



# Report

## Inspection

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Facility: Northern Endeavour - NOGA  
Operator: Upstream Production Solutions Pty Ltd  
Offshore Inspection Dates: 28/06/2017 – 28/06/2017

Lead inspector [s 22 irrelevant material](#)  
Inspection Team  
Report Number 1641

### REPORT DISTRIBUTION

Position	Company
Records management	NOPSEMA
	Upstream Production Solutions Pty Ltd

### REVISION STATUS

Rev:	Date:	Description:	Prepared by:	Approved by:
A	29/06/2017	Internal Draft	<a href="#">s 22 irrelevant material</a>	
B	20/07/2017	Draft for Discussion with Operator		
0	03/08/2017	Final		

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## 1 Abbreviations

HIRA	Hazard Identification Risk Assessment
PTW	Permit to Work
UPS	Upstream Production Solutions Pty Ltd

## 2 Inspection Method

The inspectors prepared an Inspection brief and forwarded this to the operator Upstream Production Solutions Pty Ltd (UPS) prior to the inspection. The brief set out the proposed inspection agenda and scope.

The proposed scope for this inspection included:

- Incident Investigation: Incorrect use of a spreader bar during lifting operations (Incident Date: 10/6/2017, Notified to NOPSEMA on 12/6/2017 NOPSEMA ID: 4960).
- Training and Competency of facility personnel conducting lifting related activities.

On arrival at the operator's regulated business premises, an entry meeting was held to present the inspection plan to the operator's representatives. Following the review of inspection brief, the inspectors interviewed and discussed the inspection scope with onshore personnel. At the conclusion of the meeting the inspectors presented the preliminary findings. A list of persons present at the meeting is included in Attachment A.

Subsequently, a draft report was issued to the operator for review and the Operator agreed that there were no factual errors. A meeting to discuss key findings from the inspection has been scheduled for 15 August 2017 as requested by the Operator.

## 3 Conclusions and Recommendations

The inspectors noted that safety case commitments relating to lifting operations had been implemented, in relation to the lifting of the alternator. The inspectors concluded that the incident was primarily due to inadequate understanding in the use of the spreader/lifting bar supplied by a third-party.

The inspectors found deficiencies in the lifting procedures used at the facility and a lack of basic understanding of differences between a spreader bar and a lifting bar.

Two recommendations relating to lift planning and procedures have been raised.

It was found that the persons involved in the alternator lift met the competence requirements of the operator. However, two systemic recommendations relating to lifting personnel competence have been raised.

Detailed findings are provided in the following sub-sections, which highlight any particular areas where non-compliance or opportunities for improvement have been identified. The inspectors' detailed recommendations are included in the following sub-sections and are repeated in the Recommendations and Follow-up List in Attachment B.

### 3.1 Incorrect use of a spreader bar during lifting operations (NOPSEMA ID: 4960):

#### Background:

A 9 tonne alternator was lifted into position with the use of a combination spreader/lifting bar. The lift was carried out with the bar configured as a lifting bar. The Safe Working Load (SWL) of the bar when used as a lifting bar was 4.05 tonnes as opposed to a SWL of 15 tonne when configured as a spreader bar. This was realised by the crew after the 9 tonne lift was completed in the lifting bar configuration. The incident occurred on 10/06/2017 and was notified to NOPSEMA on 12/06/2017.

#### Safety case commitments:

“Loss of Control of Suspended Load” is indicated in the facility safety case, to be a Major Accident Event (MAE).

The following controls, relevant to this incident, are listed in the safety case:

- Temporary Equipment Procedures (Contractor lifting equipment);
- Equipment Design and Specification;
- Certified lifting Equipment;
- Permit to Work System; and
- Lifting Procedures.

#### Controls implemented and functional:

Competency and training are discussed in Section 3.2 of this report.

The inspectors found that a Lifting Operations and Lifting Equipment procedure had been implemented, and that a Lifting Equipment performance standard has been published.

A Rigging and Lifting Register is maintained for lifting gear at the facility.

The inspectors found that a Permit to Work (PTW) was raised and approved for the lift, a Lift Plan was raised and a Hazard Identification Risk Assessment (HIRA) was conducted.

#### Discussion of the Dangerous Occurrence:

The operator conducted a TapRoot® investigation of the incident and a draft copy of the report was discussed during the inspection. The operator submitted a final report to NOPSEMA on 07/07/2017.

The remedial actions in the TapRoot® report appeared to be appropriate. Several corrective actions have been raised in section 10 of the report (document number 4900-HS-H0105, Revision: 0).

A number of opportunities for improvement listed in the operator’s investigation report were mirrored in observations by the NOPSEMA inspectors. These have not been repeated in this NOPSEMA report.

#### **Recommendation 1641-1**

UPS to ensure that all corrective actions raised in section 10 of the UPS investigation report (document number 4900-HS-H0105, Revision: 0), are addressed in a timely manner.

Procedural shortcomings relating to the use of third-party supplied lifting tools were identified in the report. The gaps in procedural and competency requirements with reference to identification of engineering assistance for complex lifts was identified, however infrequently used lifting gear or uncommon lifts have not been discussed. These deficiencies have been discussed with the operator’s onshore management.

The inspectors observed that the PTW does not reference or include the lift plan.

The inspectors noted that the assessment of the load weight does not appear to have been verified. The lift plan states “up to 10 tonnes”. Details of verification, for example from cross-checking with the supply vessel manifest, were not available.

A sketch showing some details of the lift was prepared. The sketch appears incorrect since it shows the configuration of the combination bar to be used as a lifting bar whilst the lift plan consistently refers to it as a spreader bar.

The copy of the sketch provided with the lift plan does not indicate whether it was reviewed or approved for use.

It was also discussed that the combination bar had a compliance plate attached. However this was not sighted since the compliance plate was on one side of the appliance and that it was lying face down. The bar weighed 110 kilograms and hence it would have been difficult to turn it to check the compliance plate. Since the compliance plate of the spreader / lifting bar was not checked, it appears that the Pre-Use Visual Checks as required by Section 6.3.1 of the Lifting Operations and Lifting Equipment procedure were not carried out. This has been recorded as an action item in the operator’s TapRoot® investigation report.

It is noted that the Lifting lugs on the alternator were not inspected or certified as required by Section 7.3 of the Lifting Operations and Lifting Equipment procedure.

The lift plan provided is inconsistent with the Lifting procedure. A lift plan template has been provided in Appendix B of the Lifting procedure. This template has not been used.

**Recommendation 1641-2**

UPS to ensure that all relevant members of the facility workforce are made aware that all lifting equipment, including equipment that is provided by third party specialist vendors, must be adequately inspected and registered before it is used.

**Recommendation 1641-3**

UPS to ensure that all relevant members of the facility workforce receive instruction in the use of the permit to work system, Job Safety Analysis and lifting plans to make certain that lifting operations are adequately planned, and risks are reduced to ALARP. This instruction should include, but not be limited to:

- a) Consideration of alternative lifting methods, equipment and rigging configurations;
- b) Implementation of Original Equipment Manufacturer provided advice and equipment including verification of load weight and inspection & certification of lifting lugs;
- c) Implementation of engineering advice relating to uncommon lifts; and
- d) Supervisors’ oversight and approval of Lift plans including sketches.

### 3.2 Training and Competency of facility personnel conducting lifting related activities

#### Implemented Controls

The inspectors found that the facility crane operator and rigger involved in this incident all held current High Risk Work Licenses and had completed the operator's relevant Competency Based Training and Assessment (CBTA).

#### Discussion

The inspectors identified the following opportunities for improvement:

- Members of the workforce had an incomplete knowledge of the difference between a spreader bar and a lifting bar, particularly with respect to the reduction of SWL when the load is configured as a lifting bar;
- The competency criteria for relevant personnel described in Section 6.1 of the Lifting Operations and Lifting Equipment procedure does not recognise the training required for the use of combination spreader/lifting bars; and
- The competency criteria for relevant personnel described in Section 6.1 of the Lifting Operations and Lifting Equipment procedure does not recognise the training required for identifying whether engineering input is required for uncommon lifts.

#### **Recommendation 1641-4**

UPS to ensure that all relevant members of the facility workforce receive instruction in the safe use of combination spreader/lifting bars.

#### **Recommendation 1641-5**

UPS to consider including the following competence criteria for Crane Operators and Riggers:

- a) The safe use of combination spreader/lifting bars; and
- b) Identifying whether engineering input is required for infrequently used lifting gear and uncommon lifts.



## 4 Attachments

### Attachment A – Meetings


#### 1. Pre-Inspection Meeting

There was no separate pre-inspection meeting held for this inspection.

#### 2. Regulated Business Premises Meeting

The meeting provided an opportunity for NOPSEMA to provide an overview of the inspection programme and confirm the timing. Interim observations and conclusions from the inspection and the operator's representative's views were also discussed.

A list of personnel at the meeting is attached below:



## Form

### Entry and Exit Meeting Register and Notification of Entry

By initialling the "Entry" column of the form below, I hereby acknowledge that on entering the regulated business premises the inspectors notified the entry meeting attendees of the purpose of entering the facility in accordance with Clause 5.1 (2) : "Notification of entry" of Part 4 (OHS Inspections), Division 2 of Schedule 3 to the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGSA).

Note: Page two of this form contains NOPSEMA Privacy Notice

OPERATOR:	Upstream Production Solutions	REGULATED BUSINESS PREMISES:	West Perth
Entry meeting date:	28/6/2017	Exit meeting date:	N/A

NAME <small>(Please Print)</small>	COMPANY	POSITION	Entry <small>(Please Initial)*</small>	Exit
s 22 irrelevant material	NOPSEMA	OHS Inspector	s 22 irrelevant material	
	NOPSEMA	OHS Inspector		
	VPS	OPERATIONS MGR		
	UPS	AIM ENGINEER		
	NOGA	ASSET MGR		
	NOGA	ENG MGR		
	UPS	HSE ADVISOR		
	UPS	HSE ADVISOR		

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Revision Date: 1 October 2014

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Reference: N-02100-FM0042  
Objective ID: A15392

National Offshore Petroleum Safety and Environmental Management Authority

**Attachment B – Detailed Recommendations from this Inspection**

NOPSEMA	ID	1641-1
	Recommendation	UPS to ensure that all corrective actions raised in section 10 of the UPS investigation report (document number 4900-HS-H0105, Revision: 0), are addressed in a timely manner.
	Status	Open

NOPSEMA	ID	1641-2
	Recommendation	UPS to ensure that all relevant members of the facility workforce are made aware that all lifting equipment, including equipment that is provided by third party specialist vendors, must be adequately inspected and registered before it is used.
	Status	Open

NOPSEMA	ID	1641-3
	Recommendation	UPS to ensure that all relevant members of the facility workforce receive instruction in the use of the permit to work system, Job Safety Analysis and lifting plans to make certain that lifting operations are adequately planned, and risks are reduced to ALARP. This instruction should include, but not be limited to: a) Consideration of alternative lifting methods, equipment and rigging configurations; b) Implementation of Original Equipment Manufacturer provided advice and equipment including verification of load weight and inspection & certification of lifting lugs; c) Implementation of engineering advice relating to uncommon lifts; and d) Supervisors' oversight and approval of Lift plans including sketches.
	Status	Open

NOPSEMA	ID	1641-4
	Recommendation	UPS to ensure that all relevant members of the facility workforce receive instruction in the safe use of combination spreader/lifting bars.
	Status	Open

NOPSEMA	ID	1641-5
	Recommendation	UPS to consider including the following competence criteria for Crane Operators and Riggers: a) The safe use of combination spreader/lifting bars; and b) Identifying whether engineering input is required for infrequently used lifting gear and uncommon lifts.
	Status	Open