



MANAGEMENT SUMMARY OF CORRECTIVE AND IMPROVEMENT OPPORTUNITIES

Tracking No.
Deepwater Horizon
July - 2009
For Office Use Only

Performance Monitoring Audit and Assessment

Location Identifier: Deepwater Horizon

Unit/Division/Sector/Branch: AMU – NAM - GOM

PMAA Start/End Dates: 6/30/09 – 7/3/09

PMAA Lead Assessor: Gary Butler

PMAA Team Members: Michael Sculthorpe, Tony Reid and Scott

Total Number of Corrective /
Improvement Actions &
Best Practices
COA =10 IOA =14 BP = 3

Cote

Principles Assessed	Corrective / Improvement Actions	
	Corrective	Improvement
Leadership in Management		1
Policies and Procedures		2
Organization, Resources, and Responsibilities		
Planning and Risk Management		
Executing and Monitoring		1
Evaluation and Improvement		
Training and Competence		
Communications		
Behavior		
Accountability		
Appraisals and Feedback		1

Policy and Procedure applicable to Location per Core PMAA Scope	Corrective / Improvement Actions	
	Corrective	Improvement
THINK Planning Process		
Permit to Work		1
Emergency Response		1
General Safe Work Practices		
Energy Sources and Isolation		
Manual Handling		
DROPS	1	
Mechanical Lifting		2
Hazardous Material		
ISM		

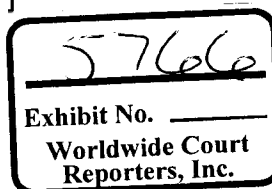
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- Core PMAA Scope is reviewed and modified by Corporate Management (with input from Business Unit and Division/Sector Management).

Policy and Procedure applicable to Location per Core PMAA Scope	Corrective / Improvement Actions	
	Corrective	Improvement
Marine / Watertight Integrity Summary		
Maintenance Summary	4	2
Accommodation Summary	4	1
Environmental Summary		1
Client		
Orientation		1
Hydrogen Sulfide	1	

PMAA Team Management Summary of Location Results:

Subject: ISM / ISPS / Performance Monitoring Audit and Assessment (PMAA)

1.0 Introduction

An ISM / ISPS & Performance Monitoring Audit and Assessment (PMAA) was conducted on the Deepwater Horizon on 6/30/09 to 7/3/09 in accordance with Manual HQS-HSE-PP-01 - HQS-CMS-PR-02. The primary goals and objectives of the audits were to assess the implementation and maintenance of the Company Management System (CMS) in the following areas:

- Ensure managers and supervisors monitor, evaluate, and take appropriate action to maintain or improve the Company performance.
- Assist in the development of a performance culture.
- Ensure people have the understanding and ability to execute and deliver required results.
- Ensure key company risk-reducing controls that contribute to safe and reliable performance have been implemented and are effective.
- Verify conformance with the Company Management System.
- The ISM/ISPS & PMAA compared facility operations to company policies and procedures. Audit information was gathered through interviews of facility personnel, reviewing records, and a site inspection.

The rig was audited against the standard ISM / ISPS checklist and the core PMAA principles which consisted of the eight management and three personal principles as defined in the Company Management System.

The audit/assessment team consisted of:

Gary Butler (Lead Auditor), Michael Sculthorpe, Tony Reid and Scott Cote.



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Audit Schedule:

<u>Date</u>	<u>Time</u>	<u>Activity</u>
6/25/09	1000	The audit team held pre-audit meeting to discuss objectives of the audit and review reports in GRS.
6/29/09	1800	The team traveled to Houma, La.
6/30/09	1030	The audit team departed from Houma PHI Heliport for the Deepwater Horizon
5/30/09	1400	Held opening PMAA/ISM audit meeting where objectives and the audit process were discussed.
6/30 to 7/3		Carry out PMAA audit
7/2/09	1700	Close out Meeting
7/3/09		Return to shore

Company Management System Summary:

This is the first PMAA Audit conducted on the Deepwater Horizon since 2007. There were no areas of Nonconformity. The facility had a total of 14 FAC, 4 SNH, 4 MTC 9 NH YTD and 3 NWR with a TRIR of 2.23 rolling, YTD 2.73. The SIC rate was 0.0 and the rig has worked 2315 days since last SIC. There has been 6 loss of containment incidents and the rig needs to be constantly vigilant that crew members understand the importance and the responsibility they have when operating mud valves.

Environmental Summary:

- Green Team meetings are occurring every quarter and are recorded.
- **Improvement Action** – Rig Manager/Asset Manager needs to countersign the oil record log book and the garbage record book.
- Environmental aspects and impacts register established on board.
- Environmental goals and objective established on board.
- Recycling is well established on board.
- Deck drain plan posted.
- Green team bulletin board established on board.

Marine Summary:

- Through conversation and observations the rig is conducting marine scenario drills on a two weekly basis.
- Watertight doors and bilge alarms are monitored 24/7.
- Personnel accessing the columns are tracked in a logbook on the bridge.
- During the drills crew members are being trained on the emergency ballast board.



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- Interviews with the Marine crew indicated that stabilities drills have greatly improved in recent weeks.
- Stability integrity check list maintained on the bridge.

Maintenance Summary:

- EMPAC is the planned maintenance system that is utilized onboard the Deepwater Horizon.
- There was a good overall knowledge of the system by most of the people who were interviewed. Plan to convert to RMS July 12, 2009.
- The housekeeping in the machinery spaces was excellent.
- DWH down Time (Mech + PEF) is 2.36% year to date
- MPI Meetings are held weekly
- There were a total of 6 open OER's
- There were a total of 60 overdue PM's 22 Operational Critical, 19 Safety Critical less than 6 months, 5 high critical but none over 6 month due.
- There are a total of 31 work orders in progress, including 7 Safety Critical, 1 High Critical, 14 Operational Critical, and 5 Low Critical.
- **Improvement Action** – The annual potable water test results were positive for bacteria. The DWH takes aboard potable water from work boats often and could contribute to the positive results. Consider utilizing rigs water makers to reduce likelihood of contaminated water.
- **Corrective action** – Broken ground strap on #6 Shaker
- **Corrective action** – Beam trolley in Port Pump Room (Pontoon) not color coded
- **Corrective action** – No secondary fall retention on flood light FWD (by ROV)
- **Corrective action** – There was no Third Party Installation Inspection completed on Total Safety's equipment onboard and there were several forms that were not signed by all parties.
- **Improvement action** – Maintenance system requires testing of bilge alarms annually. It is recommended to evaluate the frequency of the testing.

Accommodation Summary:

- The following corrective action listed below was identified by the audit team as major concerns with sanitation and food safety on board the rig.
- **Corrective action** – Frozen foods not wrapped with freezer paper.
- **Corrective action** – Many packaged foods passed used by date and must be discarded immediately as per TOI policy.
- **Corrective action** – Dishwasher not operating correctly, i.e. rinse cycle not draining properly, water temperature does not reach minimum required temperature.

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- **Improvement action** – There is a sanitary issue with placement of the ice machine scoop.
- **Corrective action** – A number of items found open not in the refrigerator that required refrigeration after opening.

Audit / Assessment Details

Performance Monitoring, Audit and Assessment Management Principles

Leadership in Management:

- Most personnel interviewed were aware of the QHSE Companies goals and Supervisor expectations.
- Personnel recognize that they are accountable for their action and understand the responsibilities of their position however they recognized there is room for improvement.
- Approval authority levels have been established for all personnel through the Company management system.
- **Improvement Action:** There needs to be a plan developed to comply with the 14 key expectations and shared with all personnel. (Road Map)

Policies & Procedures:

Objective evidence based on interviews indicates that employees generally adhere to policies and procedures. Supervisors interviewed were aware of the approval process for documents.

- **Improvement Action** - All supervisors interviewed could access EDOCS at the rig central web site however there is a need to improve access to all personnel.
- **Improvement Action** – there should be more references made to the CMS when developing TSTP, think plans, permits as per the prompt card.
- Level 3 documents are approved and in use on this installation.

Organization, Resources and Responsibilities:

- Organizational structure is communicated and posted to all personnel onboard the rig.
- Personnel understand their role and responsibilities in the organization.

Planning and Risk Management:

- Interviews and observations revealed a high level of understanding and participation in the START process; this included both monitoring and observations with junior and senior people.
- The THINK Risk Assessment Prompt Card is being utilized and every person spoken too was able to produce one.

Executing & Monitoring:



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- SQA's are being conducted quarterly as specified by the CMS.
- The rig is tracking their progress in START, THINK, PTW and has shown a marked improvement in participation.
- **Improvement Action** - Third party should be more proactive with monitoring and executing the TOI risk management policies and procedures.

Evaluation & Improvement:

- Personnel at the location were pro-active towards the audit and assessment process.
- People at the location feel their ideals are valued.

Training & Competence:

- Training completion percentage is 92%.

Communications:

- Observation of notice boards and safety meetings indicate that the rig is effectively communicating publications; which includes safety alerts, bulletins, etc. The rig has an excellent HSE information board.
- The rig is active in reporting all incidents.
- Meetings are productive and provide relevant information.

Personal Principles

Behavior:

- The mentoring process is being used onboard. There appears to be a genuine desire to take care of the new person coming onboard.
- Morale and job satisfaction appeared to be mainly high. A good team atmosphere is seen throughout the rig. However the personnel did express their disappointment in not receiving their six years without a LTA award.
- The obligation and right to stop the job (**Time Out for Safety**) is understood and employees interviewed felt comfortable in stopping the job if they felt it was necessary. Objective evidence was seen through review of the START cards. TOI start card participation is at 100%.

Accountability:

- There is strong evidence that the crews on the Deepwater Horizon actively work to comply with company policy and procedures. There is an understanding that failure to follow policies and procedures will result in consequences.
- There is a good understanding of the requirement to call a time out for safety. Crew can clearly talk about this expectation and their accountability if they do not interrupt when required.

Appraisals & Feedback:



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- There is not simple process to verify percent of appraisals completed on board the rig.
- **Improvement Action:** There needs to be more feedback to personnel on their appraisals.

Policies & Procedures

Orientation:

- **Improvement Action** – Class A, B, and C fire extinguishers were discussed during the orientation process but there was no explanation about class D fire extinguishers.

General Safe Work Practices:

- Housekeeping is very good in all areas.

Permit to Work:

- **Improvement Action** – It should be communicated to all crews that the OIM must approve all permits during his day tour and close out all permits with his signature.
- The work permit system is located on the bridge and the Sr. Toolpusher has been assigned as the work permit administrator.

Dropped Objects:

- The rig is actively pursuing the elimination of all "Dropped Objects" through training awareness and personal observations.
- Derrick DROPS inspection is being tracked in EMPAC.
- **Corrective Action** – The derrick log book indicates that tools taken up and brought down from the derrick are not being itemized. The rig must manage correctly all tools taken aloft (what is taken up must be indicated in the log that it has been brought down).
- DROPS zone scheme has been developed for the rig floor and cranes. A color code system has been developed for various areas on the rig floor.
- DROPS inspection by third party was carried out in 8/2008 by HADCO.
- Two DROPS toolboxes located on the rig floor.

Mechanical Lifting:

- **Improvement Action** – Port Aft lifeboat deck, air hoist does not have a line guide installed and does not have a SWL label on the air hoist.
- **Improvement Action** – All air hoist should be clearly marked with the SWL.

Manual Handling:

- Most of the personnel on board have received the hands free awareness training.

Client:

- Everything from the client company man indicated that BP was very happy with the rig performance, safety culture and moral of the crews. He did indicate there is inconsistency with the catering crew. He stated BP is making a concerted effort to adopt the Transocean Company Management System.

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Emergency Response:

- **Improvement Action** – The Emergency contact list is outdated and the manual needs the approval of the present Division Manager.

Hydrogen Sulfide:

- The rig has a TOTAL safety representative on board to provide H2S training on board while the rig is operating in a potential H2S environment.
- **Corrective Action:** A H2S contingency plan has been developed for the rig; however there is no evidence that the Division Manager/Operation Manager has reviewed the plan.
- All personnel coming on board receives H2S training upon arrival.

Noise:

- A high noise survey was conducted on 10/08 by third party Micah Lindsay.

2.0 Interviews:

- Interviews were conducted with the OIM/Master, DPO's, Chief Engineer, RSTC, Crane Operator, Roustabout Crews, Sr. Toolpusher, Tourpushers, Drillers, Asst Drillers, Sr. Materials Coordinators, and the Electrical Supervisor. All personnel fully cooperated with the audit team.

5.0 Best Practices Observed:

1. **Best Practice** – The rig has decided to adopt the practice of requiring a permit for all isolations that are raised. This is considered to be a best practice.
2. **Best Practice** – The lift for removing baggage from and two the helideck is a good example of reducing manual handling, slip, trips and fall injuries to ALARP.
3. **Best Practice** – The daily operations report is posted in the transit room for all arriving personnel.

6.0 Areas of Nonconformity:

There were no areas of non-conformity.

7.0 Conclusion of Audit Findings:

A failure to identify areas of nonconformity during this audit should not be considered as indication that there are none. All personnel are encouraged to identify them and report them through the corrective and improvement action system (GRS). Personnel are reminded of their responsibility to familiarize themselves with relevant policies and procedures and to fully implement them.



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Comments from AMU PMAA Manager (Chris Knight)

While the Deepwater Horizon has had a good audit the rig needs to be concerned about the bacteria in the pot water and address this situation. The maintenance issues and the galley inspection should be easy to close out. The management of tools in and out of the derrick needs to be closely monitored and in regards to having the Snr. Toolpusher as the PTW administrator what does the rig do in an emergency when the toolpusher goes to the rig floor. I would have thought the DPO's are the ideal people to administer the permits. The administrator's duties are only to keep copies and ensure permits are returned in the event of suspension!(HQS-HSE-PP-01 sect 4 subsection 2.2 5.5) Advice will be sought from QHSE.

Apart from that the rig is doing well and is encouraged to keep improving and setting higher standards for the future.

PMAA Team Lead Assessor has verified that the corrective and improvement actions identified in the PMAA were developed and agreed with the onsite management for entering into the FOCUS/IRR Planning and Tracking Tool.

PMAA Lead Assessor:

Signature: _____

Date: July 2nd, 2009

