



NOPSEMA

Report

Planned Inspection

Facility: Northern Endeavour
Operator: Woodside Energy Ltd
Offshore Inspection Dates: 27/04/2016 – 29/04/2016

Lead inspector [REDACTED]
Inspection Team [REDACTED]
Report Number 1346

REPORT DISTRIBUTION

Position	Company
Records management	NOPSEMA
	Woodside Energy Ltd

REVISION STATUS

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A	16/05/2016	Internal Draft	[REDACTED]	[REDACTED]
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Table of Contents

1	Abbreviations.....	3
2	Inspection Method	3
3	Conclusions and Recommendations.....	4
3.1	Previous recommendations	5
3.2	Consultation with Health & Safety Representatives and members of the workforce	5
3.3	Follow up on Previous Incidents	5
3.4	MAE-02: Topsides Loss of Containment	7
3.5	MAE-09: Machinery Space Fires	10
3.6	General OHS Observations.....	11
4	Attachments	15
	Attachment A – Meetings.....	15
	Attachment B – Detailed Recommendations from this Inspection.....	18
	Attachment C – Recommendations Status from Previous inspections.....	21

1 Abbreviations

AIS	Automatic Identification System
ALARP	As Low As Reasonably Practicable
BDV	Blowdown Valve
CCR	Central Control Room
CRN	Controller Reference Number
CRT	Cathode Ray Tube
ESD	Emergency Shut Down
HSR	Health & Safety Representative
ICS	Integrated Control System
MAE	Major Accident Event
MOS	Maintenance Override Switch
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OHS	Occupational Health and Safety
PFP	Passive Fire Protection
P&ID	Piping and Instrumentation Diagram
PLC	Programmable Logic Controller
PS	Performance Standards
RESDV	Riser Emergency Shutdown Valve
SDV	Shutdown Valve
SIF	Safety Instrumented Function
SIL	Safety Integrity Level
SIS	Safety Instrumented System
TOP	Temporary Operating Procedure
WEL	Woodside Energy Limited

2 Inspection Method

The inspection team prepared a planned inspection brief and discussed this with the operator prior to the inspection. The brief set out the proposed inspection itinerary and scope. A list of persons present at this pre-inspection meeting is included in Attachment A.

The proposed scope for this inspection included:

- Verification of commitments regarding the recommendations from previous inspections;
- Consultation with Health & Safety Representatives and members of the workforce;
- Follow up on Previous Incidents:
 - #4477 Oil sheen identified in sea around turret; and
 - #4534 Radar failure.
- MAE-02: Topsides Loss of Containment – Focus on functional safety / SIL PS assurance; and
- MAE-09: Machinery Space Fires – Exposure to hazardous chemicals, flammable / toxic fumes in machinery spaces and enclosed areas.

General Occupational Health and Safety (OHS) observations noted during the course of the inspection are also included in the report.

On arrival at the facility, an entry meeting was held to present the plan to the offshore personnel. Before leaving the facility, the inspection team prepared an Inspection Exit Brief, which was discussed with key offshore personnel during an exit meeting. An attendance list for both the offshore entry and exit meetings is included in Attachment A.

Subsequently, a meeting was held with key onshore personnel of the operating company to discuss key findings from the inspection. Significant details of this meeting are provided in Attachment A.

3 Conclusions and Recommendations

At the time of the inspection, the facility had 24 personnel on board and was producing at a steady state of approximately 3800 barrels of oil per day.

11 recommendations from previous inspections remain open. There are no overdue recommendations.

The inspectors found that the Health & Safety Representative (HSR) process on the facility functions effectively. The relationship between the HSRs and facility management remains positive.

The Emergency Shutdown System (ESD), which is implemented via the Safety Instrumented System (SIS), is a control measure for MAE-02 and was reviewed during the inspection. It was found that there are several recommendations from the NE Safety Integrity Level Classification and Verification Report, issued in December 2012, which have not been implemented. These recommendations were required to be implemented to meet the assessed Safety Integrity Level (SIL) of the respective Safety Instrumented Functions (SIFs). Several of these recommendations have been singled out in this report and it has been recommended that they be addressed in order to meet the requirements of IEC 61511 as per commitments in the safety case.

During the inspection it was identified that two high level trip functions, relating to the HP and LP Flare KO drums, were being overridden with a Maintenance Override Switch (MOS) since June 2015. The functions have a SIL 2 classification however there was no identifiable plan to restore the functionality during the inspection. It has been recommended that these functions be restored to full operation.

Control measures for MAE-09, Machinery Space Fires, were reviewed during the inspection. It was observed that gas and smoke detectors were in place at the ventilation inlets with appropriate trip functions, an Inergen active fire protection system was provided for the purifier and inert gas generator rooms, operators were trained appropriately in how to use the systems employed and escape routes were clearly identifiable. The inspection did identify two valves relating to the diesel storage tank and the aft foam tank which needed repair and which had been identified as requiring repair since 2013.

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.

Attachment C also includes the status of previous recommendations from the last inspection report as well as any other open recommendations.

3.1 Previous recommendations

11 recommendations remain open from previous inspections. There are no overdue recommendations. Summary of recommendations closed during the inspection:

No.	Recommendation	Remarks
1106-9	Ensure that the annual third party performance standard verification activities are completed as required by the WEL Integrity Management process.	Response accepted – closed.
1175-3	Ensure that the technical and other controls for MAE-02 are subject to an independent audit in accordance with table 1.1 and Section 10.2 of Part 3 of the facility safety case.	Response accepted – closed.
1175-14	Ensure that the technical and other controls for MAE-05 are subject to an independent audit in accordance with table 1.1 and Section 10.2 of Part 3 of the facility safety case.	Response accepted – closed.
1175-15	Ensure that the capability assessment of potential contractors is undertaken to assess their ability to manage HSSE risks in accordance with Part 3, section 8.3 of the safety case.	Response accepted – closed.
1175-16	Ensure that a close-out report as required by step #8 of Part 3, section 8.3 of the safety case is completed. The report must include the following: a. Formally review the HSSE performance of a contractor throughout the contract; b. Capture lessons learned and best practices for improving HSSE performance of current and future work and future contractor selection; c. Formally review the suitability of the Woodside HSSE contract strategy and contract delivery requirements.	Response accepted – closed.

3.2 Consultation with Health & Safety Representatives and members of the workforce

All workgroups are represented by HSRs and the inspectors noted that all HSRs have been trained. The relationship of the HSRs with management is open and responsive. All actions arising through safety meetings are effectively tracked through the minutes of the meetings. The minutes and action items are shared on the common “L” drive on the corporate network. A list of photos of the HSRs was posted on the safety notice board.

3.3 Follow up on Previous Incidents

#4477 Oil sheen identified in sea around turret:

It was reported that an oil-sheen was noticed in the sea around the turret (port and starboard sides). An incoming helicopter was asked to carry out a flyby which confirmed the sheen. Pictures were taken and

sent to Perth for approximate volume analysis. It was estimated that the port side sheen was 135 litres and the starboard side sheen was 34 litres, for a total of 169 litres of light condensate. The facility was instructed to shut in the Laminaria 8 well and observe the sheen, after which there was no change to the sheen.

The 30 day Accident or Dangerous Occurrence Report (Rev 0, Issued for Use on 17 March 2016, Woodside DRIMS #10851834) confirmed that the inner and outer sheath of the Laminaria Production/Test Riser (R16) had been perforated and was the source of the leak to the environment. The remaining production, gas lift and gas injection risers (R1, R6, R18 and R20) were tested with no breaches detected.

The 30 day report attributes the root cause of the failure to be the following:

“The failure of the riser can be attributed to the age and era of flexible design as this riser [Laminaria Production/test riser R16] was from the original project installation.”

The report did not discuss the integrity of the riser or whether the riser was fit for purpose. A failure within the design envelope might indicate a manufacturing fault of the riser or that the riser was operated outside the design operating envelope. There is no discussion whether a breach of the inner or outer sheath was detected in earlier tests, which may have given an earlier indication of a potential loss of containment from the riser. Similarly, there is no discussion whether the annulus and venting system should have provided some level of protection against a subsequent breach of the external sheath.

Recommendation 1346-1

Ensure that the root cause of the riser R16 failure is determined, including discussions such as design envelope and the robustness of the riser inspection regime, in order to provide assurance that the remaining risers in use at the facility remain fit for purpose.

#4534 Radar failure:

It was reported that the vessel radar failed (reported to NOPSEMA at 09:05 on 11/4/2016) with the display screen malfunctioning. A CCR operator responded to an alarm on the ICS from the radar system. The operator attempted to turn up the screen brightness and noticed there was no display. The instrument and electrical technicians investigated and determined that the CRT screen had failed and that they were unable to repair it. The vendor [REDACTED] has been engaged for assistance. There are no spares for the CRT screen as it has been assessed to be obsolete.

‘Collision prevention systems – Radar coverage’ has been listed as a control to detect passing vessels and collision avoidance. As an interim measure, it has been stated that while the radar is non-operational there will be increased visual checks during daylight hours and AIS following on the “Gismap” system, however there is no audio indication of an approaching errant vessel. It should be noted that not all vessels are obliged to be fitted with an AIS.

Recommendation 1346-2

Ensure that interim measures including continuous visual look-outs are implemented to detect errant passing vessels in order to reduce the risk of vessel collision to a level that is ALARP.

Recommendation 1346-3

Ensure that radar functionality is restored in order to reduce the risks associated with MAE-04 – Loss of Marine Separation to a level that is ALARP.

3.4 MAE-02: Topsides Loss of Containment

Focus - Functional safety / Safety Integrity Level (SIL) and Performance Standard Assurance.

Implemented:

The Emergency Shutdown System (ESD) is a control measure for topsides loss of containment and is implemented through a series of Safety Instrumented Functions (SIFs) via the Safety Instrumented System (SIS). The ESD functions typically put the facility in a safe state by a combination of isolating hydrocarbon sources and/or blowing down hydrocarbon inventory to flare. SIFs consist of sensors (example temperature, pressure and level transmitters) a logic solver (example Triconex PLC) and final elements (example SDVs and BDVs). The complete system of SIFs, implemented through sensors, final elements and the logic solver is called the SIS.

The various SIFs were classified and verified in the “Northern Endeavour Safety Integrity Level Classification and Verification Report” (Woodside CRN: M1000RJ7583527). The most recent issue of this report is Rev 1 “Issued for Use”. The SIFs were allocated a Safety Integrity Level (SIL) (example level 1, 2 and 3) which defines the required reliability of the overall function. The existing installation for the respective SIF was then analysed to determine whether they meet the required SIL level. Overall, the objective of the report was to ensure that the SIS complies with the industry accepted international standards for safety control systems IEC 61511 (as listed in the safety case).

The inspectors sought to confirm that the ESD system was implemented, functioning, maintained and audited, so that it would meet its requirements as a control measure for MAE-02, by establishing the following:

- That selected SIFs are implemented as required by IEC 61511;
- That the devices, especially the sensors and final elements are proof tested in line with IEC 61511;
- That there is a written procedure for conducting the tests;
- That test records are maintained that certify that proof tests were completed and they include basic information outlined in IEC 61511;
- That a discrepancy between expected behaviour (of the SIF) and actual behaviour is addressed and the cause analysed;
- That visual inspections of the devices are conducted to ensure they are fit for purpose; and
- That personnel undertaking the tests and inspections on the SIFs are trained to sustain its full functional performance.

To verify that the SIFs are being implemented in accordance with the SIL Classification and Verification Report, the following SIFs were sampled:

SIF #	Description	Selected SIL
A.08.0296A	K3300A-PT over-speed while coupled to comp.	3
M.02.064	LAM. PROD. Swivel Oil (supply – return) Differential Pressure	3
M.02.065	COR. PROD. Swivel Oil (supply – return) Differential Pressure	3
E.14.3110	V-4501: HP Flare KO Drum (ESD & PSD) Level HH	2
E.14.3111	V-4502: LP Flare KO Drum Level HH	2

With respect to SIF A.08.0296A, the SIL report recommended that to meet the SIL 3 requirement an additional sensor be added and the voting changed from 1oo1 to a 1oo2. At the time of the inspection, WEL were unable to ascertain whether this change has been implemented.

Recommendation 1346-4

Ensure that SIF A.08.0296A meets the SIL 3 requirement as per IEC 61511 specified in the facility safety case.

A review of the current P&IDs and associated cause & effects diagrams shows that the SIFs M.02.064 and M.02.065 have not been implemented as recommended in the aforementioned SIL classification and verification report. This was also confirmed in the memo with the subject “NE SIF ALARP Review Recommendations Close Out File Note” (Woodside DRIMS: 10274671). The justification for not implementing this SIF was given as following:

“Though the field life sensitivity for SIF Group 3 [incl. SIFs M.02.064 and M.02.065] suggest implementation in 2012 may have been justified, the planned decommissioning in mid-2016 and requirement to carry out the work in an additional shutdown makes the cost to implement grossly disproportionate to the benefit.”

It is noted that there is no current plan to decommission the Northern Endeavour facility.

Recommendation 1346-5

Ensure that the recommendations for SIF M.02.064 and M.02.065 as described in the Northern Endeavour Safety Integrity Level Classification and Verification Report (Woodside CRN: M1000RJ7583527) are implemented as per IEC 61511 specified in the facility safety case.

Recommendation 1346-6

Ensure that all identified gaps described in the Northern Endeavour Safety Integrity Level Classification and Verification Report (Woodside CRN: M1000RJ7583527) have been addressed to meet the requirements of IEC standards as set out in the safety case.

Functional:

SIFs E.14.3110 and E.14.3111 appear to be implemented in accordance with the requirements of IEC 61511, however it was observed at the time of the inspection that both these functions had been disabled via a Maintenance Override Switch (MOS). The MOS has been in place since at least 12 June 2015 and was the subject of a “Deviation” (ref. Woodside Deviation Number 92013426). The mitigating action described in the Deviation was to implement a Temporary Operating Procedure (TOP) (ref. Woodside CRN M1500PP10900548). The reason given in the Deviation for the override of the trip function was:

“The Northern Endeavour LP and HP Flare KO Drum trip transmitters 45LZT031 and 45LZT033 are experiencing spurious faults than can cause a Process Shutdown (PSD3.1).”

No plan to restore the functionality of the trip functions was apparent at the time of the inspection.

Recommendation 1346-7

Ensure that the operation of the SIF functions E.14.3110 and E.14.3111 associated with the HP and LP Flare KO Drums is reinstated so that they meet the performance requirements of IEC standards as set out in the safety case.

Maintained:

Typical proof test procedures were sighted for pressure transmitters and emergency shutdown valves as required by IEC 61511. Test records are prepared by ticking a check list which is incorporated as part of the proof test procedures. The test procedure includes a check of the physical state of the device to ensure there is no corrosion or mechanical damage.

It was noted that the test records, which are scanned and imported into SAP, do not include the name of the person conducting the test or the date that the test was conducted. Additionally, the template for the test records do not include a place to add the tag number of the device being tested, however in at least one instance this had been added manually at the top of the test record. IEC 61511 requires that the test records contain the date of the test, the name of the person who performed the test and the unique identifier of the system tested (example instrument tag number). It was stated by WEL personnel that these details are implied by the SAP record, when the scanned test record is uploaded. It should be noted however, that due to the potential gap in the chain of custody of the original test record, it cannot be guaranteed that the person uploading the document is the person who conducted the test.

Recommendation 1346-8

Ensure all original test records for sensors and end devices include the name of the individual conducting the test, the date that the test was conducted and the tag number of the device, prior to being scanned and uploaded into SAP in accordance with the nominated standard (IEC 61511).

Audited:

Audit records for the controls associated with MAE-02 (ESD) were not available.

Recommendation 1346-9

Ensure that an independent audit of the SIS and the associated SIFs is conducted in accordance with Table 1.1 and Section 10.2 of Part 3 of the facility safety case to confirm that the system continues to be fit for purpose.

Competence / Training:

It was observed that the training matrix for the instrument and electrical technicians included training in SIF functionality.

3.5 MAE-09: Machinery Space Fires

Focus - Exposure to hazardous chemicals, flammable / toxic fumes in machinery spaces and enclosed areas.

Implemented:

The following observations were made by the inspectors at the time of the inspection:

- Gas and smoke detectors were provided at the ventilation intakes which activate damper closure and stop the ventilation fans;
- Inergen active fire protection was provided for the purifier room and the inert gas generator room;
- Escape routes were clear and identifiable; and
- Quick closing valves are provided for remote isolation of diesel inventory.

However, anti-spray arrangements for the lube-oil and fuel oil systems have not been provided on the emergency power generators or the fire-water generators.

Recommendation 1346-10

Ensure that anti-spray arrangements are fitted in the machinery spaces on the lube-oil and fuel oil systems of the emergency power generators and fire water generators.

Functional and Maintained:

With respect to the function and maintenance of the systems, the following were noted:

The diesel oil storage tank outlet quick closing valve, with solenoid actuator, is passing. This has been the subject of a WEL notification (#20155652] open since 2013.

Recommendation 1346-11

Ensure that the diesel oil storage tank quick closing valve is repaired in a timely manner and remains fit for purpose.

The aft foam tank level gauge cock has seized in the open position. This has been the subject of a WEL notification open since 2013.

Recommendation 1346-12

Ensure that the aft foam tank level gauge cock is repaired in a timely manner and remains fit for purpose.

Audited:

Audit records for the controls for MAE-09 in accordance with Table 1.1 and Section 10.2 of Part 3 of the facility safety case were not available at the time of inspection.

Recommendation 1346-13

Ensure that appropriate steps are taken to make certain the safety case is complied with in respect of audit arrangements.

Competency / Training:

The competency of the operators was in compliance with the training matrix and is electronically verifiable on a competency dashboard.

3.6 General OHS Observations

At the time of the inspection, the most recent annual test records for the produced foam concentrate and produced foam sample were not available for the foam deluge system. It was also noted that the 1% foam sample failed the strength criteria in the last known test report, dated November 2014.

Recommendation 1346-14

Ensure that annual tests are conducted on the foam concentrate and a produced foam sample in accordance with Performance Standard Foam Systems F16 (WEL document controlled reference number M1500RF1000.0095) and take appropriate steps to rectify any identified deficiencies.

Two temporary wrap repairs were observed on the crude fuel supply line to GT7010 and GT7020.

Recommendation 1346-15

Ensure that the sections of damaged (wrapped) crude fuel supply line to GT7010 and GT7020 are permanently repaired and fit for purpose.

Passive Fire Protection (PFP) was cracked and damaged on the debutaniser column as shown in Figure 1 and Figure 2 below.



Figure 1 - Temporary Repair to PFP on the Debutaniser Column



Figure 2 - Damage to the PFP on the Debutaniser Column

Recommendation 1346-16

Ensure that the damaged passive fire protection on the Debutaniser column is repaired so that it will meet the requirements of the associated performance standard and is fit for purpose.

Significant corrosion was observed in the process cooling overboard line as shown in Figure 3 and Figure 4 below. It was also observed that there was cyclic lateral movement of the discharge line which was being transferred back to the header located in the pipe rack.



Figures 3 and 4 - Process Cooling SW Overboard Line

Recommendation 1346-17

Ensure that corrosion on the overboard sea-water cooling line is addressed and that the existing line is reviewed for fitness for purpose. Ensure that any corrective work is undertaken in a timely manner.

Recommendation 1346-18

Ensure that the cyclic loading of the process cooling sea-water piping, caused by cyclic lateral movements of the overboard sea-water cooling line, is reviewed for the potential for fatigue induced failures. Undertake any corrective work in a timely manner.

The inspectors observed that the #1 and #2 water ballast tanks and cargo tanks Butterworth hatches as well as various tank lids and deck penetrations at these locations have significant corrosion as shown in Figure 5 through Figure 8 below.



Figure 5 - Corrosion on the #2 Water Ballast Tank



Figure 6 – Corrosion at Deck Penetration



Figure 7 - Corrosion at Deck Penetration



Figure 8 - Corrosion at Deck Penetration

Recommendation 1346-19

Ensure that corrosion on the deck penetrations of #1 and #2 water ballast tanks and cargo tanks including Butterworth hatches and tank lids are assessed for fitness for service and that corrective work is undertaken in a timely manner.

During the inspection the inspectors noted that the A60 Galley door and the A60 Mess room (temporary refuge) entrance door were locked or wedged open without any automated closing arrangement provided. The Mess room door is shown below in Figure 9 and Figure 10 below.



Figure 9 - A60 Fire Door to the Mess Room (TR)



Figure 10 - A60 Fire Door to the Mess Room (TR)
Showing Wedge

Recommendation 1346-20

Ensure that all A60 fire rated doors are normally kept closed or provided with an automated closing arrangement, which closes the doors when a fire is detected in order to maintain the integrity of the temporary refuge.

4 Attachments

Attachment A – Meetings

1. Pre-Inspection Meeting

The pre-inspection meeting was held on 19 April 2016 in order to discuss the proposed inspection scope and to ascertain senior management’s understanding and expectations of the OHS risks posed by the operation at the facility and the control measures employed to reduce risks to ALARP.

Name	Position
[REDACTED]	NOPSEMA Inspector
[REDACTED]	NOPSEMA Inspector
[REDACTED]	Asset Manager Northern Endeavour
[REDACTED]	METL Northern Endeavour
[REDACTED]	Facility Engineer


The main points arising from this meeting were:

- Scope of the Inspection discussed;
- Sampled SAP Records for selected instruments and foam deluge system;
- Recommendations from previous inspections; and
- Requested additional documents relating to MAE02 and MAE09 to support the Inspection.

2. Facility Meetings

The facility Entry Meeting provided an opportunity for NOPSEMA to provide an overview of the planned inspection programme and confirm the itinerary. The facility Exit Meeting provided an opportunity for NOPSEMA to present the interim observations and conclusions from the planned inspection and for the facility's workforce to give their views.

A list of personnel at the entry and exit meetings is attached below:



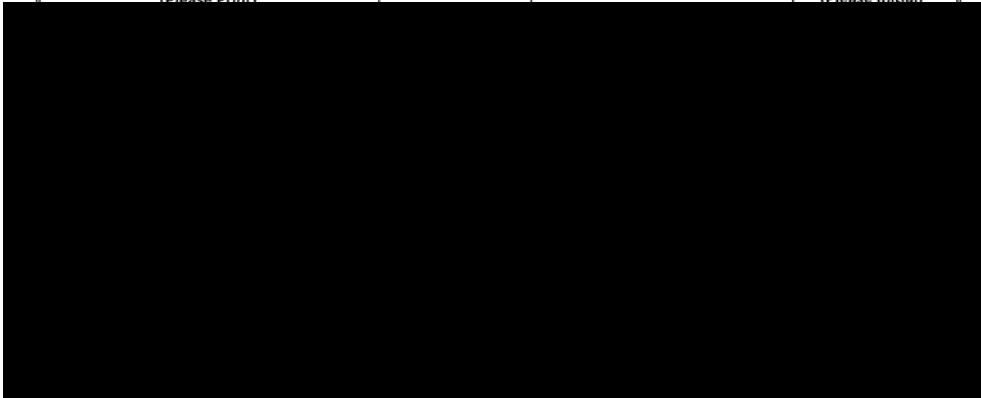
Form

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 facility the Inspectors notified the entry meeting attendees of the purpose of entering the facility in accordance with Clause 50 (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:	Woodside Energy Ltd.	FACILITY:	Northern Endeavour	
Entry meeting date:	27/04/2016	Exit meeting date:	29/04/2016	
NAME <small>(Please Print)</small>	COMPANY	POSITION	Entry	Exit <small>(Please Initial)*</small>



3. Post-Inspection meetings

A meeting was also held on 23 May 2016 in order to discuss the inspection findings. People present at that meeting are listed below:

Name	Position
[REDACTED]	NOPSEMA Inspector
[REDACTED]	NOPSEMA Inspector
[REDACTED]	Asset Manager Northern Endeavour
[REDACTED]	Operations Advisor Northern Endeavour
[REDACTED]	METL Northern Endeavour
[REDACTED]	WEL Risk Engineer

The main points arising from this meeting were:

- Draft report and recommendations presented and explained;
- Due dates of open recommendations from previous inspections discussed; and
- Draft report accepted by the operator.

Attachment B – Detailed Recommendations from this Inspection

NOPSEMA	ID	1346-1
	Recommendation	Ensure that the root cause of the riser R16 failure is determined, including discussions such as design envelope and the robustness of the riser inspection regime, in order to provide assurance that the remaining risers in use at the facility remain fit for purpose.
NOPSEMA	ID	1346-2
	Recommendation	Ensure that interim measures including continuous visual look-outs are implemented to detect errant passing vessels in order to reduce the risk of vessel collision to a level that is ALARP.
NOPSEMA	ID	1346-3
	Recommendation	Ensure that radar functionality is restored in order to reduce the risks associated with MAE-04 – Loss of Marine Separation to a level that is ALARP.
NOPSEMA	ID	1346-4
	Recommendation	Ensure that SIF A.08.0296A meets the SIL 3 requirement as per IEC 61511 specified in the facility safety case.
NOPSEMA	ID	1346-5
	Recommendation	Ensure that the recommendations for SIF M.02.064 and M.02.065 as described in the Northern Endeavour Safety Integrity Level Classification and Verification Report (Woodside CRN: M1000RJ7583527) are implemented as per IEC 61511 specified in the facility safety case.
NOPSEMA	ID	1346-6
	Recommendation	Ensure that all identified gaps described in the Northern Endeavour Safety Integrity Level Classification and Verification Report (Woodside CRN: M1000RJ7583527) have been addressed to meet the requirements of IEC standards as set out in the safety case.
NOPSEMA	ID	1346-7
	Recommendation	Ensure that the operation of the SIF functions E.14.3110 and E.14.3111 associated with the HP and LP Flare KO Drums is reinstated so that they meet the performance requirements of IEC standards as set out in the safety case.
NOPSEMA	ID	1346-8
	Recommendation	Ensure all original test records for sensors and end devices include the name of the individual conducting the test, the date that the test was conducted and the tag number of the device, prior to being scanned and uploaded into SAP in accordance with the nominated standard (IEC 61511).

NOPSEMA	ID	1346-9
	Recommendation	Ensure that an independent audit of the SIS and the associated SIFs is conducted in accordance with Table 1.1 and Section 10.2 of Part 3 of the facility safety case to confirm that the system continues to be fit for purpose.
NOPSEMA	ID	1346-10
	Recommendation	Ensure that anti-spray arrangements are fitted in the machinery spaces on the lube-oil and fuel oil systems of the emergency power generators and fire water generators.
NOPSEMA	ID	1346-11
	Recommendation	Ensure that the diesel oil storage tank quick closing valve is repaired in a timely manner and remains fit for purpose.
NOPSEMA	ID	1346-12
	Recommendation	Ensure that the aft foam tank level gauge cock is repaired in a timely manner and remains fit for purpose.
NOPSEMA	ID	1346-13
	Recommendation	Ensure that appropriate steps are taken to make certain the safety case is complied with in respect of audit arrangements.
NOPSEMA	ID	1346-14
	Recommendation	Ensure that annual tests are conducted on the foam concentrate and a produced foam sample in accordance with Performance Standard Foam Systems F16 (WEL document controlled reference number M1500RF1000.0095) and take appropriate steps to rectify any identified deficiencies.
NOPSEMA	ID	1346-15
	Recommendation	Ensure that the sections of damaged (wrapped) crude fuel supply line to GT7010 and GT7020 are permanently repaired and fit for purpose.
NOPSEMA	ID	1346-16
	Recommendation	Ensure that the damaged passive fire protection on the Debutaniser column is repaired so that it will meet the requirements of the associated performance standard and is fit for purpose.
NOPSEMA	ID	1346-17
	Recommendation	Ensure that corrosion on the overboard sea-water cooling line is addressed and that the existing line is reviewed for fitness for purpose. Ensure that any corrective work is undertaken in a timely manner.

NOPSEMA	ID	1346-18
	Recommendation	Ensure that the cyclic loading of the process cooling sea-water piping, caused by cyclic lateral movements of the overboard sea-water cooling line, is reviewed for the potential for fatigue induced failures. Undertake any corrective work in a timely manner.
NOPSEMA	ID	1346-19
	Recommendation	Ensure that corrosion on the deck penetrations of #1 and #2 water ballast tanks and cargo tanks including Butterworth hatches and tank lids are assessed for fitness for service and that corrective work is undertaken in a timely manner.
NOPSEMA	ID	1346-20
	Recommendation	Ensure that all A60 fire rated doors are normally kept closed or provided with an automated closing arrangement, which closes the doors when a fire is detected in order to maintain the integrity of the temporary refuge.

Attachment C – Recommendations Status from Previous inspections

NOPSEMA	ID	1175-2
	Recommendation	Review the Passive Fire Protection implemented for all RESDVs and associated fittings to ensure that that original design intent has not been compromised.
	Status	Open
Operator	Response	
	Action	Woodside to review current PFP arrangement on Riser Termination Hubs(as Per Photo 1) and ensure that the risk of any compromised and/or missing sections is managed to as low as resonably practicable
	Position	██████████
	Due Date	15/04/2016
Operator	Response	<p>RESDV PFP reviewed,</p> <ul style="list-style-type: none"> • PFP protection compromised on the Riser Hubs which have been defined as safety critical in PS F20 Reference PFP List DRIMs 7257124. • Sections of the PFP enclosures have been removed during Shipyard Project Construction (approx 1999) to install riser instrumentation/inspection side ports and not reinstated. • Deviation 92013784 PS F20 PFP on Riser Hubs Compromised in place to capture the risk assessment and control & mitigations. <p>Short Term:</p> <ol style="list-style-type: none"> 1. No red hot work on Riser Deck. 2. Riser Deck checked for unmitigated Area 4 piping defects. <p>Long Term:</p> <ol style="list-style-type: none"> 3. Review options to reinstate jet fire rating or otherwise demonstrate ALARP. <p>Options Considered:</p> <ol style="list-style-type: none"> 1. Conduct safety & risk analysis to determine if PFP is required for the Riser Termination hubs. Engage external engineering resources. <ul style="list-style-type: none"> • Estimate engineering works to take 4+ weeks, at approx. ██████████ • Findings of the analysis may require PFP to be installed anyway. 2. Install PFP Box enclosures – ██████████ rating <ul style="list-style-type: none"> • Not considered further, typically multiple times more cost and longer lead times than jacket option. 3. Install PFP – ██████████ rating jackets. <ul style="list-style-type: none"> • Budget cost estimate ██████████ • Implementation timeline – will require approx. 6 months for installation at next planned campaign.

	<ul style="list-style-type: none"> • Recommendation to progress with Option 3 has been decided by Asset as part of Deviation close out plan. <p>Risk Assessment:</p> <ul style="list-style-type: none"> • Risk Assessment conducted and agreed by Safety & Risk Technical Authority as part of Deviation. • Initial Risk Rating H&S: B0, Medium • Residual Risk Rating H&S: B0, Medium <p>Date Extension:</p> <ul style="list-style-type: none"> • Request date extension to 31/10/2016 to allow time for implementation. <p>Due to scheduled change of owner/operator, there is a hold on maintenance activities requiring the use of contracted vendors (required contract agreements to be in place) until transition completion. Please extend due date for recommendation until 31/10/2016 to allow adequate time for transition and new operator to schedule appropriate maintenance activities, including mobilisation of nominated contractor to fit fire blanket style PFP.</p> <p>Woodside is currently progressing the completion of this work and once final contractor selection complete a purchase requisition will be raised to complete work, including consultation with new owner/operator.</p>
	Action
	Position [REDACTED] - Operations Superintendent
	Due Date 31/10/2016

NOPSEMA	ID	1175-5
	Recommendation	Ensure that appropriate certificates, load test results and records that relate to lifting equipment integrity are available on board the facility. The records should include certification and traceable maintenance, inspection and testing history.
	Status	Open
Operator	Response	
	Action	Woodside to confirm the availability of Crane Maintenance and Inspection records onboard the asset.
	Position	[REDACTED]
	Due Date	15/03/2016

Operator	Response	<p>Woodside attaches all certificates and inspection reports to the notification that the task was carried out on. See Figure1: 1 Yearly AFT [REDACTED] Crane Service and Inspection, Figure 2: 2 Yearly Rope Change Out. (See below for attached certification for one of the ropes on the notification attachment list.)</p> <p>Service Technicians will be informed on how to access these certificates and reports whilst on board the NE from within SAP.</p> <p>Email sent to all parties to ensure all are aware of how to carry out this task (see snip it of email below).</p> <p>Woodside also uses the TI function within SAP for all safety critical tasks (see figure 1. highlighted in yellow).</p>
	Action	
	Position	[REDACTED] Operations Advisor
	Due Date	
NOPSEMA	Status	<p>Certification for the deck cranes was not available on board and could not be located by facility personnel. Hence the recommendation. The response does not provide evidence other than the annual inspection report and wire rope certificates. Access to appropriate certification, load test results and records that relate to lifting equipment integrity in the lifting register has also not been demonstrated.</p>
Operator	Response	<p>In relation to the Lifting Register, its availability offshore and required content, can we please have an extension to the due date. Given this issue appears to have manifested itself across a number of facilities and you have a meeting scheduled next week to discuss a way forward with [REDACTED] [REDACTED] Lifting TA), [REDACTED] (Asset Manager) and others, can we look at extending this by at least 2 months, or an amount you consider appropriate, to successfully close this recommendation across all assets.</p>
	Action	
	Position	[REDACTED] - Operations Advisor
	Due Date	30/04/2016

NOPSEMA	Status	<p>This issue was one of the items discussed at a meeting with WEL (22 March 2016) & then subsequently with [REDACTED] and [REDACTED] (31/03/2016) during which NOPSEMA have highlighted systemic deficiencies in the management of WEL lifting equipment. It was agreed at the meeting (31/03/2016) that all the lifting equipment related recommendations would be held in abeyance until WEL conducts a review of the management of lifting equipment.</p> <p>Based upon the evidence available, NOPSEMA highlighted concerns that several WEL procedures relating to the integrity management of lifting equipment had been diluted over time. To date WEL has not been able to demonstrate that the removal of several key steps in inspecting and maintaining lifting equipment which were required in earlier revisions of WEL procedures have been adequately risk assessed, and that the controls stated in the current revisions reduce the risks associated with lifting to a level that is ALARP.</p> <p>It was also agreed that WEL would request extension dates for all lifting related recommendations in order to complete this review in a reasonable timeframe.</p>
Operator	Response	<p>Could we please have an interim extension to all lifting recommendation due dates discussed until a fixed date extension is applied, as per ongoing discussions with WEL.</p> <p>Lifting recommendations discussed and agreed interim due date of 30/06/2016 applied to below indicated;</p> <ul style="list-style-type: none"> • 1175-5 • 1175-6 • 1175-11 • 1175-13
	Action	
	Position	[REDACTED] - Operations Advisor
	Due Date	30/06/2016

NOPSEMA	ID	1175-6
	Recommendation	Ensure that the forward and aft [REDACTED] cranes are safe and fit for purpose and that risks relating to the use of man riding lifting equipment at the facility are reduced to a level that is ALARP.
	Status	Open
Operator	Response	
	Action	Woodside to confirm that the FWD and AFT [REDACTED] cranes are safe and fit for purpose, and also that risks associated with man riding lifting equipment for are reduced to as low as reasonably practicable.
	Position	[REDACTED]
	Due Date	30/03/2016

NOPSEMA	Status	<p>This issue was one of the items discussed at a meeting with WEL (22 March 2016) & then subsequently with [REDACTED] and [REDACTED] (31/03/2016) during which NOPSEMA have highlighted systemic deficiencies in the management of WEL lifting equipment. It was agreed at the meeting (31/03/2016) that all the lifting equipment related recommendations would be held in abeyance until WEL conducts a review of the management of lifting equipment.</p> <p>Based upon the evidence available, NOPSEMA highlighted concerns that several WEL procedures relating to the integrity management of lifting equipment had been diluted over time. To date WEL has not been able to demonstrate that the removal of several key steps in inspecting and maintaining lifting equipment which were required in earlier revisions of WEL procedures have been adequately risk assessed, and that the controls stated in the current revisions reduce the risks associated with lifting to a level that is ALARP.</p> <p>It was also agreed that WEL would request extension dates for all lifting related recommendations in order to complete this review in a reasonable timeframe.</p>
Operator	Response	<p>Could we please have an interim extension to all lifting recommendation due dates discussed until a fixed date extension is applied, as per ongoing discussions with WEL.</p> <p>Lifting recommendations discussed and agreed interim due date of 30/06/2016 applied to below indicated;</p> <ul style="list-style-type: none"> • 1175-5 • 1175-6 • 1175-11 • 1175-13
	Action	
	Position	[REDACTED] - Operations Advisor
	Due Date	30/06/2016

NOPSEMA	ID	1175-7
	Recommendation	<p>Conduct a risk assessment to assess the potential impacts of superseding the WEL Lifting Operating Standard (Controlled Reference Number: WM1040SF5599291, Revision 3, dated 7 July 2014) with the WEL Safe Work Control Procedure (Controlled Reference Number: WM0000PG9905472, Revision 0, dated 17 June 2015). The risk assessment should include, but not necessarily be limited to, potential impacts caused by changes such as the removal of compliance with the Lifting Operations and Lifting Equipment regulations (LOLER) 1998, Regulation 5 or an International Equivalent standard as required by the superseded WEL Lifting Operating Standard (Controlled Reference Number: WM1040SF5599291, Revision 3, dated 7 July 2014).</p>

	Status	Open
Operator	Response	
	Action	Woodside to confirm that the management of change process associated with update of VM1040SF5599291 with WM0000PG9905472 has been completed and relevant risks identified and managed.
	Position	██████████
	Due Date	30/05/2016

NOPSEMA	ID	1175-8
	Recommendation	<p>Conduct a risk assessment to assess the potential impacts of changes adopted by the Lifting Equipment Maintenance, Inspection and Testing Strategy to ensure that risks relating to lifting equipment at the facility are reduced to a level that is ALARP.</p> <p>The risk assessment should include, but not necessarily be limited to, potential impacts caused by changes such as the removal of certification, maintenance and inspection in accordance with manufacturer's recommendations and recognised standards appropriate for the use of cranes as stated in Elements 4 and 5 of the Woodside Standard – Lifting and Hoisting Practise, Document No. W1000QAF2572510, Revision 0.</p>
	Status	Open
Operator	Response	
	Action	Woodside to confirm that the management of change process associated with implementation of the updated lifting equipment maintenance, inspection and testing strategy has been completed and relevant risks identified and managed.
	Position	██████████
	Due Date	30/05/2016

NOPSEMA	ID	1175-11
	Recommendation	Ensure that all crane wire ropes are changed out in a timely manner in accordance with the periodicity specified in the maintenance program.
	Status	Open
Operator	Response	
	Action	Woodside to confirm that crane rope changed out in accordance with relevant maintenance strategy or that risks deferment of rope change-outs are managed to as low as reasonably practicable
	Position	██████████
	Due Date	30/03/2016

NOPSEMA	Status	<p>This issue was one of the items discussed at a meeting with WEL (22 March 2016) & then subsequently with [REDACTED] and [REDACTED] (31/03/2016) during which NOPSEMA have highlighted systemic deficiencies in the management of WEL lifting equipment. It was agreed at the meeting (31/03/2016) that all the lifting equipment related recommendations would be held in abeyance until WEL conducts a review of the management of lifting equipment.</p> <p>Based upon the evidence available, NOPSEMA highlighted concerns that several WEL procedures relating to the integrity management of lifting equipment had been diluted over time. To date WEL has not been able to demonstrate that the removal of several key steps in inspecting and maintaining lifting equipment which were required in earlier revisions of WEL procedures have been adequately risk assessed, and that the controls stated in the current revisions reduce the risks associated with lifting to a level that is ALARP.</p> <p>It was also agreed that WEL would request extension dates for all lifting related recommendations in order to complete this review in a reasonable timeframe.</p>
Operator	Response	<p>Could we please have an interim extension to all lifting recommendation due dates discussed until a fixed date extension is applied, as per ongoing discussions with WEL.</p> <p>Lifting recommendations discussed and agreed interim due date of 30/06/2016 applied to below indicated;</p> <ul style="list-style-type: none"> • 1175-5 • 1175-6 • 1175-11 • 1175-13
	Action	
	Position	[REDACTED] - Operations Advisor
	Due Date	30/06/2016

NOPSEMA	ID	1175-12
	Recommendation	<p>Ensure that:</p> <p>a. corrosion on the provisions crane jib handrail crossbars, handrail connections to jib, cab window frame and cab roof is permanently repaired;</p> <p>b. the provisions crane right hand side window glass is replaced/permanently repaired.</p>
	Status	Open
Operator	Response	
	Action	Woodside to implement a repair campaign for the provisions crane to ensure that risks are managed to as low as reasonably practicable.
	Position	[REDACTED]
	Due Date	30/03/2016

Operator	Response	<p>Woodside has had the cab replated removing all the corrosion to reinforce the cab structure. The glass windows have been replaced as well as the window frames. See attached photos.</p> <p>The hand rail was unable to repair at this time due to the work on the cab at the time. A work order #2100198065 is in the system for the blast and paint of the Boom handrails. All the hand rail base plate bolts have been replaced early 2016 .See last photo to show bolts that have been changed. Pease extend due date for recommendation until 31/10/2016 to allow adequate time for transition and new operator to schedule appropriate maintenance activities. This has been identified as priority contingent work should opportunity dictate during April fabric maintenance activities.</p>
	Action	
	Position	██████████ - Operations Superintendent
	Due Date	31/10/2016

NOPSEMA	ID	1175-13
	Recommendation	Ensure that chain blocks, pad-eyes and monorails are inspected and colour coded as per WEL PS P20 Lifting Equipment Performance Standard or tagged out of service.
	Status	Open
Operator	Response	
	Action	Woodside to review chain blocks, pad-eyes and monorails are managed in accordance with P20 and associated Woodside lifting standards.
	Position	██████████
	Due Date	30/03/2016
NOPSEMA	Status	<p>This issue was one of the items discussed at a meeting with WEL (22 March 2016) & then subsequently with ██████████ and ██████████ (31/03/2016) during which NOPSEMA have highlighted systemic deficiencies in the management of WEL lifting equipment. It was agreed at the meeting (31/03/2016) that all the lifting equipment related recommendations would be held in abeyance until WEL conducts a review of the management of lifting equipment.</p> <p>Based upon the evidence available, NOPSEMA highlighted concerns that several WEL procedures relating to the integrity management of lifting equipment had been diluted over time. To date WEL has not been able to demonstrate that the removal of several key steps in inspecting and maintaining lifting equipment which were required in earlier revisions of WEL procedures have been adequately risk assessed, and that the controls stated in the current revisions reduce the risks associated with lifting to a level that is ALARP.</p> <p>It was also agreed that WEL would request extension dates for all lifting related recommendations in order to complete this review in a reasonable timeframe.</p>

Operator	Response	<p>Could we please have an interim extension to all lifting recommendation due dates discussed until a fixed date extension is applied, as per ongoing discussions with WEL.</p> <p>Lifting recommendations discussed and agreed interim due date of 30/06/2016 applied to below indicated;</p> <ul style="list-style-type: none"> • 1175-5 • 1175-6 • 1175-11 • 1175-13
	Action	
	Position	Mike Roads - Operations Advisor
	Due Date	30/06/2016

NOPSEMA	ID	1175-17
	Recommendation	Ensure that all sections of damaged main deck aqueous film forming foam (AFFF) piping are permanently repaired and fit for purpose.
	Status	Open
Operator	Response	
	Action	Woodside to ensure that the risks associated with the degradation of the AFFF piping are managed to as low as reasonably practicable.
	Position	██████████
	Due Date	15/05/2016

Operator	Response	<p>Deterioration Mechanism:</p> <ul style="list-style-type: none"> • The damage mechanism for this 316L piping system is external chloride pitting induced by ferrous contamination during the construction phase. • This has caused widespread pitting damage resulting in AFFF leaks from pinholes. • Due to the contamination being widespread, clusters of pits resulting in enlarged holes is probable and has been observed. <p>Structured Risk Assessment:</p> <ul style="list-style-type: none"> • A multi-discipline risk assessment with Inspection, Mechanical and Safety & Risk engineers was carried out for a scenario of numerous AFFF leaks through pinhole locations and clusters resulting in larger leaks. • Initial Risk Rating H&S: B1, High • Residual Risk Rating H&S: B1, High <p>Defect Management Strategy:</p> <ul style="list-style-type: none"> • AFFF ring main tested annually and aligned with the 1Y visual inspection maintenance plan (AU06-01772) to identify new and monitor deterioration of existing locations. • This was last tested and inspected 13th April 2016 (WO 2100197578), with AFFF delivery available, meeting pressure requirements (62PZT001&002, LL=1350kPag). • Copy of completed PRT attached with pass criteria indicated (refer to Pass/Fail Step 3.0 for 145m head and PRT Step 2.8 run pump up to 10 mins) and ring main press trend. • Minor leaks are addressed with non engineered wraps/clamps managed under Temporary Deviation 92009877 LEAKS: AFFF Piping System. • Larger leaks or areas at risk of cluster formations are assessed for engineering solutions which may include permanent pipe replacement or engineered wraps/clamps managed under Deviation 92008426 WRAP: Engineered Wrap -AFFF Piping <p>Date Extension:</p> <ul style="list-style-type: none"> • Request date extension to 31/12/2016 to avoid sale transition period and allow time for implementation of WO 2100210477 to replace AFFF pipe spool.
	Action	
	Position	██████████ METL
	Due Date	31/10/2016

NOPSEMA	ID	1175-21
	Recommendation	Ensure that the hypochlorite tank support base is permanently repaired to adequately support the weight of the tank and associated accessories.
	Status	Open
Operator	Response	
	Action	Hypochlorite tank support base structural integrity to be assessed and appropriate repair strategy to be determined and scheduled in based on results.

	Position	██████████
	Due Date	30/03/2016
Operator	Response	<p>Notification: 20245007 for Blast & re-paint & further assessment. Further assessment required after UHPB & shall include “quantifying material loss” located at package eye beams.</p> <p>The Tank is constructed from GRP (Glass Reinforced Plastic) and PVC lined. The main load is supported via eye beams & not the corroded base plate therefore this does not compromise the tanks integrity.</p> <p>If the base plate ultimately failed, the tank would still remain in situ (tank feet are physically bolted to I-Beam structure below plate).</p> <p>Please extend due date for recommendation until 31/10/2016 to allow adequate time for transition and new operator to schedule appropriate maintenance activities. This has been identified as priority contingent work should opportunity dictate during April fabric maintenance activities.</p>
	Action	
	Position	██████████ - Operations Superintendent
	Due Date	31/10/2016

NOPSEMA	ID	854-2
	Recommendation	<p>Woodside Energy Limited to ensure the guidance document for the selection of SCE (W1000AG3184458 Rev 3) aligns with the safety case and the development of performance standard guideline (W10000SF3352276). Specifically it should include procedures, processes and competency MAE control measures and subsequent performance standard development. Currently the guidance excludes “Health, Safety and Environment (HS&E) business process (HS&E management systems), processes and procedures”. * Regulation 2.45 OPGGS(S)R 2009</p>
	Status	Open
Operator	Response	<p>The document Development of Facility Performance Standards W0000SF335227 is a guideline. Hence we do not necessarily prepare this format for all Performance Standards in the Safety Case. For procedural controls we rely on assurance and audit.</p> <p>12/2/14 WEL will establish a procedure stating minimum standards and expectations in establishing managing SCE and associated performance standards which will ensure alignment with Safety Case</p>
	Action	Develop Performance Standard Procedure with clarity on which SCE controls require Performance Standards
	Position	Principal Advisor Process Safety
	Due Date	31/12/2014

NOPSEMA	Status	Updated 17/2/14 Response Not accepted – remains open It is unclear how the response of 12/2/14 addresses the recommendation. WEL committed to the development of performance standards for all safety critical controls in the safety case as per the formal safety assessment (FSA) Section 3.2 (including hardware, software and procedures which are required to prevent or control a MHH or MAE. Further the timeframe for completing this action is considered excessive.
Operator	Response	
	Action	
	Position	██████████ - Asset Manager
	Due Date	28/02/2015
Operator	Response	
	Action	
	Position	██████████ - Asset Superintendent
	Due Date	30/04/2015
Operator	Response	
	Action	
	Position	██████████ - Asset Superintendent
	Due Date	30/06/2015
Operator	Response	
	Action	
	Position	██████████ - Asset Superintendent
	Due Date	31/08/2015
Operator	Response	Response to be aligned with Woodside approach for other assets. Due date to be extended to align with Safety Case resubmission (15th Oct, 2015).
	Action	
	Position	██████████ - Risk Engineer
	Due Date	15/10/2015
Operator	Response	NE's bowties updated (Safety Case Part 4, Rev 9c) to incorporate appropriate referencing to the SMS section for the identified non-hardware barrier. As part of the internal Woodside improvement project, Process Safety Management Initiative, a clearer performance standard requirement for management systems is being developed. A presentation was made to NOPSEMA in May 2015 on this initiative. Currently assurance on the effectiveness of these procedural controls are undertaken through discrete assurance assignments in accordance with operations assurance plans. This is described in Part 3, Section 10 of the Safety Case Rev 9c. Monthly assurance reports are prepared to report on status of assurance assignments. These reports complement the process safety reporting of KPIs for hardware controls and provide an overall picture of barrier health to support governance.
	Action	
	Position	██████████ - Production Advisor

	Due Date	
NOPSEMA	Status	The recommendation requires alignment of the SC and the "guidance document". WEL provides evidence that the SC has been improved, but no evidence provided that the "guidance document" has been changed, or an alternative solution has been implemented.
Operator	Response	<p>Woodside do not believe that there is misalignment between the referenced documents. As per the original response to this action and the accepted response to action 854-1, the FSA commitment to develop procedure/process/management system based performance standards is an objective of the Process Safety Management Initiative, which was presented to NOPSEMA in May 2015.</p> <p>As Woodside do not currently implement management system performance standards, the referenced guidelines are correct to exclude them. Once the Process Safety Management Initiative delivers management system performance standards, the referenced guidelines will be updated, or supplemented, to include guidance on their development.</p>
	Action	
	Position	██████████ - METL
	Due Date	
NOPSEMA	Status	The response does not address the recommendation and is still open. In order to address the recommendation, please provide: <ul style="list-style-type: none"> (a) The current revision of the guidance document (W1000AG3184458) with a description of how it aligns with the Safety Case, or (b) A description of how the "Process Safety Initiative" outcomes align internal processes for selection of hard and soft SCEs with Safety Case commitments.
Operator	Response	As discussed in meeting with NOPSEMA on 23/11/15, Woodside requests an extension of this action. The proposed extension is 30th June 2016, which is linked to the final delivery of Process Safety Management Initiative (PSMI) outcomes for Management System Performance Standards MSPS, planned for Q2 2016.
	Action	
	Position	██████████ - Production Process Advisor
	Due Date	30/06/2016