

BOEMRE

**Bureau of Ocean Energy Management,
Regulation and Enforcement**

UNITED STATES DEPARTMENT OF THE INTERIOR

Regulatory Changes Post-Macondo

Michael J. Saucier

BOEMRE Regional Supervisor for Field Operations



TIMELINE

- Macondo incident occurred on April 20, 2010
- Deepwater drilling suspension issued on May 28, 2010
- NTL 2010-N06 issued June 18, 2010
- Suspension lifted on October 12, 2010
- New drilling safety rule effective October 14, 2010
- NTL 2010-N10 issued November 8, 2010
- First deepwater well drilling permit issued on February 28, 2011 (not including water injection wells)

POST-MACONDO SAFETY INITIATIVES

- NTL No. 2010-N06 EP, DPP, DOCD Blowout & Worst Case Discharge
- Interim Final Safety Rule
- NTL No. 2010-N10 Statement of Compliance, Spill Response, and Well Containment
- Safety and Environmental Management System (SEMS) Rule

REVISED INFORMATION REQUIREMENTS FOR OIL SPILL RESPONSES

- NTL No. 2010-N06 – “*Information Requirements for EP, DPP, DOCD on the OCS*” (June 18, 2010)
- In any new or supplemental EP, DOCD, DPP, you must include:
 - A blowout scenario
 - Assumption and calculations used to determine volume of worst-case discharge
 - Proposed measures to prevent a blowout

BLOWOUT SCENARIO

- Include the highest volume of liquid hydrocarbon
- Estimate flow rate, total volume, maximum duration potential
- Discuss potential for the well to bridge over, likelihood that surface intervention will stop flow, rig availability to drill relief well
- Time to contract rig to drill relief well, move rig onsite, drill well

WORST-CASE DISCHARGE

- Provide information to support assumptions associated with worst-case discharge including:
 - Well design
 - Reservoir characteristics
 - PVT data
 - Analog reservoirs used in making decisions
- Supply the reason for each assumption and any models used to determine daily blowout rate
- Compare the calculated WCD to your OSRP

INTERIM FINAL SAFETY RULE

- Published in Federal Register 10/14/2010
- Effective immediately
- Emergency rulemaking
- In response to release of 5/27/10 Safety Measures Report
- Imposes a variety of requirements addressing well bore integrity and well control equipment and procedures

WELL BORE INTEGRITY

- Best cement practices – API RP 65-Part 2
- Certification by PE that casing & cement program is fit for purpose
- Two independent tested barriers across each flow path during completion (PE certification)
- Proper installation, sealing, and locking of casing & liner
- BOEMRE approval before displacing fluids
- Enhanced deepwater well control training

WELL CONTROL EQUIPMENT & PROCEDURES

- Documentation & schematics for all control systems
- I3P verification that B/S rams cuts DP at MASP
- Subsea BOP equipped w/ ROV intervention
- Maintain ROV & trained crew on all floating rigs
- Auto-shear and deadman on all DP rigs
- Documentation of subsea BOP Inspection & Maintenance procedures per API RP 53
- ROV intervention testing on subsea BOP stump test
- Function test of auto-shear and deadman during subsea BOP stump test
- Deadman test during initial seafloor test

Spill Response & Containment

- NTL No. 2010-N10 *“Statement of Compliance with Applicable Regulations and Evaluation of Information Demonstrating Adequate Spill Response and Well Containment Resources”* (Nov 8, 2010)
- Applies to subsea and surface BOP on floating facilities
- Operators to submit statement signed by an authorized company official that operations are conducted in accordance with all applicable regulations
- Operator must submit information demonstrating that they have access to and can deploy containment resources promptly in response to a blowout

CONTAINMENT REVIEW PROCESS

- The operator must submit with the Application for Permit to Drill (APD) a written description of its containment strategy on a well-by-well basis demonstrating the following:
 - a. Debris removal capability
 - b. Dispersant injection capability
 - c. Capping stack access and installation capability
 - d. Top-hat deployment capability
 - e. Well integrity utilizing the Well Containment Screening Tool (WCST) in development by MWCC, HWCG, and BOEMRE

CONTAINMENT REVIEW PROCESS

(cont.)

- Containment equipment may include:
 - Subsea containment and capture equipment (domes, capping stacks)
 - Dispersant injection
 - Riser systems
 - Remotely Operated vehicles (ROVs)
 - Capture and support vessels
 - Storage facilities

CONTAINMENT REVIEW PROCESS

(cont.)

- How the well containment plan is submitted?

At this time the well containment plan is to be submitted two ways:

1. A copy is to be submitted to the Houma District to Bryan Domangue's attention.
2. A copy should also be submitted along with the APD.

SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS (SEMS) RULE

- Final Rule Published in Federal Register 10/15/10
 - New “Subpart S”
- Effective 11/15/2010
- SEMS plan needs to be operational by 11/15/2011
- Companies are required to develop and implement their own SEMS
 - Based on API RP 75 (SEMP), 3d Edition, May 2004

API RP 75 – 13 ELEMENTS

1. General – Principles & Scope
2. Safety & Environmental Information
3. Hazards Analysis
4. Management of Change
5. Operating Procedures
6. Safe Work Practices
7. Training
8. Mechanical Integrity
9. Pre-Startup Review
10. Emergency Response & Control
11. Investigation of Accidents
12. Auditing the Program
13. Records & Documentation

SEMS – POINTS OF INTEREST

- Applies to *ALL* operations
 - Drilling, production, workover, completion, servicing, construction, pipelines, etc.
- Applies to *ALL* structures
 - Fixed, floaters, MODU (when under BOEMRE jurisdiction)
- Program approval by BOEMRE *not* required
- Lessee needs to have SEMS plan developed, implemented and available upon request
- Lessee or I3P conducted audits
- BOEMRE will staff a new group in our Office of Safety Management specifically to handle SEMS and conduct audits

CONTRACTORS

- The Lessee's SEMS programs applies to contractors performing maintenance, repair, turnaround, major renovation, or specialty work
- Lessee responsibilities:
 - Have procedures in place for selecting and evaluating contractors
 - Ensure contractors have the skills & knowledge to perform their assigned duties
 - Ensure contractors have their own written safe policies and procedures
 - Provide evaluations conducted to verify that contractors are skilled (upon request)
- Can use Subpart O (training) requirements for well control and production training
- Contractor is not required to have a SEMS plan

HAZARD ANALYSIS

- Facility-level Hazard Analysis
- Hazard Analysis to be conducted by qualified personnel
- Hazard Analysis findings and recommendations need to be in a written report
- Task level Job Safety Analysis (JSA)
- JSA to be conducted for each activity and be maintained on facility

MANAGEMENT OF CHANGE (MOC)

- Facility/MODU is subject to continual and temporary changes
 - equipment, people, and procedures
- Any of these changes can introduce new hazards to the operation which can impact safety
- MOC should be written and include link to Hazard Analysis

OPERATING PROCEDURES

- Written procedures for each activity in your SEMS (lifting, drilling, production ...)
- Address activities from start-up to shut down
- Changes in operating procedures need to be reviewed in context of your MOC
- Accessible to all affected employees
- Reviewed and updated as needed to keep current

MECHANICAL INTEGRITY

- Assure equipment is designed, procured, tested, built, inspected, monitored and maintained in a manner appropriate with service requirements and manufacturer recommendations
- Fit for service

WHAT'S NEXT ?

FUTURE RULEMAKINGS

- Additional rulemakings are being developed to further improve OCS safety:
 - Drafting ANPR on additional safety issues
 - (drilling safety II)
 - Drafting Proposed Rule on SEMS
 - (SEMS II)