

2nd International Workshop on Human Factors in Offshore Operations



Opening Remarks
by

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MMS

Industry Changes Since 1996

- A lot has happened since the first workshop in 1996
 - ◆ We have continued moving into deeper and deeper waters in search of resources.
 - ◆ The industry continues to develop new technology at a record pace.
 - ◆ There has been a great number of mergers in industry, resulting in fewer, but much larger companies.
 - ◆ Small, independent operators play a major role in the Gulf of Mexico, especially on the shelf.
 - ◆ Opportune to meet and discuss Human Factors

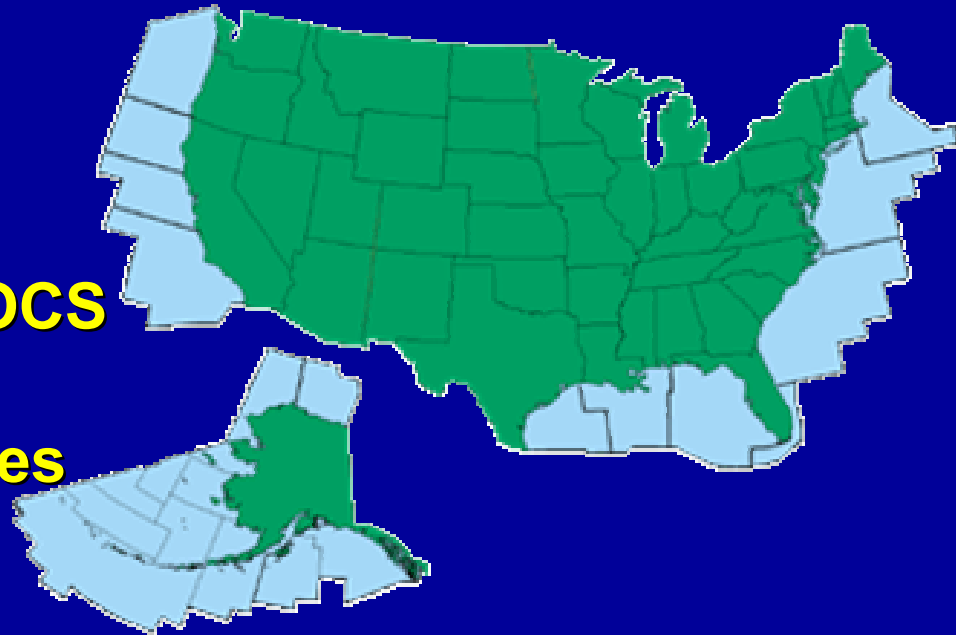
Human Factors

“It’s not the panacea for today’s problems.”

Taf Powell UK HSE

MMS Responsibilities

- **Administration of**
 - ✓ 1.76 billion acres on the OCS
 - ✓ Over 7,500 leases
 - ✓ 4,000 + production facilities
- **OCS production**
 - ✓ 25% of U.S. natural gas
 - ✓ 27% of U.S. crude oil
- **Revenue collection for U.S. OCS**
 - ✓ Since 1953, almost \$133 billion
 - ✓ Nearly \$10 billion in 2001

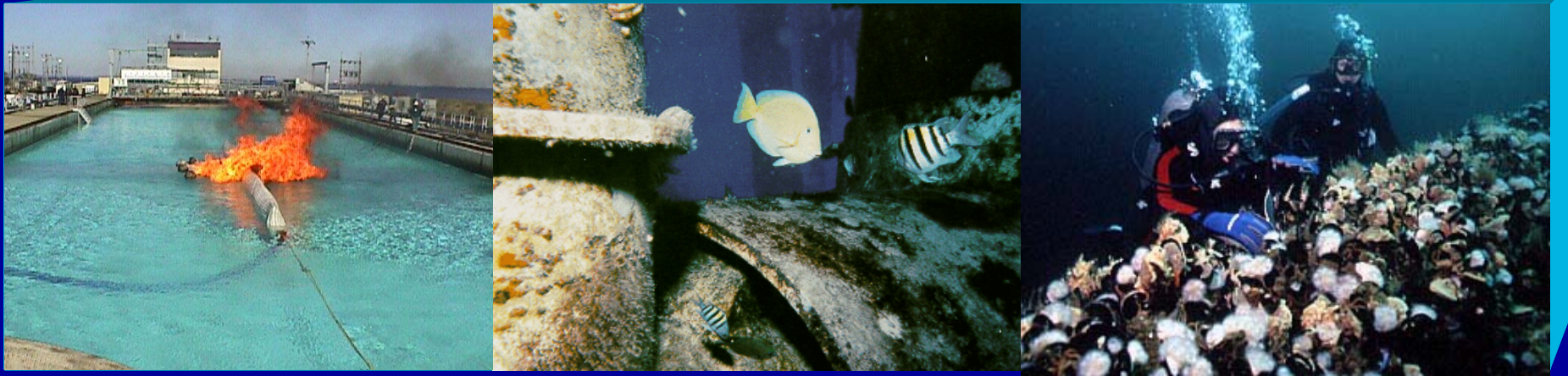


Many Agencies Involved

- U.S. Coast Guard
 - Oil-spill response, port regulation, vessel inspection
- Office of Pipeline Safety
 - Pipeline inspections, standards
- Environmental Protection Agency
 - Air and water quality
- National Marine Fisheries Service
 - Marine mammals/endangered species
- Fish and Wildlife Service
 - Marine mammals/endangered species
- Department of Commerce
 - Coastal programs

Safety & Environmental Protection

Two Core Objectives



Safe Offshore Operations

Promote incident free operations during exploration and development on Federal Offshore Lands.

Environmental Protection

Ensure that all activities on Federal Offshore lands are conducted with appropriate environmental safeguards.

Varied Clientele

- Program must be responsive to operators
 - Some companies are small and operate single well caissons
 - Others are large multinationals who deal with cutting edge technology
- We require the same level of performance
 - Program does recognize that small operator may not have the same support staff as a major player

The U.S. System—Process Rich

- 5-Year Program
 - Outlines size, timing and location of potential sales
- Individual Lease Sales—competitive bidding
 - Primary term for completing exploration
 - Site specific environmental and safety requirements
 - Financial terms (minimum bid, royalties, rentals)
- Review of exploration and development plans
- Adaptations for deepwater activity

Regulatory Strategy

- Crossroads of developing new regulatory systems
 - Focus on performance while maintaining prescriptive features
- Consensus standards development
 - Mutual benefits for government and industry
- Industry collaboration
 - Through OOC, IADC, API & ISO
- Coordination and collaboration with other regulators around the world

Deepwater Operations Plan

- DWOP requires 3 Parts -
conceptual, preliminary & final
 - Early dialogue - focus on “total system”
 - MMS approval prior to major financial commitment
 - List alternative compliance and departures
- Avoid unnecessary regulatory rewrites



Guiding Principles for Program

- Operator responsibility
- Understanding human factors & mechanical systems interface
- Measure performance
- Make sure poor performance carries a price



Accident Investigation

- An important responsibility - Industry & MMS
 - Should be integral part of operator's SEMP
 - Both should review data & conduct investigations
 - Determine root causes
 - Identify trends
 - Share information to prevent future incidents
- Use information to revise requirements and direct research
- Share results through safety alerts and workshops
- Information exchange with international colleagues

Human Factors Roles In Accidents

- Relationship between human factors and management system failures
- Negative human interaction with the system
- Need to find the deepest underlying cause of the accident



Management System Failures

- Failure may include the following:
 - failure to identify hazardous aspects of an operation
 - failure to provide guidelines for the safest way to accomplish a task
 - failure to effectively implement the corporate safety program
- Need to address these failure modes to prevent future accidents

Riser Package Accident



Control Panel

A Crane Accident



Annual Performance Reviews

- Continuing dialogue - MMS & operators
- Safety - ensure corporate focus
- Regulatory practices - feedback for MMS
- Poor performance - identify/suggest remedies
- Correct problems before they become serious

In Conclusion

- MMS continues to seek way to improve its regulatory program
- Human Factors aspects of safety management is an integral part of our program
- We want companies to keep HSE issues a top priority
- We all have much to gain in maintaining good safety and environmental performance