



Common Marine Inspection Document

Vessel name:	Deepwater Horizon
IMO number:	8764597
Date inspected:	13 to 17 September 2009

The International Marine
Contractors Association

www.imca-int.com

EXHIBIT # <u>1794</u>
WIT: _____

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The International Marine Contractors Association (IMCA) is the international trade association representing offshore, marine and underwater engineering companies.

IMCA promotes improvements in quality, health, safety, environmental and technical standards through the publication of information notes, codes of practice and by other appropriate means.

Members are self-regulating through the adoption of IMCA guidelines as appropriate. They commit to act as responsible members by following relevant guidelines and being willing to be audited against compliance with them by their clients.

There are two core activities that relate to all members:

- ◆ Competence & Training
- ◆ Safety, Environment & Legislation

The Association is organised through four distinct divisions, each covering a specific area of members' interests: Diving, Marine, Offshore Survey, Remote Systems & ROV.

There are also four regional sections which facilitate work on issues affecting members in their local geographic area – Americas Deepwater, Asia-Pacific, Europe & Africa and Middle East & India.

IMCA M 149 Issue 7

This document supersedes all previous issues of the Common Marine Inspection Document (IMCA M 149), which are now withdrawn.

This latest issue has been produced as the result of discussion by a cross-industry steering committee and workgroup which has resulted in a complete update of the document.

www.imca-int.com/marine

The information contained herein is given for guidance only and endeavours to reflect best industry practice. For the avoidance of doubt no legal liability shall attach to any guidance and/or recommendation and/or statement herein contained.

Common Marine Inspection Document

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Introduction

The purpose of the Common Marine Inspection Document (the 'CMID') is to provide an industry format for vessel inspection reports and to reduce the number of inspections carried out on individual marine vessels, together with the adoption of a common inspection standard for the offshore marine industry. This can be achieved by sharing inspection reports. If there is a requirement to inspect a vessel, the company requesting the inspection should first ascertain the date when the last inspection was conducted, using the format of this document and the availability of the report. If the report is more than one year old then a new inspection should be conducted. A competent and independent third party should complete the inspection.

Using the report does not waive any rights to inspect the vessel, but the inspection report can be taken into consideration when assessing the degree of any further inspection that might be required.

A significant part of the international offshore industry has accepted this document as the standard for vessel inspections and, as such, when requesting copies of recent inspections they will expect them to be in this format.

This document does not contain specialist sections for different vessel types, but may be used as a basis for inspecting any type of vessel.

It is intended that the CMID should be treated as a living document, in that some parts can be completed by the crew prior to an inspector's arrival and thereafter the vessel's crew can keep it updated wherever possible, so that the minimum amount of work is required at each inspection.

Notes

- 1 This issue of the CMID follows cross-industry discussion which has resulted in a complete update of the document. Changes from the previous version are therefore not listed;
- 2 Reference to IMCA M 167 – *Guidance on use of the Common Marine Inspection Document* – as updated to reflect Issue 7 of the CMID will be of assistance;
- 3 IMCA M 189/S 004 – *Marine inspection checklist for small workboats* – may be appropriate for other vessels;
- 4 The vessel owner has the right to comment on the findings;
- 5 Further topic- and vessel-specific reports are being developed by IMCA;
- 6 The electronic version of this report, ready for completion by inspectors, is available via the IMCA website at www.imca-int.com/cmd
- 7 For information on obtaining the printed CMID and related documents see www.imca-int.com/publications
- 8 In the CMID the abbreviations used are: NA = not applicable; NS = not seen.

Terminology Definitions

Inspector	The person (or persons) inspecting the vessel. The technical knowledge, experience and competence of the person (or persons) performing the inspection should be appropriate to the type of vessel under review.
Inspector competence	<p>Inspector competence is a key part of delivering a consistently good CMID.</p> <p>Competence is self administered by the inspection companies and forms part of the IMCA competence framework. The individual's competence is a combination of three sections:</p> <ul style="list-style-type: none">◆ qualifications;◆ experience; and◆ verification. <hr/> <p>Qualifications</p> <ul style="list-style-type: none">◆ Seagoing qualification at management level or appropriate qualification for the vessel type;◆ Inspection/audit qualification (IRCA or equivalent). <p>Experience</p> <ul style="list-style-type: none">◆ A number of inspections in tandem with a competent inspector;◆ A number of inspections shadowed by a competent inspector;◆ For any new ship type, the inspector should carry out further inspections whilst being shadowed by a suitably competent inspector;◆ Following the inspections, the inspector should be given feedback with remedial action taken as required;◆ A minimum number of inspections per year (3-4) to maintain competence. <p>Note: 'An inspection' means carrying out the inspection, discussing the results with the Master and writing/delivering the report.</p> <p>Verification</p> <ul style="list-style-type: none">◆ Inspector company to develop and administer a competence assurance scheme including mentoring;◆ The inspector's client to provide feedback to the company and audit the company scheme if necessary.
International voyage	A voyage from a country to a port or place outside such country or the converse.
Operator	The word 'operator' has been used throughout this document as meaning either the company, operator or manager responsible for the vessel.

Abbreviations

AIS	Automatic identification system
ARPA	Automatic radar plotting aid
BA	Breathing apparatus
CSO	Company security officer
DP	Dynamic positioning
DPA	Designated person ashore
DSC	Digital selective calling
EEBDs	Emergency breathing devices
FMEA	Failure modes and effects analysis
FMECA	Failure modes and effects criticality analysis
FRC	Fast rescue craft
GMDSS	Global Maritime Distress and Safety System
H&M	Hull and machinery
HAV	Hand arm vibration
HLO	Helideck landing officer
ICS	International Chamber of Shipping
IMCA	International Marine Contractors Association
IMO	International Maritime Organization
INLS	International pollution prevention certificate for the carriage of noxious liquids substances in bulk
IOPP	International Oil Pollution Prevention Certificate
ISM	International Safety Management
ISPS	International Ship & Port Facility Security Code
LOA	Length overall
LSA	Life saving appliance
MARPOL	Merchant Shipping (Prevention of Oil Pollution) Regulations
MOB	Man overboard boat
OWS	Oily water separator
P & I	Protection and indemnity
POB	Personnel onboard
PPE	Personal protective equipment
PTW	Permit to work
SIMOPS	Simultaneous operations
SMS	Safety management system
SOLAS	International Convention for the Safety of Life at Sea
SMPEP	Shipboard Marine Pollution Emergency Response Plan
SOPEP	Shipboard Oil Pollution Emergency Response Plan
SSO	Ship security officer
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
SWL	Safe working load
TBT	Tributyltin
UKOOA	UK Offshore Operators Association – now Oil & Gas UK
UMS	Unattended machinery space
VHF	Very high frequency

Inspection Process

The inspection should be planned and undertaken in liaison with the vessel owner to maximise the use of resources, while creating the least disruption to ongoing activities. Sufficient flexibility should be built into the programme to reflect changing operational demands. To this end, the inspector and vessel owner should discuss in advance:

- ◆ the timing and programme (opening meeting, scope of inspection and closing meeting);
- ◆ approximate duration and format of the inspection;
- ◆ the personnel to be made available;
- ◆ vessel's documentation requiring to be viewed (including previous inspection reports where available);
- ◆ if in doubt, the inspector may ask for the equipment in question to be operated.

The inspector should satisfy him/herself that, through the inspection process, shore-based management has demonstrated a satisfactory commitment to the vessel's health, safety and environmental issues. This can be achieved through observation and conversation with the vessel's crew with matters relevant to them.

Throughout the inspection, the inspector, where possible and appropriate, should be accompanied by the vessel owner's personnel familiar with the area being inspected.

On conclusion, the inspector will provide the relevant operator's personnel with a verbal briefing and a brief written summary of the result of the inspection. The Master has the right to comment and include notes on the findings.

Inspection Summary

Report completed by (inspector's name)	Richard Cox and Barry Hayward	Date	13 to 17 September 2009
Inspector's employer	BP Exploration		
Company on whose behalf inspection is carried out	BP Exploration		
Report summary seen and discussed by (master's name)	N/A	Date	N/A

Inspector's findings	Master's Comments (at time of debrief)
<p>During the audit period the rig had just completed a UWILD survey and mid life upgrade for the DP system. During this period twelve skin valves were replaced as well as software and hardware for the DP system. No work was undertaken on the vessel management system. A Kongsberg Customer Acceptance Trial (CAT) was witnessed which covered testing of the newly installed DP equipment. A number of issues were identified but the majority of these were cleared prior to departure from the rig.</p> <p>A black start recovery test was witnessed and on restart, four of the thrusters were delayed in starting. One high voltage switchboard had a diesel generator connected which subsequently failed and the second diesel generator took some time to become run rated. On the basis of this result a second black recovery out was undertaken with much improved results.</p> <p>Watertight integrity was reviewed and a number of tests were undertaken. There were failures observed which have raised some concerns. On testing the port aft quadrant watertight dampers a command from the vessel management system was issued but no dampers closed. Four watertight doors were found to be able to be operated locally only, evidently there were insufficient spares onboard to return the doors to remote operation. A further two watertight doors were found to have fault conditions which were identified during random testing.</p> <p>There is an issue with the dead man lever associated with the watertight doors. This has manifested itself in the dead man lever when released not returning to the neutral position. On some doors it can go past the neutral position and cause the door function to be reversed, i.e. from open to close and vice versa. This is considered a hazard to staff. The method of operation of the door in the procedures is for the dead man lever to be maintained in the direction of travel of the door throughout the operation. The culture onboard is to start the open/close cycle then release the handle until the operation is completed. The design premise of allowing a door to continue in operation even though the dead man lever is released is considered poor, is different to the norm including the sister rig, the Deepwater Nautilus, and should be addressed. This difference in operating philosophy also presents a risk to personnel and watertight door operation familiarisation should be undertaken on an urgent basis.</p> <p>The weathertight door limit switches indicating door status to the bridge were found in some cases to be non-functional. In the worst</p>	N/A

case approximately four of these doors had the limit switch frozen in the closed position. This then means the bridge would be unaware of the status of the door as the limit switch always reports closed status. Additionally when reviewing alarm status conditions on the vessel management system, a number of doors had the 100 second alarm timer disabled. This means that if the doors are left open for more than 100 seconds then the audible alarm will not be generated in line with the original requirements.

During the review the PCU18 serving the starboard aft quadrant failed. The PLC card failure meant that it was not possible to operate the starboard aft bilge and ballast valves remotely. The defect could not be immediately rectified due to insufficient onboard spares.

During testing of the bilge system three of the four electric bilge pumps failed to take suction, the priming devices being defective. Two emergency bilge suction check valves also failed integrity checks when subject to flow back tests.

Of the eight seawater cooling pumps just one was totally defect free, while four pumps were deemed non-operational others could be operated despite the defects such as severely leaking upper and lower shaft seals. In two cases pump defects had been reported during our previous audit over eighteen months prior.

Distribution List for Reports

A copy of the *final* report to be distributed as follows:

- 1 Wells Team
- 2 SPU Marine Authority
- 3 ETP Drilling Library

1 Vessel Particulars

	Requested Information
Name of vessel	Deepwater Horizon
IMO number	8764597
Type of vessel	Semisubmersible MODU RBSD 8
<i>(include detail of any special features)</i>	Dynamic Positioning
Previous name(s)	None
Date of inspection	September 2009
Port of inspection	Mississippi Canyon 727, GOM, Lat 28° 14N, Long 88° 50W
Vessel operation at time of inspection (e.g. mobilising, loading, discharging, bunkering, repairs or idle)	Preparing to Drill after out of service Period, (DP Mid life upgrade and UWILD)
Vessel owner	Triton Hungary Asset Management Kft,
Address:	Dohany u. 12. H-1074 Budapest Hungary
Tel:	N/A
Fax :	N/A
E-mail:	N/A
Vessel operator	
Name:	Transocean Offshore International
Address:	Park Ten 10 , Houston
Tel:	N/A
Fax:	N/A
E-mail:	N/A
Date current vessel operator assumed responsibility for vessel	February 2001
Manning agent	N/A
Address:	N/A
Tel:	N/A
Fax:	N/A
E-mail:	N/A
Flag	Republic of Marshall Islands
<i>(if the vessel has changed flag within the past six months, report date of change and previous flag in 'Additional comments')</i>	Previously Panamanian Flag
Port of registry	Majuro
Classification society (if vessel has changed class within the past six months, report date of change and previous classification society, in 'Additional comments')	ABS, A1, AMS Column Stabilised Drilling Unit, CDS, DPS-3, ACCU
Class ID number	
Additional comments (include any additional specialised equipment vessel has onboard)	
Hull type	RBS 8D
LOA	114m
Beam	61m
Maximum draft	23m Opearational
Deadweight tonnage	
Gross tonnage	32,5888mt
Main engine horsepower and manufacturer	Wartsila 18V32 Engines 7 MW (9387 Hp ea)

	Requested Information
Number of engines	Six off
Number and type of main propellers	N/A
Number of rudders	N/A
Number of generators	Six off
Kort nozzles fitted?	N/A
Bow thruster fitted (number and type)?	N/A
Stern thrusters fitted (number and type)?	N/A
Other propulsors fitted (number and type)?	8 off Kamewa variable speed fixed pitch Aquamaster thrusters (5.5 MW 7375 hp). Shaft input speed 0 to 750 rpm, output max 157 rpm, BP 100 tonnes
Rated bollard pull (as applicable)	N/A
Type of bunkers	N/A
Bunker capacity	N/A
Daily fuel consumption	34 m ³ Fuel /day
Potable water capacity	48m ³ /day
Can vessel make potable water?	Capability is available based on engine loads experienced
Inmarsat number	453800613
V-Sat number	
Vessel mobile phone number	N/A
Vessel email address	N/A
Call sign	N/A
Date of last owner's/operator's superintendent's visit to vessel	Asset Rig Manager attended rig Sept 2009
Name of the vessel's P&I club	N/A
Date of last port state inspection (see also 2.6 below)	
Name and contact details for designated person ashore (DPA)	N/A
Date of last dry docking or in water survey	UWILD carried out Sept 2009
Location of last dry docking or in water survey	Atwater 53
Date next dry docking due	2011

2 Previous Inspections

2.1	Date of last CMID inspection	
	Comments	Date: January 2008
	A previous CMID inspection was conducted	

2.2	Does the vessel have onboard a copy of the most recent CMID report?	Yes X	No	NA	NS
	Comments				
	Although the CMID inspection reports were not available onboard the recommendations arising from the reports were being tracked. Generally some effort had been made at closing out the audit findings but a number of key findings remain open or have been repaired and fell back into decline.				

Inspector should review the previous report and verify that appropriate corrective action has been taken on any findings. Actions not closed-out are to be carried forward to this report under the original date.

Note where not available and state why.

2.3	Does the vessel carry a DP system?	Yes X	No	NA	NS
	Comments				
	The rig is a Class 3 (ABS DP 3) unit. A Kongsberg SDP 32 system is fitted on the bridge with a back up SDP 12 fitted in the ECR				

If yes state class notation and go to question 2.4 and 2.5.

If no go to question 2.6.

2.4	Does the vessel have onboard a copy of the most recent DP trials report?	Yes	No	NA	NS
	Comments				
	See CMID Annexe				

Inspector should review the previous report and verify that appropriate corrective action has been taken on any findings. Actions not closed-out are to be carried forward to this report under the original date.

Note where not available and state reasons why.

2.5	Does the vessel have onboard a copy of the most recent vessel FMEA or FMECA?	Yes X	No	NA	NS
	Comments				
	The rig has an updated FMECA dated June 2009. The recommendations relating to this document are tracked using the Focus system. The tracking actions indicate that a technical concerns register is currently being reviewed in the Transocean office. Once this is complete modifications will be made as required.				

Inspector should review the previous report and verify that appropriate corrective action has been taken on any findings. Actions not closed-out are to be carried forward to this report under the original date.

Note where not available and state reasons why.

2.6	Date and place of last Port State Control inspection	Yes X	No	NA	NS
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Comments

The last USCG inspection was carried out on the 27 July 2009. No deficiencies were issued.
Next inspection due 7 July 2010

If vessel was detained, or significant deficiencies were listed, record the reason for detention or nature of those deficiencies.

3 Certification

3.1	Is the vessel clear of conditions of class and any safety related memoranda?	Yes X	No	NA	NS
Comments There are no Class Conditions due. Two statutory deficiencies are currently in progress: 1503: Long range identification and tracking system as part of GMDSS system. Prior to next MODU safety survey (29 May 2010) documentation to be provided regarding type approval, certification etc. 1390: IAPP Annex VI Survey, Caterpillar crane engines to be confirmed in accordance with their ABS Approved Technical Files and Issuance of Engine International Air Pollution Prevention Certificates.					

Give details of conditions of class outstanding and any safety related memoranda.

3.2	Have the certificates and documentation listed in the Index of Certificates (Section 4) been checked and verified as in date?	Yes	No	NA	NS
Comments See CMID Annexe					

Inspector should review the Index of Certificates (Section 4) and confirm whether all appropriate certificates are in date.

Inspector should note any expired certificates or recertification ongoing at the time of inspection.

3.3	Does the vessel maintain an indexed library of procedures and publications?	Yes X	No	NA	NS
Comments No list of current publications could be provided. However the library of publications was reviewed and key IMO publications were in place.					

Review documents carried to ensure all correct documents, including consolidated publications, are available.

3.4	Are publications carried in accordance with statutory requirements and IMCA recommendations?	Yes X	No	NA	NS
Comments Master and bridge have access to IMCA documentation. No deficiencies were noted with regards to statutory publications					

3.5	Is the chain register/lifting appliance register up to date?	Yes	No	NA	NS
		X			

Comments

The last third party lifting gear inspection was carried out in August 2009. Deficiencies were limited to a few damaged slings which were removed from service. The last load test was undertaken by ABS on 15 January 2006, for the port deck crane, knuckle boom pipe handling crane and riser gantry crane. The starboard crane was tested on 4 December 2007. The last ABS annual thorough examination of the deck cranes was completed on 8 December 2008; the cargo gear register UL 10865-CHG issued at Ulsan and dated 23 February 2001 was endorsed for the annual survey. Certification for the crane wire ropes, winch wires, fibre strops and wire slings was sighted.

Items such as cranes, derricks and pad eyes must be clearly marked with their SWL.

Test certificates should be onboard for all items of lifting equipment including chain blocks, strops, ropes, shackles (NB: may have a batch certificate for small shackles).

4 Index of Certificates

Certificate	Applicable to vessel type Y/N	Date of expiry	Certification Guidance
International Tonnage Certificate (1969)	See CMID Annexe	See CMID Annexe	See CMID Annexe
International Load Line Certificate			
International Load Line Certificate Exemption			
Cargo Ship Safety Construction Certificate			
Intact stability booklet			
Cargo Ship Safety Equipment Certificate			
Cargo Ship Safety Radio Certificate			
Cargo Ship Safety Radio Exemption Certificate			
Damage control booklets			
Minimum Safe Manning Document			
Cargo securing manual			
International Oil Pollution Prevention Certificate			
Offshore support vessel Certificate of Fitness (for hazardous and noxious liquids); or International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (INLS Certificate)			
Document of Compliance with the special requirements for ships carrying Dangerous Goods			
Dangerous Goods Manifest or Stowage plan			
Garbage management plan and garbage record book			
Diving Systems Safety Certificate			
Dynamically Supported Craft Construction and Equipment Certificate			
Oil Record Book			
Shipboard Oil Pollution Emergency Plan			
Shipboard Marine Pollution Emergency Plan			
International Air Pollution Prevention Certificate			
Safety Management Certificate			
Document of Compliance (copy)			
Noise Survey Report			
Continuous Synopsis Record			
International Ship Security Certificate (copy)			
Ship Security Plan (not for examination – content secure to vessel)			
Cabotage – if applicable			
Anti-fouling/TBT Free – if applicable			
MARPOL IV/V/VI – if applicable			
Ship Sanitation Certificate – Derat			
Ballast Water Management Plan			
P&I			
H&M Insurance certificate			
Employer Liability insurance			
Locally applicable additional certificates			

5 ISM

5.1	Does the vessel have an ISM Safety Management Certificate?	Yes	No	NA	NS
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Comments

See CMID Annexe

Review most recent internal audit. Confirm that any proposed corrective actions have been implemented.

5.2	Are the DPA details available?	Yes X	No	NA	NS
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Comments

Marco Barbosa QHSE Manager is the nominated DPA and Gary Butler is alternate. These are displayed on the notice board in Masters Office and also outside the heli transit lounge.

Confirm that the correct details of designated person ashore (DPA) are displayed prominently.

5.3	Does the vessel display current health, safety and environment policies signed by management?	Yes X	No	NA	NS
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Comments

Transocean HSE policies posted in heli transit room and are signed and dated May 2008. Transocean HSE OJT completed by all Transocean personnel. BP HSE Policy also posted but dated 2002 and needs most recent update posted.

Workforce/marine crew should be aware of current health, safety and environmental policies.

Are the policies available and the most recent revision?

5.4	Is there a system in place for reporting non-conformances to the operator?	Yes	No X	NA	NS
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Comments

Formal protocol is not in place for reporting defects to the operator; many of the equipment deficiencies noted during the audit periods were not recorded on the daily maintenance report nor communicated to the BP Well Site Leaders. The daily meeting regime is obviously not used to good effect for reporting defects.

Note type of system in use.

Note any non-conformances outstanding and responses to non-conformances raised.

5.5	Does the system ensure that all non-conformances are closed out in an agreed period?	Yes X	No	NA	NS
<p>Comments</p> <p>The FOCUS system in use allowed for information relating to non-conformances to be immediately retrievable. A review was made of action status within FOCUS over the last twelve months. All had been reviewed by the Rig Manager and were being managed. One overdue was noted and this related to lifeboat maintenance. This had been flagged and was being managed. FOCUS requires due dates to be entered and if this was not met then the overdue item would be flagged.</p> <p>In Addition, ISM, ISPS and PMAA audits had been completed in July 2009 and all twenty five improvement and corrective actions had been closed out within the FOCUS system.</p>					

What timeframe does the system require to have close outs completed in?

5.6	Are procedures in place that address response to any noted non-conformances?	Yes X	No	NA	NS
<p>Comments</p> <p>All non-conformances are required to be entered into the FOCUS system in accordance with Transocean HSE Procedures Manual. The FOCUS Improvement Process incorporates planning and tracking tools which are located within the Global Reporting System (GRS) as a means to efficiently manage the steps of formulating the plan, organizing the resources, communicating the plan, undertaking the improvement/corrective opportunities and summarizing the results. The feedback from the FOCUS Improvement Process is lessons learned. Use of GRS enables the company to capture lessons learned and to make them available fleet wide.</p>					

5.7	Is feedback reported to the vessel?	Yes X	No	NA	NS
<p>Comments</p> <p>Feedback comes from the Rig Manager and onboard the rig during the various daily and weekly meetings. Two way communication is encouraged.</p> <p>System should include provision for feedback on action on any non-conformances from the vessel's shore management.</p> <p>How is this feedback provided?</p>					

5.8	Are arrangements in hand to ensure efficient communication between all persons on the vessel and third parties?	Yes X	No	NA	NS
<p>Comments</p> <p>English is the spoken language, no language issues were identified. All safety and emergency signage was clearly written in English.</p>					

Where a common language is not spoken by all, arrangements should be made to ensure that orders and information can be transferred efficiently and without ambiguity, e.g. provision of a liaison Master.

Signs and warning notices should be in language(s) understood by all.

5.9	Does the operator have a drug and alcohol policy?	Yes	No	NA	NS
	X				

Comments

Drug and alcohol policy requires all new hires to be tested and post incident tests are also undertaken. Random testing is also undertaken at the heliport.

Establish how the operation of the policy is monitored.

5.10	Is there evidence that the workforce/marine crew is fully involved in safety management?	Yes	No	NA	NS
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Comments

See CMID Annexe

Look for evidence demonstrating active workforce/marine crew involvement.

Safety meetings – note the stated frequency of the meetings and verify by reference to the minutes.

Establish who attends the safety meetings.

Is there evidence of issues being identified and closed?

6 HSE

6.1	Is there evidence of full compliance with the company's HSE management system?	Yes	No X	NA	NS
<p>Comments</p> <p>There was evidence that not all HSE management system requirements were being met e.g. some issues with the permit to work system, not raising permits for energy isolation, failure to enter lock-out details on an isolation certificate and failure to fully implement mechanical lock out when for example performing work on the water maker. The TSTPs were not always used when carrying out Think Plans. Generally though, the level of compliance was good and all Transocean personnel are required to complete the HSE OJT. Smoking is only permitted in designated smoking areas and this requirement was strictly complied with. Safety signs were displayed and appeared to be in good order.</p>					

Key personnel should have knowledge of the safety management system appropriate to their duties.

Sufficient crew should be onboard at time of inspection trained to handle emergency situations. Check that procedures address minimum manning requirements in port.

All loose gear on and below deck should be safely secured.

Smoking regulations should be in place and complied with.

Safety signs and relevant safety information should be prominently displayed.

6.2	Is there evidence of full compliance with the company's personal protective equipment policy?	Yes X	No	NA	NS
<p>Comments</p> <p>People were generally seen to be compliant with the PPE requirements of the PPE policy contained in the Transocean HSE Procedures Manual with the exception that some personnel were not wearing hearing protection in high noise areas.</p>					

Does the company have a personal protective equipment policy? Note evidence of compliance.

6.3	Are personnel joining the vessel given an appropriate safety induction?	Yes X	No	NA	NS
<p>Comments</p> <p>All personnel arriving onboard receive a DVD induction. Personnel are shown to their emergency stations and the alarm signals are demonstrated. A BP requirement is to complete an environmental quiz, however the hand out does not adequately address the questions raised in the quiz.</p>					

Is there evidence of crew and contractor inductions?

Are inductions aligned to the vessel type, operation and structure?

Is a safety tour part of the induction process for personnel joining?

6.4	Are personnel visiting the vessel given an appropriate safety briefing?	Yes	No	NA	NS
<p>Comments</p> <p>Not Applicable see 6.3</p>					

Are arrangements in place for briefing/managing the safety of visitors?

Are safety rules prominently displayed?

6.5	Does the vessel have a system for reporting and recording incidents, accidents and near misses?	Yes	No	NA	NS
		X			
Comments The FOCUS system is used for reporting and recording incidents and a review was conducted of the events that had been reported in the last year, the system was seen to be used effectively. Near miss reporting is encouraged and fifteen serious Near Hits were recorded over the last year. The Transocean HSE management system sets out procedures for conducting investigations (Section 4 – sub-section 6.3.)					

Is there evidence that the reporting system is being used?

Is reporting of near misses encouraged?

Does the system identify responsibility for conducting investigations?

6.6	Is there evidence that the vessel complies with the system for reporting and investigating incidents, accidents and near misses?	Yes	No	NA	NS
		X			
Comments The FOCUS system was checked and investigation process verified as working. Training in root cause analysis is provided via Kelvin Top Set Training. Three day Top Set training courses are held for senior rig personnel and one day courses held for Supervisors – only two of the twenty eight people requiring the one day course have been trained. Three levels of investigation are included and responsibility for investigation depends on the severity of incident. For the most severe (Level 1), a lead Investigator must be appointed and the team members must not be from the operation where the incident occurred. Responsibilities for individuals involved in the investigation are outlined and training requirements for each individual are stated. For higher potential incidents, an investigation team may be sent to the rig. Results of the investigations are normally promulgated within the company and to the client.					

Is there is an investigation process in place?

Does the investigation process include provision for training?

Is there evidence that onboard personnel have undergone the training?

Is there evidence of a system that identifies root cause during investigations?

Are the results and findings promulgated both within and outside the company?

6.7	Do vessel specific emergency procedures exist covering, for example, fire, explosion, grounding, pollution?	Yes	No	NA	NS
Comments See CMID Annexe					

Assess familiarity of officers and crew with the procedures.

Are drills routinely conducted with all vessel crews?

Does the vessel have access to shoreside specialist support?

6.8	Are risk assessments conducted onboard?	Yes X	No	NA	NS
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Comments

A number of Task Specific Think Procedures (TSTPs) and Think Plans were reviewed. In some instances, the TSTPs were not used in conjunction with the Think Plans but generally the risk assessment system was working effectively with input from the workforce. A generic database of TSTPs was in place and readily accessible on the rig computers. TSTPs from other rigs could also be viewed. Instructions were given during the Think Plan that everyone had the right to stop the operation by calling a Time Out for Safety (TOFS) if conditions changed. TOFS was being used and recorded.

View recent risk assessments, comment if they are generic and/or task based.

Determine what input the workforce/crew has in the process.

Is there a process for reviewing new and existing tasks?

If possible, view the risk assessment for an operation presently underway.

Is there a process to stop work when there is a change in conditions?

Perform random spot-checks to determine if risk assessments have identified hazards and that any mitigation identified has been implemented.

6.9	Is risk assessment training provided to personnel on board?	Yes X	No	NA	NS
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Comments

Included in the HSE OJT module twelve day TOP set training is given to all Transocean personnel prior to coming out to the rig. Long term third party personnel do not go through the HSE OJT but get training as required onboard, but generally this is not formally recorded. The Transocean HSE Procedures Manual describes the various risk assessment tools and a hard copy is available at the Right to Know Information Station located next to the upper changing room. A number of crew members were asked about their knowledge of the risk assessment processes and training received and this was generally found to be acceptable.

Does the risk assessment training provide an understanding of the company's risk assessment policy?

6.10	Are the worksites assessed?	Yes X	No	NA	NS
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Comments

Worksites are assessed for hazards and health risks. MSDS Sheets were available at the Right to Know Information Centre. The industry standard HMIS was also in use.

Are workplace health risks, from operations and products, to both employees and contractors controlled?

6.11	Does the work management system address regulatory requirements and industry guidance?	Yes X	No	NA	NS
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Comments

For substances hazardous to health, material safety data sheets were available. A noise survey had been carried out on the rig but hearing protection was not always worn as required. Manual handling is addressed in the HSE Procedures Manual as was HAV management.

Are assessments conducted for substances hazardous to health, display screen equipment, radiation, noise, manual handling, lifting equipment management systems, SIMOPS, HAV?

6.12	Is there evidence that the output of risk assessments is applied at the work site?	Yes X	No	NA	NS
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Comments

TSTP/Think Plan controls were seen to be applied at the worksite. IF a TSTP is required then an after action review is meant to be completed. There is evidence that this is done but it was not being done regularly.

Check if a system of pre/post task safety meetings/toolbox talks is in place.

How is post task feedback managed?

6.13	Is there a formal management of change policy in place?	Yes X	No	NA	NS
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Comments

Management of Change policy in place and formalised within the Transocean HSE Procedures Manual section 1, sub-section 4.2. These are categorised under three headings: 1.Simple 2. Enhanced 3. Exemption. For the simple MOC, control of the risks identified is accomplished utilising an appropriate risk assessment from the individual THINK Plan up to a Task Risk Assessment. For the enhanced MOC, the Rig Manager must review the FOCUS proposal and risk assessment to determine if it is required and adds value, and if further assessment or additional expertise is required. If it is determined at the installation/facility level that a TSTP needs to be developed or an existing one revised, a written Think Plan is required for the task to proceed until such time as the new or revised TSTP is approved. The FOCUS tracking tool is used with Management of Change to develop plans, obtain approvals, monitor the progress and track the progress to completion. MOC's are not tracked in the onshore office as those conducted on the rig are scanned into the system. The majority of MOC's require a Task Risk Assessment. Engineering

Does the vessel have a formal management of change process?

Comment on the level of risk assessment required by the process.

Comment on the process that exists, including the apparent level of use.

6.14	Is a permit to work (PTW) system in use onboard?	Yes	No	NA	NS
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Comments

See CMID Annexe

Describe the types of tasks covered by permits.

How are isolations identified and managed?

Are permits audited?

Have personnel received formal training in the PTW system?

How are risk assessments linked to the permit system?

6.15	Is the permit system applied onboard?	Yes	No	NA	NS
		X			

Comments

Numerous tasks were being managed by permit. Permits are controlled from the bridge and a copy of the permit and associated controls e.g. Isolation certificate and TSTP/Think Plans are posted at the worksite. One instance was noted where the lock-out box was not marked to signify that a padlock had been used to effect a mechanical isolation.

At the time of inspection, comment on the number of tasks managed by permit.

The inspector should try to confirm that the relevant permit controls are in place at the worksite.

6.16	Are enclosed spaces and controls for entry identified onboard?	Yes	No	NA	NS
		X			

Comments

Confined space entry is one of the categories within the permit system. Gas testing is included in the HSE OJT. Tank diving equipment included twelve survive air BA sets (2250 psi). One additional SCBA set giving 45 minutes. A tripod was available for vertical rescue from confined space. Confined space entry is included in the HSE OJT.

Entry permit system should be in use (to include testing of atmosphere for oxygen and toxic gases) with records available for inspection.

Atmosphere measuring instrumentation should be calibrated; a process should be in place for ensuring staff are trained and aware of limitations of gas meters.

All records should be fully completed and signed off when work completed.

Enclosed spaces should be adequately ventilated during entry.

Vent fans should be available and be operated in extraction mode when in use.

What type of breathing apparatus is available; if there are limitations on its use, is there a process for ensuring staff are aware of these limitations?

What rescue equipment is made available for use, and where will it be located?

Dangerous or potentially dangerous enclosed spaces should be identified and labelled with procedures in place for entry. Check for evidence of awareness training for all staff.

6.17	Are specific procedures used for hot work?	Yes	No	NA	NS
		X			

Comments

Hot work procedures are contained within section 4, sub-section 4.1 of the Transocean HSE Procedures Manual. Hot work included welding and oxygen/acetylene cutting, electrical work, grinding (fixed or portable), needle gunning and all work using other types of ignition sources. A hot work permit is used and the necessary controls are entered. The hot work permit will identify PPE to be worn and PPE was available on the rig. A system is in place to affect permit close-out. Hot work permits are managed from the bridge and like all other permits are signed by the OIM or the Toolpusher if required at night. Flashback arrestors were fitted and gas and oxygen bottles were stored separately. Safety guidelines were also included in the Transocean HSE Procedures Manual which also included duties of the firewatcher.

Comment on the system in use.

Comment on the system requirements for PPE and confirm that the required equipment is available for use.

All records should be fully completed and signed off when work completed.

Welding equipment should be routinely inspected with documented inspection records and safety guidelines available.

Are flashback arrestors fitted?

Spare gas and oxygen bottles should be stored apart in dedicated storage lockers that are clearly marked and in a well-ventilated position outside accommodation and engine room.

Cylinders should be appropriately colour coded.

6.18	Is there a lock-out/tag-out policy in place?	Yes	No	NA	NS
		X			
Comments					
A lock-out/tag-out policy is in place and is a feature of the confined space entry certificate.					

6.19	Is there evidence of consistent application of the lock-out/tag-out policy?	Yes	No	NA	NS
			X		
Comments					
Satisfactory execution of electrical isolation but mechanical isolations not routinely recognised, for example start air compressor #4 maintenance work discharge valve shut but not locked or tagged and maintenance on water maker #5 none of the jack water or sea water valves were locked or tagged shut. Additionally there was one instance noted of failure to identify the mechanical lock-out on an Isolation Certificate (No 26403). Long term Isolations are listed on the permit notice board but policy for temporary re-instatement was not sighted.					

Is there evidence of positive isolation?

Is a long-term isolation record maintained?

Is there evidence of a policy for the temporary re-instatement of systems?

6.20	Is there an asbestos management system?	Yes	No	NA	NS
		X			
Comments					
The Transocean asbestos management system was outlined in the section 5, subsection 2.1 of the Transocean HSE Procedures Manual. There was no requirement for an asbestos management plan on the Horizon as it is a recent build and declared asbestos free.					

Is there a requirement for an asbestos management plan?

If no, the 'Asbestos Free' certification should be seen by the inspector. If yes, is the management plan in place, with marked general arrangement plans available?

Are warning signs displayed and an asbestos log maintained?

Check for awareness of the appropriate legislation in respect of asbestos onboard.

6.21	Are procedures for stowage and handling of chemicals and flammable/combustible materials in place and being consistently applied?	Yes X	No	NA	NS
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Comments

MSDS sheets were available but not all located at storage locations e.g. sack storage area. Right to Know Information Sites were sighted around the rig and all necessary information including MSDS was located there. PPE was available at the work locations. Stowage of materials was seen to be adequate and the mud sack stowage area was generally tidy although a number of wooden pallets had some fork lift damage. The industry standard HMIS was in use on the rig.

Copies of material safety data sheets should be at storage locations.

Does the vessel have access to specialist advice?

Personal safety equipment should be available and locations clearly defined.

Location of cleaning stations should be identified.

Risk assessment should have been conducted.

Warning notices should be displayed.

Secure stowage should be provided where required.

Chemicals should be stowed away from ropes or other materials that might be contaminated in the event of spillage.

Incompatible chemicals should have separate stowage.

6.22	Is the vessel provided with its own safe means of access?	Yes	No	NA X	NS
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Comments

The rig was on location at MSC 7-27. Access was provided by helicopter or via Billy Pugh basket transfer.

Over-side accommodation ladders should be available for use, free from defect and properly rigged.

Gangway should be available for use, free from defect and, when in use, should be properly rigged and attended with a safety net and a life buoy with lifeline placed near the gangway or accommodation ladder.

Pilot ladders should be available for use, free from defect and properly rigged. If not in use, ladders should be properly stowed to minimise damage.

6.23	Does the SMS specifically address hazards associated with slips, trips and falls?	Yes	No	NA	NS
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Comments

See CMID Annexe

Note if a programme to detect and minimise hazards is in force;

Note if hazards that cannot be eliminated are clearly marked;

Comment on any apparent hazards that have not been eliminated or marked;

Note if personnel are wearing footwear contradictory to signage in their location;

Check for the following hazards:

- ◆ unsecured, buckled or missing gratings or plates;
- ◆ missing handrails or unguarded drops;
- ◆ worn treads on ladders;
- ◆ spillages of liquid left untreated;

- ♦ showers without grabrails or non-slip deck surfaces.

6.24	Is there evidence that safe working practices are being consistently applied to machinery spaces?	Yes	No	NA	NS
	Comments See CMID Annexe				

Are safety areas inspections conducted that include machinery spaces?

Are warning signs in place indicating where hearing protection is required?

Comment on whether machinery space PPE requirements are specified and complied with;

Engine room machine tools should have eye protection measures in place;

Guards should be in place on exposed shafts/gears;

Are emergency escape routes clearly marked, unobstructed and well lit?

Engine room emergency stops/shut-offs should be clearly marked and regularly tested with tests recorded;

Is an engineer's call alarm fitted and is it in good order and tested regularly and the results recorded?

Gauge glass closing devices on oil tanks should be of self-closing, fail-safe type;

Self-closing devices on double bottom sounding pipes should be operational;

Is there a set of chief engineer's standing orders posted and countersigned?

Does the chief engineer maintain a night order book? If so, this should be checked as providing instruction for situations likely to be encountered;

Has the chief engineer written his own standing orders and are night orders being completed? Have the watch engineers countersigned the chief engineer's standing and night orders as read and understood?

Watertight doors should be in full working order and operating/warning notices posted.

7 Security

7.1	Is the vessel required to have an approved Ship Security Plan that meets ISPS requirements?	Yes X	No	NA	NS
Comments DNV Class approved Security Plan is onboard. Last annual review of the plan was December 2008. Last internal audit of ISPS was June 2009					

ISPS Code applies to the following types of ships engaged on international voyages:

- ◆ passenger ships, including high speed passenger craft
- ◆ cargo ships, including high-speed craft, of 500 gross tonnes and upwards
- ◆ mobile offshore drilling units.

Verify a valid International Ship Security Certificate is being carried onboard.

(Note: Inspectors are not authorised to see individual ship security plans and should not request to view them.)

Confirm that an onboard security review has been conducted in the last twelve months by the Company Security Officer and the Ship Security Officer to ensure that the plan is aligned with operational requirements in the area of vessel operation.

If no, go to question 7.2 only; if yes go to question 7.3 onwards.

7.2	If the vessel is not required to have an approved Ship Security Plan because of vessel's tonnage or trading area, are there security procedures in place?	Yes	No	NA X	NS
Comments N/A					

If a vessel is not required to have a Ship Security Plan, verify that security procedures are in place onboard covering:

- ◆ company security obligations
- ◆ Company Security Officer or representative
- ◆ vessel security obligations
- ◆ Vessel Security Officer
- ◆ Ship Security Plan
- ◆ responding to a security incident
- ◆ reporting and follow up of security incidents
- ◆ port and vessel operations
- ◆ visitor management
- ◆ restricted or controlled areas
- ◆ training, drills and exercises.

7.3	Is there an appointed Ship Security Officer and Company Security Officer?	Yes X	No	NA	NS
Comments The Chief Officer is the designated SSO. Gary Butler is the nominated CSO. Roles and responsibilities are reported to be included in the SSP.					

Verify there is a company appointed Security Officer. *All vessels are required to have an officially appointed Ship Security Officer.*

Verify that the Ship Security Officer has been formally trained and certificated for ISPS Ship Security Officer roles.

Verify roles and responsibilities of Company Security Officer are documented and defined.

Verify that roles and responsibilities of Ship Security Officer are documented and defined.

Verify that the company security reporting responsibilities documented and clearly defined.

7.4	Does vessel have a ship security alert system installed?	Yes X	No	NA	NS
<p>Comments</p> <p>It is confirmed that a ship security alert system is fitted</p>					

Confirm date of last test.

7.5	Does the Ship Security Officer maintain security records onboard?	Yes X	No	NA	NS
<p>Comments</p> <p>Reported that CSO, Gary Butler is in regular communication. This is recorded in the SSP as applicable. No security incidents have been reported. SSO has received shore based training and has STCW 95 amendment to Certificate of Competency reflecting this. Additionally the current Master has also undergone shore based SSO training. Security drills records are maintained in GRS and hard copy format. Declarations of security folder maintained by the Chief Officer on the bridge. Last security drill conducted 10 August 2009 and related to a suspect package</p>					

Verify that the SSO maintains records of communication made with regards to the following;

- ◆ records of communications with Port Facility Security Officers
- ◆ records of communications with Company Security Officers
- ◆ declarations of security
- ◆ details of security incidents
- ◆ details of security training
- ◆ details of security drills.

7.6	Is the ship security operating level clearly indicated to all personnel?	Yes X	No	NA	NS
<p>Comments</p> <p>MARSEC levels are displayed on the bridge, transit room and outside the galley. The MARSEC placards identify overview of security measures in place. At MARSEC level I no formal recording of security rounds is undertaken.</p>					

Verify that ship operational security level is clearly communicated to all personnel and how.

7.7	Are personnel joining or visiting the vessel given a security induction?	Yes X	No	NA	NS
<p>Comments</p> <p>The rig was at MARSEC level I during the audit period hence no security induction was required.</p>					

Verify security forms part of vessel formal induction process.

Confirm security duties and responsibilities are covered in vessel formal induction process.

7.8	Does the vessel have specific port security procedures covering visitors, storing and vessel gangway watchkeeping requirements?	Yes X	No	NA	NS
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Comments

The rig was offshore and transit of staff was controlled via the helideck operations. Marsec 1, 2 and 3 have limits up to 100% baggage search as detailed in the SSP. An arrival and departure log is maintained in the transit room.

Is a visitors' log maintained and comment on where this is located when the vessel is in port?

Confirm that security badges are issued to all visitors while the vessel is in port.

Confirm that a gangway watch is maintained.

Confirm that random searches of visitors' baggage are conducted.

Is there signage at the gangway?

7.9	Is security considered as part of the vessel passage planning requirements?	Yes	No	NA X	NS
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Comments

The rig does not transit in high risk areas and does not undertake voyages to ports.

Confirm that security is considered as one of the critical parts of vessel passage planning requirements.

Verify that high risk security areas are marked on charts as part of the passage planning process.

Verify the company has security procedures for transit through high risk security areas.

8 Crew Management

8.1	Based on a random sample, is the data in the crew qualification matrix accurate?	Yes X	No	NA	NS
Comments The most recent update of the training matrix was reviewed and understood to be accurate. A number of crew were questioned on their training and as far as can be perceived, the matrix was accurate. A percentage was given for the number of training courses completed, both for Transocean OJT and non OJT requirements.					

Review data in crew qualification matrix. See Section 8.

8.2	Is the safe manning certificate signed and stamped by the relevant flag state?	Yes X	No	NA	NS
Comments The Safe Manning Certificate is displayed and signed off by Marshall Islands delegate as Flag State Authority. The Certificate was issued on the 29 December 2004					

Note actual number of crew and compare with safe manning certificate.

8.3	If the Master has been promoted within the last 12 months, did he/she receive appropriate pre-command training?	Yes X	No	NA	NS
Comments The current Master has been promoted within the last 12 months. He has 5 years of experience including SDPO and Chief Officer. No formal succession plan was utilised and hand over was undertaken while serving as Chief Officer under the previous master.					

State training given.

Discuss with Master his/her previous training and experience.

8.4	Are adequate personnel on board to perform anticipated marine operations?	Yes X	No	NA	NS
Comments The marine staff on the bridge is considered satisfactory with operations relating to DP and vessel management system function. Responsibility for the vessel management system operational command is transferred and logged between the CCR and the bridge. The DP department are also permit administrators which can interfere with the day to day marine operations. The rig is fitted with a DP simulator and joystick rig handling can be simulated. The two SDPO's have experience of drill ships as well as this unit. They hold BCO licenses but do not hold STCW qualifications. A Chief Officer and Master are carried with the Chief Officer working days as well as the Master. The Master and Chief Officer have been assigned to the rig several years and both have full marine licences. Due to the control transfer the ECR can be unmanned when operations are controlled from the bridge vessel management system. The ER is manned with a Second Engineer and also a Third Engineer. This team reports directly through to the maintenance supervisor who holds a MODU Chief Engineer's certificate.					

Comment on the watchkeeping arrangements. How are the bridge and engine room watches manned when the vessel is operational?

Review the ship handling experience of relevant officers.

8.5	Does the vessel operator have a competency assessment process?	Yes	No X	NA	NS
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Comments

No competency assessment process was in place.

Comment on the type of scheme in use. Is the system compliant with STCW 95?

Review evidence of the competency scheme completion if available onboard and identify where the evidence is held, if unavailable.

8.6	Are GMDSS requirements met with regard to sufficient qualified personnel?	Yes X	No	NA	NS
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Comments

All bridge staff hold GMDSS qualifications.

Review as per attached current crew appendix and ensure that the nominated responsible personnel have valid certification.

8.7	Has provision been made to provide crew with medical and first aid training?	Yes X	No	NA	NS
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Comments

All deck officers, engineers, motormen, and anyone with coastguard marine credentials were trained in first aid. Floormen and dedicated stretcher handlers also had basic First-Aid training.

Review as per attached current crew appendix and ensure that the nominated responsible personnel have valid certification.

8.8	Are the crew appropriately qualified for the operations and equipment on board?	Yes	No	NA	NS
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Comments

See CMID Annexe

Note specialist qualifications, e.g. DPO, crane driver, FRC coxswain, rigging slinging and banksmen or other vessel specific requirements. Review as per attached current crew appendix.

8.9	Does the vessel operator have a policy to control hours worked and to minimise fatigue?	Yes X	No	NA	NS
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Comments

More than 14 hours then an MOC are required with authorisation from the Master.

8.10	Is there evidence to confirm compliance with the company policy and regulatory requirements controlling hours of work and periods of rest?	Yes	No	NA	NS
		X			
Comments					
No evidence was produced other than confirmation by the Master that this was the case.					

Review evidence of compliance.

Review any breaches and reporting/management follow up.

[illegible]

10 Life Saving Appliances

10.1	Are all survival craft operational and defect free?	Yes X	No	NA	NS
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Comments

LA Marine carried out an annual thorough examination of lifeboats during May 2009. The five yearly examinations were carried out on all boats at the same time. Lifeboat #1 was lowered and limit switches tested. The emergency winch stop button was tested while recovering and all functioned satisfactorily. Lifeboat #2 was inspected internally and found in acceptable condition. The engine was started on primary and secondary batteries and no defects noted. The rudder was function tested and the crew were questioned on the operation of the release hooks and emergency steering. A good knowledge of these systems was exhibited. SOLAS VHF radios are maintained, three are located on the bridge and three in the ECR.

Lifeboats should be ready for immediate use. Internally they should be clean, dry and tidy.
 All small equipment should be secured and stored in lockers or watertight containers as appropriate.
 Large equipment should be suitably secured.
 All equipment should be readily accessible, including medicines not stowed on board.
 Contents of lockers should be clearly identified.
 Communications equipment, where fitted, should be operable.
 Perform a random check to ensure that food and water, and pyrotechnics are in date.
 Lifeboat operating instructions should be prominently displayed.

10.2	Are survival craft planned maintenance tasks up to date?	Yes X	No	NA	NS
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Comments

Routine inspections, including weekly checks, are performed in accordance with RMS II maintenance routines. On load releases gear and davit winch inspections are carried out by third parties on an annual basis. Weekly drills are conducted which include the lowering of the lifeboats

Lifeboats should have been lowered as appropriate for the lifeboat type.
 Engines and electrical equipment should be tested.
 Lowering equipment and associated items should be operational and defect free.
 Review any outstanding planned maintenance tasks.
 Is there a maintenance and test schedule for lifeboat on-load release gear?

10.3	Are all life rafts available for immediate use?	Yes	No	NA	NS
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Comments

See CMID Annexe

Casings should be in good condition.
 Are life rafts stowed as per the LSA plans?
 Boarding ladders should be in good condition (check for missing steps, rope deterioration and lashings where required).
 Hydrostatic releases, if fitted, should be correctly attached, in good condition and in date.
 Life raft operating instructions should be prominently displayed.

10.4	Are all life raft planned maintenance tasks up to date?	Yes X	No	NA	NS
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Comments

RMS II has maintenance checks included for the liferaft davits and associated equipment. Five yearly load tests certification was available along with the wire rope certificates. The liferaft certificates for annual service were found all in order.

Review any outstanding planned maintenance tasks.

Life raft should have a valid inspection certificate.

A davit life raft launch exercise should be conducted every six months.

10.5	Are muster lists posted and correct?	Yes X	No	NA	NS
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Comments

Muster lists are posted at the muster locations and also on the bridge. Station bills are posted throughout rig. Adequate signage for muster points is in place

Muster lists should be displayed and up to date; verify accuracy of muster lists against current POB.

Muster points should be clearly identified.

10.6	Are immersion suits available?	Yes	No	NA X	NS
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Comments

Formal flag state exemption is in place due to rig operating location (32°N- 32° S)

Where required, are there sufficient numbers and sizes of immersion suits for the crew?

10.7	Is the man overboard/rescue boat, where fitted, operational and defect free?	Yes X	No	NA	NS
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Comments

Lifeboat #2 is used as the man overboard boat. Last man overboard drill was conducted on 19 April 2009 which is outside the Transocean required 90 day frequency. Fuel is transferred using a portable Tote tank; adequate arrangements are in place for onboard fuel tanks. Fire and boat drills are held on a weekly basis. The last drill held was held on 13 September 2009.

Crew should have received onboard training in MOB use and hazards to SOLAS requirements.

Personal protective equipment to be provided for all crew including head protection.

Check condition of spare fuel storage cans/tanks and suitability of storage location.

Launching apparatus should be operational and defect free.

Communications equipment should be operable.

Drills should be held at regular intervals; comment on date of last drill.

10.8	Are training manuals onboard describing LSA equipment and its correct operation?	Yes X	No	NA	NS
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Comments

SOLAS training manuals are available. These are held on the bridge.

Do the manuals provide equipment-specific information relevant to installed equipment?

Are manuals in a language understood by vessel personnel?

10.9	Are ship-specific life-saving equipment maintenance instructions available?	Yes X	No	NA	NS
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Comments

Life saving apparatus (LSA) maintenance manuals are available on the bridge

Are the manuals in a language understood by vessel personnel?

11 Fire Fighting Appliances

11.1	Is the vessel provided with fixed fire fighting equipment in accordance with applicable regulations for vessel type?	Yes X	No	NA	NS
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Comments

The fire fighting systems have not changed since the last marine assurance inspection. With the exception of fire pump #1 they are reported as operational

Fire mains, pumps, hoses and nozzles should be available for use and defect free. Conduct physical inspection of a random number of hoses.

Emergency fire pump should be fully operational. Starting instructions should be clearly displayed.

International ship/shore fire connection should be readily available and its location clearly marked.

Operating instructions for fixed systems should be clearly displayed.

Crew should be familiar with operation of fixed systems.

Isolating valves in fire/foam system lines should be clearly marked and operational.

11.2	Is all fire fighting equipment available for use and defect free?	Yes	No X	NA	NS
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Comments

Fire pump #1 in the starboard engine room is out of service. The mechanical seal has failed and leaks profusely. Random checks of hoses were conducted and two hoses were tested simultaneously using fire pumps #1 and #2 in turn. The helideck foam pump was tested successfully using the helideck monitors with satisfactory throw and delivery pressure. The fire extinguishers, hoses, fireman kits and breathing apparatus were found in satisfactory condition. The last air quality tests were carried out in July 2009, and are now overdue (A monthly PM routine). The rig has nineteen 10 minutes emergency escape sets. Adequate BA sets were available at the fireman's lockers with spare bottles available. The rig has a BA air compressor for recharging discharged bottles.

Portable fire extinguishers should be in apparent good order with operating instructions clearly marked.

Firemen's outfits including breathing apparatus should be in good condition and ready for immediate use.

Breathing apparatus sets should be ready for immediate use with fully charged air bottles.

Sufficient fully charged spare air bottles should be available.

Is a BA air compressor available?

Note last air quality check.

Are EEBDs available, charged and crew trained?

11.3	Are records of fire fighting equipment maintenance available?	Yes X	No	NA	NS
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Comments

Records for fire equipment planned maintenance are available in the RMS II planned maintenance system. The last third-party fire equipment inspection was carried out by Total Safety in March 2009. The portable CO₂ bottles are due to be sent for hydrostatic inspection in 2010.

Inspection records and inventory lists should be maintained and kept up to date.

Are records available to show that samples of foam compound have been tested at regular intervals?

11.4	Are fixed fire and gas detection systems fully operational and tested regularly?	Yes	No X	NA	NS
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Comments

Random fire alarm detectors were tested in the accommodation and in the machinery spaces. Combustible gas and H₂S detectors were tested in the accommodation intakes and in the mud pit intakes, all of which were found to operate satisfactorily. There is presently a defect list of seven fire alarm sensors and two LEL combustible gas sensors that are not operational and require repair. The fire and gas, and ESD control panel is presently in alarm condition on both the fire and gas and ESD, with both systems also indicating an override condition.

Establish operational condition of fire detection and alarm systems throughout vessel.

If a system to monitor flammable atmospheres in non-cargo spaces is fitted, are recorders, alarms and manufacturers' test procedures in order?

The inspector should comment if portable monitoring equipment is used, detailing the system of periodic sampling and record keeping.

11.5	Are vessel personnel familiar with the operation of fire fighting, life saving and other emergency equipment?	Yes	No X	NA	NS
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Comments

The rig regularly undertakes fire drills and monthly maintenance is carried out on the fire fighting equipment. Crew familiarisation was considered satisfactory.

Note last fire drill.

Relevant vessel personnel to be familiar with the following:

- ◆ donning and use of breathing apparatus
- ◆ location and operation of ventilation fans emergency stops
- ◆ location and operation of ventilation isolation dampers
- ◆ operation of main and emergency fire pumps
- ◆ operation of fixed fire fighting systems
- ◆ emergency fuel shut-off system
- ◆ operation of emergency steering gear
- ◆ evacuation escape routes.

11.6	Are measures in place to effectively isolate ventilation to enclosed spaces, e.g. engine room, accommodation, galley, storerooms?	Yes	No	NA	NS
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Comments

See CMID Annexe

Vent fan stops should be operational (spot check) and clearly marked.

Closing devices should have maintenance and testing programmes in place.

11.7	Are vessel specific manuals and plans for fire-fighting equipment available and up to date?	Yes X	No	NA	NS
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Comments

The displayed LSA fire and life saving plans were updated in March 2008 and the Station Bill was last updated in June 2009. The rig has technical manuals for the safety equipment. The safety equipment systems are described in the marine operations manual, which was last updated 5 years ago after the Helideck capacity was uprated (ABS Rev2 9 December 2004).

Note last updating of plans.

Do all plans have the same revision number?

Are ship-specific fire training manuals available in a language understood by crew?

Are ship-specific fire safety operational booklets available?

Are fire control plans exhibited within the accommodation and available outside the accommodation?

12 Pollution Prevention

12.1	Are SOPEP/SMPEP drills held at regular intervals?	Yes X	No	NA	NS
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Comments

SOPEP drills are conducted on 90 day cycle in line with Transocean policy.

State interval and date of last drill.

Describe the last drill and who was involved.

12.2	Are arrangements in place to prevent any spillage entering the water?	Yes X	No	NA	NS
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Comments

SOPEP spill kits are deployed at key locations including bulk loading stations. Random kits were inspected and absorbent materials and protective equipment was in place. Scupper plugs were in place to provide containment in the event of a spill. Due to heavy rain scupper plugs were not in use to allow main deck to drain.

Describe the last drill and who was involved.

What pollution prevention equipment is available for immediate use?

Is there a bunkering procedure?

Anti-pollution warning notices should be posted.

Unused bunker pipeline connections, drains and vents and unused gauge stems should be suitably blanked or capped.

Suitable containment should be fitted around hydraulic deck machinery.

During fuel transfer operations, scuppers should be plugged or dammed.

Are there arrangements in place to prevent spillages from tank vents?

Bilge overboard valves should be suitably marked. Specific warning notices should be posted to safeguard against the accidental opening of bilge overboard discharge valves. Valves should be lashed and sealed.

Comment on evidence of any leaks noticed during inspection.

12.3	Is the bilge oily water separator/filtering system in good working order?	Yes X	No	NA	NS
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Comments

Both the port and starboard oily water separators are operational and both units being successfully tested. The PPM meter calibration cycle was tested and noted as working. Bilge water and oil residue discharges (dirty oil via tote tanks) are logged in the oil record book

Confirm that the OWS is functional.

Comment on last test and any OWS planned maintenance outstanding.

Are notices posted to warn of the dangers of the accidental opening of the overboard discharge valve?

Has the OWS been fitted with an automatic stopping device?

12.4	Does the vessel have a waste/garbage management plan?	Yes X	No	NA	NS
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Comments

The garbage plan was issued in June 2009 and appeared thorough. The plan was located on the bridge and covers waste oil and used oil, oily rags, filters and absorbent pads, Paint waste, thinners and solvents, scrap metal, food waste, domestic waste, medical waste. The biggest waste disposal issue on the rig was paper. The plan contains procedures and responsibilities and records were being maintained. A garbage management record log is maintained by the Chief Officer. This is signed off by the Master.

Comment on whether a plan is available onboard.

If available, comment on where the plan is located and who has responsibility for compliance.

Does the plan contain procedures for the collecting, storage, processing and disposing of garbage?

Are the garbage disposal records complete and up to date?

12.5	Does the vessel have a ballast water management plan?	Yes X	No	NA	NS
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Comments

A ballast water management plan is maintained by the Chief Officer. This details Transocean's practices and procedures. A ballast water reporting form is completed and plan is implemented. The last ballast report form was dated 18 May 2009 and was submitted online.

Is the plan approved by the relevant flag state or classification society?

12.6	Are oil record book(s) correctly completed and up to date?	Yes X	No	NA	NS
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Comments

There is a Republic of the Marshall Islands oil record book which was started on 22 August 2009. The last entry was on 15 September 2009, where 9.3m3 of bilge water was discharged via the oily water separator unit. There were no reported pollution incidents during the last 12 months. There are two bilge water holding tanks in the port aft and starboard aft columns.

Are all the activities signed off by the person performing the task and is each completed page endorsed by the Master?

If any pollution incidents have occurred in the last twelve months, note how they were closed out and any preventative measures that were put in place.

Do the sludge and bilge tanks designated in Form B of the IOPP Certificate and those listed in the Oil Record Book Part I, agree?

13 General Appearance

13.1	Are there arrangements in place to address the general condition, visual appearance and cleanliness of the hull?	Yes X	No	NA	NS
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Comments

Where hull condition could be observed from the main deck it was found in acceptable condition. Localised corrosion is apparent at man hole covers and also at protrusions on the shell plating. There is damage to the emergency column exit stairs and back scratches etc. There were no other reported or sighted hull defects.

Hull should be visibly free of extensive coating breakdown.

Hull should be free of fractures or indentations which may significantly weaken the structure or affect the watertight integrity.

Are all hull markings, namely vessel name, loadlines, draft marks and warning signs, correctly placed and legible?

13.2	Are there arrangements in place to address the general condition, visual appearance and cleanliness of the weather decks?	Yes X	No	NA	NS
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Comments

Walkways were clearly marked and non skid paint used as appropriate. Lighting of walkways was found of a reasonable standard on the main deck. Lay down on deck includes the use of portable mats and these were found to be in place as required

Inspection of weather decks should include checking for any evidence of wastage, structural problems, collision contact or distortion from heavy weather on fore end of accommodation.

The deck should be well lit.

Chain locker doors should be firmly battened down.

Moorings and other equipment should be securely stowed.

Forecastle space, lockers and holds should be free of water.

Manual sounding points should be identified and easily opened and closed.

Non-slip surfaces should be provided on external walkways.

Ladders and walkways should be in good condition.

Check condition of wood sheathing and T-bars.

13.3	Are all deck openings, including watertight doors and portholes, defect free and capable of being properly secured?	Yes	No	NA	NS
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Comments

See CMID Annexe

Bridge windows should be effectively sealed and, where vulnerable to wave action, provided with shutters.

Are vents and air pipes on freeboard deck in good condition and fitted with closing devices to prevent ingress of water?

Closing devices, packing material and locking arrangements should be complete and free of defects.

Are closing devices included in the planned maintenance system?

Securing arrangements of ends of vessel's own anchor chains, when visually accessible, are unobstructed.

Chain locker doors should firmly battened down.

13.4	Are there arrangements in place to address the general condition, visual appearance and cleanliness of the accommodation?	Yes X	No	NA	NS
Comments The accommodation was maintained to a satisfactory standard					

Alleyways should be free of obstructions and areas of low headroom to be properly marked.

All exits, including escape routes, should be clearly marked.

Fittings such as central radio and TV antennas, lights, emergency lighting, domestic piping and isolation valves, should be identified and in apparent good physical condition.

Check for any improvised rigging of radio/TV aerials or antennas.

13.5	Are food storerooms, handling and refrigerated spaces, galleys, mess rooms and pantries clean and tidy?	Yes	No	NA	NS
Comments See CMID Annexe					

Test personnel alarms for refrigerated spaces.

Gratings or duckboards, if fitted in storerooms and refrigerated spaces, should be free from defects.

Are galley, fridge and storeroom decks clean, dry and free from defects?

Food storerooms and refrigerated spaces should be in a hygienic condition. Carry out random check of food stocks to ensure stock is being rotated and is not out of date.

Refrigerated spaces should be maintained at an appropriate temperature: frozen meat -15/-18°C, fish room -18/-25°C, veg. +2/+4°C, flour <8°C, deep freeze -18°C.

Galley extraction grills should be clean and free from grease.

Galley fire extinguishing systems should be available for immediate use and free of defects. The catering workforce should be aware of locations and means of operation.

Crockery should be free from defects which may contain contamination.

Food preparation areas should be tidy and clean.

13.6	Are galley personnel trained in food hygiene practices?	Yes X	No	NA	NS
Comments Galley personnel had basic food hygiene training and the standards of hygiene in the galley appeared satisfactory.					

State any training given.

13.7	Is there evidence to show that the vessel is free of animal or insect infestation?	Yes	No	NA X	NS
Comments Not Applicable					

13.8	Are procedures in place to address the potential for animal or insect infestation?	Yes	No	NA X	NS
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Comments

Not Applicable

13.9	Is the hospital clean and tidy?	Yes	No	NA	NS
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Comments

See CMID Annexe

Note how medical stores are verified and checked.

Hospital should be ready for immediate use.

First aid kits should be readily available.

Hospital alarm should be in working order.

Suitable stretcher for marine use should be available.

Oxygen resuscitation equipment should be available for immediate use where fitted.

13.10	Is the vessel lighting sufficient for the operations being conducted?	Yes	No X	NA	NS
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Comments

The lighting, including the main deck, was generally acceptable however no record of a lighting survey was available. The lighting inside the starboard-aft stairwell from the main deck was very poor.

Has a lighting survey been conducted onboard?

Has the lighting survey addressed all areas onboard including accommodation?

Are arrangements in place to provide suitable levels of lighting to cover all vessel operations, in particular vessel access, work at height, safe navigation in all parts of the vessel, highlighting of hazards?

14 Bridge, Navigation and Communications Equipment

14.1	Is the vessel provided with operator policy statements, instructions and procedures with regard to safe navigation?	Yes X	No	NA	NS
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Comments

The volume of Field Operations Manual covers the expectations and information required for safe navigation and relates to the specific navigational publications and information required. The current hard copy bridge version of this manual has been superseded as has the electronic version contained on the rig network. The latest version was available on rig central

Review the policies and procedures to ascertain if the duties of the watch standing officers are clearly defined. A copy of the policies and procedures should be on the bridge.

Does the policy cover bridge team management?

14.2	Does the vessel have written procedures for entry into a 500-metre zone?	Yes X	No	NA	NS
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Comments

Field Operations Manual HQS-OPS-HB-05 details corporate requirements for 500m zone entry. The Deepwater Horizon has a 500m zone check list which is completed by the vessel entering the 500m safety zone. Records were provided of previous check lists. (Ref Simon Bankston 5/09/09)

Procedure should detail what tests are conducted prior to entry.

A checklist should be in use to assist the conduct and recording of tests.

Results of tests should be reported to the appropriate installation.

14.3	Are vessel manoeuvring characteristics clearly displayed?	Yes X	No	NA	NS
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Comments

Rig manoeuvring characteristics are displayed on the starboard side of the bridge bulkhead. They cover transfer functions for transit and operational drafts

Vessel manoeuvring characteristics should be displayed on the bridge.

14.4	Are auto, manual and emergency steering changeover procedures displayed?	Yes X	No	NA	NS
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Comments

These are not displayed as a placard at either thruster control desk. However there is a TSTP relating to the emergency transfer between Main SDP 32 and back up SDP 12.

14.5	Is the deck logbook fully maintained in ink, both at sea and in port?	Yes X	No	NA	NS
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Comments

A hard copy deck log is maintained on a daily basis. Signatory sections are available for the Master and Chief Officer. Entries are in ink

Logbooks books should be checked to ensure that rough logs in pencil are not being maintained and that the logbooks are up to date, with entries properly made in ink.

14.6	Has the Master written his/her own standing orders and are night orders being completed?	Yes X	No	NA	NS
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Comments

A night order book is available on the bridge. The last entry was dated 14 September 2009.

Standing order and Master's night order book should be checked to ascertain that all officers are certain as to their responsibilities; whether standing orders issued by the operator are endorsed by the Master and signed by all deck officers, and whether the Master's specific instructions are supplemented by instructions contained in the night order book pertaining to situations to be encountered.

14.7	Have the deck officers countersigned the Master's standing orders and night orders as being read and understood?	Yes X	No	NA	NS
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Comments

Within the night order book signed standing orders are in place and these have been signed by the current DPO's and SDPO's

14.8	Is the standard equipment, including bridge, communications and navigation equipment as listed in SOLAS available for use and free from defects?	Yes	No X	NA	NS
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Comments

A GPS input to the Inmarsat C system was missing causing alarm condition. The Doppler radar is non functional, DGPS 2 had a failed Trimble receiver and UPS 11 failure probably caused by loose cabling on the bridge caused a failure of gyro 3 output and loss of DGPS2.

Note any deficiencies in equipment.

14.9	Has a system been established to ensure that nautical publications, charts and information are both onboard and current?	Yes X	No	NA	NS
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Comments

Week 37 noted as the last correction. A file is maintained of publications and chart corrections, this includes the on line notice to mariners etc

Determine the system used to ensure that light lists, tide tables, pilot books, nautical almanac, charts catalogue and ship's routing are the current editions.

Latest notices to mariners should be onboard and dated within previous two months.

Charts in use should be appropriate for the port.

Charts should be provided for ports of refuge.

14.10	Is a comprehensive passage plan available for the previous voyage and did it cover the full voyage from berth to berth?	Yes X	No	NA	NS
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Comments

There is a Deepwater Horizon voyage plan available for the recent transit from Keithly Canyon to MS 727. The system in use follows standard operating practice with regards to waypoints/, under keel clearance and navigational observations.

Note the system of passage planning in use and how the passage plan is produced, whether this is manually or by computer.

14.11	Is a comprehensive passage plan available for the current voyage and does it cover the full voyage from berth to berth?	Yes	No	NA	NS
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Comments

See CMID Annexe

Passage plan should be prepared by an appropriate officer and verified by Master;
Passage plan information should be readily available for watchkeepers' use.

14.12	Is gyro and magnetic compass error log maintained and up to date?	Yes X	No	NA	NS
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Comments

Compass error book is maintained, the last entry was dated 15 September 2009 (gyro #2). Deviation card is displayed on the bridge and dated 16 January 2001

Evidence should be available to show that periodic checks of navigational equipment are made at sea.
Deviation curve(s) should be displayed.

14.13	Are navigation warnings and weather forecasts available?	Yes X	No	NA	NS
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Comments

The rig is fitted with a Furuno NX 700 Navtex. This was checked and found to be fully functional. A weather Fax was also in place (Furuno DFAX FAX 207).

Note source, i.e. Navtex, weather facsimile or others.

14.14	Is radio and communications equipment available for use and free from defects?	Yes	No X	NA	NS
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Comments

Call sign and ship station identity is displayed at the GMDSS station. Flow charts for the operation of the DSC distress alert and Masters Guidance for Rigs in Distress is located adjacent to the GMDSS station. A listening watch is maintained on VHF 16/65. The power supply unit for the GMDSS system has an AC failure light on. It is not known why this failure has occurred. The Inmarsat C Operator terminal is constantly in alarm with external Nav equipment failure alarm displayed. This is probably as a result of the Bridge Trimble receiver that has failed. The GMDSS SSB console display is displaying corrupted data. GMDSS Handbook 2nd Edition is available on the bridge

Handbook for GMDSS operations should be available.

Are instructions for operating the digital selective calling (DSC) and satellite communications equipment in an emergency clearly displayed?

Are the vessel's call sign and Inmarsat ship station identity clearly marked on the radio installation?

Is a continuous listening watch maintained on VHF channel 16?

Are officers aware of the requirements for position updating on two-way communications equipment?

Are the periodical tests of communications equipment being carried out as required?

14.15	Is a satisfactory maintenance programme for radio and electronic equipment in place?	Yes X	No	NA	NS
	Comments NSSL shore based maintenance contract is in place with expiry dated 1 February 2010. Monthly checks are recorded in RMS II relating to Sart/Epirbs and battery checks etc				

Outline the maintenance programme followed, e.g. onboard maintenance by competent person or by maintenance contract, etc.

14.16	Are GMDSS logs maintained and up to date?	Yes X	No	NA	NS
	Comments An MCA type GMDSS log book is maintained. Last entry was dated 15 September 2009. Records of daily checks are maintained.				

Verify that the GMDSS log is being maintained.

15 Machinery Space

15.1	Are all items of main, auxiliary and emergency plant reported to be fully operational?	Yes	No X	NA	NS
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Comments

The following marine equipment is either down or awaiting repair.

- Main engine #1 – common rail engine driven fuel pump not operational, awaiting new parts for repair.
- Thruster T2 has a current imbalance on the inverter above 50% speed.
- Engine #4 air start compressor – drive motor down – awaiting new motor.
- Water maker #1 – PPM meter not working – waiting on spare unit.
- Sea water pump #2 – motor shaft broken – awaiting spare.
- Sea water pump #3– Top pump shaft seal leaking (still in operation)
- Sea water pump #4– Motor dead – awaiting new spare motor.
- Sea water pump #5 – Cracked volute casing - awaiting new spare – (still in operation)
- Sea water pump #6 - Pump not operational – waiting on new pump.
- Sea water pump #7 – Bottom seal leaking (still operational)
- Sea water pump #8 – Motor trips on over current - requires attention.
- Drill water pump #4 – Mechanical seal leaking.
- Ballast pump #1 – Top mechanical seal leaking.
- Ballast pump #4 – Bottom pump seal leaking.
- Fire pump #1 (port engine room) – out of service shaft mechanical seal has failed.
- Port forward ballast pump - suction valve actuator leaking
- Seawater pump #5 – missing suction valve actuators

In addition there are numerous lube oil leaks on the main engines. The bilge transfer pipeline from the starboard aft holding tank to the bilge separator tank, in way of the utility duct in the starboard aft leg column is holed. Fluid is leaking into the duct void space and requires to be repaired to stop further leakage. Rig piping systems are colour coded to demote service.

Record those items of machinery not operational, and why.

All fluid transfer and storage systems, e.g. hydraulic oil, oil fuel, cooling water and water supplied for domestic purposes, should be leak-free.

All valves and pipelines should be identified by tagging, colour coding or similar.

Is the vessel provided with operator's instructions and procedures?

15.2	Is there a planned maintenance system in use?	Yes	No	NA	NS
		X			

Comments

The rig has recently changed from the legacy Transocean maintenance system Empac to the GSF legacy system RMS II. Although personnel had been trained most were still coming to terms with the system. There was excessive overdue maintenance but most was drilling related. Notable overdue marine related maintenance concerned ballast valve system checks, Fire damper system checks, 24,000 and 12,000 hour main engine overhauls on #1 and #4 and the eight year thruster drive refurbishments. Manufacturer's manuals were available in both hard and electronic version in most cases. Maintenance records were generally complete but overall quality of reporting was poor.

Note type of system in use.

Comment on the number of routines outstanding.

Manufacturers' manuals should be onboard and appropriate for the plant fitted.

All manufacturers' manuals should be in a language understood by the engineering workforce.

Is an inventory of spare parts being maintained?

Do records indicate the regular testing of equipment?

15.3	Is the engine logbook fully maintained in ink, both at sea and in port?	Yes	No	NA	NS
		X			
Comments					
There is a hard copy engine room log maintained which is hand written in ink. Information is also recorded electronically to the rig server.					

Logbooks should be checked to ensure that they are up to date with entries made in ink.

Compare entries in the main logbook with entries in the rough log.

15.4	Are hot surfaces and exposed lagging free of any evidence of fuel, hydraulic or lubricating oil?	Yes	No	NA	NS
		X			
Comments					
No change since last marine audit, a regular watch is also undertaken of the engine rooms.					

All lagging should be free from oil, grease or other flammable contaminants and maintained without exposed hot surfaces.

Is there a programme for inspection of lagging?

Check that potential sources of ignition in the vicinity of fuel, hydraulic and lubricating oil pipes are properly insulated and shielded against spray should a pipe or hose fracture.

15.5	Are main switchboard, generators and critical electrical equipment protected against water spray?	Yes	No	NA	NS
		X			
Comments					
No change since last marine audit, the fire main pipework passes above the main engine alternators					

Risk due to water spray in the event of failure of sea water pipes including fire mains and hydrants should be assessed. If main switchboard is not located in engine control room or other protective location, note in 'comments'.

Main switchboard and generators should be protected against water spray.

Insulated decking/grating to front and rear of switchboards greater than 220v should be in place and in good condition.

Electric motors critical to the propulsion or steering of the vessel should be protected against water spray.

15.6	Are emergency electrical power supplies fully operational?	Yes X	No	NA	NS
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Comments

The standby generator is not classified as an "emergency" generator and does not come on automatically when power is disrupted on the rig. The generator set was last run on 5 September 2009. In the old Empac planned maintenance system there was a monthly PM routine for testing the emergency generator on line. With the introduction of the RMS II maintenance system this procedure has not been transferred across to the new system. Transocean will need to reintroduce this procedure into the RMS II work plans planned maintenance system.

Emergency starting arrangements should be regularly tested and proved to be operational.

Instructions should be available to maintain/restore main plant in the event of emergency.

There should be records of equipment being regularly tested.

Emergency generator fuel tank should be fully charged.

Emergency generator should be tested regularly on load – last test?

Concise starting instructions for emergency generator should be clearly displayed.

Is there a 'black start' procedure and are personnel familiar with its content?

15.7	Is the bilge system operational?	Yes	No	NA	NS
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Comments

See CMID Annexe

Are the engine room bilge oily water pumping and disposal arrangements available for use?

Bilge system normal discharge should be via OWS without bypass and not directly overboard.

Are emergency bilge pumping arrangements ready for immediate use; is the emergency bilge suction clearly identified and, where fitted, is the emergency overboard discharge valve provided with a notice warning against accidental opening?

Bilge level alarms should be regularly tested and records maintained.

15.8	In the case of UMS vessels, are machinery alarms and engineer's alarm systems regularly tested with results recorded?	Yes	No	NA X	NS
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Comments

Not Applicable

Duty cycles to be clearly defined.

UMS alarms should be relayed to duty engineer's cabin and public spaces, e.g. mess room.

15.9	Is the steering gear/steering compartment free from defects?	Yes X	No	NA	NS
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Comments

The rig has DP controlled thrusters. The equipment has not changed since the last audit. The emergency steering for the thrusters is tested at arrival at the well and at departure from the well.

Emergency steering gear should have been tested quarterly and tests recorded – last test date?

Instructions for the changeover of steering gear from remote to local operation should be clearly displayed in steering flat.

All deck and engineer officers should be familiar with operation of steering gear in normal and emergency modes.

All steering gear hydraulic reservoirs should be charged to normal operating levels.

Communications with the bridge should be satisfactory.

The rudder angle indicator should be clearly visible at the auxiliary/emergency steering position.

Access to steering gear should be unobstructed.

The steering gear save-all should be free of spilt oil.

Are there duckboards in the steering flat?

15.10	Are all machinery spaces clean and free from obvious leaks?	Yes	No	NA	NS
		X			

Comments

The bilges of the starboard aft ballast pump room have water from the ballast pump #4 seal leaking, the port forward ballast pump room has water from ongoing repair to ballast pipe line and ballast pump #1. All thrusters and pump rooms were generally free from oil leakage, but thrusters #3 and #7 have slight leakage of gear oil at the upper drive shaft seal. Some oil accumulation and oil soaked absorbent matting was noted in engine rooms in way of various engine lube oil leaks.

Comment on general condition of machinery spaces.

15.11	Is the necessary technical information available for safe and efficient handling of bulk cargo and ballast?	Yes	No	NA	NS

Comments

See CMID Annexe

Are transfer systems for cargo and ballast (including bulk cargo) and associated monitoring and control systems pumps fully operational?

Ballast operations should be monitored and controlled to prevent tank overflow or over pressurisation.

Engineering drawings for vessel should be readily available onboard, legible and up to date.

Valves should be clearly identified.

16 Mooring and Lifting Equipment

16.1	Are mooring practices appropriate for the size of vessel?	Yes	No	NA	NS
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Comments

See CMID Annexe

Are certificates available for all mooring ropes and wires?

Are mooring lines flaked out to minimise tripping hazard?

Are mooring lines secured to bitts and not to drum ends?

Are spare mooring ropes available?

Is the vessel securely moored at berth with moorings arranged to take into account anticipated conditions?

Moorings should be tended regularly, especially at berths where there is a large tidal difference.

16.2	Is all mooring equipment available for use and defect free?	Yes	No	NA	NS
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Comments

See CMID Annexe

The inspector should assess the conditions of all mooring equipment, brakes, wires and lines. Note the date when brake bands were last inspected and whether a policy is in place for testing brakes.

Mooring ropes should be available for use and defect free.

Are they stowed out of direct sunlight?

Fairleads, rollers, bitts and chocks should be in available for use and defect free.

Deadmen and roller fairleads should be well greased and free to turn with little evidence of grooving.

Winch seatings and connections to deck should be sound.

Are appropriate stoppers available?

16.3	Are anchors, cables and securing arrangements available for use and defect free?	Yes	No	NA	NS
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Comments

See CMID Annexe

Anchor chain stoppers should be available for use and defect free;

Anchors should be cleared and ready for immediate use during port entry.

16.4	Does the company have a lifting equipment management system in place?	Yes X	No	NA	NS
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Comments

The rig has a limited lifting gear management system. There is no formally controlled lifting gear loft or locked lifting gear storage area. The larger spare lifting gear is stowed in the two aft columns, but this has open access and usage is not regulated. Most lifting equipment is stowed in open work areas ready for use. The rig has a lifting gear register maintained annually by third party inspection company with the last inspection carried out in August 2009. Any defective equipment is destroyed and replaced with new equipment during the inspection period.

Note system in use and system for quarantining equipment.

Is a colour-coding or alternative system in use to identify inspected lifting equipment?

Check that it is being adhered to, i.e. no evidence of wrong colour/non-coded equipment in use, that non-coded/wrong colour equipment is segregated and access to same denied.

16.5	Is there evidence of that the provisions of the lifting equipment management system are being adhered to?	Yes X	No	NA	NS
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Comments

Maintenance routines are included in RMS II for the various disciplines for the maintenance of lifting equipment. The crane operator completes a daily crane inspection report and also has periodic maintenance routines set out in RMS II. The mechanics and electricians also have their routines. A review of the past PM history files indicated that lifting gear maintenance is being adhered to.

Note how fixed lifting equipment is maintained.

Verify the programme for routine testing, i.e. start-up, daily, weekly and monthly checks.

16.6	Does the vessel have a certified cargo securing manual?	Yes	No	NA X	NS
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Comments

Non Applicable

Is the manual carried onboard certified by appropriate authority, i.e. classification society or flag state?

17 Construction and Stability

17.1	Is a survey report file maintained onboard?	Yes	No	NA	NS
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Comments

See CMID Annexe

Is the documentation available onboard? Information contained should include:

- ◆ previous repair history
- ◆ inspections by vessel personnel of structural deterioration and leakages detected in bulkheads and pipes
- ◆ ~~condition of coatings and/or corrosion prevention systems~~
- ◆ a summary of the results of the tank coating surveys, including date conducted and tanks inspected. Any deficiencies or areas of substantial corrosion should be recorded.

17.2	Is there an approved stability book?	Yes	No	NA	NS
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Comments

See CMID Annexe

Approved stability book should be available including damage stability.

17.3	Are procedures in place to govern vessel stability through all stages of the operation?	Yes X	No	NA	NS
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Comments

Ocean Motions stability software is used for the calculation of the intact and damage stability conditions. The calculation is carried out on a daily basis. The OS2 screen is used for monitoring stability. CDs are made as back up for the data files generated in Ocean Motions. The software is a recognised stability software programme and common to the Transocean fleet.

The officer in charge of ballast transfer operations should understand the number of tanks that may be slack for vessel to remain stable.

Note how the officer in charge can establish stability conditions without extensive calculations.

If stability calculation program is used, verify that it has classification society approval.

Are records kept of previous loading conditions and stability calculations?

18 Helidecks

18.1	Does the vessel have a helideck?	Yes X	No	NA	NS
Comments					
Yes					

If yes, answer questions 18.2 to 18.7.

18.2	Do onboard procedures address helicopter operations?	Yes X	No	NA	NS
Comments					
Yes, no change since our previous audit					

Is relevant regional helicopter operational guidance onboard, such as:

- ◆ ICAO Annex 14 & CAP 437
- ◆ UKOOA Guidance for the Management of Offshore Helideck Operations
- ◆ ICS Guide to Helicopter/Ship Operation
- ◆ operator procedures for helicopter operations and winching.

18.3	Is the helideck appropriately certified and approved?	Yes X	No	NA	NS
Comments					
BP Aviation visit conducted during August 2009 and ABS Approval for S92 operations dated 3 November 2004					

State in comments section what the certification covers including helicopter types.

If the vessel has been operational in another region, confirm the relevant requirements being complied with at the time of inspection.

18.4	Is the helideck fire-fighting equipment available for immediate use and free of defects?	Yes	No X	NA	NS
Comments					
Equipment has not changed since our previous audit. The last foam sample was taken in April 2009, but did not pass. New 3% AFFF foam will be required to replace spent foam in system.					

Verify the condition of the following:

- ◆ dry powder and compressed gas extinguishers
- ◆ foam extinguishing systems — has foam concentrate and mixing induction system been tested as satisfactory within the last 12 months?
- ◆ total fire protection suit (sizes available for personnel onboard), including breathing apparatus
- ◆ emergency equipment box with an inventory of equipment available. Confirm that all the equipment is accounted for.

18.5	Has the helideck crew been allocated and trained to an appropriate aviation authority standard under which the vessel is operating?	Yes X	No	NA	NS
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Comments

As per previous audit. The HLO are sent for training every 4 years. Presently the two Bosun and Night Seamen and AB have HLO certification. The Chief Officer is due to attend the HLO course in the near future. All deck crews have attended fire fighting courses.

Detail the aviation authority standard.

Crew should include:

- ◆ HLO, fireman, baggage handler, fire valve attendant and loaders (if required), training records should be onboard
- ◆ note the training provided to the HLO and firemen
- ◆ drills should be held for helicopter deck crew and records kept.

18.6	Is there a formal procedure for briefing passengers?	Yes X	No	NA	NS
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Comments

As per previous audit. Pre flight videos for the S 92, S 61 and S 76 aircraft available

Briefing should include:

- ◆ who is in charge
- ◆ approach to helicopter
- ◆ correct clothing to be worn and securing of loose articles
- ◆ emergency procedures/exits
- ◆ DVDs for varying types of helicopters to be onboard, a note should be made of the DVD supplier.

18.7	Are appropriate checks made before helicopter arrival?	Yes X	No	NA	NS
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Comments

As per previous audit, but TSTP needs to be updated to ensure critical systems are available and not inhibited.

Verify that the records exist of checks taking place and that it includes:

- ◆ deck and surrounds clear of loose article
- ◆ helideck net in good condition and correctly tensioned
- ◆ crane stowed and secured
- ◆ work boat and covers lashed
- ◆ fire fighting equipment ready
- ◆ lighting working
- ◆ communications working
- ◆ baggage weighing equipment calibrated and ready for use.