



PETRONAS

Safety Case – Effective Implementation

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12 March 2015

Lessons Learnt



HSE Case is a critical document for demonstrating the management of Major Accident Hazards. However PETRONAS CARIGALI is fully committed to ensure Rig Contractors embed the use of the HSE Case in their daily operations and not an HSE Case that “Sits On The Shelf”

Macondo Incident

- 20 April 2010
- 11 fatalities, 17 injured
- 87 days of Hydrocarbon flow from reservoir



Overview

PETRONAS HSE Case Guidelines:

“All Drilling Contractors engaged with the Company shall have in place a HSE Case developed in accordance with the latest International Association of Drilling Contractors (IADC) HSE Case guidelines for Mobile Offshore Drilling Units (MODU) or Land Unit.”

IADC Guidelines:

“The HSE Case demonstrates how a Drilling Contractor’s organisation applies a systematic risk management approach to maintain and improve HSE and operational performance.”

Purpose

Demonstrate that there is an effective HSE management system in place for managing major hazards, other workplace hazards and environmental aspects

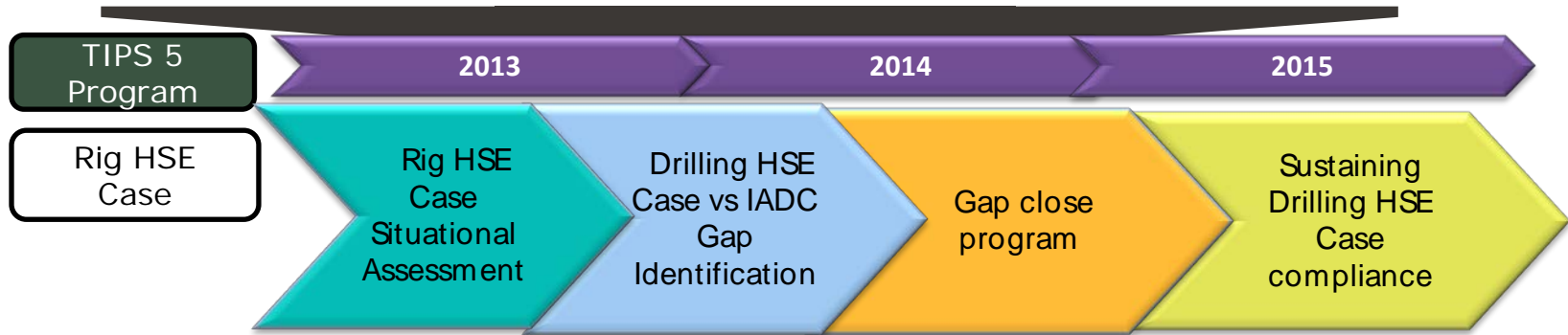
Identification of potential hazards including MAH

Identify and assess the risks associated with the hazards

Managing the risk

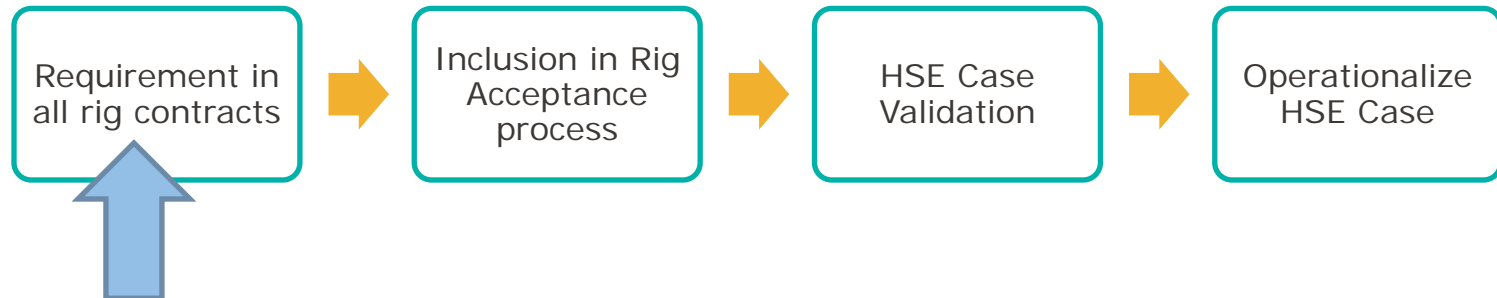
Demonstrate the risks are reduced to TOLERABLE levels

Demonstration



2015 TIPS 5 Deliverables (Part-1/ Development Phase)

- Rig Drilling System Assessment
- Rig Well Control Equipment Assessment
- Drilling Manual (80% completion)
- **Drilling HSE Case Alignment with IADC**



Developing Operational HSE case for existing fleet.

Design HSE Case for fleet under construction (FEED --→ D. Design stage)

Operationalisation



Each Rig Contractor shall have a detailed implementation plan to demonstrate effective operationalization and roll out of the HSE Case to Cover:

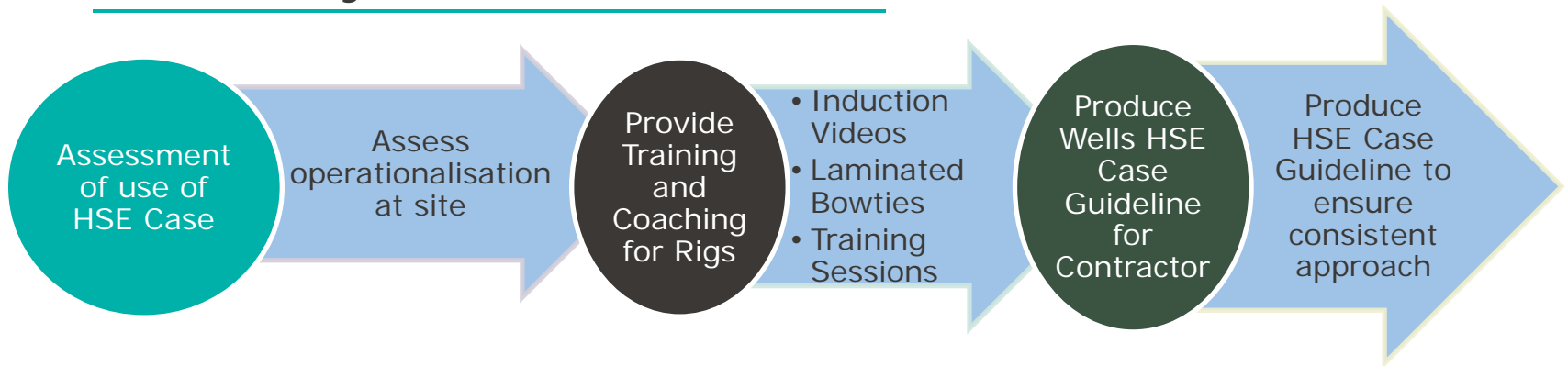
- Roll out and communication of the Rig HSE Case to all personnel at site
- Two levels of training on the HSE case, basic familiarization for all personnel and technical training for management, supervisors and those with HSE Critical tasks.
- Visibility and use of the Rig HSE Case. Accessible for all / feedback by all! Make HSE case mandate document to refer for operation & HSE related purpose.
- Verification of the controls/barriers identified in the Bowtie documented.
- Sustainability on the implementation and use will be sustained for the duration of the rigs operation.

Operationalisation

Gap Analysis



Third Party Assessment



Coaching

Through training and coaching, PETRONAS has encouraged the:

- Production of a brief induction video on HSE cases for all rig personnel
- Usage of laminated “Major Bow Tie Hazards Applicable to Daily Rig Operations” for communication of hazards and controls.
- Usage of the HSE case at all planning and operation meetings by both PETRONAS Rig Management and Supervisors.
- Implementation of a schedule for Heads of Department to lead a weekly review of specific MAH (Major Accident Hazard)
- Utilisation of the weekly Hazard Hunts to ensure that the barriers and controls remain intact
- Placement of HSE Case signage (MAH and Sample Bow Tie) at the rigs
- RSTO (Rig Safety & Training Officer) daily reporting starts with MAH and relevant barriers and controls

Moving forward

Wells HSE Case Guideline

- Structure of Performance Standards
- Guidance on Safety Critical Elements for verification of Performance Standards
- Guidance on effective operationalization of HSE Case

On-site awareness

- A HSE Case induction video to be shown to all crews at induction
- Training sessions for all supervisors
- Verification of Critical Barriers and controls



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Thank you

References

1. Gosden, E, July 2012, Retrieved from <http://www.telegraph.co.uk/>
2. Issue 3.6, January 2015 HSE Case Guidelines for Mobile Offshore Drilling Units, International Association of Drilling Contractors
3. Assurance & Verification Practitioner's Guide, Step Change in Safety,
4. Jan 2015, Rig HSE Case Guideline, PETRONAS
5. Sept 2010, Deepwater Horizon Accident Investigation Report, BP