

Our ref: ID : **A792572**

Senate Economics References Committee

Economics.Sen@aph.gov.au

RE: NOPSEMA Response to Question on Notice 3245 – Request for NOPSEMA Documents

I refer to the Senate Economics References Committee request of 6 July 2021, requesting the production of documents from the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The request refers to the NOPSEMA review of Lloyds Register raised by Senator Rex Patrick in Senate Estimates Question on Notice (QoN) 3245.

The Senate Economics References Committee request requires that NOPSEMA produce the reports and file notes for the Lloyds Review between the period 1 May 2019 – 30 September 2019 for the following facilities:

- Northern Endeavour
- Montara Venture
- Pyrenees Venture
- Nganhurra

NOPSEMA reviewed all records held in its document management system related to this activity and identified seven documents that constitute reports and file notes. A number of these documents contain individuals' names that have been redacted.

The requested documents are provided at Attachment A.

Yours sincerely

Stuart Smith

Chief Executive Officer

20 July 2021



Organisation **Lloyd's Register International**

Regulated Business Premises Inspection Dates **16/05/2019 – 09/08/2019**

Lead Inspector:



Inspection Team:



Inspection Number: **2011-1**

Report ID: **A672612**

REPORT DISTRIBUTION

| Position | Company |
|---|---------------------------------------|
| Records management | NOPSEMA |
| Offshore Business Development Manager, Australasia | Lloyd's Register International (LR) |
| Executive General Manager-West (Engineering & Operations) | Upstream Production Solutions Pty Ltd |
| Partner | KPMG |

REVISION STATUS







| Rev | Date | Description | Prepared By | Approved By |
|-----|------------|--|--|---|
| A | 27/08/2019 | Internal Draft |  |  |
| B | 28/08/2019 | Draft for Discussion with Lloyd's Register International |  |  |
| 0 | 27/09/2019 | Final |  |  |

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1. Abbreviations

| | |
|------------|---|
| AMSA | Australian Maritime Safety Authority |
| CVI | Close Up Visual Inspection |
| FMECA | Failure Mode Effect Criticality Analysis |
| IACS | International Association of Classification Societies |
| LR | Lloyd's Register International |
| NOPSEMA | National Offshore Petroleum Safety and Environmental Management Authority |
| OPGGs Act | Offshore Petroleum and Greenhouse Gas Storage Act 2006 |
| PR | Procedural Requirements |
| RBI | Risk Based Inspection |
| RP(SP) Act | Regulatory Powers (Standard Provisions) Act 2014 |
| UPS | Upstream Production Solutions |
| UT | Ultrasonic Testing |
| UR | Unified Requirements |
| WB | Water Ballast |

2. Inspection Method

The inspection team prepared a planned inspection brief and discussed this with Lloyd's Register International (LR) prior to the inspection. The brief set out the proposed inspection schedule and scope. A list of persons present at this pre-inspection meeting is included in Attachment A.

NOPSEMA inspections of facilities and operator's business premises are generally conducted under the provisions of schedule 3 of the Offshore Petroleum and Greenhouse Gas Storage Act 2006 [OPGGs Act]. As LR does not meet the definition of an offshore petroleum premises or a regulated business premises under schedule 3 of the OPGGs Act, this inspection was conducted under a monitoring warrant under s.32 of the Regulatory Powers (Standard Provisions) Act 2014 ["the RP(SP) Act"] as provided for under s.602C of the OPGGs Act.

For the purposes of this inspection under the monitoring warrant, the relevant listed NOPSEMA laws in s.601 were monitored for compliance including Item 14 — Schedule 3 [Occupational health and safety (applying to offshore petroleum operations and offshore greenhouse gas storage operations)].

The proposed scope for this inspection included:

- Seeking clarification on how risks in facility safety cases (where class is specified) are managed, specifically the role of class in risk mitigation and the basis of advice provided by class.

On arrival at the LR business premises, an entry meeting was held to present the plan to LR personnel. Electronic recording devices were started and the warrant served. It was explained that using recorders was standard NOPSEMA practice when executing a warrant as it protects the integrity of the inspection. A copy of the warrant and information regarding the occupier's rights and responsibilities was handed over to LR. An attendance list for entry meeting is included in Attachment A.



The inspection was conducted on the following dates at LR offices:

- 16 May 2019
- 20 May 2019
- 06 June 2019
- 26 June 2019
- 10 July 2019

Audio recordings were made on the first two days of the inspection. At the request of LR recordings were not made on subsequent visits. On the arrival at LR premises on each of the dates listed above an LR representative was provided with a copy of the warrant and information regarding occupier's rights and responsibilities as well as information in relation to Legal and Professional Privilege.

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

3. Findings and conclusions

3.1. Summary

The inspectors found that LR have been providing information to the facility operator in the form of reports that related to the structural integrity of certain aspects of the operator's facility. This information is important in that it may be used to assess the risk of structural failure which could lead to catastrophic consequences to both personnel and the environment. Based on the inspection, the inspectors determined that some of the information provided by LR to the facility operator was not consistent with LR's own processes and rules with examples as follows:

- Planned Survey Programme: LR has not required the operator to comply with the LR rules to develop this document and submit for approval.
- Survey extensions: The extensions to the Special Survey due dates were not granted in accordance with LR rules.
- Conditions of Class: Conditions of Class were not raised in accordance with LR Offshore Rules.
- Additional thickness measurements: Additional thickness measurements were not undertaken at Annual Surveys for areas of substantial corrosion in accordance with LR Offshore Rules & IACS
- Close Up Surveys: The use of unqualified surveyors (from other companies providing thickness measurement services) to complete some close up surveys.
Thickness Gauging: insufficient documentary evidence that LR been in attendance to ensure control of the process and to verify the measurements.
- Survey Scope: The survey scope was altered from the scope as specified in LR rules.

From this the inspectors concluded that some of the information provided by LR cannot be relied upon as a basis for effective risk control measures for a loss of structural integrity or stability Major Accident Event at the Northern Endeavour – NOGA facility.

Detailed findings are provided in the following sub-sections.

3.2. LR application of processes and procedures with reference to Northern Endeavour – NOGA facility

The aim of the planned inspection was to obtain assurance that the information provided by LR to facility operators is consistent with LR's documented processes and procedures, such that this information may be relied upon by facility operators as an effective risk control measure. Documentation and records for several facilities were sampled, including the Northern Endeavour-NOGA facility. The inspection report has been written in separate parts for each facility sampled. This report 2011-1, is written with reference to records sampled for the Northern Endeavour-NOGA facility. The inspectors interviewed LR personnel listed in Attachment A and sampled the Survey Status (and Class Records) for the facility.

3.2.1. Northern Endeavour – NOGA Safety Case:

The operator of the Northern Endeavour-NOGA facility prepared and submitted a safety case to NOPSEMA for assessment. NOPSEMA subsequently accepted the safety case and thereafter holds the operator accountable for operating the facility in accordance with the content of the safety case. This accountability includes adherence to the commitments made to the identification of risks to the structural integrity of the facility and the control measure required to reduce the risks to a level that is low as reasonably practicable.

The following is stated in the accepted/in force Safety Case (Document number 26RSKRIML001 Rev. 2, dated 20/12/2018, (A649359)):

"2.9 Class and Registry

The NE is designed and built in accordance with class requirements and has the following Lloyd's Register class notations:

- *+A1 Floating Production Storage and Offloading System (FPSO), non-disconnectable*
- *Laminaria, Corallina Fields, Timor Sea*

The NE is registered in Australia. The FPSO will be maintained in accordance with the requirements of the Classification Society, to provide assurance that it remains seaworthy at all times. The NE will also maintain its statutory certification as required under the applicable maritime legislation.

Safety Case – Request for Written Information #3 – Appendix 2 – Tank Inspection Types and Applicable Class Rules (A650451)

"Tank Inspection Types and Applicable Class Rules

Water Ballast Tanks (1P, 2P, 3P, 4P, 5P, 6P, 1S, 2S, 3S, 4S, 5S, 6S, AP, FP) – Periodic Rule Surveys + FMECA"

3.2.2. Planned Survey Programme

Findings

It was noted (as stated by LR during the inspection) that none of the facilities queried had a Planned Survey Programme Document as required by LR Offshore Rules Pt.1 Ch.3 Sec.1.6. This is a document that is to be developed by the owner of a facility (or vessel) and submitted to LR for approval. The programme should include guidance for the control and recording of all relevant aspects of the inspection philosophy.

Conclusion

The absence of a Planned Survey Programme Document (a key planning document) could result in a lack of control of the survey process and poor planning resulting in a diminished ability to maintain an accurate understanding of current integrity status and associated level of risk.

3.2.3. LR Class Direct

Findings

The inspectors sampled the LR Class Direct system (computer based system) to access Class information for the facility. The system as sampled was unable to create single consolidated reports that provide basic class information with regard to tank and compartment survey dates, coating condition, areas of substantial corrosion and areas of excessive diminution. LR personnel stated that this information has to be extracted from individual survey reports which makes for difficult oversight and review. Various facility operators have been able to provide "Survey Status" reports for their facilities, which also do not provide all the information.

Conclusion

The lack of ease to access information such as tank and compartment survey dates, coating condition, areas of substantial corrosion and areas of excessive diminution makes it difficult to provide oversight and review. Accessibility of information such as tank and compartment survey dates, coating condition, areas of substantial corrosion and areas of excessive diminution should be readily accessible to enable its effective use in the assessment and control of risks.

3.2.4. Northern Endeavour Survey Extensions

Findings: Special Survey extensions – prior knowledge

LR Offshore Rules Pt.1 Ch.2 Sec. 3.10.4 and IACS PR1C A1.1 require Special Surveys to be completed by the due date. However, the following provide grounds for extensions:

- Exceptional Circumstances - a maximum extension of 3 months may be given (Pt.1 Ch.2 Sec.3.5.7);
- Force Majeure: no limit given for an extension but is a mechanism to cover unforeseen events (Pt.1.Ch.3. Sec.3.11).

The inspectors note that the facility operator Upstream Production Solutions (UPS) had prior knowledge about the condition of the facility and the amount of survey work remaining before making an application to LR for an extension to the Special Survey. UPS advised LR in document (Submission - NE WBT Integrity Management Philosophy 2018 4900-FP-E0071 26/02/2018 (A685563)):

"The sheer volume of descaling and inspection work to assess every single anomaly lead to significant schedule overrun, meaning that it is extremely unlikely that we can complete all the WBT's prior to the end of the survey cycle".

Conclusions

By stamping the document (NE WBT Integrity Management Philosophy) "Noted Received for Information", LR had acknowledged receipt and were aware that the survey cycle was unlikely to be completed on time, as required by the LR Offshore Rules and IACS PR1C.

It does not appear that the information contained in the NE WBT Integrity Management Philosophy was taken into account by LR during the assessment process of the subsequent requests by UPS for survey extensions, including whether a Special Survey extension should have been granted as a consequence.

Findings: 1st Extension Request – 23 July – 23 October 2018:

UPS' first Special Survey extension dated 09 March 2018 (Supporting Document - email chain NE 1st Extension 2.2.1.1-2-3-NE-10-07 - 2.2.1, 2 & 3 (A682200)) was based on the corroded heli-deck structure. LR Perth office sent the application to LR London for review. LR London office replied on 15 March 2018 and advised of appropriate strategies and grounds for applying for a Special Survey extension, i.e., Force Majeure vs Exceptional Circumstances. UPS's application was then re-submitted 19 March 2018 claiming Force Majeure due to the corroded heli-deck structure. LR London conditionally accepted giving a 3 month extension to the Special Survey on 23 March 2018. One of the conditions was "Flag State and Coastal State Authority agreement to be obtained". LR emailed the Australian Maritime Safety Authority (AMSA) on 03 April 2018 seeking agreement for the extension (Submission - NE LR AMSA MARPOL surveys 18 July 2018 (A685561)). AMSA replied on 26 April 2018 stating the following:

"1.0 - As a fixed facility, the application of the Navigation Act 2012 is disallowed, as the facility will come under NOPSEMA jurisdiction and the associated safety case the fixed facility operates under.

1.1 - Where for the purposes of the safety case, the use of maintenance of Class and the associated surveys of hull, machinery, pumping and piping, electrical and control is being used as a compliance tool, the request to postpone the continuous survey hull (CSH) renewal is a matter for Lloyd's Register (under its own terms and conditions of business) to discuss with the stated to be NOGA as fixed facility operators and NOPSEMA".

The inspectors note AMSA in their email (Submission - NE LR AMSA MARPOL surveys 18 July 2018 (A685561)) advised LR that the extension be discussed between the operator and NOPSEMA. Neither the operator nor LR corresponded with NOPSEMA regarding this issue before extending the Special Survey. If all conditions cited by the LR London office (Supporting Document - email chain NE 1st Extension 2.2.1.1-2-3-NE-10-07 - 2.2.1, 2 & 3 (A682200)) were not complied with, the extension should not have been granted.

LR Offshore Rules Pt.1 Ch.2 Sec.3.11 - Force Majeure

"3.11.1 If due to circumstances reasonably beyond the Owner's or LR's control (limited to such cases as damage to the offshore unit or structure, unforeseen inability of LR to attend the offshore unit due to the governmental restrictions on right of access or movement of personnel, unforeseeable delays in port due to unusually lengthy periods of severe weather, strikes, civil strife, acts of war, or other cases of force majeure) the unit is not in a port where the overdue surveys can be completed at the expiry of the periods allowed, the Classification Committee may allow the unit to sail, in class, directly to an agreed facility and, if necessary, then, in ballast, to an agreed facility at which the survey will be completed, provided that LR:

- *Examines the unit's records; and*
- *Carries out the due and/or overdue surveys and examination of recommendations at the first port of call when there is an unforeseen inability of LR to attend the unit in the present port, and*
- *Has satisfied itself that the unit is in a condition to sail for one trip to a facility and subsequent ballast voyage to a repair facility if necessary. (Where there is unforeseen inability of LR to attend the unit or structure in the present port, the master is to confirm that the unit is in condition to sail to the nearest port of call."*



Based on the information obtained it is the inspectors opinion that a corroded heli-deck structure would not meet the definition of Force Majeure and that the LR Offshore Rules Pt.1 Ch.2 Sec.3.11 have not been appropriately applied in this case. It is also noted that maintenance and timely repair of the structure prior to it becoming unserviceable is reasonably expected to be within UPS's control. Further the above mentioned rule paragraph does not allow for the facility to continue operations but rather allows for the facility to be moved to a location where the overdue surveys may be completed. It is noted that in this instance, the facility continued to operate.

Conclusions

The local LR office did not comply with conditions imposed by their head office for the administration of Special Survey extensions.

LR did not obtain Flag State and Coastal State Authority agreement prior to the administration of Special Survey extensions.

There was no regulatory oversight of the proposed Special Survey extensions.

Findings: 2nd Extension Request 23 October 2018 – 28 February 2019

The Special Survey IV after the first survey extension was due for completion on 23 October 2018. The LR Surveyor planned visit dates to complete the Special Survey IV was 4–10 October 2018 (Supporting Document - NE 2.2.2 - docs- pp, extn, Class certs (A683365)).

On 5 October 2018 an ESD 0 occurred which means a shut down and loss of power. Survey work was then postponed. The surveyor however then transferred to another due survey task being the sub-sea turret mooring system. This survey was carried out from 8 to 14 October 2018.

On 18 October 2018, UPS requested a second extension of the Special Survey based on Force Majeure due to the ESD 0 emergency shut down.

The cause of the incident was identified by UPS as being the gas turbine, GT-7010 had exceeded its overhaul hours which caused high bearing vibration and subsequent shutdown trip. This was not the first incident around this time involving the GT-7010 as there had been previous vibration issues dating back to 24 April 2018 ((A652151).

LR once again extended the Special Survey due date under a Force Majeure claim. It is the opinion of the inspectors that this too would not meet the definition of Force Majeure.

The extension request was granted by LR in two stages, initially to 30 November 2018 in order to assess survey progress, then later till 28 February 2019.

The inspectors conclude that the circumstances leading to the surveys not being completed in a timely manner were not unforeseen. The operator's records (Submission - NE WBT Integrity Management Philosophy 2018 (A685563)) noted that the condition of the facility translated to increased volume of survey work due to the large number of structural corrosion defects and it would not be possible to complete the survey in the required timeframe. Both reasons claimed for extensions of the Special Survey based on Force Majeure grounds would not meet the definition of Force Majeure in accordance with LR Offshore Rules and IACS PR1C. They could both be attributed to lack of maintenance and would hence be deemed foreseeable.



Documents sighted (Submission - NE WBT Integrity Management Philosophy 2018 (A685563) and Supporting Document - email chain NE 1st Extension 2.2.1.1-2.3-NE-10-07 - 2.2.1, 2 & 3 (A682200)) during the inspection revealed poor condition of the WB Tanks and condition of the topside structure. It is the inspector's opinion that Class should have been suspended in accordance with LR rules Pt.1 Ch.2 Sec. 3.10.4 and IACS PR1C A1.1, and subsequently cancelled if the operator did not comply with the rule requirements to repair identified defects and if the surveys were not completed in accordance with rule requirements. Neither the LR Offshore Rules nor IACS PR1C provide for survey extensions based on commercial grounds.

The inspectors also noted that LR does not in practice automatically suspend class as required by LR Offshore Rules Pt.1 Ch.2 Sec. 3.10.3/4 and IACS PR1C A1.1/A1.2 but has an internal process to review each case with final decision by the Classification Executive.

The inspectors queried whether any specific criteria derived from engineering principles were applied by LR in administering the extensions, since thickness measurements from all cargo tanks were not completed/available and excessive diminution was already noted in the WB tanks at the time of administering the extensions. During the inspection LR verbally stated that they were not aware of any applied criteria when the LR London office had agreed to the extensions.

Conclusion

Survey extensions were not granted in accordance with the appropriate LR rules stated in Pt.1 Ch.2 Sec.3.5.7 for Exceptional Circumstances and Pt.1.Ch.3. Sec.3.11 for Force Majeure events as applicable. Delaying surveys without reasonable procedural grounds and/or the application appropriate engineering principles increases the uncertainty regarding the integrity of the tanks.

3.2.5. Northern Endeavour Water Ballast (WB) Tanks

Findings: Corrosion anomalies

The inspectors sighted an inspection report (Supporting Document - TM-2018-FRE1500233-NE SSIV-Final Argonaut Report, 15/02/2019, (A683373)), and noted that the WB Tanks have approximately 4,000 structural components with documented corrosion anomalies. These anomalies are broken down into "Substantial Corrosion" (approximately 1,500 anomalies) and "Excessive Corrosion" (approximately 2,500 anomalies).

Classification Society Rules and IACS require corrosion margins to be added during the design. The following LR Rule Pt.1 Ch.3 Sec.1.5 definitions apply to corrosion:

- Substantial corrosion = 25% of corrosion margin remaining.
- Excessive corrosion = corrosion beyond the corrosion margin.

LR Offshore Rules require:

- steel renewal for excessive corrosion (LR Offshore Rules Pt.1 Ch.3 Sec.1.10 Steel Renewal Criteria); and
- annual measurement of substantial corrosion (LR Offshore Rules Pt.1 Ch.3 Sec.2.2.15).

“Excessive Diminution (corrosion)” in LR Rules is defined as – *“is an extent of corrosion beyond allowable limits”*. In accordance with LR Rules Pt.1 Ch.3 Sec.1.9/10, steel replacement is required for plates where the corroded margins have been exceeded.

The inspectors also noted that LR Rules do have a clause which allows for defect repairs to be deferred subject to a criticality assessment (LR Offshore Rules Pt.1 Ch.3 Sec.1.9.2). UPS have developed a Failure Mode Effect Criticality Analysis (FMECA) for this purpose. This technique has been accepted by LR (Submission - NE Inspection Strategy & FMECA 5P DAD 0018223 (A685578), Submission - NE WBT AP FMECA DAD 0019812 (A685579) and Submission - NE WBT 1S FMECA DAD 0019822 (A685580)). However the FMECA's (Submission - NE FMECA WBT 5S (A685568), Submission - NE FMECA WBT AP (A685569), and Submission - NE WBT 5P FMECA-Endorsed copy (A685583)) recommend steel renewal/replacement for many defects and has proposed repair specifications (Submission - NE WBT 1S Proposed Steel Renewals (A685575) and Submission - NE WBT AP Proposed Steel Renewals (A685571)) detailing the location and size of the many steel areas to be renewed/replaced. No evidence that this steel renewal/replacement has been carried out has been sighted. Whilst LR has “Approved” the FMECA's no “Conditions of Class” as required by LR Offshore rules (Pt.1Ch.2 Sec.3.4.3) have been raised.

The inspectors sighted Criticality Assessments for 3 of the 14 WB Tanks (Aft Peak tank, 1S WBT and 5P WBT) in response to a request for all Criticality Assessments to be provided. It can therefore be concluded that Criticality Assessments have not been completed for the remaining 11 WB Tanks. Conditions of Class as required LR Offshore Rules Pt.1 Ch.2 Sec.3.4.3 should therefore have been given for steel renewal by a prescribed date for all areas of excessive corrosion in the 11 WB Tanks. There is no evidence that LR has issued Conditions of Class for steel renewals.

Conclusion

Conditions of Class have not been raised as required by LR Offshore Rules Pt.1 Ch.2 Sec.3.4.3. that should ensure steel renewal is undertaken by a prescribed date for all areas of excessive corrosion in the 11 WB Tanks.

Findings: Additional thickness measurements

LR Offshore Rules Pt.1 Ch.3 Sec 2.2.15 & IACS UR-Z7 Sec. 3.2.4 require additional thickness measurements to be taken at Annual Surveys for any area of substantial corrosion. There is no evidence that LR has required the additional measurements for all 14 WB tanks. The inspectors note that if these additional thickness measurements have not been completed as required by the rules, the assurance provided by LR for the structural integrity of the hull that includes the tanks in question may be in doubt.

Conclusion

In the absence of additional thickness measurements having been taken at Annual Surveys for any area of substantial corrosion (required by LR Offshore Rules Pt.1 Ch.3 Sec 2.2.15 & IACS UR-Z7 Sec. 3.2.4) the condition of the structural integrity of the hull is unknown.

Findings: Thickness measurements

LR Offshore Rules Pt.1 Ch.3 Sec.1.7 & IACS UR-Z7 require thickness measurements. Thickness measurement is completed by an LR Approved Service Supplier, in accordance with Pt.1 Ch.3 Sec. 1.8.3 of LR rules. It is noted that LR Offshore Rules Pt.1 Ch.3 Sec 1.8.8 requires the LR Surveyor to witness the measurements to the extent necessary to control the process including those units that are offshore. The inspectors have sighted Thickness Measurement reports for six WB Tanks (2P, 2S, 3P, 3S, 4P & 5S) (Supporting Document - TM-2018-FRE1500233-NE SSIV-Final Argonaut Report, (A683373)), which state that the LR Surveyor was not in attendance. Also, the thickness measurement attendance by the LR Surveyor should be documented via a LR Survey Report. A LR Survey Report was not available for six WB tanks (4P, 4S, 5P, 5S, 6P, 6S). It can therefore be concluded that LR did not attend Thickness Measurement surveys for ten WB Tanks 2P, 2S, 3P, 3S, 4P, 4S, 5P, 5S, 6P and 6S.

Further LR rules Pt.1 Ch.3 Sec.1.8.15 state *"The thickness measurement report is to be verified and signed by the Surveyor and countersigned by an authorising Surveyor."* It is not clear how the Surveyor verified and signed the reports if the thickness measurements were not witnessed.

Conclusion

Where Thickness Measurements were not controlled and witnessed as required by LR Offshore Rules Pt.1 Ch.3 Sec.1.8.8 and IACS PR UR-Z7 and hence the validity of the associated reports is questionable.

Findings: CVI

A Close Up Visual Inspection (CVI) is required to be carried out in accordance with LR Offshore Rules Pt.1 Ch.3 Sec.5.3.11. Records (Inspection at LR Perth Office dated 20 May 2019 and Survey Reports – various such as FRE1700203-FSR-1 Survey Report 16 - 23 Aug 2017 (A676243) and FRE1600176-FSR-1 Survey Report 2 - 28 Sep 2016(A676233) indicated that LR have relied on UT Thickness Gauging Companies using rope access methods to complete the CVI of the tanks and LR are crediting the CVI survey on the basis of the thickness gauging companies' reports. It was noted that in some instances the LR surveyor was not present. Thickness Measurement companies are not LR Surveyors and are not qualified under LR's and IACS's required Surveyor training & qualification schemes. As a result the crediting of tanks against a survey requirement where the survey of tanks has not been surveyed by a LR Surveyor may not be valid.

Conclusion

The CVI of tank structures were not carried out in accordance with LR Offshore Rules Pt.1 Ch.3 Sec.5.3.11 and IACS PR UR-Z7, including but not limited to the requirement that a LR Surveyor conducts the CVI and hence the validity of the associated reports is questionable.

Findings: RBI

UPS has proposed to change the WB Tanks survey scope by reducing rule required surveys based on the survey results from other WB Tanks where most of the corrosion was in the top part of the tanks. (Submission - NE WBT Integrity Management Philosophy 2018, (A685563)). The inspectors note that Risk Based Inspection (RBI) techniques can only be applied once an RBI Plan has been approved by LR as per Offshore Rules Pt.1 Ch.6. There is no other LR Rule or IACS clause to allow this reduction in survey scope. As stated earlier in this report, no records stating LR approval of the proposed survey methodology was available.

Conclusion

The survey of WB Tanks Fore Peak, 1P, 6P, 6S are incomplete and hence overdue and consequently the integrity of these tanks has not been determined.

Findings: integrity

With respect to watertight integrity and structural integrity, LR Offshore Rules Ch.1 states:

"1.1.3 Unit classification may be regarded as the development and worldwide implementation of published Rules and Regulations which, in conjunction with proper care and conduct on the part of the Owner and Operator, will provide for:

1.1.4 the structural strength of (and where necessary the watertight integrity of) all essential parts of the hull and its appendages".

Conclusion regarding WBTs

The tank condition of the 14 WB Tanks is unknown as LR Class Rules & IACS UR-Z7 have not been followed as detailed above, and the assurance provided by LR for the structural integrity of the hull that includes the tanks in question may be in doubt. It is reasonably concluded that the status of the hull's structural integrity is unknown.

3.2.6. Overall conclusion

The inspectors have concluded that the application of class rules by LR is neither robust nor reliable and hence is not effective as a preventative risk control measure for a loss of structural integrity or stability Major Accident Event at the Northern Endeavour – NOGA facility.

4. Attachments

Attachment A – Meetings

1. Pre-Inspection Meeting

The pre-inspection meeting was held on 15 May 2019 in order to discuss the proposed inspection scope.

| Name | Position |
|------------|---|
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Head of Division, Safety and Integrity (NOPSEMA) |
| [REDACTED] | Manager, Vessel Facilities (NOPSEMA) |

2. LR Business Premises Meetings

The Entry Meetings provided an opportunity for NOPSEMA to provide an overview of the planned inspection programme.

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

16 May 2019

| Name | Position |
|------------|---|
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Offshore Operations Manager (LR) |
| [REDACTED] | Administrator (LR) |

20 May 2019

| Name | Position |
|------------|---|
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Offshore Operations Manager (LR) |
| [REDACTED] | Administrator (LR) |
| [REDACTED] | Legal Counsel, Legal Services (SAMEA) (LR) |
| [REDACTED] | Legal representative for LR |

06 June 2019

| Name | Position |
|------------|---|
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Offshore Operations Manager (LR) |
| [REDACTED] | Administrator (LR) |
| [REDACTED] | Legal Counsel, Legal Services (SAMEA) (LR) |
| [REDACTED] | Legal representative for LR |

26 June 2019

| Name | Position |
|------------|---|
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Offshore Operations Manager (LR) |
| [REDACTED] | Legal representative for LR |

10 July 2019

| Name | Position |
|------------|---|
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Offshore Operations Manager (LR) |
| [REDACTED] | Legal representative for LR |

3. Post-Inspection Meetings

A meeting with LR was also held on 23 September 2019 in order to discuss the inspection findings. People present at that meeting are listed below:

| Name | Position |
|------------|---|
| [REDACTED] | Manager – Assessment and Inspection – Vessel Facilities (NOPSEMA) |
| [REDACTED] | NOPSEMA Inspector |
| [REDACTED] | A/ General Counsel (NOPSEMA) |
| [REDACTED] | Offshore Business Development Manager, Australasia (LR) |
| [REDACTED] | Marine and Offshore Manager WA (LR) |
| [REDACTED] | Legal Counsel SE Asia (LR) via telephone |

The main points arising from this meeting were:

- No errors of fact with respect to the findings were identified by LR
- No additional information regarding the findings was provided by LR



INSPECTION DETAILS

| | |
|--------------------|--------------------------------|
| Inspection number: | 2011 |
| Organisation: | Lloyd's Register International |
| Inspection dates: | 16/05/2019 onwards |
| Lead Inspector: | |

1. Introduction

The questions and requests for copies of documentation detailed in pages 4 to 12 of this document are made pursuant to the powers detailed in Sections 18 and 24 of the *Regulatory Powers (Standard Provisions) Act* (see extracts of relevant provisions over page).

In accordance with the above stated powers, NOPSEMA requests that Lloyd's Register International (Lloyd's) have available for collection by NOPSEMA the copies of documents and written responses to the questions set out at pages 4 to 12 of this document by 1700hrs WST on Tuesday 2 July 2019, preferably in digital form.

The questions and requests for copies of documentation has been coloured coded as follows:

| | |
|--|--|
| | Question asked or documentation requested either on 16 or 20 May 2019 |
| | Question or documentation request modified on basis of inspection on 16 or 20 May 2019 |
| | New question or documentation request |

Regulatory Powers (Standard Provisions) Act 2014**18 Entering premises by consent or under a warrant**

- (1) *An authorised person may enter any premises and exercise the monitoring powers for either or both of the following purposes:*
- (a) *determining whether a provision subject to monitoring under this Part has been, or is being, complied with;*
 - (b) *determining whether information subject to monitoring under this Part is correct.*

24 Asking questions and seeking production of documents*Entry under a monitoring warrant*

- (3) *If the entry is authorised by a monitoring warrant, the authorised person may require any person on the premises to answer any questions, and produce any document, relating to:*
- (a) *the operation of the provision; or*
 - (b) *the information.*



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2. Requests

2.1. Northern Endeavour, Prelude, Montara Venture, Pyrenees Venture & Nganhurra

2.1.1. Survey status Report

| | |
|---|--|
| Facilities: | Northern Endeavour, Prelude, Montara Venture, Pyrenees Venture & Nganhurra |
| Document request: Survey History | |
| <p>A copy of the documents listed below for the last two complete survey cycles for the Northern Endeavour and the last complete cycle for the Prelude, Montara Venture, Pyrenees Venture & Nganhurra facilities (or for the length of time each asset has been classed by LR if less):</p> | |
| <p>1. Planned Survey Programme document</p> <p><u>LR DOCUMENTS PROVIDED</u></p> <ul style="list-style-type: none"> For the Nganhurra, as this is a Continuous Survey Hull (CSH) scheme, the CSH survey listing and the Continuous Survey Machinery (CSM) contains the planned survey programme information. As this facility was a disconnectable, the CSH scheme was reviewed and approved by ECG Aberdeen and a design appraisal document (DAD) was issued. (Provided to NOPSEMA on 10 July 2019). For the Montara Venture, as this is a fixed facility, the CSH survey listing and the CSM contains the planned survey programme information. (This was provided to NOPSEMA on 25 June 2019, see Mast report). The Prelude is on a risk based class plan approved by Lloyd's Register in London. The facility is still in the commissioning phase and not fully operational at this time. The plan is in the process of being finalised and implemented. [Draft class plan provided to NOPSEMA on 10 July 2019]. For the Pyrenees Venture, a CSH scheme is used for survey planning. The CSH survey listing and the CSM contains the planned survey programme information. (Already provided on 25 June 2019 see Mast report) The Northern Endeavour – answers and documents being obtained and expected to be provided by 30 July 2019. <p>Reference is made to Offshore Rules Pt1. Ch.3 1.6 Planned Survey Programme. The document is to be developed by the owner and approved by LR. The above response does not meet the Rule requirement.</p> | |
| <p>2. Surveyor attendance dates, to include FVD, LVD and actual dates for multiple attendances under one report.</p> <p><u>LR DOCUMENTS PROVIDED</u></p> <ul style="list-style-type: none"> This is not a separate document. The information is found in the Survey Report (FSR) provided on 6 and 25 June 2019. <p>Noted</p> | |
| <p>3. Survey Reports (FAR & FSR).</p> <p><u>LR DOCUMENTS PROVIDED</u></p> <ul style="list-style-type: none"> FSRs for the Nganhurra were provided on 6 June 2019. FSRs for all other facilities were provided on 25 June 2019. NOPSEMA to confirm whether FARs are still required (following LR providing an example FAR on 25 June 2019, which contains substantially the same information as the FSR). <p>Noted</p> | |
| <p>4. Thickness Measurement (TM) reports.</p> <p><u>LR DOCUMENTS PROVIDED</u></p> | |

- Provided for Nganhurra and Montara Venture on 10 July 2019. **Noted.**
- Documents for Northern Endeavour being obtained, and expected to be provided by 30 July 2019.
- This is not applicable for the Prelude, and the Pyrenees Venture (see explanation in answers below). **No explanation is given below.**

5. Conditions of Class (COCs) – current & historic.

LR DOCUMENTS PROVIDED

- Provided for all facilities on 10 July 2019.
- Noted**

6. Statutory Findings – current & historic.

LR DOCUMENTS PROVIDED

- Provided for all facilities on 10 July 2019.
- None listed for any facility – current or historic – not credible**

7. Actionable Items – current & historic.

LR DOCUMENTS PROVIDED

- Provided for all facilities on 10 July 2019.
- Noted**

8. Details of areas of Substantial Corrosion.

LR DOCUMENTS PROVIDED

- This is not a separate document. The information is found in the Thickness Measurement Report or Survey Report or Conditions of Class (if any is identified).
- Improvement needed – should be readily available on class status**

9. Details of areas of Excessive Diminution.

LR DOCUMENTS PROVIDED

- This is not a separate document. The information is found in the Thickness Measurement Report or Survey Report or Conditions of Class (if any is identified).
- Improvement needed – should be readily available on class status**

10. Tank/Compartment actual survey dates for each.

LR DOCUMENTS PROVIDED

- This is not a separate document. The information is found in the Survey Report.
- Improvement needed – should be readily available on class status**

11. Tank Coating Condition as recorded by the surveyor

LR DOCUMENTS PROVIDED

- This is not a separate document. The information is found in the Survey Report.
- **Improvement needed – should be readily available on class status**

Document request: Process documents

1. A copy of all LR Management system documents (including but not limited to: Policies, Procedures & Work Instructions) that support the survey function.

LR DOCUMENTS PROVIDED

- Electronic access to Global Management System **to be discussed with NOPSEMA on 10 July 2019.**
- Physical access to the Marine Surveys Procedures Manual **provided on 10 July 2019.**

2.2. Northern Endeavour

Some answers provided 10 July 2019.

Remaining answers expected to be provided by 30 July 2019.

See details below.

2.2.1. Extension of Special Survey IV – 23 July 2018 to 23 October 2018

| | |
|---|--------------------|
| Facilities: | Northern Endeavour |
| Background | |
| <p>LR Rules Offshore Units July 2018 – Pt1. Ch.2 Sec. 3.5.7 – Special Survey may be extended in “exceptional circumstances” for a <u>maximum period of 3 months</u>. Pt1. Ch.2 Sec 3.5.4 - “Exceptional Circumstances” means unavailability of dry-docking facilities, repair facilities, essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions.</p> <p>Special Survey IV completion due date was 23 July 2018. LR extended this to 23 October 2018 on 23 July 2018 by LR Senior Surveyor [REDACTED] whilst offshore according to Class Certificate endorsement.</p> | |
| Questions / Document requests | |
| <p>1. Please provide a copy of Operator’s request to LR for extension based on “exceptional circumstances”.</p> <ul style="list-style-type: none"> Emails from Northern Oil and Gas Australia (operator) to LR dated 9 March 2018 and 19 March 2018. <p>[Provided 10 July 2019]</p> <p>Based on Force Majeure due to helideck corrosion. Extension request was questioned initially by LR FOI. Request should have been rejected as it was a result of poor planning, maintenance and commercial reasons.</p> | |
| <p>2. How this was processed & approved internally by LR?</p> <p>The operator requested an extension based on “exceptional circumstances”. The operator’s request was forwarded to FOI Class within LR and provided to the Lloyds Classification Executive for consideration. The Classification Executive agreed to postpone of the Continuous Hull Survey Cycle from 23 July 2018 until 23 October 2018 under certain conditions.</p> <p>Conditional on Coastal State approval!</p> | |
| <p>3. Please provide a copy of internal LR documentation in regard to the request, discussion, assessment and approval of the extension as per above rule reference & IACS PR1C (supporting question 1 above)</p> <ul style="list-style-type: none"> Email from the attending surveyor to FOI Class dated 15 March 2018 forwarding operator’s extension request. Email correspondence regarding operator’s extension request, ending with email from the attending surveyor dated 19 March 2018 to FOI Class. Email from FOI Class to attending surveyor dated 23 March 2018 responding to operator’s extension request. <p>[Provided on 10 July 2019]</p> <p>Noted</p> | |
| <p>4. Please provide copies of records of surveyors’ offshore actual attendance dates noting FVD was 7 Jun 2018 and LVD was 26 July 2018 as disclosed in our meeting of 20 May 2019. It was also disclosed [REDACTED] in the same meeting that he also attended hence there was multiple attendances under the one report. (Supporting question 2 above)</p> <ul style="list-style-type: none"> Email correspondence between LR and operator regarding two visit dates of attending surveyor. | |

- Email correspondence within LR regarding decision to use same report number for both visits.
- [Provided on 10 July 2019]
 [redacted] attended twice 6 – 21 June & 2 – 26 July 2018
 [redacted] did not attend

5. What was the planned survey scope for this visit?

6. What survey items were outstanding prior to the FVD to complete the Special Survey at this time?

2.2.2. Extension of Special Survey IV – 23 October 2018 – 28 February 2019 & 30 November 2018

| | |
|---|--------------------|
| Facilities: | Northern Endeavour |
| Background - general | |
| Two extensions were issued 1st dated 2 November 2018 giving an extension to 28 Feb 2019. The 2nd extension dated 14 November 2018 giving an extension to 30 November 2018. The 1st extension was retracted by LR London office. | |
| It appears that LR's Perth office had issued the 1st extension to 28 February 2019 without authorisation from the LR London office and this was later corrected. | |
| Questions / Document requests | |
| 1. What was the internal process followed for the 1st extension? | |
| 2. Was the vessel's class automatically suspended between 23 October 2018 & 2 November 2018 as per LR Rules & IACS PR1C? If not, why not? | |
| 3. Please provide copies of all communication between the Operator, LR Perth & LR London including Class Suspension Notices to the owner (supporting question 1 above). | |
| Background - Forced Majeure | |
| Owners claimed Forced Majeure as reason for the extension beyond the 3 months. One planned visit (3 October – incident was on 5 October 2018) was affected only by the Forced Majeure. | |
| Document requests, please provide: | |
| 1. Copies of records of LR Surveyor actual attendance dates | |
| 2. A copy of UPS advice to LR that they were de-manning the facility of all non-critical personnel. | |
| 3. Copies of all communication between the Operator, LR Perth & LR London. | |
| 4. A comparison of planned survey scope for the survey attendance versus the remaining outstanding Special Survey items. | |
| 5. Copies of LR's records of internal reviews and actions taken to accept the Forced Majeure and what overdue surveys were completed prior to class reinstatement, see IACS PR1C A1.7 & LR Rules. | |

2.2.3. Extension of Special Survey IV – 23 October 2018 – 28 February 2019

| | |
|---|--------------------|
| Facilities: | Northern Endeavour |
| Background | |
| A 3rd extension was granted without a Forced Majeure reason. This is against LR Rules Offshore Units July | |

| |
|--|
| 2018 – Pt1. Ch.2 Sec. 3.5.7. |
| Questions |
| 1. Why was the Special Survey extended for a 3 rd time? |

2.2.4. Annual, Intermediate & Special Surveys

| | |
|--|--------------------|
| Facilities: | Northern Endeavour |
| Questions and document requests | |
| 1. RBI of COT's as per LR's approval letter dated 2 November 2018 is conditional upon the Regulatory Authority's approval, in this case NOPSEMA. The letter was presented during the inspection on 20 May 2019 to LR from NOPSEMA and discussed. Can LR confirm it has not obtained approval from NOPSEMA? | |
| 2. Please provide copies of Service Provider approvals by LR for companies used for Thickness Gauging, Digital Methods, ROV and Rope Access technicians conducting Close Up Inspections | |
| 3. FMECA – Please provide a copies of LR's approval and Work Procedures, etc., on this technique. | |
| 4. For the salt water ballast tanks with areas of Excessive Diminution which would normally require steel replacement at what stage is steel replacement required versus a FMECA? | |
| 5. For the salt water ballast tanks with areas of Excessive Diminution which would normally require steel replacement please provide copies of the relevant approved FMECA's | |
| 6. Please provide copies of CRS and design appraisal document for all ballast tanks. | |
| 7. What is the 100 year return period global loadings (static & dynamic) and the corresponding 25 year return period global loads for unrestricted worldwide transit service? | |
| 8. Have revised loading conditions ever been approved and used in FMECA assessments? If so how? | |
| 9. Please provide a copy of the Condition of Class for reduced loading conditions. | |
| 10. Has the on board loading computer been updated for revised loading conditions? | |

2.2.5. Life extension

| | |
|---|--------------------|
| Facilities: | Northern Endeavour |
| Document request, please provide: | |
| 1. A copy of the Life Extension Programme | |
| 2. Copies of Life Extension Programme approvals | |

2.3. Nganhurra

Some answers provided 10 July 2019.

Remaining answers expected to be provided by 30 July 2019.

See details below.

2.3.1. Statutory – SOLAS Safety Equipment Certificate - Inergen Cylinders – 2014 Alternative inspection proposal to LR

| | |
|--|-----------|
| Facilities: | Nganhurra |
| Background: Inergen Cylinders – 2014 Alternative inspection proposal to LR | |
| <p>Testing of the cylinders was due in September 2014.</p> <p>A new revision of MO 15 was published on 21 May 2014 with an effective date of 1 July 2014 to include mandatory pressure testing of cylinder on 10th anniversary in accordance with IMO Circ MSC.1/Circ.1432 which reflected requirements of other EU Standards updated testing requirements at that time.</p> <p>Previous version of MO15 required additional testing beyond AS 2030. Requirement was for a 10 year pressure test or alternatively an external examination showing no defects. This could then extend the requirement of the pressure test out to the 20 year anniversary.</p> <p>Woodside on 10 June 2014 sent LR a proposal to fully visually inspect only 10% on the cylinders as they could not be fully inspected in their stands. LR replied on the same day accepting the proposal. The old MO15 does not mention sampling. In fact it refers to “a gas cylinder must be tested..”. Hence Woodside’s proposal is a deviation from MO15. LR must therefore consult with AMSA for their approval of the proposed equivalence.</p> | |
| Questions and document requests | |
| <p><u>Context to below answers to questions</u></p> <ul style="list-style-type: none"> MO15 2009 (which was in force as at 30 June 2014) prescribed the minimum requirements for testing of cylinders. It stated, relevantly, that the testing of the cylinders must be completed “on the 10th anniversary”. LR interpreted this to mean the test must occur in the 10th year from the last testing date, with testing done between 3-12 months prior to the 10th anniversary date and by no later than that date. In applying this interpretation LR notes it would be practically difficult to test all of the cylinders precisely on the 10th anniversary date of the initial test as the cylinders may have been tested at different dates, as in the case of the cylinders on the Nganhurra. Additionally, testing at the last possible date may potentially compromise operability, safety and integrity of the system. Assessing the bottles prior to the last possible date does not compromise the safety of the system because it brings forward any subsequent test. In respect of the Nganhurra, 300 of the cylinders were originally/initially tested in September 2004 and the remainder around December 2004. Accordingly, the hydrotest was to be undertaken between December 2013 and September/December 2014. The LR attending surveyor assigned to survey the Nganhurra in June 2014 was former LR employee [REDACTED]. Survey records indicate that [REDACTED] credited the safety equipment periodical survey on 30 June 2014. At this time MO15 2009 was still in force. However the detailed inspection of the bottles did not commence until after this date. | |

| Facilities: | Nganhurra |
|---|-----------|
| <ul style="list-style-type: none"> <p>██████████ has informed LR that on 30 June 2014, within the 10 year anniversary period, he conducted an external examination and waived the Inergen Bottle Hydrotest requirement as in his opinion there were no unacceptable defects, so the test could be validly waived under MO15.</p> <p>This conveniently ignores the email exchange with Woodside 10 June 2014 where it states that full visual inspection is not possible and requested 10% of bottles to be inspected. His inspection could not therefore have been properly done. Waiving the test was inappropriate as the full visual inspection could not be done without removing the bottles</p> <p>AMSA carries out an annual SMC-ISM audit which includes a tour of the ship and all machinery spaces, equipment, including fixed firefighting systems, and AMSA has raised no issues with LR on this specific point in respect of the Nganhurra.</p> <p>Noted but unlikely to pick this up during a walk around.</p> <p>1. Did LR consult AMSA in regard to the deviation from the old MO15? If so please provide a copy of the communication with AMSA.</p> <ul style="list-style-type: none"> <p>There was no deviation from the old MO15 and hence no need to contact AMSA.</p> <p>Disagree as there was deviation due to 10% sampling. Refer to Woodside/LR email exchange of 10 June 2014.</p> <p>But in any event, AMSA was notified on 4 February 2011, by email sent from WEL to LR and AMSA, of the intention to waive the 10 year Hydrotest. See email below.</p> <p>Email not received however it is LR's responsibility as RO to contact AMSA about the deviation, not Woodside. It was also before the introduction of the new MO15.</p> | |
| <p>2. If the answer to the above question is "yes" please provide a copy of the communication with AMSA.</p> <ul style="list-style-type: none"> <p>LR did not deviate from the MO15.</p> <p>Disagree as there was deviation due to 10% sampling. Refer to Woodside/LR email exchange of 10 June 2014.</p> <p>But in any event, LR updated AMSA on its approach. See email dated 4 February 2011 from WEL to LR and AMSA.</p> <p>Email not received but unlikely to have raised the 10% sampling as it was only proposed on 10 June 2014.</p> | |
| <p>3. Further as the 10 year anniversary was falling after the introduction of the new MO15 and the inspection was done after the introduction, did LR consult with AMSA in regard to the plan for early inspection so that the old & proposed modified MO15 requirements could be used?</p> <ul style="list-style-type: none"> <p>On LR's analysis, the 10 year anniversary did not fall after the introduction of the new MO15. The 10 year anniversary ran from December 2013 to September/December 2014 (depending on the particular bottle).</p> <p>Disagree as the actual inspection occurred some months after the introduction of the new MO15.</p> <p>The requirement for the 10 year anniversary test was validly waived by ██████████ on 30 June 2014, in accordance with the applicable marine order, MO15 2009.</p> <p>This conveniently ignores the email exchange with Woodside 10 June 2014 where it states that full visual inspection is not possible and requested 10% of bottles to be inspected. His inspection could not therefore have been properly done. Waiving the test was inappropriate as the full visual inspection could not be done without removing the bottles</p> <p>AMSA was notified on 4 February 2011 by email sent from WEL to LR and AMSA of the intention to waive the 10 year Hydrotest.</p> | |

| | |
|--|-----------|
| Facilities: | Nganhurra |
| Email not received however it is LR's responsibility as RO to contact AMSA about the deviation, not Woodside. It was also before the introduction of the new MO15. | |
| <p>4. If the answer to the above question is "yes" please provide a copy of the communication with AMSA.</p> <ul style="list-style-type: none"> • See answer to question 3 above. • See email from WEL to [REDACTED] of AMSA sent on 4 February 2011. | |
| <p>5. We note that the provided copy of the LR Australia Country File dated 9/11/18 directs the reader to the AMSA website for the latest Marine Orders. However we also note that the Country File has not been updated in accordance with the latest Marine Order 15 for gas cylinder testing requirements. What is the LR process for ensuring the Country File remains up to date?</p> <ul style="list-style-type: none"> • The Country Files are maintained and kept current by LR London. These are available to surveyors, and surveyors are required to refer to current Country Files before conducting surveys. Country Files refer to Instructions to Class ("ITC") and MOs. • Surveyors are required to check AMSA's website for the latest Marine Orders. Quarterly updates with regards to Marine Orders and other updates are circulated to all surveyors by the local Technical Performance Manager on a quarterly basis. Updates are circulated to surveyors as needed in the interim, before each quarter end. <p>Improvement required as the current Australia Country File has not been updated for the current MO15.</p> | |
| Background: Inergen Cylinders – 2018 Cylinder Leak & Solas Safety Equipment Certificate | |
| <p>History of Inergen bottles failures in the form of loss of pressure through stress corrosion cracking. Three separate leaks have occurred:</p> <ol style="list-style-type: none"> 1. January 2018 – 1st leak – pin hole 2. April 2018 – 2nd leak – failure mode not determined but expect the same. 3. October 2018 3rd leak – slow leak holding some pressure. <p>After the 2nd leak a Woodside MOC was raised dated 6th April 2018 which prevented access to the inergen room.</p> <p>LR on 22 April 2018 endorsed a full term SOLAS Safety Equipment Certificate. This raises a number of questions in regard to access for the inspection, known failures of the tanks & AMSA involvement. Given the Statutory Deficiency AMSA would normally only authorize issuance of a Short Term Certificate however LR endorsed the full term cert.</p> <p>In regard to 21 October 2018 3rd leak a Woodside inspection of all cylinders' gauges was carried out. The Woodside inspector wore a head mounted camera and this was accepted by LR for the purpose of their inspection.</p> | |
| Questions and document requests | |
| <p>1. Was AMSA consulted for each leak occurrence given that these leaks are statutory deficiencies and therefore the Safety Equipment Certificate is affected?</p> <p>No reply – assumed they did not contact AMSA as indicated below.</p> | |
| <p>2. For the April leak how was the surveyor able to access the inergen room given that Woodside was not allowing access?</p> <ul style="list-style-type: none"> • The attending surveyor, [REDACTED] obtained access to the inergen room with another person. • [REDACTED] informed Woodside that he could not complete his survey unless he inspected the bottles. Woodside informed him that there was no access to the room. Later, [REDACTED] became | |

| Facilities: | Nganhurra |
|-------------|--|
| | <p>aware that another person would be entering the room for another purpose. [REDACTED] attended the room at the same time, in accordance with the arrangements made for the entry by the other person, and visually inspected the bottles at that time.</p> <ul style="list-style-type: none"> [REDACTED] also reviewed 2 vendor reports (the second of which took place between 7 and 21 of March 2018) confirming the acceptability of the system. The reports are from LR approved suppliers. <p>Please supply copies of the vendor reports. (Unlikely they include bottle pressure testing).</p> |
| 3. | <p>On 20 May 2019 [REDACTED] advised the surveyor did access the room. Was there a JSA prepared for the entry?</p> <ul style="list-style-type: none"> A Safe START Task Risk Assessment form was completed by [REDACTED] in relation to this entry. [REDACTED] (from WEL at that time and now employed by LR) recalls a special risk analysis was carried out to enter the room temporarily to do some inspections and to facilitate [REDACTED] inspecting the room. Entry was subject to WEL's facility wide permit to work system. |
| 4. | <p>If the answer to the above question is "yes" please provide copies of such records. LR does not have copies of the risk assessment completed by Woodside. See Safe START Task Risk Assessment completed by [REDACTED] in relation to the entry.</p> |
| 5. | <p>Are there any surveyor records, photos, safety assessment, etc, associated with this entry? Yes, see below, item 6.</p> |
| 6. | <p>If the answer to the above question is "yes" please provide copies of such records.</p> <ul style="list-style-type: none"> Job Control Record, Survey FRE 1800059 confirms that the inergen fire fighting systems are credited. (Provided 10 July 2019) Survey report (already provided on 6 June 2019). Survey checklist, item 020600. (Provided 10 July 2019) |
| 7. | <p>Does LR have approvals (internal & external) in place to accept video evidence from an owner for use with assessing statutory deficiencies?</p> <ul style="list-style-type: none"> LR does not have these approvals. However, LR has not used video evidence to assess statutory deficiencies. The video evidence was reviewed and used to support and confirm the conclusion that the surveyor had reached on other grounds; it was not a primary basis for the surveyor's conclusion. The surveyor's conclusion was that two empty bottles and one partially empty bottle did not significantly affect the fire fighting system. This conclusion was based on a visual inspection of the bottles from outside the room, and was backed up by a submission of the calculation by Woodside regarding the fire fighting effectiveness of the system, and a risk analysis that was reviewed by [REDACTED] as noted above. <p>Not acceptable practice</p> <ul style="list-style-type: none"> See also the Marine Technical Notice MTN201/24 (MTN) issued on 29 October 2018 which applied when the surveyor viewed the video evidence in December 2018. The MTN sets out LR's approach to the use of certain technology in surveys and the same principles apply to this case. The MTN states that remote inspection technologies (RIT) have long been used by surveyors, and from a class regulatory perspective, there are no objections to using RIT as long as the attending surveyor is satisfied that the results provide equivalence with results obtained using traditional means of access and is satisfied to use the results towards the credit of the survey. The video evidence was viewed in this case and confirmed the results obtained through other traditional means of inspection, as noted above. |

| | |
|---|---|
| Facilities: | Nganhurra |
| Needs to be specifically accepted by AMSA for this case. | |
| 8. | If the answer to the above question is "yes" please provide copies of such approvals. Not applicable. |
| 9. | <p>Was AMSA consulted for the October statutory deficiency leak for issuance of a Short Term SOLAS Safety Equipment Certificate which included a disclosure that an owner's video was used?</p> <ul style="list-style-type: none"> LR did not consult AMSA on this. LR's surveyors did not consider the leak was a significant defect or a statutory deficiency. Poor decision by the surveyor LR is aware that AMSA was informed of the leak by WEL. AMSA did not give LR instructions in relation to the matter, including any instructions that would prompt a change in LR's approach. LR's role as RO is to consult with AMSA when deficiencies are found which cannot be immediately rectified. |
| 10. | <p>If the answer to the above question is "no" please provide records of what was done and why</p> <ul style="list-style-type: none"> As above |
| 11. | <p>Please provide copies or records supporting the answer to the above question where applicable</p> <ul style="list-style-type: none"> As above |

2.4. Montara Venture

Some answers provided 10 July 2019.

Remaining answers being obtained, and expected to be provided by 17 July 2019.

2.4.1. Special Survey Extensions

| | |
|---|-----------------|
| Facilities: | Montara Venture |
| Background: Special Survey Extension – Due Date 24 June 2017 – 1st Extension | |
| <p>LR Rules Offshore Units July 2018 – Pt1. Ch.2 Sec. 3.5.7 – Special Survey may be extended in “exceptional circumstances” for a maximum period of 3 months. Pt1. Ch.2 Sec 3.5.4 - “Exceptional Circumstances” means unavailability of dry-docking facilities, repair facilities, essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions.</p> <p>LR granted an extension for 3 months to 24 September 2017.</p> | |
| Questions and document requests | |
| <p>1. What was the basis of the extension?</p> <p>The special survey was due on 24 June 2017. Prior to that date on 25 May 2017, PTTEP sought an extension of the special survey due to exceptional circumstances. This was forwarded to FOI Class for the consideration of the relevant Classing Committee (the Southampton Devolved Classification Executive). Approval for the extension until 24 September 2017 was obtained from Southampton Devolved Classification Executive and communicated to PTTEP on 7 August 2017.</p> <p>Blamed cyclones but being in “cyclone alley” this is a well known event and risk that needs to be planned for. Comes down to poor survey planning and commercial reasons. The extension should not have given. It is also noted that LR interchange Force Majeure and Exceptional Circumstances in regard to weather events.</p> | |
| <p>2. Please provide copies of correspondence from PTTEP to LR and LR internally to approve the extension including all communication with FOI Class</p> <ul style="list-style-type: none"> • Letter from PTTEP to LR dated 25 May 2017. • Email from [REDACTED] dated 1 June 2017. • Email from [REDACTED] to FOI Class dated 2 June 2017. • Email from [REDACTED] to FOI Class dated 6 June 2017. • Email from FOI Class to [REDACTED] dated 7 June 2017. • Email from FOI Class to [REDACTED] dated 19 June 2017. • Email from FOI Class to [REDACTED] dated 23 June 2017. • Email from [REDACTED] to FOI Class dated 29 June 2017. • Email from FOI Class to [REDACTED] dated 3 July 2017. • Letter from LR to PTTEP dated 7 August 2017. • [Provided on 10 July 2019] | |
| Background: Class Suspension 24 September 2017 to 24 March 2018 | |
| <p>Special Survey Extension expired on 24 September 2017.</p> <p>On 9 November 2017 as per PTTEP internal P.S. Deviation Case to Operate Form noted that:</p> <ol style="list-style-type: none"> 1. 8 tanks remained to be inspected 2. Leaking between tanks 6C/6P/5S – Pipe work holes | |

| | |
|---|-----------------|
| Facilities: | Montara Venture |
| <p>3. Leaking between 6S and Stbd Diesel Tank – temporary repair to E/R BHD</p> <p>4. Cargo Pump Room – Piping holes – temp repairs – LR CoC – Permanent repair April 2018?</p> <p>LR notified PTTEP of class suspension on 29 March 3 January 2018 back dated to 24 September 2017. A meeting between LR & PTTEP was held on 24 March 2018. LR should have suspended class on 24 September 2017 and then cancelled class on 24 March 2018 which is 6 months of Suspension as per IACS PR1C.</p> | |
| Questions and document requests | |
| 1. Why was class not automatically suspended on 24 September 2017? | |
| 2. Why was class not cancelled on 24 March 2018? | |
| 3. Please provide copies of automatic generated letters to the owner. | |
| <p>4. Please provide copies of correspondence between PTTEP to LR and LR internally during this period.</p> <ul style="list-style-type: none"> Letter from PTTEP to LR dated 25 August 2017 Letter from LR to PTTEP dated 3 January 2018 Email from [REDACTED] to FOI Class dated 19 September 2017. Email from FOI Class to [REDACTED] dated 20 September 2017. Email from [REDACTED] to FOI Class dated 20 September 2017. Email from [REDACTED] to PTTEP dated 20 September 2017. Email from [REDACTED] to FOI Class dated 20 September 2017. Email from FOI Class to [REDACTED] dated 20 September 2017. Email from [REDACTED] dated 12 October 2017. Email from [REDACTED] to FOI Class dated 12 October 2017. Email from FOI Class to [REDACTED] dated 19 October 2017. Email from [REDACTED] to FOI Class dated 26 October 2017. Email from Secretary to Classification Committee dated 7 March 2018. Not Received [Provided on 10 July 2019] <p>Would expect more communication between 26 Oct 2017 & 7 March 2018</p> | |
| 5. How was the suspension lifted & class reinstated? Reference is requirements in LR Rules & IACS PR1C. | |
| Background: Class Suspension/Reinstatement/Interim Class Certs – COT 6 | |
| <p>3 July 2018 LR Interim Certificate is closing out previous pipe damage CoC but then at bottom states that 6C Overall survey is complete. PTTEP have then used this Interim Cert to justify returning the tank to service however the Close Up Survey had not been completed as evidenced by the DITS Inspection. Further DITS inspections found more pipework defects.</p> <p>LR Rules for Offshore Units Pt.1 Ch.2 Para.3.7.3 LR Surveyors are permitted to issue provisional (interim) certificates to enable an offshore unit classed with LR to proceed on its voyage or to continue in service, provided that, in their opinion, the unit is in a fit and efficient condition. Such certificates will embody the Surveyor's recommendations for continuance of class, but in all cases are subject to Confirmation by the Classification Committee.</p> <p>Interim certificates cannot be used to reinstate class after suspension. Only the completion of overdue surveys can reinstate class. Refer IACS PR1C A1.1.</p> | |
| Questions and document requests | |
| 1. Why was an Interim Class Certificate issued when Class was suspended and who authorized it? | |

| Facilities: | Montara Venture |
|-------------|--|
| | <ul style="list-style-type: none"> • There was no “Interim Class Certificate” issued. The relevant document was an “Interim Certificate” which is an interim report recording the survey items completed on board, that is handed to the Installation Manager by the surveyor at the end of the period on board the facility. • An internal inspection of 6 centre on the facility was undertaken by the issuing surveyor, who reported the inspection accordingly. • LR was not involved in PTTEP’s decision to use this Interim Certificate to justify returning the tank to service. |
| 2. | <p>How was the CoC for pipework damage cleared by LR, i.e., on what basis?</p> <ul style="list-style-type: none"> • LR did not issue any CoC relating to pipework damage. The pipework damage was not a CoC. • The pipework damage was reported as “MDAM” which is a reference to machinery damage. The pipework damage was not cleared by LR, all that the surveyor noted was that the inspection had occurred and the survey had been completed. The survey report dated 3 July 2018 states that the surveyor found pipework damage and did not clear the pipework damage. <p>Request definition and procedures for MDAM vs a CoC. The MDAM was “Credited” rather than “Raised” in the survey report and listed as “Complete” on the Interim Certificate.</p> |
| 3. | <p>Did an LR Surveyor inspect the repair as there were more defects found shortly thereafter on associated piping?</p> |

2.5. Pyrenees Venture

Answers provided on 10 July 2019.

See details below.

2.5.1. EM & I, Survey Reports & ESP Status

| | |
|---|------------------|
| Facilities: | Pyrenees Venture |
| Background: EM & I & LR Survey Reports | |
| <p>EM&I, a provider of asset integrity, inspection and specialized repair and maintenance services, has signed a contract with BHP Billiton Petroleum Australia (BHP Billiton) to provide inspection management services to their Pyrenees FPSO.</p> <p>The agreement, executed on 1 November 2016, includes 2 x 1 year options, and covers a range of conventional and specialist inspection services, to be managed from EM&I's offices in Perth Western Australia</p> | |
| Questions and document requests | |
| <p>1. Is EM & I being used in a similar way to other facilities?</p> <ul style="list-style-type: none"> LR is not a party to the agreement referred to between EM&I and BHP, nor any other agreements between EM&I and other facility operators. | |
| <p>2. Please supply recent examples of EM & I inspection reports and associated LR Survey Reports.</p> <ul style="list-style-type: none"> LR survey report has already been provided to NOPSEMA on 25 June 2019. EM&I reports dated July and August 2017 are provided to NOPSEMA on 10 July 2019. EM&I inspection reports received by LR were a draft main deck visual inspection report dated July 2017, a draft main deck pitting report dated July 2017 and a main deck thickness measurement report dated August 2017. The reports were requested by BHP in preparation for dry docking. Please provide recent EM & I reports for SW Ballast & COT Tanks together with the associated survey reports. | |
| Background: ESP Survey Status | |
| <p>During our inspection dated 20 May 2019 [REDACTED] mentioned that LR had been in discussion with AMSA for the last 4 years about ESP implying that because ESP is not mandatory under LR Rules that they didn't have to apply these requirements.</p> | |
| Document request, please provide | |
| <p>1. Copies of LR's correspondence with AMSA in regard to ESP.</p> <p>LR has had a lot of correspondence with AMSA in regard to ESP over many years. Can you please clarify the scope of this request?</p> <p>Just an email from AMSA stating that ESP Code requirements do not apply to the Pyrenees Venture will be sufficient.</p> | |



Project Update #2

The following is a top level preliminary summary of the main conclusions from Inspection # 2011 of Lloyd's Register.

Survey Status and Class Records

None of the four vessels queried as part of the inspection had a Planned Survey Programme Document as required by LR Offshore Rules Pt.1 Ch.3 Sec.1.6. It is not optional. The document is to be developed by the owner and submitted to LR for approval. The programme should include guidance for the control and recording of all relevant aspects of the inspection and replacement philosophy. The absence of this key planning document puts in doubt the planning and control aspects of the subsequent surveys.

The LR Class Direct system as demonstrated by LR surveyors was unable to provide adequate reports that provide basic class information in regard to tank & compartment survey dates, coating condition, areas of substantial corrosion, areas of excessive diminution and other defects. This information has to be extracted from individual survey reports which makes for difficult oversight and review.

Conclusions

Planned Survey Programme: LR has not required operators to comply with the rules to develop this document and submit for approval.

LR Class Direct system: The system as demonstrated is lacking in capability to provide basic classification information as outlined above which makes the process of facility management and oversight difficult.

Recommendations

Planned Survey Programme: LR are to assure operators comply with the rule requirements.

LR Class Direct: LR to consider system capability and functionality improvements.

Close Up Surveys & Use of UT Thickness Gauging Companies

Both LR Offshore Rules and IACS Procedural Requirements (PR's) require Close Up Visual Inspection (CVI) of tank structures by the surveyor. LR are not meeting this requirement. Instead LR are relying on UT Thickness Gauging Companies using rope access methods to complete the Close Up Visual Inspection Survey requirements and are crediting the LR survey on the basis of the thickness gauging companies' report. On most occasions the LR surveyor is not present. Thickness Measurement Companies are not LR Surveyors and are not qualified under LR's and IACS required Surveyor training & qualification schemes. As a result tanks not surveyed by a LR surveyor are not valid

In addition, the thickness gauging process is required by LR Rules to be sufficiently attended by the surveyor to ensure control of the process and to verify the measurements. Due to numerous documented thickness gauging reports associated with several facilities stating that the gauging measurement was carried out without the LR surveyor in attendance demonstrates that the gauging process is not adequately

controlled and verified by the LR Surveyor as required. This puts doubt over the veracity of the gauging work completed by the thickness gauging companies.

Conclusions

Close Up Surveys: The use of unqualified surveyors invalidates surveys where Thickness Measurement Companies completed the close up surveys.

Thickness Gauging: the process was found not to be sufficiently attended by LR to ensure control of the process and to verify the measurements.

Recommendations

Close up surveys: LR to review internal procedures to ensure only close up surveys are credited when a LR Surveyor has completed the survey.

Thickness Gauging: LR to review internal procedures ensure the thickness gauging process is sufficiently attended by the surveyor as required by the rules.

Northern Endeavour – Safety Case Commitments

UPS made the following commitments within the Safety Case (26RSKRIML001 R2 – 20/12/2018, A649359):

The NE is designed and built in accordance with class requirements and has the following Lloyd's Register class notations:

+A1 Floating Production Storage and Offloading System (FPSO), non-disconnectable

Laminaria, Corallina Fields, Timor Sea

The NE is registered in Australia. The FPSO will be maintained in accordance with the requirements of the Classification Society, to provide assurance that it remains seaworthy at all times. The NE will also maintain its statutory certification as required under the applicable maritime legislation.

Safety Case – Request for Written Information #3 – Appendix 2 – Tank Inspection Types and Applicable Class Rules

Water Ballast Tanks (1P, 2P, 3P, 4P, 5P, 6P, 1S, 2S, 3S, 4S, 5S, 6S, AP, FP) – Periodic Rule Surveys + FMECA

The preliminary inspection findings and conclusions in regard to the Northern Endeavour are as follows:

Northern Endeavour Survey Extensions

LR Offshore Rules and IACS PR1C require the Special Surveys to be completed by the due date. However there are two possibility for extensions:

1. Exceptional Circumstances a maximum extension of 3 months may be given. Pt.1 Ch.2 Sec.3.5.7.
2. Force Majeure; no time given for an extension but is a mechanism to cover unforeseen events. Pt.1.Ch.3. Sec.3.11.

UPS had prior knowledge about the condition of the facility and amount of survey work remaining before making an application to LR for an extension to the Special Survey. UPS advised LR in document NE FPSO



WBT Integrity Management Philosophy 2018 Onwards (4900-FP-E0071 26/02/2018 – A685563) – “The sheer volume of descaling and inspection work to assess every single anomaly lead to significant schedule overrun, meaning that it is extremely unlikely that we can complete all the WBT’s prior to the end of the survey cycle”. LR by stamping the document “Noted Received for Information” were therefore notified and aware that the survey cycle was extremely unlikely to be completed on time, as required by the LR Offshore Rules and IACS PR1C. This prior knowledge should have been taken into account by LR during the assessment process of the subsequent requests by UPS for survey extensions.

1st Extension Request – 23 July – 23 October 2018

UPS’ first Special Survey extension dated 15 March 2018 was based on the corroded heli-deck structure. LR Perth office sent the application to LR London for review. LR London office in reply dated 15 March and advised of appropriate strategies and grounds for applying for a Special Survey extension, i.e., Force Majeure vs Exceptional Circumstances. UPS’ application was then re-submitted 19 March 2018 claiming Force Majeure due to the corroded heli-deck structure. LR London accepted giving a 3 month extension to the Special Survey.

LR Offshore Rules - Force Majeure

3.11.1 If due to circumstances reasonably beyond the Owner’s or LR’s control (limited to such cases as damage to the offshore unit or structure, unforeseen inability of LR to attend the offshore unit due to the governmental restrictions on right of access or movement of personnel, unforeseeable delays in port due to unusually lengthy periods of severe weather, strikes, civil strife, acts of war, or other cases of force majeure) the unit is not in a port where the overdue surveys can be completed at the expiry of the periods allowed, the Classification Committee may allow the unit to sail, in class, directly to an agreed facility and, if necessary, then, in ballast, to an agreed facility at which the survey will be completed, provided that LR:

- (a) Examines the unit’s records; and*
- (b) Carries out the due and/or overdue surveys and examination of recommendations at the first port of call when there is an unforeseen inability of LR to attend the unit in the present port, and*
- (c) Has satisfied itself that the unit is in a condition to sail for one trip to a facility and subsequent ballast voyage to a repair facility if necessary. (Where there is unforeseen inability of LR to attend the unit or structure in the present port, the master is to confirm that the unit is in condition to sail to the nearest port of call.)*

A corroded heli-deck structure does not meet the definition of Force Majeure as maintenance and timely repair of the structure prior to it becoming unserviceable is fully within UPS’ control. Further the above mentioned rule paragraph does not allow for the facility to continue operations but rather allows for the facility to be moved to a location where the overdue surveys may be completed. LR allowed the facility to continue operations.

2nd Extension Request 23 October 2018 – 28 February 2019

The Special Survey IV after 1st survey extension was due for completion on 23 October 2018. The LR Surveyor planned visit dates to complete the Special Survey IV was 4–10 October 2018, i.e., a total of 6 days.

On 5 October 2018 an ESD 0 occurred which means a full emergency shut down and loss of power. Survey work was then postponed. The surveyor however then transferred to another due survey task being the sub-sea turret mooring system. This survey was carried out from 8 to 14 October 2018, i.e., a total of 6 days.

UPS on 18 October 2018 requested a second extension of the Special Survey based on Force Majeure due to the ESD 0 emergency shut down. The request was granted by LR in two stages, initially to 30 November 2018 in order to assess survey progress, then later till 28 February 2019. It is not known why LR London wanted to check survey progress.

LR made two (2) offshore visits to complete the outstanding survey items:-

1. LR Report 2015680 (A676273), 20 – 29 November 2018 – 9 days
2. LR Report 2025320 (A676242), 21 – 28 February 2019 – 7 days.

A total of 16 days subsequently to complete the survey versus the original planned 6 days. That is, an additional 10 days of work was needed to complete the survey compared to the original plan. Further the 6 days survey of the sub-sea turret system also needed to be done prior to the end of the special survey extension period being 23 October 2018.

There is no evidence that LR London in granting the extension made an assessment of the survey work remaining to complete the special survey versus the timeframe available nor was there any attempt to identify the root cause of the ESD 0. The root cause of the incident however was identified by UPS as being the gas turbine, GT-7010 had exceeded its overhaul hours which caused high bearing vibration and subsequent shutdown trip. This was not the first incident around this time involving the GT-7010 as there had been previous vibration issues dating back to 24 April 2018.

LR allowed the facility to continue operations not in accordance with the rule requirements for Force Majeure.

Conclusions

The two granted extensions are concluded to be “engineered” and were not unforeseen. They were done in collaboration between the operator UPS and LR. The operator’s documented problem was that the condition of the facility translated to increased volume of survey work due to the large number of structural corrosion defects was not possible to complete in the required survey timeframe. Both reasons claimed for extensions of the Special Survey based on Force Majeure grounds did not meet the definition of Force Majeure in LR Offshore Rules and IACS PR1C. They both were due to lack of adequate facility maintenance and hence deemed foreseeable. The extensions were therefore based on purely financial reasons. Both LR Offshore Rules and IACS PR1C do not provide for survey extensions based on financial grounds.

Recommendation

LR to develop more robust internal procedures for assessing survey extensions requests which ensures decisions are based on the requirements of LR Rules and IACS procedures only.

Northern Endeavour Water Ballast (WB) Tanks

The WB Tanks have approximately 4,000 structural corrosion anomalies. These are broken down into “Substantial Corrosion” (approximately 1,500 anomalies) and “Excessive Corrosion” (approximately 2,500 anomalies).

Classification Society Rules and IACS require corrosion margins to be added during the design. Structural plates have a 25% corrosion allowance based on thickness and stiffeners have 20%. The following Rule definitions apply to corrosion:

- Substantial corrosion = 25% of corrosion margin remaining.
- Excessive corrosion = corrosion beyond the corrosion margin.

LR Offshore Rules require:

- steel renewal for excessive corrosion LR Offshore Rules Pt.1 Ch.3 Sec.1.10 Steel Renewal Criteria, and
- annual measurement of substantial corrosion LR Offshore Rules Pt.1 Ch.3 Sec.2.2.15.

Notwithstanding the above, LR Rules do have a clause which does allow for defect repairs to be deferred subject to a criticality assessment. UPS's have developed an FMECA analysis technique for this purpose. (FMECA = Failure Mode Effect Criticality Analysis). This technique has been accepted by LR. However the FMECA has also recommended for many defects that steel renewal is required and has proposed repair specifications detailing the location and size of the many steel areas to be renewed. Whilst LR's has “Approved” the FMECA's there are no supporting “Conditions of Class” as required by their rules (Pt.1Ch.2 Sec.3.4.3). There is no evidence this steel renewal has been done.

Criticality Assessments were received for 3 of 14 WB Tanks (AP, 1S & 5P) in response to a request for all to be provided. For the remaining 11 WB Tanks it is concluded Critically Assessments have not been done. Conditions of Class as required LR Offshore Rules Pt.1 Ch.2 Sec.3.4.3 should therefore have been given for steel renewal by a prescribed date for all areas of excessive corrosion in the 11 WB Tanks. There is no evidence that LR has issued Conditions of Class for steel renewals.

LR Offshore Rules Pt.1 Ch.3 Sec 2.2.15 & IACS UR-Z7 Sec. 3.2.4 require additional thickness measurements to be taken at Annual Surveys for any area of substantial corrosion. There is no evidence that LR has required the additional measurements for all 14 WB tanks.

LR Offshore Rules Pt.1 Ch.3 Sec.1.7 & IACS UR-Z7 require thickness measurements. Thickness measurement is completed by an LR Approved Service Supplier, Pt.1 Ch.3 Sec. 1.8.3. LR Offshore Rules Pt.1 Ch.3 Sec 1.8.8 requires the Surveyor to witness the measurements to extend necessary to control the process including those units that are offshore. There are 6 WB Tanks' Thickness Measurement reports which state that the LR Surveyor was not in attendance: (2P, 2S, 3P, 3S, 4P & 5S). The thickness measurement attendance by the LR Surveyor should be documented via a LR Survey Report. On 6 occasions (4P, 4S, 5P, 5S, 6P, 6S) there is no LR Survey Report.

It is therefore concluded that LR's did not attend at WB Tanks 2P, 2S, 3P, 3S, 4P, 4S, 5P, 5S, 6P & 6S Thickness Measurement surveys, i.e., 10 tanks in total.

It is not possible for LR to witness measurements if the surveyor does not attend. The report cannot be verified and signed by the Surveyor as required, Pt.1 Ch.3 Sec.1.8.15. – *“The thickness measurement report is to be verified and signed by the Surveyor and countersigned by an authorising Surveyor.”*

UPS has changed the WB Tanks survey scope reducing Rule requirements based on survey results from other WB Tanks where most of the corrosion was in the top part of the tanks. (Ref: NE FPSO WBT Integrity Management Philosophy 2018 Onwards 4900-FP-E0071 26/02/2018, A685563).

Risk Based Inspection (RBI) techniques can only be applied once an RBI Plan has been approved by LR as per Offshore Rules Pt.1 Ch.6. There is no other LR Rule or IACS clause to allow this reduction in survey scope. UPS submitted a document dated 26 February 2018 to LR outlining their plan for reduced survey scope. LR did not approve the document but stamped it “Noted for Information Only”. The survey of WBT’s FP, 1P, 6P, 6S are therefore incomplete and hence overdue.

Conclusions

It is concluded that the ongoing tank condition of the 14 WB Tanks is in doubt as LR Class Rules & IACS UR – Z7 have not been followed in several instances as detailed above and steel renewals have not been completed.

In summary, the WB Tanks do have excessive corrosion requiring steel replacement. LR has accepted a quasi-RBI scheme to reduce the survey requirements and are not enforcing required steel replacements or annual measurements of areas of substantial corrosion. Further the thickness measurement process is not being controlled by the surveyor and the close up survey requirements are being completed by the thickness gauging company who are not qualified LR surveyors. Therefore LR Classification Certificate cannot “provide for the structural strength of (and where necessary the watertight integrity of) all essential parts of the hull”. Ref LR Offshore Rules Ch.1 – 1.1.3 & 1.1.4.

Recommendations

Criticality Assessments of Defects: LR to improve internal procedures to ensure that approved criticality assessments actions in regard to steel renewals are supported by appropriately detailed and timely Conditions of Class, and actions in regard to increased survey and thickness measurement of other defects are supported by detailed Actionable Items for each defect.

Steel Renewals: LR to improve internal procedures to ensure steel renewals are supported by appropriately detailed and timely Conditions of Class. If a Criticality Assessment is contemplated then this process should be completed before crediting of the survey.

Substantial Corrosion: LR to improve internal procedures to ensure annual thickness measurements of areas of Substantial Corrosion are supported by detailed Actionable Items for each area.

Reduced Scope Survey Schemes: LR to improve internal procedures to ensure only reduced scope survey schemes are approved (including tacit approvals) and implemented in accordance with rule requirements.

Close up surveys: LR to review internal procedures to ensure only close up surveys are credited when a LR Surveyor has completed the survey.

Thickness Gauging: LR to review internal procedures ensure the thickness gauging process is sufficiently attended by the surveyor as required by the rules.

Montara Venture Safety Case Commitments

Jadestone made the following commitments in accepted Safety Case (MV-70-REP-F-00004 Rev.1 18/04/2019, A669381):

The Facility will comply with the Rules & Regulations for the Classification of Offshore Units (ROU rules) July 2018 or applicable updates. The hull survey scheme being applied will be Continuous Survey of Hull (CSH) described in the ROU rules. This will be articulated in the survey planning document agreed and approved by Class.

It is noted that The LR Rules for the Classification of a Floating Offshore Installations at a Fixed Location no longer exists and has been incorporated into the ROU. Furthermore, JSE recognise that sections of the LR Rules for the Classification of Ships may be applicable to the MV FPSO. However, these are referenced within the ROU (as presented below) and so do not need to be called out separately:

- *Rules and Regulations for the Classification of Offshore Units, July 2018.*
- *Part 1, Chapter 3, Section 5*
- *Special Survey Hull Requirements*
- *5.1.6 Ship units and other surface type units: for units with crude oil bulk storage tanks, the requirements of Pt 1, Ch 3, 7 Special Survey-Oil Tankers (including ore/oil ships and ore/bulk/oil ships) – Hull requirements of the Rules for Ships are to be complied with as applicable.*

Montara Venture – Special Survey Extension 24 July to 24 September 2017

LR Offshore Rules Pt.1 Ch.2 Sec. 3.10.4 and IACS PR1C A1.1 require Special Surveys to be completed by the due date. However, the following provide grounds for extensions:

- Exceptional Circumstances - a maximum extension of 3 months may be given (Pt.1 Ch.2 Sec.3.5.7);
- Force Majeure: no limit given for an extension but is a mechanism to cover unforeseen events (Pt.1.Ch.3. Sec.3.11).

Neither the LR Offshore Rules nor IACS PR1C provide for survey extensions based on commercial grounds.

The inspectors obtained the following documents during the inspection which summaries the key steps in LR's granting of the Special Survey extension:

- Letter from PTTEP to LR dated 25 May 2017 (A682244) – Requesting extension of Special Survey due to "Exceptional Circumstances" which were described as an inability to complete survey of crude oil tanks and produced water tanks prior to the due date as a result of interruptions to cargo tank surveys due to weather, deferred facility start-up, inert gas isolation valve issues, tank cleaning and allowable personnel on board (POB) constraints which limited tank cleaning activities. The deferred start-up had caused the tanks to corrode thereby producing large volumes of scale.
- Several internal LR emails between Perth and London offices outstanding survey scope, what survey scope would be completed by the due date, flag state approval, etc. (A682239, A682243, A682215)

- LR London email to LR Perth dated 3 July 2017 granting a 3 month extension to the Special Survey due to severe weather (A682220).
- LR Perth letter to PTTEP granting the 3 month extension of the Special Survey, dated 7 August 2017 (A682266).

Exceptional Circumstances

Defined in LR Offshore Rules Pt.1 Ch.2 Sec.3.5.4; *"In this context 'exceptional circumstances' means unavailability of dry-docking facilities, repair facilities, essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions."*

The inspectors note LR London quoted in email dated 3 July 2017 *"severe weather – cyclones forcing the onboard personnel to evacuate what caused the survey preparations delay"* as the basis for granting the 3 month extension. There was no mention of the other reasons cited by PTTEP in their letter dated 25 May 2017 (A682244) such as deferred facility start-up, inert gas isolation valve issues, tank cleaning and allowable personnel on board (POB) constraints which limited tank cleaning activities.

Further PTTEP quoted in their request dated 25 May 2017 three severe weather events as follows:

- Tropical Cyclone Blanche: 4 – 8 March 2017
- Tropical Low: 9 – 13 April 2017
- Tropical Cyclone Frances: 28 - 30 April 2017

The inspectors are unaware of any other facilities requesting extensions of surveys due to severe weather for the above mentioned weather events.

Prior to LR Perth formally writing to PTTEP (letter dated 7 August 2017, A682266) advising of agreement to a 3 month extension, there was a series of emails exchange between PTTEP and LR Perth (A684330) commencing with PTTEP's email dated 13 July 2017 and then 3 August 2017 where PTTEP was advising LR that the tank surveys would not be completed by the end of the proposed 3 month extension and were seeking advice to be given in the formal extension letter about likely scenarios beyond the end of the extension period. A draft of the letter (letter dated 7 August 2017, A682266) was sent to PTTEP on 7 August 2017 and PTTEP replied on the same day. The following exchange occurred:

PTTEP: *"Thanks very much for the draft letter. I'm not sure how the final paragraph will go given LR are aware of the current state of affairs and recognise (albeit unofficially!) that to finish the tanks will take us well into next year. "*

LR Perth: *"Agreed yes we are aware of this unofficially."*

Conclusion

Based on the information obtained it is the inspectors opinion that the delay in the survey program was mainly due to the deferred start-up of the facility which then caused excessive sludge and scale in the crude oil tanks causing delays due to the volume of cleaning work to be undertaken to prepare the tanks for survey. It is also noted that maintenance of the tanks during and after a deferred start-up prior to it becoming a cause of delay is reasonably expected to be within PTTEP's control and therefore does not meet the definition of Exceptional Circumstances. This opinion is further supported by the PTTEP/LR Perth

email exchange mentioned above where it was advised by PTTEP and acknowledged by LR Perth that the completion of the tanks would take several months.

Recommendation 2011-2-#

LR to ensure that if any survey extensions are granted, they are granted in accordance with the appropriate LR rules stated in Pt.1 Ch.2 Sec.3.5.7 for Exceptional Circumstances and Pt.1.Ch.3. Sec.3.11 for Force Majeure events as applicable.

Australian Maritime Safety Authority (AMSA) Communication and Advice to the Operator

LR London on 5 June 2017 (A682239) instructed LR Perth to obtain Flag State (AMSA) agreement for 3 month extension of the statutory certificates. LR Perth emailed AMSA on 13, 26 & 27 June 2017 (A682220) requesting instructions in regard to issuing a proposed 3 month Short Term SOLAS Safety Construction (SAFCON) Certificate. AMSA replied on 29 June 2017 stating the following:

"The following response is made on the basis that the Montara Venture is defined as a permanently moored FPSO under the definitions of Part 2 of Marine Order 60 and therefore to which the Marine Order would not apply.

The requirement for the Montara Venture to hold a SAFCON is not a legislative requirement under the provisions of the Navigation Act 2012, whilst permanently moored as the vessel is under NOPSEMA's jurisdiction and the OPGGSA is in force on the vessel.

However should the operator wish to maintain voluntary compliance with the provisions relating to an FPSO under Marine Order 60, it is suggested that LR withdraw the SAFCON and replace it with a 'Document of Compliance' or equivalent covering the SAFCON related matters under LR's own Terms and Conditions.

Further to the above, should the owner request the re-issue of the SAFCON under Marine Order 60, the reasons in writing for re-issue should be provided to LR and on forwarded to AMSA for consideration and advisement."

The inspectors also noted the following comment and instruction in LR London's email to LR Perth dated 3 July 2017 when granting the 3 month extension:

"Regarding the below communication from the Administration it is considered that decision regarding the survey postponement remains entirely within Class jurisdiction. Please follow the below advice and discuss with the operators whether they wish LR to provide them with the relevant Statement of Compliance. Kindly please keep FOI-class informed."

LR Perth then in their letter dated 7 August 2017 advised PTTEP in part as follows:

"We can inform that all postponements have been agreed by Flag state AMSA in their email dated 29th June 2017 – AMSA Ref: HPRM: 2011/318", and,

"With regards to the survey status beyond 23rd September we would require more details of your plans and intentions on the remaining scope of work. This will be best understood in the light of completed tank entry surveys by that time and further submitted proposals.

However should the completion of outstanding surveys extend beyond 24th September 2017 the potential outcomes from a regulatory point of view are as follows:

1. A further extension of Class and Statutory certification can be requested from AMSA and provide flag state agrees, the vessel could remain under survey with existing certification.
2. If AMSA/Flag state does not agree then Class would be withdrawn for the period the surveys remain outstanding and would be re-instated on completion of all outstanding surveys”.

Conclusions

It is concluded that LR did not provide PTTEP with the correct advice in regard to:

- NOPSEMA’s jurisdiction whilst permanently moored,
- non-applicability of the Navigation Act 2012
- AMSA not having jurisdiction in granting of extensions, both for the current extension and possible future ones.

The inspectors also found no evidence LR Perth followed AMSA’s and LR London’s instruction to the cancel AMSA’s SAFCON certificate and re-issue a statement of compliance (if required by the operator).

| Recommendation 2011-2-# |
|--|
| LR to ensure that information including instructions obtained from AMSA is accurately and timely relayed to the operator. |
| Recommendation 2011-2-# |
| LR to ensure that instructions given by their head office for the administration of flag state statutory certificates are complied with. |

Montara Venture – Class Suspension Decision Process

PTTEP requested a 2nd extension to the Special Survey in two letters dated 25 August 2017 and 8 September 2017 (A682266).

LR Perth forwarded the request on 19 September 2017 (A682248) to LR London. They replied on 20 September 2017 stating in part:

“there is no apparent “force majeure” (please refer to the Rules Part 1, Chapter 2, sect. 3.11) supporting further postponement of the continuous hull survey cycle beyond current three months postponement. Please kindly inform the Clients that their request shall be reviewed by the Classification Committee, though the above circumstances will be taken into consideration.” and,

“Written response to the Client at this point may only contain the information that their request shall be subject to the Classification Committee review as I stated above. Please feel free to convey this message to your manager to communicate with the Client.

Until any of the above listed circumstances affecting classification of the unit would have changed any Interim Certificate or Survey report containing standard recommendation can only be issued up to 24 September 2017.

There is no objection to attend the unit after that date however Interim Certificates and Survey Reports may contain non-standard recommendation "For the information of the Committee" only and shall be marked for vetting until further instructions received.

It is strongly recommended to consult the Rules for Offshore Units Part 1 - Regulations when dealing with the case and communicating with the Client. It is also strongly recommended to help the Client to familiarise themselves with the Regulations as their content forms the frame and limitations of our classification services."

The inspectors also sighted an LR internal email discussion dated 20 September 2017 (A682251) which stated:

"I referred to that 'communication'. It was held on 30 of August, but there was no firm agreement achieved (and obviously it couldn't be achieved as the final say belongs to the Class Exec). I pointed out that we can continue surveys with the Class suspended until they manage to complete all outstanding. Option with CoC, as we discussed yesterday does not look realistic considering the scope to cover that way. David wished to help them but expected that Perth and the Client to focus on the survey progress like boilers etc.

I have not recorded the meeting. I would be happy if Francis can remind me what we actually agreed. And I see re-cap with David necessary to move on."

The inspectors conclude from the above LR internal emails that a further extension of the Special Survey was not possible and class suspension was being contemplated as at 20 September 2017.

The next email of significance sighted by the inspectors was from LR London to LR Perth dated 14 December 2017 (A685588) which stated:

"thank you for the below reminder.

- 1. I understand that the survey progress made since our previous communication on the subject over two months ago has been reflected in your two survey reports: FRE 1700251 and FRE 1700285.*
- 2. Following analysis of the outstanding portion of the CSH survey FOI-Class can not recommend maintenance of Class at this point and the Class suspension will be recommended to the Class Committee soonest.*
- 3. Please advise any options or reasons which may justify maintenance of Class we are not aware of.*
- 4. As discussed previously LR may offer attendance for the surveys of Class items after the Class has been suspended. Please make sure that LR has a contract in place clearly stating that these services can not lead to assumption that the unit remains in Class.*
- 5. Class may be reinstated should all outstanding surveys have been completed."*

The inspectors noted in subsequent internal emails the following series of comments:

20 December 2017 LR Perth addressees (A685616) - *"We also discussed the need to speak to [Redacted] and others as the case may be so as to avoid placing this client of ours offside. They can as a fixed facility tell us we don't need Class anymore and that would not be our preferred choice. I think we must do everything to keep the vessel under survey and informally in Class as opposed to formally throwing them out of Class.*

If they lose Class then we are duty bound to inform AMSA who in turn will inform NOPSEMA and the chain will complete itself with PTTEP being queried by NOPSEMA.

They have agreed to give us fortnightly updates on progress and Angus is due to go offshore to the MV in the first week of January in relation to crediting of surveys."

20 December 2017 LR Perth addressees (A685616) – *"Guys I recommend strongly that you speak to [Redacted] this week. [Redacted] is going on leave and so am I end of this week. I think that it will be too late if we wait any longer – we will be asked to suspend class."*

20 December 2017 LR Perth to LR London (A685611) – *"Gents we need to discuss the possible withdrawal of class"..... "It is important that we look at every option where Class can be retained this was the client's choice"..... "We want to be part of the solution to the problems they are facing and hence this meeting request to help us in achieving this outcome."*

20 December 2017 LR Perth to LR London (A685611) – *".....I feel that the Risk Based option in the Rules could be used as justification to allow them additional time to complete the surveys. I propose that, should we see any poor condition tanks in the coming period that we review status at that time – so we reserve the right to suspend if we see significant issues."*

22 December 2017 LR Perth to LR London (685614) – *"Just to confirm that I have spoken to [Redacted] this morning to warn him that Class will be suspended formally in the New Year I explained the implication of this versus Class Withdrawn and was given assurance that they are working on an improvement plan for tank entries. I also spoke to [Redacted] who has been working with PTTEP Bangkok to secure LR involvement with the new Cash-Maple project – to make sure that any fallout reaching PTTEP in Bangkok can be managed."*

30 December 2017 LR Perth addressees (A685602) – *"There is a new guard there now and personally I would tread carefully until we get to know them better especially whilst handing out bad news. My approach would be to proactively assist (whilst of course being clear how hard we have tried to help them), rather than tell them it is their problem to manage. That has the advantage of reputation and revenue for us."*

Neither the LR Offshore Rules nor IACS PR1C provide for survey extensions based on commercial grounds.

The inspectors noted that PTTEP was formally advised of the class suspension in LR letter dated 3 January 2018 which was signed on 12 March 2018 and received by PTTEP on 12 March 2018 (A685581). The suspension was back dated to 24 September 2017.

The inspectors reviewed LR rules and IACS PR1C and noted that class is to be automatically suspended (LR Offshore Rules Pt.1 Ch.2 Sec. 3.10.3/4 and IACS PR1C A1.1/A1.2) when the Special Survey has not been completed by the due date, being 24 September 2017. Both LR rules and IACS PR1C do not provide any other mechanism to delay the class suspension.

The inspectors conclude from multiple internal emails cited above that there is a systemic issue within LR where commercial considerations unduly delayed giving notice to the operator that class had been suspended.

Recommendation 2011-2-#

LR to ensure that class is automatically suspended in accordance with LR Offshore Rules Pt.1 Ch.2 Sec. 3.10.3/4 and IACS PR1C A1.1/A1.2 when the Special Survey has not been completed by the due date.

Montara Venture –Continued Operations under Suspension

Inspectors noted that after class was suspended the operator required LR to continue to complete overdue surveys with the aim to reinstate class once all overdue surveys were completed. LR London instructed LR Perth on 22 December 2017 (A685589) as follows:

“Class suspension is subject to the review by 24 March 2018.”

Inspectors also note the requirements of IACS PR1C A.4 in light of the possible class withdrawal date of 24 March 2018:

“A.4.1 When class of a vessel has been suspended for a period of six (6) months due to overdue surveys and/or recommendations / conditions of class, the class is to be withdrawn. A longer suspension period may be granted when the vessel is not trading as in cases of lay-up, awaiting disposition in case of a casualty or attendance for reinstatement.”

LR London’s (Secretary to Class Committee) email dated 7 March 2018 (A684324) stated the following:

“It was also agreed by the Classification Executive that adding Class Withdrawal, which as per IACS PR1C would be applicable at the end of this month, will be held in abeyance until 23 June 2018, noting discussions taking place with the client for Reclassification.”

The final decision in regard to possible class withdrawal was made in LR London’s email dated 16 March 2018 as follows:

“LR is obliged to adhere to the IACS PR 1C (attached for your convenience) section A.4. Shut down of operation shall be presented as “the vessel not trading” which A.4 stipulates as the ground for extended Class suspension. LR has not developed written procedure specific to suspension of class for the offshore units as mentioned in the final Note (2) of PR 1C however specific circumstances of the FPSO operation will be used to support the extended Class suspension request.”

It is the inspectors’ opinion is that LR have not complied with IACS PR1C A.4 as the FPSO was still operating and not shutdown, and LR does not have specific procedures except what is stated in the rules.

It is not known whether PTTEP’s facility insurance would be automatically terminated when class is suspended as is the case with vessel insurance.

The inspectors’ conclude that the Class should have been withdrawn effective 24 March 2018.

Recommendation 2011-2-#

LR to ensure that class is withdrawn in accordance with IACS PR1C A4 when class has been suspended for six (6) months.

Montara Venture –Conditions for Operations under Suspension

LR London instructed LR Perth on 22 December 2017 (A685589) as follows:

“Due to the current Class/survey status attending surveyors should adhere to the following reporting principles:

- Interim Certificate issued on completion of each visit should display non-standard recommendation “For the information of the Committee” only, until instructed otherwise by the FOI-Class.*
- Survey Status Updates and Survey Reports should contain the same recommendation.*
- Condition of Class 004 should not be revised beyond the end of the survey cycle without FOI-Class consent. It has to remain due/overdue until satisfactorily closed out.*
- New Conditions of Class should not be imposed, however any deficiencies potentially affecting the Class should be reported as hull or machinery damage.*
- No certificate/statement of compliance related to the Class, structural/weathertight/watertight integrity (normally related to SAFCON and Load Line aspects) shall be issued without satisfactory completion of the relevant inspections and tests and without agreement of the FOI-Class.*
- As soon as all overdue and due surveys and tests are satisfactorily completed attending surveyor may recommend Class re-instatement.*
- From now on all survey reports shall be marked for vetting.”*

PTTEP (A656621) has used the “Interim Certificate” (A656967) to justify return COT tanks 5 Centre and 6 Centre into service. The inspectors queried this during the inspection with LR. The response contained within document “NOPSEMA Document and Information Request – 30 July 2019 Final Answers” (A685590) stated the following:

“LR did not issue any CoC relating to pipework damage. The pipework damage was not a CoC. The pipework damage was reported as “MDAM” which is a reference to machinery damage. The pipework damage was not cleared by LR, all that the surveyor noted was that the inspection had occurred and the survey had been completed. The survey report dated 3 July 2018 states that the surveyor found pipework damage and did not clear the pipework damage. The damage in PWT 5S and COT 6 C (identified in the survey report and in subsequent close up visual inspection (CVI) and TM reports) were the subject of temporary repairs pending fabrication of replacement pipework. These temporary repairs were not inspected by an LR surveyor, as they are not class items. However, LR was requested to approve the repair process by the operator, and LR confirmed that the process proposed was suitable for the intended repairs. The pump room pipework was repaired in November 2018 under the supervision of the attending surveyor.”

Further LR has provided Survey Report dated 3 July FRE 800087 (A684332) and the Interim Certificate (A656967) for the same survey attendance contain conflicting information as follows:

Survey Report dated 3 July FRE 800087 (A684332)

| OTHER SURVEYS HELD | DATE HELD BY | CERTIFICATE EXPIRES TYPE | |
|--|--------------|-----------------------------|------|
| <X> MDAM Pipework damage in PWT 5S and COT 6C | 26/06/18 | | 0.00 |
| <X> HDAM 6S/Stbd DO Tank Bulkhead damage | 26/06/18 | | 0.00 |

MACHINERY NARRATIVE

Survey M/L Number C.O.C. Memoranda
MDAM

SDN Event 1

Stated cause: MACHINERY-MISCELLANEOUS: OPERATIONAL

Date reported: 22/06/18

MLIs affected: 0017 PUMPING ARRANGEMENTS
0031 PIPING SYSTEMS, FITTINGS &
CONTROLS EXC. BILGE & BALLAST

SDN Defect/Damage 1.1

Defective MLIs: 0017 PUMPING ARRANGEMENTS
0031 PIPING SYSTEMS, FITTINGS &
CONTROLS EXC. BILGE & BALLAST

Description: The following was found inside Produced
Water Tank 5S:
- 4 holes in produced water pump caisson
iwo stabiliser
- hole in decanting line 12 o'clock
position near flabge at longitudinal
bulkhead.

Survey M/L Number C.O.C. Memoranda
HDAM

SDN Event 2

Stated cause: HULL-STRUCTURAL: WASTAGE

Date reported: 22/06/18

MLIs affected: 1915 ENGINE ROOM 2ND FLAT STARBOARD
D.O. STORAGE TANK
2099 ENGINE ROOM 3RD FLAT STARBOARD
D.O. SIDE TANK
3247 STARBOARD SLOP TANK

SDN Defect/Damage 2.1

Defective MLIs: 1915 ENGINE ROOM 2ND FLAT STARBOARD
D.O. STORAGE TANK
2099 ENGINE ROOM 3RD FLAT STARBOARD
D.O. SIDE TANK
3247 STARBOARD SLOP TANK

Description: Previously reported by owner pin hole in
bulkhead between Starboard Slop and
Starboard fwd Diesel tank temporary
repair was examined and continues to be
effective; integrity confirmed.

Interim Certificate FRE 1800087(A656967)

The Interim Certificate states:

| | SURVEYS HELD | STATUS | NEW RECORD |
|------|--------------------------------------|----------|------------|
| | MACHINERY | | |
| MDAM | Pipework damage in PWT 5S and COT 6C | COMPLETE | |
| | HULL | | |
| HDAM | 6S/Stbd DO Tank Bulkhead damage | COMPLETE | |

The inspectors conclude that the “Interim Certificate” contains conflicting information when compared to the Survey Report in regard to the survey scope and completion of damage conditions. There is no mention of the “Class Suspended” status on the Interim Certificate and the terminology can also be confused with an “Interim Class Certificate”. Further there is no explanation of the reporting system utilised by LR during the suspension, ie, Interim Certificates and raising of Machinery and Hull Damages in lieu of Conditions of Class, within the survey report or Interim Certificate. As a result the status of the facility is confused and may be misrepresented to third parties.

| |
|---|
| Recommendation 2011-2-# |
| LR to ensure that class certificates and survey reports whilst class is suspended are clearly marked with “Class Suspended” together with appropriate explanation remarks so as to prevent misrepresentation. |
| Recommendation 2011-2-# |
| LR to determine reasons for the conflicting information contained within the Interim Certificate and the associated Survey Report. |

Nganhurra Safety Case Commitments

Woodside made the following commitments in accepted operations safety case (K1005RF0001, Rev 7B, 21/10/2016, A616057):

“The hull, machinery, equipment and outfitting is constructed in accordance with the Lloyd’s Register Rules and Regulations for classification of floating installations at a fixed location as follows:

- *OI100A(1) Floating Production and Oil Storage Installation, OIWS, LI, ShipRight (SDA, FDA, CM), for service Offshore North Western Australia (Enfield Field). LMC, IGS, CCS*
- *Descriptive Note: Turret Moored, Disconnecting Unit, ESP, COW (LR), SBT(LR), ShipRight PCWBT (Date), Helideck, SCM, PC (Stores Crane only), Part Higher Tensile Steel”*

And:

“Woodside, as a minimum, requires compliance with all relevant federal and state legislation. The facility complies with the requirements of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and the Australian Maritime Safety Authority (AMSA) as contained in the following regulations:

- Offshore Petroleum and Greenhouse Gas Storage Act 2006;
- Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009; and
- Navigation Act 2012. “

Nganhurra – SOLAS Safety Equipment Certificate - Inergen Cylinders – 2014 Alternative inspection proposal to LR

The certification of the Inergen system is to be in accordance with the Australian Maritime Safety Authority (AMSA) Marine Order 15 (MO15).

Woodside in an email dated 10 June 2014 11.15am (A673245) advised LR Perth *“As discussed, 10 yearly recertification of the Nganhurra Inergen cylinders is due in the second half of this year”*.

The inspectors noted Woodside’s email correctly quoted the recertification requirement as per MO15 for the Inergen cylinders: *“hydrostatic testing of the cylinders is not required for 10 yearly recertification provided that no unacceptable defects are identified during an external visual inspection (refer schedule 3 clause 1.1.2(b)). In order to achieve compliance with Marine Orders part 15 Woodside therefore intend to perform external visual inspection of all 448 active Inergen cylinders prior to the 10th anniversary of their initial pressure test.”*

Importantly, Woodside also advised that they could not fully comply with MO15 as they could not visually inspect the base of the cylinders without removal from the mounting rack. Their proposed solution was to remove 10% of the 448 cylinders and visually inspect the base of these selected cylinders. Woodside proposed in addition to the visual inspection they would conduct NDT thickness measurements of certain areas of the selected 10% cylinders.

LR Perth in reply dated 10 June 2014 11.37am (A673245) *“As discussed, I see nothing in that proposal that contradicts the requirements of MO Part 15.”*

The inspectors reviewed MO15 2009 Issue 5 which states under Schedule 3 - 1.1.2 the requirements for testing of the Inergen gas cylinders as follows:

Despite the test period mentioned in Australian Standard AS 2030, a pressure test of a gas cylinder is to be performed in accordance with the following:

- (a) subject to paragraph (b), on the 10th anniversary of the cylinder’s initial test after manufacture (the cylinder’s initial test);*
- (b) if, on the 10th anniversary of the cylinder’s initial test, an external examination of the cylinder reveals that the cylinder has no unacceptable defects, the pressure test period may be extended until the 20th anniversary of the cylinder’s initial test;*
- (c) on the 20th anniversary of the cylinder’s initial test;*
- (e) every 5 years after the 20th anniversary of the cylinder’s initial test.*

The inspectors noted that MO15 2009 Issue 5 refers to “a gas cylinder” must be pressure tested. There is no option for only testing a sample of cylinders if there are multiple number of cylinders to be tested.

The inspectors concluded that the proposed sampling of 10% of the cylinders is a deviation to the requirements of MO15 2009 and Woodside’s proposed solution is deemed a possible “equivalent” solution. In such cases LR must present the case to AMSA for their decision and instruction (Ref: LR document: National Administration Requirements – Australia dated November 2018, A673241).

LR provided the following responses to this issue in the document “NOPSEMA Document and Information Request – 30 July 2019 Final Answers” (A685590):

“[REDACTED] has informed LR that on 30 June 2014, within the 10 year anniversary period, he conducted an external examination and waived the Inergen Bottle Hydrotest requirement as in his opinion there were no unacceptable defects, so the test could be validly waived under MO15. “; “There was no deviation from the old MO15 and hence no need to contact AMSA.”; “But in any event, AMSA was notified on 4 February 2011, by email sent from WEL to LR and AMSA, of the intention to waive the 10 year Hydrotest. See email below.”

The inspectors further conclude that it was not possible [REDACTED] to fully examine the Inergen cylinders on 30 June 2014 as they were not removed from their racks at this time. The 10% were removed after his survey in October 2014 for inspection and testing (A638772). The AMSA communication dated 4 February 2011 was prior to the proposal from Woodside to conduct inspection of the cylinders on a sampling basis. As a result the decision to waive the hydrotest requirement was incorrect and AMSA should have been consulted.

Selected photos of Inergen cylinders corrosion taken during the inspection in October 2014 (A638772) have been included below for the purpose of showing the condition at that time.



**Recommendation 2011-3-#**

LR to ensure that procedures contained LR's National Administration Requirements – Australia (A673242) in regard to AMSA Equivalents are followed.

Ngnahurra – SOLAS Safety Equipment Certificate - Inergen Cylinders – New Marine Order 15 - 1 July 2014

A new revision of MO 15 was published on 21 May 2014 with an effective date of 1 July 2014 to include mandatory pressure testing of cylinder on 10th anniversary in accordance with IMO Circ MSC.1/Circ.1432. The requirement for testing of the Inergen bottles can be found in section 10 of IMO Circ MSC.1/Circ.1432 as follows:

"10 Ten-year service

At least once every 10 years, the following inspections should be carried out for the specified equipment:

10.1 Fixed gas fire-extinguishing systems

- 1. perform a hydrostatic test and internal examination of 10 per cent of the system's extinguishing agent and pilot cylinders. If one or more cylinders fail, a total of 50 per cent of the onboard cylinders should be tested. If further cylinders fail, all cylinders should be tested;*
- 2. flexible hoses should be replaced at the intervals recommended by the manufacturer and not exceeding every 10 years; and*

3. *if permitted by the Administration, visual inspection and NDT (non-destructive testing) of halon cylinders may be performed in lieu of hydrostatic testing."*

The inspectors noted that the new MO 15 was published on 21 May 2014, Woodside's email proposal was dated 10 June 2014 (A673245) and the testing of the Inergen bottles occurred in October 2014 (A638772).

It is the conclusion of the inspectors that LR should have applied the new revision of MO15 to the 10 year inspection of the Inergen cylinders. If Woodside wanted to apply NDT inspection then paragraph 3 above should have been followed noting that AMSA should have been requested for their agreement and the requirement for internal examination in paragraph 1 which was not done (A638772).

Recommendation 2011-3-#

LR to ensure that requirements contained within AMSA's Marine Orders are followed.

Nganhurra - SOLAS Safety Equipment Certificate - Inergen Cylinders – Survey Report FRE1800059 (A676214)

Woodside Management of Change MOC-66096 (06/04/2018, A638785) and Improvement Notice 724 (15/10/2018, A637371) described a history of Inergen cylinders failures in the form of loss of pressure through stress corrosion cracking. Three separate leaks have occurred:

1. January 2018 – 1st leak – pin hole
2. April 2018 – 2nd leak – failure mode not determined
3. October 2018 3rd leak – slow leak holding some pressure

Woodside MOC-66096 stated *"Last inspection of the inergen cylinders occurred under WO 2100161572 in 2014, some areas of general external corrosion was identified at this time but no indication of cracking was identified."*, and assessed the impact as *"Catastrophic failure of a cylinder could result in single fatality and / or permanent total disability if personnel are in the line of fire. Failure of multiple cylinders could result in sections of the Inergen system becoming inoperable and impairment of the fire suppression system. Once one cylinder has a low pressure alarm, we will not know if any subsequent failures have occurred without accessing the room to bypass the cylinder with low pressure. Statutory AMSA Safety Equipment Certificate is currently unable to be endorsed as we can't safely enter the room for maintenance and checks."*

MOC-66096 limited the access to the inergen room on 13 April 2018.

The inspectors noted LR on 23 April 2018 endorsed a full term SOLAS Safety Equipment Certificate (A676214) which involves according to LR's survey checklist (A682264) the inert gas system to be *"from external examination, all components and piping found in satisfactory condition and free of signs of corrosion or gas/effluent leakage."* The checklist item was circled "yes" by the LR surveyor.

LR provided the following responses to this issue in the document "NOPSEMA Document and Information Request – 30 July 2019 Final Answers" (A685590):

"Q: For the April leak how was the surveyor able to access the inergen room given that Woodside was not allowing access?"

A: The attending surveyor, [REDACTED] obtained access to the inergen room with another person.

████ informed Woodside that he could not complete his survey unless he inspected the bottles. Woodside informed him that there was no access to the room. Later, █████ became aware that another person would be entering the room for another purpose. █████ attended the room at the same time, in accordance with the arrangements made for the entry by the other person, and visually inspected the bottles at that time. “

“Q: On 20 May 2019 █████ advised the surveyor did access the room. Was there a JSA prepared for the entry?

A: A Safe START Task Risk Assessment form was completed by █████ in relation to this entry. █████ (from WEL at that time and now employed by LR) recalls a special risk analysis was carried out to enter the room temporarily to do some inspections and to facilitate █████ inspecting the room. Entry was subject to WEL’s facility wide permit to work system. █████ also reviewed 2 vendor reports (the second of which took place between 7 and 21 of March 2018) confirming the acceptability of the system. The reports are from LR approved suppliers.”

LR were unable to provide a copy of WEL’s facility wide permit to work system permit and Safe START Task Risk Assessment form was requested by the inspectors but not received. The inspectors did receive the two vendor reports but noted that these only covered replacement of 94 cylinder valves and not a cylinder inspection.

The inspectors reviewed the LR Survey Report FRE 1800059 dated 30 May 2018 covering the survey attendance dates 18 – 23 April 2018 (A676214) and noted the statement; “10% Inergen cylinders replaced by approved service supplier. Removed cylinders sent ashore for testing. Suitable statutory memo added to capture requirements for future testing”. The inspectors found no evidence of any cylinders being replaced or any cylinders being removed and sent ashore for testing.

The inspectors conclude that there was no basis for LR to endorse the IMO SOLAS Safety Construction Certificate on the 23 April 2018.

Recommendation 2011-3-#

LR to ensure that requirements contained within AMSA’s Marine Orders and LR internal statutory survey checklists (A682264) are followed.

Nganhurra - SOLAS Safety Equipment Certificate - Inergen Cylinders – Survey Report 2013091 (A676198)

As noted above Woodside Management of Change MOC-66096 (06/04/2018, A638785) and Improvement Notice 724 (15/10/2018, A637371) described a history of Inergen cylinders failures in the form of loss of pressure through stress corrosion cracking. Three separate leaks have occurred with the third occurring on 21 October 2018.

The LR surveyor attended the facility 24 – 29 October 2018 for end of field life surveys. Woodside email dated 21/11/2018 stated “On 21/10/2018, an inergen cylinder low pressure alarm was triggered. An ORA was conducted (ORA#50) which concluded that entry to the room to determine if there had been a loss of inergen capacity and to re-establish the alarm was required to reduce the risk to ALARP. Completing this task required a check of the pressure in every cylinder. This task completes one of the key components of the 1M and 1Y PRTs, which is to check all the gauges, and ensure there are no leaks and sufficient inergen is

available. This inspection found one bottle identified in a previous inspection as having dropped slightly in pressure, had lost further pressure and tripped the alarm. The bottle still had 200barg pressure remaining and the source of the slow leak could not be found. An assessment of inergen capacity concluded that there is still sufficient inergen capacity for fire suppression to all machinery spaces even if this bottle depressures completely (refer to MoC-66096). The Operator who completed this task wore a camera to capture footage of the cylinder pressures and condition of the inergen setup. That footage has been viewed by the Class Surveyor who has concurred the inergen system is fit for purpose. "

The inspectors queried LR had received AMSA approval to accept video evidence from an owner for use with assessing statutory deficiencies. LR provided the following responses to this issue in the document "NOPSEMA Document and Information Request – 30 July 2019 Final Answers" (A685590):

"LR does not have these approvals. However, LR has not used video evidence to assess statutory deficiencies. The video evidence was reviewed and used to support and confirm the conclusion that the surveyor had reached on other grounds; it was not a primary basis for the surveyor's conclusion. The surveyor's conclusion was that two empty bottles and one partially empty bottle did not significantly affect the fire fighting system. This conclusion was based on a visual inspection of the bottles from outside the room, and was backed up by a submission of the calculation by Woodside regarding the fire fighting effectiveness of the system, and a risk analysis that was reviewed by [REDACTED], as noted above. "

The below photo (A638772) is taken from within the inergen room:



It is unclear how the LR Surveyor could make a visual examination of all cylinders from outside the room given the arrangement of the cylinders as depicted in the above photo.

The inspectors conclude that there was no basis for LR to state that the statutory survey found the FFA equipment satisfactory. The inspectors noted that on 23 January 2019 Survey Report 2022276 (A676199) stated *“As reported by the owner during decommissioning of the Inergen system, 66 unit of Inergen cylinders failed to release. The system will remains inactive while the vessel in lay-up.”*

Recommendation 2011-3-#

LR to ensure that statutory surveys are carried out in accordance with requirements contained within AMSA’s Marine Orders and LR internal statutory survey checklists (A682264).

Nganhurra - SOLAS Safety Equipment Certificate - Inergen Cylinders – AMSA Communication

The inspectors reviewed LR National Administration Requirements – Australia (A673242) and noted the following AMSA requirement:

“If a short term exemption is required (for example, due to some temporary malfunction of equipment), LR is required to carry out an appropriate risk assessment. If it is deemed an exemption certificate may be issued, LR shall recommend to the Manager Ship Inspection and Registration conditions to be imposed for the issuance of a short term exemption certificate or letter based upon their risk assessment. AMSA may request an electronic copy of the risk assessment when considering LR's proposal.”

The inspectors queried LR as to whether they had communicated with AMSA in particular to the April 2018 and October 2018 surveys where it was known that the inergen system had partially malfunctioned. LR provided the following responses to this issue in the document “NOPSEMA Document and Information Request – 30 July 2019 Final Answers” (A685590):

“Further, the relevant LR surveyors who inspected the inergen cylinders were of the view that the leaks were not statutory deficiencies, and that the firefighting system was not significantly affected by the leaks and remained safe until lay-up. Accordingly, there was no requirement to notify AMSA.”

LR’s opinion is not supported by the operator, (Woodside MOC-66096) who assessed the impact as *“Catastrophic failure of a cylinder could result in single fatality and / or permanent total disability if personnel are in the line of fire. Failure of multiple cylinders could result in sections of the Inergen system becoming inoperable and impairment of the fire suppression system. Once one cylinder has a low pressure alarm, we will not know if any subsequent failures have occurred without accessing the room to bypass the cylinder with low pressure. Statutory AMSA Safety Equipment Certificate is currently unable to be endorsed as we can't safely enter the room for maintenance and checks.”*

The Inspectors conclude that LR should have consulted with AMSA.

Recommendation 2011-3-#

LR to ensure that procedures contained LR’s National Administration Requirements – Australia (A673242) in regard to AMSA short term exemptions are followed.

Pyrenees Venture – ESP Survey Status

The FPSO Pyrenees Venture is registered in Australia and is under the jurisdiction of the Navigation Act 2012 and AMSA’s Marine Orders. Marine Order 60 states:

“FPSOs and FSUs are to be subjected to enhanced programme of inspections in accordance with IMO Resolution A.744(18) as amended. The operator of an FPSO or FSU may apply to the Manager, Ship Inspection and Registration in accordance with 7.3 for exemption from mandatory dry-docking as required by paragraph 2.2 of Resolution A.744(18), subject to such dry dockings being replaced by in-water surveys in accordance with recognised organisation requirements.”

The inspectors sighted survey reports which confirm that the FPSO is a continuous hull survey program which is contrary to the requirements to the Enhance Survey Program (ESP) Code. LR were unable to produce the requested (A685590) authorising correspondence from AMSA to LR stating that ESP Code requirements do not apply.

The inspectors conclude that the Pyrenees Venture is not in compliance with Marine Order 60.

Recommendation 2011-3-#

LR to ensure that Enhanced Survey Program (ESP) requirements contained within AMSA’s Marine Order 60 are complied with.

24 September 2019



1.1 Project / Initiative Description

1.2 Governance

| | | |
|-------------------------|---------------------|-------------------------------|
| Title: | Class Certification | Proj ID: P0052/2019 |
| Sponsor: | | |
| Project Manager: | | |
| Division/Team: | FPD | |
| Date: | | Click here to enter a date. |

1.3 What

(description, what outcomes and deliverables will be created)

Review of safety cases / operator performance standards to determine the number of operators using:

- Class rules/classification as their performance standard for hull integrity.
- Classification society surveyors to ensure the adequacy of maintenance such that equipment is fit for normal and emergency service as applicable

Researching the extent to which class rules/processes allow for a class certificate to be issued despite maintenance/inspection tasks not having been undertaken (i.e. the basis for discretion).

Assist NOPSEMA inspectors as an SME in a potential inspection/meeting of the class societies, particularly Lloyds where practicable.

Guidance note to clarify NOPSEMA's position on this issue.

1.4 Why

(what are the drivers for this change)

NOPSEMA has observed apparent willingness of the class societies to deviate from class rules by way of extending class certificates without the completion of inspection requirements as stipulated by class rules.

Some facility operators are using class rules as a performance standard for integrity of hull structures, and when the class society agrees to extend without inspection the operators argue that they remain within their performance standard. NOPSEMA fundamentally disagrees with this argument in the context of the operator's specific duties under subclause 9(2)(c) of schedule 3 to the OPGGS Act.

1.5 When

| | | | | | |
|-------------------------|-----------|---------------------------|------------|------------------|------------|
| Activity Starts: | 1/04/2019 | Activity Finishes: | 15/08/2019 | Duration: | 4.5 months |
|-------------------------|-----------|---------------------------|------------|------------------|------------|

1.6 Cost Estimates (all costs must exclude GST)

| | This financial year | | | | Next financial year | | | |
|-------------------|---------------------|----|----|----|---------------------|----|----|----|
| Costs | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Internal | | | | | | | | |
| External | | | | X | X | | | |
| Savings / Revenue | | | | | | | | |
| Total Costs | | | | | | | | |

| | | |
|---|--|---|
| Net Total: \$Engagement and salary costs for Craig Hughes | | |
| <input type="checkbox"/> Are components of the project ongoing / recurring? No | | |
| <input checked="" type="checkbox"/> Costs cease at a future date? (Financial Year / Quarter): 15/08/2019 | | |
| | | |
| 1.7 Part 6 – Value / Risk Analysis (these are the main factors that determine the relative priority) | | |
| Business Value (Benefits to NOPSEMA once completed) | Business Risk (Risks to NOPSEMA that will be reduced/removed once completed) | — |
| <ul style="list-style-type: none"> Clarity of our position in relation to this issue communicated to industry Understanding of the current state of the industry in relation to this matter – how big the problem is Class societies are aware that NOPSEMA are applying scrutiny The integrity of items under class are better managed by the industry Safety cases are clear in how they will manage integrity and the role of class | <ul style="list-style-type: none"> Legal challenges to enforcement action Reputation risk of not having identified/intervened Workload on inspectors dealing with these issues | |
| Capability (of NOPSEMA to implement this initiative successfully) | Implementation Risk (that might prevent successful completion of this initiative) | — |
| <ul style="list-style-type: none"> Recruiting SME to deliver this project scope – successful recruitment will deliver required capability | <ul style="list-style-type: none"> Failure to recruit a suitable SME Legal access to inspect class societies Perception that NOPSEMA is endorsing class rules as a prescriptive performance standard for hull integrity | |

1.8 Project Risk Rating

If this project were to fail, or not proceed, the consequence rating to NOPSEMA would most likely be High

| | |
|--|---|
| 1.9 Additional Considerations | |
| This initiative depends upon ... (other initiatives, external events, ...) | Other initiatives which depend upon this one ... |
| <ul style="list-style-type: none"> Recruitment of appropriate SME Legal team investigation into feasibility of inspection of class societies | <ul style="list-style-type: none"> Nil |
| Constraints | Resources Required (assistance from other teams, facilities, ...) |

| | |
|--|---|
| (Non-negotiable limits e.g. government directives or laws, externally imposed deadlines, resource restrictions ;...) | |
| <ul style="list-style-type: none"> Length of engagement of SME | <ul style="list-style-type: none"> Legal team assistance re class society inspection HR – recruitment, contracts, etc. Relevant inspectors from FPD & VF teams |
| Timing (<what timeframe, and why; what would happen if it were deferred until a later date, and how much longer could it be deferred until risks become unacceptable> | |
| This is a current issue for NOPSEMA and has the potential to affect numerous facilities so failure to complete this project could create significant workload for inspectors in future, and allow unacceptable risk to remain offshore. | |
| Privacy Does this project constitute a high privacy risk? (A project may be a high privacy risk project if the agency reasonably considers that the project involves any new or changed ways of handling personal information that are likely to have a significant impact on the privacy of individuals). | |
| No | |

2 Success measures

<What are the measures of success of this project, and what are their relative priorities? For example, is it more important to meet a time deadline than to keep to budget? If you have to make a choice, what would win? No two can have the same priority. The project manager and sponsor will base their project controls and reporting on the higher priority measures. The measures suggested in this template form may be amended, deleted or added to as appropriate to the project. Recognising that it is difficult to optimise for many measures simultaneously, the list will usually be shorter than shown here. >

| Success Measures | | Relative Priority | | | | | | | | | | Reporting criteria | |
|------------------|---|---------------------------------------|---|---|---|---|---|---|---|---|---|--------------------|---|
| | | "10" is highest rating, "1" is lowest | | | | | | | | | | | |
| | | N/A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| A. | Minimise risk | | | | | | | | | | | | X |
| B. | Optimise usage of industry levies | | | | | | | | | | | | |
| C. | Deliver value as early as possible | | | | | | | | | | | | |
| D. | Meet the expectations of stakeholders | | | | | | | | | | | | |
| E. | Meet all the project's objectives / requirements | | | | | | | | | | | | |
| F. | Meet the agreed budget , resources, etc | | | | | | | | | | | | |
| G. | Deliver the key product / service on time | | | | | | | | | | | | |
| H. | Add value to the organisation | | | | | | | | | | | | |
| I. | Meet quality requirements | | | | | | | | | | | | |
| J. | Sense of professional satisfaction for the team | | | | | | | | | | | | |
| K. | Others specific to your project, e.g., improve satisfaction rating to 80% by end 2020, or "pay 100% of accounts payable for small businesses within 7 days" | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

3 Project Plan

3.1 General approach

External SME will be recruited to deliver the project with support provided from internal inspectors.

3.2 Scope

Scope is limited to the items described in the deliverables section above.

3.3 Phases, deliverables, benefits, funding and resources

| | | | |
|---|---|------------------------------|---|
| Stage 1: | Review of safety cases / performance standards | Duration or End Date: | Click here to enter a date. |
| Objective or Deliverable | Benefit | Costs | |
| Summary paper on current status regarding reliance on class rules and the associated processes of issuing/renewing class certificates | Clear understanding of the extend of the problem | Hours | |
| | | | |

| | | | |
|---------------------------------|--|------------------------------|---|
| Stage 2: | Inspection | Duration or End Date: | Click here to enter a date. |
| Objective or Deliverable | Benefit | Costs | |
| Inspect class societies | Improve standards applied offshore, contain deviations | Hours | |
| | | | |

| | | | |
|---------------------------------|--|------------------------------|---|
| Stage 3: | Guidance note | Duration or End Date: | Click here to enter a date. |
| Objective or Deliverable | Benefit | Costs | |
| Guidance note | Clarify NOPSEMA's position to industry | Hours | |
| | | | |

3.4 Risk Mitigation

| Stage/Risk | Initial L'hood | Initial Cons | Initial Rating | Proposed Treatment | Residual L'hood | Residual Cons | Residual Rating |
|------------|----------------|--------------|----------------|--------------------|-----------------|---------------|-----------------|
|------------|----------------|--------------|----------------|--------------------|-----------------|---------------|-----------------|



| | | | | | | | |
|---|----------------|------|------|-----------------------------|----------|------|------|
| Class societies refuse inspection | Almost certain | Mod. | High | Legal to investigate | Possible | Mod. | Mod. |
| Perception that NOPSEMA is endorsing class rules as a prescriptive performance standard for integrity of a range of items | Poss. | Low | Low | Careful wording of Guidance | Unlikely | Low | Low |

4 Approvals

Save this document in a corporate file (within Strategic Management – Project Coordination - Project Concept Documents - Active and Planned Projects) named "Project xxx – name of project – YYYY". Name the document "PCD – name of project 9999/yyyy".

This spending proposal complies with the policies of the Commonwealth Government, including the Commonwealth Procurement Rules, the *Public Governance, Performance and Accountability Act 2013* and the *Public Governance, Performance and Accountability Rule 2014* and constitutes value for money.

NOPSEMA has sufficient available, uncommitted funds to support the expenditure under spending proposal as and when it may become payable

For *each stage*, submit for approval by commencing the Edoc workflow, specifying the actions and roles in the sequence below:

| Action(s) | Officer(s) |
|-----------|--|
| Approve | Sponsor |
| Approve | CFO |
| Approve | CSC Secretary (only if PPG approval is required) |

Notes:

- **Sponsor** – edit the document if desired then Publish before approving the Edoc workflow.
- **CFO** – complete the Edoc workflow to make the declaration above regarding funding.
- **CSC Secretary** – After CSC approves or rejects, complete the Edoc workflow, then update the status of the project in the project portfolio.

□ □ □ □ □

Date – Thursday 16 May 2019

[illegible]

| | |
|-------|--|
| | <ul style="list-style-type: none"> • NOPSEMA - Improvement Notice - WEL • Inspectors looked at Safety equipment certificate • WEL had done risk assessment and MOC • Surveyor undertook risk analysis – sort advice from fire safety specialist – additional mitigation – advice • Flag state form 19 sent to AMSA • WEL says not hydrostatically tested within 10 years • Correspondence sighted dated 10 June 2014 – ■ states that marine orders were revised in May and it appears that the surveyor used old standard • Email states Sampled 10% - CH says not allowed • Marine orders • Not complied with the Marine order / Aust. Standard – need flag state approval to deviate • No evidence that flag state provided approval • Inergen system is on survey checklist – should be checked • No AMSA communication could be found • Full term certificate was issued – ■ and ■ are of the opinion that potentially should not have been provided |
| | <ul style="list-style-type: none"> • ■ asked about video evidence – October • Procedure for using video – is it allowed • AMSA correspondence to allow video • ■ states LR should be corresponding with AMSA • ■ states you knew deficiency and therefore should discuss with AMSA • Remote inspection technique |
| | <ul style="list-style-type: none"> • Confirm half day Monday afternoon 1:00 – 4:00 |
| 16:46 | <ul style="list-style-type: none"> • Conclude inspection |

List of documents requested

- Procedure for postponement or extension of survey
- Procedure for when you update system with revised / updated Marine Orders – 3 months
- Correspondence with AMSA in relation to Ngurharra statutory deficiency
- Procedure for using video – acceptable video of statutory deficiency
- Correspondence with AMSA in October

Collected

- Procedure for dealing with statutory deficiency – instruction to seek approval from flag
- Correspondence in relation to overview hydrostatic testing – email sighted
- Australian country file

■■■■■■■■■■

Date – Monday 20 May 2019

| Time | Notes |
|-------|--|
| 13:00 | <ul style="list-style-type: none"> • Arrived at premises – start recording • Attendees [REDACTED] |
| 13:03 | <ul style="list-style-type: none"> • Start recording • LRI also recoding |
| 13:05 | <ul style="list-style-type: none"> • PD provided copy of warrant, roles and responsibilities and Legal and professional privilege documentation |
| 13:08 | <ul style="list-style-type: none"> • LR (FA) – provided document titled NOPSEMA-Audit LR Offshore Operation from 20-05-19 |
| 13:22 | <ul style="list-style-type: none"> • Stag Clam buoy - CH asks for <ul style="list-style-type: none"> ○ Asset details ○ Survey attendance dates ○ Survey reports ○ Thickness gauging reports ○ Conditions of class ○ Actionable items ○ Areas of substantial corrosion ○ Summary of each compartment surveyed 2 cycles ○ Tank coating condition ○ Work instruction / country file – how to deal with issues |
| 13:29 | <ul style="list-style-type: none"> • Norther Endeavour <ul style="list-style-type: none"> ○ Assets details ○ Flags ○ Survey status ○ Same list as above for NE |
| | <ul style="list-style-type: none"> • Northern Endeavour (specific) (Surveyor [REDACTED]) • Extensions - Rules max 3 months <ul style="list-style-type: none"> ○ Operators request detailing exceptional circumstances ○ Was extended offshore – process for doing so ○ Actual Surveyor Attendance dates ○ Planned survey scope ○ What survey item were outstanding to complete the special survey |
| 13:52 | <ul style="list-style-type: none"> • MAST system records first and last dates • Doesn't record when they are onshore or offshore • Questions about fatigue management if he was offshore for 7 weeks • Job scope [REDACTED] – requests copy of job scope for NE – issue extracting from MAST system – can get through survey report |
| 12:08 | <ul style="list-style-type: none"> • [REDACTED] asks about – documents not attached in MAST |

| | |
|-------|--|
| | <ul style="list-style-type: none"> • LR state that the survey was about the time they switched from Triple S (old System) they might be with the hard copy • LR state that they can provide through FOI class or through the client – can't find in system • [REDACTED] asks for communication request from operator and process for approval internally • Planned survey scope Vs Surveys required – survey report will show what was planned what was Vs what was required • [REDACTED] keeps saying that folders have gone missing • Emails are automatically archived – [REDACTED] • Fundamental documents – are un-locatable and should be easily available |
| 14:21 | <ul style="list-style-type: none"> • [REDACTED] - two extension for NE and rules say only one allowed • [REDACTED] has identified a - period of 10 days gap when it should be suspended • Need communication • Why was class not suspended • Class should not be disturbed is the term LR used • Notices to operators about pending suspensions • Force majeure – 3rd October 2018 (incident on the 5th) • What was the planned job scope Vs what was required • Survey dates 4th and 16th October • ESD 1 – incident 5th October • Information from operator – when were personnel demobilised • Attendance dates – what were the actual attendance • What was planned for the survey vs what was required • What is the definition of forced Majeure - • Require additional action if there is a forced Majeure – what was done |
| | <ul style="list-style-type: none"> • [REDACTED] returns from Offshore - 30 May |
| 14:53 | <ul style="list-style-type: none"> • Break |
| 15:04 | <ul style="list-style-type: none"> • Resume |
| 15:05 | <ul style="list-style-type: none"> • Third extension of the special survey 28 the feb • According to rule you are only allow one extension • Class was approved on 28th February according to LR • Currently risk based class - • Cargo tanks on risk based class • Rules and approval letter in relation to risk based class state that RBI is subject to approval by the national administration – need copy of approval – it would be NOPSEMA • [REDACTED] and [REDACTED] state that the owner had not submitted anything to NOPSEMA • Continues hull • Planed survey plan approved for previous cycle – • It should be available in MAST system – can't find it need to ask [REDACTED] • There is an issue that documents can't be located • Survey reports are available • How do you access tanks • Cargo is physical – remote is also acceptable • How are close up surveys done – ROV and back up with physical • Service provided are used where can't get access • ROV and rope access technician • They use approved service suppliers |

| | |
|-------|---|
| | <ul style="list-style-type: none"> • Process for approval – remote inspection techniques • Look at footage • ■ do close up survey on ropes when surveyor cant access – where are the process and procedures that allow the ■ guy to do this work • ESP offshore rules don't require close up according to LRI 1998 haven't imposed ESP rules and 4 years ago AMSA raised and still in discussion |
| 15:58 | <ul style="list-style-type: none"> • Listing of corrosion – • Procedures that allow current process vs use of condition of class and current approvals in place • What do you do steel replacement vs monitoring • How was it done prior to 2017 – given process was approved in 2017 – • Older info should be documented in the memos - memo should be attached to survey report • Requirement to go into ballast tanks twice in every 5 year cycle – doing every year – need to confirm • Is RBI part of the rules? Acceptance of equivalency – NE under loaded and fixed therefor less risk. CRS for each ballast tanks. • There was a condition of class to limited loading it may be there - unclear • Unclear if on board loading program has been implementing • Copy of life extension program and associated approvals |
| 16:21 | <ul style="list-style-type: none"> • Conclude inspection |

List of documents collected

- Photos of MAST – scope – overdue items

Notes – Lloyd's Register International – [REDACTED]

Date - Thursday 6 June 2019

| Time | Notes |
|-------|--|
| 13:05 | <ul style="list-style-type: none"> Entry was granted to NOPSEMA Inspectors [REDACTED] LR [REDACTED] Lawyers [REDACTED] |
| 13:13 | <ul style="list-style-type: none"> Start recording [REDACTED] issues warrant |
| 13:18 | <ul style="list-style-type: none"> Letters – [REDACTED] provides clarification |
| 13:19 | <ul style="list-style-type: none"> Previously requested documentation |
| | <ul style="list-style-type: none"> Point 1 – Plan survey program for NE No plan available – NE - Not a flagged vessel Class rules and LR procedure don't require – [REDACTED] we want evidence Can provide tank survey |
| | <ul style="list-style-type: none"> Point 2 – Procedures Survey procedure - Rule finder contains manual |
| | <ul style="list-style-type: none"> Reasonable time <ul style="list-style-type: none"> 2 weeks 1 day |
| | <ul style="list-style-type: none"> Further discussion |
| 13:40 | <ul style="list-style-type: none"> External lawyer ([REDACTED]) arrives and lawyer ([REDACTED]) is phoned External lawyer requests that we don't record and asks what the statutory basis is for recording the inspection [REDACTED] states that it is to protect the integrity of the inspection and it is NOPSEMA policy to record when undertaking inspections under warrant [REDACTED] seeks legal advice from NOPSEMA Legal via phone |
| 14:01 | <ul style="list-style-type: none"> [REDACTED] returns to meeting room and requests that we take a break while we wait for legal advice Inspection break called |
| 14:06 | <ul style="list-style-type: none"> [REDACTED] and [REDACTED] phone [REDACTED] |
| 14:35 | <ul style="list-style-type: none"> Based on advice from [REDACTED] and [REDACTED] states case for why we would like to continue to record <ul style="list-style-type: none"> Protects Integrity Saves time and no need to take detailed notes Happy to provide copy to LR OK states that we do not have consent to record – recording ceased. |
| 14:36 | <ul style="list-style-type: none"> External lawyer (OK) asked what provisions we are operating under [REDACTED] reads letter 15th May 2019 |

| | |
|-------|---|
| | <ul style="list-style-type: none"> • asked for an agenda • explains process and facilities of interest (No formal agenda) • asks how we propose to undertake the inspection • explains – normal process • raises issue with asking questions in group setting – integrity regarding witness answering in front of others • states that to preserve the integrity of the information given the inspection should be done individually (not a group of LRI personnel) raises that – RP Act – refers to person and as such the company is not required to answer questions – individuals answer for themselves • - requests that each person be interviewed individually • Inspectors state that they will consider doing individuals • – asked why is LR following process (or not) linked to the act • explains under act operator required to operate under SC and there are often requirements in the SC linked to 3rd party certifiers such as LR • asks us how are we going to continue • states that we can operate one person at a time |
| 14:50 | <ul style="list-style-type: none"> • NOPSEMA inspectors asked to leave the room so LR can have private conversations |
| 15:27 | <ul style="list-style-type: none"> • Restart • requests that NOPSEMA provide single document listing required documents • NOPSEMA has already provided list and reiterate that we will ask for documents as questioning continues as each answer will lead to a different document • Inspectors state that they will be as clear as possible when requesting documents however won't be limited by a list. |
| 16:05 | <ul style="list-style-type: none"> • received files from • clarifies that notifying operators is not a requirement before providing documents |
| 16:25 | <ul style="list-style-type: none"> • received additional files from (NE) |
| 16:30 | <ul style="list-style-type: none"> • Set next time – 25th June 2019 1-4 – Nganhara and NE |
| 16:35 | <ul style="list-style-type: none"> • Conclude |

11/11/2016

Date – Tuesday 25 June 2019

| Time | Notes |
|-------|---|
| 16:02 | <ul style="list-style-type: none"> Arrived at premises |
| 16:10 | <ul style="list-style-type: none"> Warrant served by [REDACTED] – Copy of Warrant, LPP and R&R provided. Original warrant and inspector cards were shown to attendees for inspection – No Audio Recording was undertaken Attendees [REDACTED] Attendees confirmed understanding of warrant |
| 16:12 | <ul style="list-style-type: none"> SE provided [REDACTED] - LRI – electronic copy of questions/requested document and Audio recording from Day 1 (16 May 2019) [REDACTED] provided SE with three electronic folders titled: <ul style="list-style-type: none"> D-PRELUDE E-PYRENEES VENTURE F-MONTARA VENTURE [REDACTED] provided [REDACTED] with two hard copy reports. FSR – 2012640, v1 and FAR 2012640, v6. [REDACTED] asked if we required both the FARs and FSRs, [REDACTED] stated that at this stage we would not require the FARs however if we believe we do need them we will request. LRI representatives stated that they would provide update in relation to meeting timeframes for providing information [REDACTED] stated that if they required any clarifications that they should contact him directly. |
| 16:32 | <ul style="list-style-type: none"> Conclude inspection |

11/11/2016

Date – Wednesday 10 July 2019

[illegible]

| | |
|-------|---|
| | <ul style="list-style-type: none"> • ■ – states that Judgement – experience is key in decision making and – new Vs old surveyor may have different opinion • ■ requested extract from rule finder - Periodic survey reporting – Condition of class – Memoranda • ■ –states that significant corrosion would not result in a Memo • ■ – states that in June 2018 all Memos were converted to asset notes. At the next survey the surveyor had to assess if they were actionable items and convert relevant asset notes to Actionable Items. • ■ - Is there a documented risk assessment process/procedure in relation to use of FMECA – e.g. When it can be used and assessment criteria used by person undertaking FMECA - ■ no – they give facts to London – London make determination • ■ – states for “Out of the box solutions” they use experts that’s the process – Note ■ is visibly agitated in relation to questions in relation to use of FMECA – ■ clearly understands questions and demonstrates this by reflecting question back in his own words and trying to explain ■ questions to ■ • ■ - talks about NE - 2016 “they were in trouble in 2016” – “they are doing really well now” • ■ states that they (NE) have undertaken minor structural repairs and coating repairs • ■ concludes that no process has been identified – ■ concludes that it is not explicitly described • ■ shows - Part 1 Chapter 2 section 3 – Ship rules – exceptional circumstances – already provided to NOPSEMA • ■ - Are there any differences for FPSO’s – ■ no • ■ states that class committee has discretion – don’t know criteria • ■ states that a surveyor may not automatic class suspension, however wouldn’t confirm class • ■ states that MSPM – for extensions and exceptional circumstances – refers to up to 3 months • ■ requests copy of - Special Surveys – special survey instructions • ■ request Certification and Documentation – General |
| 15:21 | <ul style="list-style-type: none"> • Conclude line of questioning • Collect documentation from ■ |
| 15:39 | <ul style="list-style-type: none"> • Conclude inspection and leave premises – Note all documents requested during inspection were provided. |



Use of Unqualified Surveyors to Complete Surveys

It was advised on several occasions during our inspection of 20 May 2019 by [REDACTED] and [REDACTED] that LR use thickness gauging companies to complete tank surveys. This is for both General Visual Inspection (GVI) and Close Visual Inspection (CVI) surveys.

Both LR Rules and IACS Unified Requirements (UR – Z) require for a “Surveyor” to complete the survey.

A “Surveyor” means either an “Exclusive Surveyor” who is an employee of LR, or a “Non-exclusive surveyor” who is a contractor to LR as defined by IACS PR5. Both require training to the same level in an IACS defined intensive surveyor training scheme as per IACS PR5.

A thickness gauging company is defined as a “Service Supplier” who has only been assessed by LR to complete UT gauging. They are not “surveyors”.

Corrective Action

The surveys completed by unqualified surveyors are a “non-conforming product” as per ISO 9001. Appropriate corrective action would need to be undertaken.

Size of the Problem

At this time two gauging companies have been identified:

1. EM & I
2. DITS

Facilities Affected:

- Northern Endeavour
- Montara Venture
- Pyrenees Venture

Note EM & I also use a digital camera to scan the tank as part of the General Visual Inspection (GVI) survey. EM & I are not an approved service provider for Remote Inspection Technique Systems (RITS) and hence any General Visual Inspection (GVI) completed using this technique by EM & I would be a “non-conforming product” as per ISO 9001. Appropriate corrective action would need to be undertaken.

Conclusion

NOPSEMA believes that the tank surveys for the above 3 facilities are non-conforming and hence the Classification Certificate and SOLAS Safety Construction Certificate where issued are non-conforming.



Items to Be Requested at Inspection of Lloyds Register (LR)

16 April 2019

Northern Endeavour:

- a. Known Non-Compliances
- b. Suspected Non-Compliances
- c. Action Items

Special Survey Extensions

1. Request Survey Status Report.
2. Extension of Special Survey IV – 23 July 2018 – 23 October 2018
 - a. LR Rules Offshore Units July 2018 – Pt1. Ch.2 Sec. 3.5.7 – Special Survey may be extended in “exceptional circumstances” for a maximum period of 3 months. Pt1. Ch.2 Sec 3.5.4 - “Exceptional Circumstances” means unavailability of dry-docking facilities, repair facilities, essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions.
 - b. Special Survey IV completion due date was 23 July 2018. LR extended this to 23 October 2018 on 23 July 2018 by LR Senior Surveyor [REDACTED] whilst offshore according to Class Certificate endorsement.
 - c. Need evidence of Operator’s request to LR for “exceptional circumstances” and how this was processed & approved internally by LR. Also need to check surveyor’s offshore attendance dates and planned survey scope.
3. Extension of Special Survey IV – 23 October 2018 – 28 February 2019 & 30 November 2018
 - a. Two extensions were issued 1st dated 2 November 2018 giving an extension to 28 Feb 2019. The 2nd extension dated 14 November 2018 giving an extension to 30 November 2018. The 1st extension was retracted by LR London office.
 - b. It appears that LR’s Perth office had issued the 1st extension to 28 February 2019 without authorisation from the LR London office and this was later corrected.
 - c. Was the vessel in class between 23 October 2018 & 2 November 2018? Need to see communication between the Operator, LR Perth & LR London.
 - d. Owners claimed Forced Majeure as reason for the second extension however the survey program affected if completed without the claimed Forced Majeure did not cover all the remaining Special Survey items. Hence it was not possible to complete the Special Survey before the due date in any case. Need to see communication between the Operator, LR Perth & LR London and compare planned survey scope for the cancelled visit versus the remaining outstanding items.

4. Extension of Special Survey IV – 23 October 2018 – 28 February 2019

- a. A 3rd extension was granted without a Forced Majeure reason. This is against LR Rules.

Annual, Intermediate & Special Surveys plus Life Extension

1. Survey Planning

- a. Confirm whether Special Survey Hull is on Continuous basis or not. Machinery?
- b. Planned Survey Programme in place? *[The Owner is to prepare a planned survey programme for the inspection of the hull/structure after each Special Survey, before the next Annual Survey is due. The survey programme is to cover the requirements for Annual Surveys, Intermediate Surveys, Special Periodical Surveys, Special Continuous Surveys and Bottom Surveys (in dry dock and in-water) and is to be submitted to LR for review. A copy is to be kept on board and made available to the Surveyor. The survey programme should include plans, etc., for identifying the areas to be surveyed, the extent of hull cleaning, locations for non-destructive examination (including NDE methods), nomenclature, and methods for the recording of any damage or deterioration found. The planned survey programme, as agreed by LR, will be subject to revision if it is found to be necessary at subsequent surveys, or when required by the Surveyor. See Pt 1, Ch 3, 1.6 Planned survey programme.]*
- c. What “Means of Access” is used? A “Close Up Survey” means the Surveyor must be within one arm’s length. Did the surveyor enter all tanks?? Any approvals if not?
- d. Thickness gauging – was a pre-survey meeting held?
- e. Thickness gauging – did the surveyor witness any of the measurements?? Surveyor needs to be in control.
- f. Thickness gauging reports – request for all tanks last two survey cycles.
- g. Thickness gauging reports – signed by attending Surveyor & countersigned by Authorising Surveyor?

2. Survey Attendance & Reporting

- a. Request Survey Attendance history over last two survey cycles.
- b. Request Survey Reports (Annual, Intermediate, Renewal) for last two survey cycles
- c. Was each survey completed within the relevant survey window?
- d. Was the survey scope as per the Rules for each type of survey?
- e. Was inspection of critical structural areas carried out?
- f. Was areas of substantial corrosion inspected & thickness gauged?
- g. Were all COT tanks inspected at least once in the 5 year cycle?
- h. Were all Ballast tanks inspected twice in the 5 year cycle?

3. Conditions of Class

- a. Request listing of all Conditions of Class (CoC) – current & historical over last 2 cycles
- b. Determine overdue CoC's
- c. Determine CoC's that were extended & why
- d. Determine those which are continually ongoing.
- e. UPS avoid CoC's using FMECA. The Rules or LR's website do not mention FMECA. Need to sight LR's approval and Guidance Notes on this technique and determine whether it is an approved technique.
- f. Appears several Ballast/peak tanks require steel replacement. Why has class not been suspended?

4. Life Extension

- a. Current 20 year Life expired on 23 July 2018.
- b. Life Extension Programme to be Approved by LR
- c. Request a copy of the Life Extension Programme

RBI Scheme (Notes for info only)

1. Conditional upon acceptance by the "Regulatory Authority", ref LR's approval letter dated 2 Nov 2018.
2. Baseline to be determined at next scheduled surveys and then subject to further adjustment.
3. Quote from Section 13 of RBI Plan, "Considering the operational constraints, it may not be practical to access all tanks to carry out a baseline inspection in a short period of time of about a year (COTs). Also, since the installation is under conventional prescriptive Class regime at present, many of these areas will have to be inspected/ surveyed as per the inspection programme agreed with Class (LR)."
4. Does not excuse not completing surveys in the current overdue survey cycle.

Montara Venture:

Known Non-Compliances

Suspected Non-Compliances

Action Items

Special Survey Extensions

1. Request Survey Status Report.
2. Special Survey Due Date – 24 June 2017
3. LR Rules Offshore Units July 2018 – Pt1. Ch.2 Sec. 3.5.7 – Special Survey may be extended in “exceptional circumstances” for a maximum period of 3 months. Pt1. Ch.2 Sec 3.5.4 - “Exceptional Circumstances” means unavailability of dry-docking facilities, repair facilities, essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions.
4. LR granted an extension for 3 months to 24 September 2017. What was the basis of the extension?
Need to site correspondence from PTTEP to LR and LR internally to approve the extension.
5. As per PTTEP internal P.S. Deviation Case to Operate Form dated 9 November 2017 noted that:
 - a. 8 tanks remained to be inspected
 - b. Leaking between tanks 6C/6P/5S – Pipe work holes
 - c. Leaking between 6S and Stbd Diesel Tank – temporary repair to E/R BHD
 - d. Cargo Pump Room – Piping holes – temp repairs – LR CoC – Permanent repair April 2018?
 - e. LR notified PTTEP of class suspension on 29 March 2018 back dated to 24 September 2017. A meeting between LR & PTTEP was held on 24 March 2018.
6. LR should have suspended class on 24 September 2017 and then cancelled class on 24 March 2018 which is 6 months of Suspension as per IACS PR1C. Need LR to explain why they did not & to sight correspondence between PTTEP to LR and LR internally during this period.

COT 6C – LR Interim Certificate Issued Before Tank Survey

1. 3 July 2018 - Why was an Interim Class Certificate issued when class was suspended? All due surveys need to be completed to reinstate class.
2. LR Interim Certificate is closing out previous pipe damage CoC's but then at bottom states that 6C Overall survey is complete. PTTEP have then used this Interim Cert to justify returning the tank to service however the Close Up Survey had not been completed as evidenced by the DITS Inspection

Ningaloo Vision:

Known Non-Compliances

Suspected Non-Compliances

Action Items

Statutory Certificates

1. SOLAS "Oil Tanker" or MODU? If Oil Tanker are ESP requirements invoked?
2. AMSA MO60 – applies to a Foreign Flag FPSO in an Australia Port. Section 7 requires compliance with ESP. Has ESP requirements been surveyed?

Class Survey

3. Class Status Report showing all CoC's
4. WBT inspections completed twice in 5 year cycle?

Nganhurra:

Known Non-Compliances

Suspected Non-Compliances

Action Items

1. Testing of Inergen Cylinders

- a. Testing of the cylinders was due 2nd Half 2014. Need to confirm actual date.
- b. MO 15 was updated on 21 May 2014 to include mandatory pressure testing of cylinder on 10th anniversary in accordance with IMO Circ MSC.1/Circ.1432 which reflected requirements of other EU Standards updated testing requirements at that time.
- c. Previous version of MO15 required testing in accordance with AS 2030. Requirement was for a 10 year pressure test or alternatively an external examination showing no defects. This could then extend the requirement of the pressure test out to the 20 year anniversary.
- d. Woodside on 10 June 2014 sent LR a proposal to fully inspect only 10% on the cylinders as they could not be fully inspected in their stands. LR replied on the same day accepting the proposal.
- e. The MO15 does not mention sampling. In fact it refers to "a gas cylinder must be tested..". Hence Woodside's proposal is a deviation from MO15. LR must therefore consult with AMSA for their approval of the proposed equivalence. Did LR consult AMSA?
- f. Further as the 10 year anniversary was falling after the introduction of the new MO15 did LR consult with AMSA in regard to the plan for early inspection so that the old MO15 requirements can be used?

2. Cylinder Leak & Solas Safety Equipment Certificate

- a. On 21 October 2018 a leak occurred in one of the cylinders and alarm tripped. Inspection of all cylinders' gauges was carried out and found one cylinder with a leak. This cylinder had during a previous inspection had shown a drop in pressure. The Woodside inspector wore a head mounted camera and this was accepted by LR for the purpose of their inspection. Does LR have approvals in place to accept video evidence? Was AMSA consulted for issuance of a Short Term Solas Safety Equipment Certificate which included a disclosure that a video was used?
- b. Need to confirm first leak was detected early in 2018. MOC 66096 describes the depressurisation through the cylinder wall (failure) of 2 Inergen cylinders: 1 during Jan 2018 and again 1 during April 2018. (NOPSEMA was not notified - thus are not referenced with Notification numbers). Was AMSA notified? Safety Equipment Certificate Annual Endorsement signed off by LR on 22 April 2018 by [REDACTED]. How was this done when there was a Statutory Deficiency? A Short Term Certificate is normally issued under instruction from AMSA.