tunic (required to remain in full firefighting gear in the staging area) and multiple use of stairs in firefighting gear.

While the worker was acclimatised to the environment, he was not acclimatised to the high levels of physical exertion in the heat.

Root cause 2 - HVAC outage within the LQ created high temperature, high humidity and a poor sleeping environment. IP had worked prior night shift and was unable to sleep in the conditions.

Root cause 3 - IP underestimated their hydration levels.

IP could not check their urine colour (to estimate dehydration) after midday on the 03.02.2020 as the LQ toilets were not operating. IP recalled checking his urine before midday and that it was not concentrated.

Full Report - On 03.02.2020 Prelude experienced major process shutdowns resulting in 7 general alarm activations. Due to power outages and GA's the IP was involved in prolonged activity, wearing full firefighting gear. Usual HVAC and fan cooling were not available for long periods of time and potable water not available in usual locations.

Water intake was increased (Bottled water was readily available to the worker), however, not sufficiently to accommodate for conditions, due to power outage there was no air conditioning or fans in this area.

The IP presented to the medic on 03.02.2020 with heat related symptoms. IP received medical treatment and was placed on light duties with their condition monitored by the Medic. On the evening of 05.03.2020, IP reported further symptoms. In alignment with advice from onshore medical support the deterioration in the IP's condition required further onshore medical investigation. A medevac was initiated for first light on the 06.02.2020. The diagnosis from Royal Perth Hospital was 'heat exhaustion'. IP was discharged on 07.02.2020.

Actions to prevent recurrence of same or similar incident:

Action - Site wide training to increased understanding of heat stress risks and controls to all working onboard Prelude. Responsible - HSE Advisor (with Medics). Completion Date - Increased education has begun, to be completed by end of May 2020, with ongoing education on heat stress

Action - Initial updates to Heat Stress tools – paper-based risk assessment, enforced use for at risk environments. Responsible - HSE Advisor. Completion Date - Completed

Action - Update Heat Stress procedure based on learnings, increase clarity on risk and controls. Responsible - Industrial Hygienist. Completion Date - 30 April 2020

Action - Procure refractometer for Medic dehydration testing (baseline and awareness). Reagent strips already available in interim. Responsible - Industrial Hygienist. Completion Date - 31 March 2020

Action - Review the ERP requirement to wear full fire-fighting tunic while waiting in staging area to be called forward. Responsible - Prelude Safety Lead. Completion Date - 30 April 2020

Immediate cause/s

TBC

Root cause/s	
Root cause description	

Duty inspector recommendation

Date	06/02/2020
Duty inspector	
Recommendation	Do not conduct Major Investigation
Reasoning	Does not meet MI threshold based on information received
Supporting considerations	

Major investigation decision

Date	06/02/2020
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	06/02/2020
Inspector	
Risk gap	Moderate
Type of standard	Interpretative
Initial strategy	Investigate

Recommended follow up strategy

Recommended strategy	Investigate
Supporting considerations	IP may have experienced fatigue and dehydration during multiple GA and Muster events at the facility between 02/02/2020 and 04/02/2020. Was initially re-hydrated with IV line, but deteriorated and Shell chose to medivac to hospital. Investigate at the next inspection.

Non-major investigation decision

Date	06/02/2020
RoN	
RoN review result	Agree with recommendation
Strategy decision	Investigate
Supporting considerations	

Associated inspection

Inspection ID	2129
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Runsheets entries

1	Event date	31/03/2020 11:30 AM
	Event	See February MIR #12580 - reported 26 days ADI
2	Event date	20/04/2020 03:52 PM
	Event	March report A727528 - 31 days ADI. Total updated from 26 days to 57 days ADI
3	Event date	11/05/2020 01:34 PM
	Event	April report A730769 - 30 days LTI. Total updated from 0 (zero) days to 30 days LTI.
4	Event date	18/06/2020 04:52 PM
	Event	May report A735166 - 31 days LTI. Total updated from 30 days to 61 days LTI
5	Event date	13/07/2020 11:58 AM
	Event	June report A739275 - 30 days LTI. Total update from 61 to 91 days LTI

6	Event date	17/08/2020 09:15 AM
	Event	July report A743530 - 19 days ADI and 11 days ADI. Total updated from 91 to 110 days LTI and 57 to 68 days ADI