Bob Fryar
Executive Vice President of Safety & Operational Risk

Managing safety & operational risk - processes
Bob Fryar, EVP S&OR

- 28 years’ experience, joined the company in 1985
- Previous roles
  - EVP Production
  - CEO BP Angola
  - COO Atlantic LNG, Trinidad
  - VP Operations, Trinidad
  - Onshore US and GOM operations and leadership roles
A safer, stronger BP

BP’s approach to safety and operational risk management integrates our operating management system (OMS) and our values.

It is based on three principles that guide our efforts in a prioritised, multi-year programme. They are to strive for:

- Deep **capability** and a safe operating culture across all levels of BP
- Continuing to **embed** OMS as the way BP operates
- Self and independent **assurance** that confirms conduct of operating
Further embedding OMS as the way BP works

OMS is our framework for operations and driver for continuous improvement, as businesses work to progressively align local processes with key OMS “essentials”
Risk management framework

BP-wide risk management framework

- **Day to day operational risk management** happens through processes within the local operating management system

- Health of **barriers**

- Risk action plans
  - Multi-year, risk prioritised at the site

Processes within local OMS

- HAZOP
- LOPA
The “three lines of defence”

A group-wide three tier approach to oversight of safety and operational risk management is in place and improving.

Starting at the bottom of the triangle…

- Operating organizations are expected to verify for themselves that their activities have been completed as intended and are effective
- S&OR sets requirements and conducts assurance to test business conformance with them
- Group audit provides independent audit reports on the design and operating effectiveness of selected activities in the first and second lines of defence
Targeted capability programmes seek to reinforce values and build leadership and operational capacity to achieve consistently safe, compliant, reliable operations.

How S&OR adds value - building organizational capability

Senior Level leaders
Mid Level leaders
Frontline leaders
Technicians
Results – as of 3Q13

Loss of primary containment (LOPC)

Process safety events (PSE)

Recordable injury frequency (RIF)
Bly Report Recommendations

BP’s drilling operating practices and management systems

1. Update and clarify cementing guidelines
2. Update requirements for BOP configuration
3. Update requirements for negative pressure tests and lock-down rings
4. Update practice on pressure, including contingency and testing procedures
5. Strengthen incident reporting standards for well control and well integrity
6. Propose recommended practice for foam cement testing to API
7. Assess risk management and MOC processes for life cycle of D&C activities
8. Strengthen the technical authority’s role in cementing and zonal isolation
9. Enhance D&C competency programs for key operational and leadership positions
10. Develop advanced deepwater well control training
11. Establish BP in-house expertise for subsea BOP and BOP control systems
12. Request IADC to develop subsea engineering certification
13. Strengthen BP’s rig audit process to improve closure and verification
14. Establish KPIs for well integrity/control and rig safety-critical equipment
15. Require drilling contractors to implement auditable integrity monitoring system

*Completed: reported as complete subject to verification as closed.
Bly Report Recommendations

Contractor and service provider oversight and assurance

16 Assess cementing service provider capabilities
17 Confirm well control and monitoring practices are defined and applied
18 Require hazard and operability reviews for surface gas/drilling fluid
19 Include study of all surface system hydrocarbon vents in all HAZOPs
20 Establish minimum levels of redundancy and reliability for BOP systems
21 Strengthen BP’s requirements for BOP testing by drilling contractors
22 Strengthen BP’s requirements for BOP maintenance by drilling contractors
23 Set minimum requirements for drilling contractors’ MOC for subsea BOPs
24 Develop clear plan for ROV intervention for each of BP’s operating regions
25 Require drilling contractors to verify BSR shearing performance capability
26 Include testing and verification of revised BOP standards in rig audit

*Completed: reported as complete subject to verification as closed.
In summary

- Leadership
- Systematic operating
- Checks and Balances
- Vigilance