In response to the Gulf of Mexico (GOM) incident, the U.S. oil and natural gas industry launched a comprehensive review of offshore safety. Four Joint Industry Task Forces (JITFs) were assembled to focus on critical areas of GOM offshore activity: the Joint Industry Offshore Operating Procedures Task Force, the Joint Industry Offshore Equipment Task Force, the Joint Industry Subsea Well Control and Containment Task Force, and the Joint Industry Oil Spill Preparedness and Response Task Force.

The JITFs were not involved in the review of the incident; rather they brought together Industry experts to identify best practices in offshore drilling operations and oil spill response; with the definitive aim of enhancing safety and environmental protection.

The ultimate goal for these JITFs is to improve well containment and intervention capability, spill response capability, and Industry drilling standards to form comprehensive safe drilling operations; not only through evaluation and revision of Industry guidelines and procedures, but also active engagement with regulatory processes.

JITF reports can be found http://bit.ly/1xjpj49
API is the world’s leading standard-developing organization for the oil and natural gas industry and has developed standards since 1924. API’s formal consensus process is accredited by the American National Standards Institute (ANSI), the same institute that accredits similar programs at several U.S. national laboratories. API standards are developed in an open and transparent process and are the most widely cited oil industry standards by Federal, State, and International Regulators. Since 2010 API has published over 100 new and revised exploration and production standards.

Key standards include the following:

**New Documents:**


**Revised Documents:**


**Documents Under Development:**


- Standard 16AR, Repair and Remanufacture of Blowout Prevention Equipment, 1st Edition
- Specification 16RCD, Drill Through Equipment - Rotating Control Devices, 2nd Edition
- Recommended Practice 16ST, Coiled Tubing Well Control Equipment Systems, 2nd Edition
- 18 Life Cycle Management, 1st Edition
The Center for Offshore Safety (COS) supports and enables continuous understanding and improvement in safety and environmental management systems (SEMS). The work is based on API Recommended Practice 75.

**Mission:** Promote the highest level of safety for offshore drilling, completions, & operations by effective leadership, communication, teamwork, utilization of disciplined safety management systems & independent third-party auditing & certification.

**COS Areas of Activity:**
- SEMS audit tools and audit service provider accreditation
- SEMS Certification Program for Operators and Contractors
- Data and learnings collection and analysis of Safety Performance indicators and Learning from Incidents
- SEMS Good Practice Development
- COS Safety Events and Programs
- Decision making at all levels will not compromise safety
- Safety processes, equipment, training, and technology undergo constant examination and improvement
- Members will share learnings and embrace industry Standards and best practices, to promote continual improvement
- Open communication and transparency of safety information is utilized to build mutual trust among stakeholders and promote collective improvement in industry performance
- Collaborative approaches are utilized to drive safe and responsible operations
- Everyone is personally responsible for safety and empowered to take action

**Guiding Principles of the COS Include:**
- Industry leaders demonstrate a visible commitment to safety
- Operators, contractors, and suppliers work together to create a pervasive culture of safety

The Center For Offshore Safety has developed Safety and Environmental Management Systems (SEMS) tool kits, as well as auditor qualification, certification, and accreditation tools. All of these are available on their website: [http://www.centerforoffshoresafety.org](http://www.centerforoffshoresafety.org)
The Marine Well Containment Company (http://www.marinewellcontainment.com) and the HWCG, LLC (http://www.hwcg.org) were founded in 2010 to provide containment technology and response capabilities for the unique challenges of capping a well that is releasing oil thousands of feet below the water’s surface.

These companies maintain quickly deployable systems that are designed to stem any uncontrolled flow of hydrocarbons from a subsea well and facilitate training of their member companies on the installation and operation of these systems.

These systems also provide the potential to capture flow from a subsea well incident via subsea equipment, risers and containment vessels that can safely capture, store and offload the oil.

MWCC Containment System in a Cap and Flow Scenario
The U.S. oil and natural gas industry is committed to meeting the nation’s energy needs while maintaining safe and environmentally sound operations. This requires continuous investment and improvement in every phase of preparedness and operations in which oil is produced, transported, stored, and marketed.

Exploration and production facilities use advanced technologies, materials, and practices, which incorporate multiple back-up safety systems. Pipelines employ computers, electromagnetic instruments, and ultrasonic devices that detect vulnerabilities to enable proactive maintenance and repair. Marine terminal and vessel designs are constantly improved; tankers, for example, are now built with double hulls as an extra measure of security.

Additionally, storage tanks are now constructed with special materials to withstand corrosion. Industry also invests in practices and technologies that ensure a quick and effective response in the event of a spill.

The United States has established one of the world’s most sophisticated and well-coordinated spill response networks by bringing together the resources and expertise of private industry, public agencies, and academia to make sure we learn everything we can from past incidents.

[ Responders ]

RP on Oil Spill Response Plans (In Development)
Oil Spill Response Technical Reports:
Shoreline Protection
» Oil Spills in Marshes
» Subsurface Oil Detection Report
» Subsurface Oil Detection Field Guide
» Subsurface Oil Detection and Delineation in Shoreline Sediments Phase 2 — Final Report
» Shoreline Protection on Sand Beaches (aka Berms and Barriers) Report

Alternative Response Technologies
The Federal Government

Responded to the Macondo incident by reorganizing the Minerals Management Service (MMS) and focusing on four areas of regulatory policy: 1) blowout prevention, 2) drilling safety, 3) spill response and 4) well containment. To help accomplish this, the MMS was reorganized into three new agencies:

- The Bureau of Ocean Energy Management (BOEM), responsible for energy leases in areas of the U.S. Outer Continental Shelf;
- The Bureau of Safety and Environmental Enforcement (BSEE), responsible for enforcement of safety and environmental protection in all offshore energy activities; and,
- The Office of Natural Resources Revenue (ONRR), responsible for management of royalties and revenues.

These new agencies identified areas for improvement through a series of regulatory and policy actions, including:

The Bureau of Ocean Energy Management
http://www.boem.gov

The Bureau of Safety and Environmental Enforcement
http://www.bsee.gov

The Office of Natural Resources Revenue
http://www.onrr.gov
Issued NTL No. 2010-N06, Information Requirements for Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents on the OCS June 18, 2010, provided FAQs July 15, 21 and August 10

BOEMRE published an Interim Final Drilling Safety Rule October 14, 2010

BOEMRE published a Final Safety and Environmental Safety Systems Rule October 15, 2010

BOEMRE issued NTL No. 2010-N10, Statement of Compliance with Applicable Regulations and Evaluations of Information Demonstrating Adequate Spill Response and Well Containment Resources on November 8, 2010

Published the Final Drilling Safety Rule August 2012

Published the Final SEMS II Rule April 2013

Published Safety Culture Policy Statement May 2013

Published Proposed Production Safety Systems Rule August 2013

Published Proposed Aviation Regulations November 2014

Published Proposed Arctic Regulations February 2015

Proposed Well Control Rule April 2015

Some of the Detailed Requirements From the Above:

Drilling Safety Rules (Interim Final Rule)

Well Integrity

• Isolating Potential Flow Zones (Use of API RP 65-2 became mandatory)
• Well design (casing and cement program) must be certified by Professional Engineer (PE)
• Two Independent Barriers (certified by PE) during completion activities
• Procedures for installation, sealing, and locking of casing hangers required

Specific approvals needed for change-out to lighter weight fluids and negative test procedures

• Blowout Preventer (BOP) and Control Systems
  • New blind-shear ram function testing and 3rd Party verification required
  • New requirements & function testing for auto shear & deadman systems
  • Minimum requirements and testing for ROV intervention established
  • BOP inspection & maintenance to API RP 53 required
  • Minimum requirements established for personnel operating BOP equipment

Worst Case Blowout Discharge (WCD) & Blowout Response (NTL-2010-N06) policies were established.

• New requirements and definitions for WCD calculations
• New requirements for describing intervention & relief well drilling constraints

Demonstration of adequate spill response capability and well containment resources (NTL-2010-N10) were required.

• Signed statement of compliance required
• Well Containment Screening Tool developed to demonstrate that well design withstand being capped or captured
• Well Containment Plan required (usually including a contract for the services of a Well Containment Company)
• Must demonstrate access to equipment & staff resources to deploy containment prior to drilling a well

Safety and Environmental Management Systems regulations were strengthened.

• All elements of API RP 75 Safety and Environmental Management System (SEMS) were made mandatory
• SEMS audits and reporting are now required
• Operators are now responsible for verification of Contractors SEMS
• As of June 2015 SEMS must be audited by an accredited audit service provider (ASP)
Published new Marine Casualty Reporting forms and a proposed rule on Marine Casualty Reporting.

Published proposed revisions to Crane Regulations.


Published a final rule amending Vessel Inspection Alternatives regulations to add the International Energy Efficiency (IEE) Certificate to the list of certificates that a recognized classification society may issue on behalf of the Coast Guard.

Published final regulations for 3rd-party testing & certification of electrical equipment in hazardous locations on newly constructed MODUs, floating OCS facilities, and vessels other than offshore supply vessels (OSVs) that engage in OCS activities.

Published Interim Voluntary Mobile Offshore Drilling Unit (MODU) Dynamic Positioning (DP) Guidance for DP system guidance and recommended DP incident reporting criteria.

USCG issued Safety Alert #08-14 jointly with BSEE’s SA 312 on Dynamic Positioning System Failures on Vessels Other Than Mobile Offshore Drilling Units (Vessels).

Published a proposed rule establishing minimum design, operation, training, and manning standards for mobile offshore drilling units (MODUs) and other vessels using DP systems to engage in Outer Continental Shelf (OCS) activities.

Published a proposed rule amending rules relating to production testing of lifesaving equipment and harmonization with international standards.

Published Interim Voluntary Guidance on Lifesaving and Fire-Fighting Equipment, Training and drills onboard manned offshore facilities and MODUS on the OCS.

Published a proposed rule on Harmonization of Standards for Fire Protection, Detection, and Extinguishing Equipment.

Published a policy letter establishing Alternate Design and Equipment Standard for Floating Offshore Installations (FOI) and Floating Production, Storage, and Offloading (FPSO) Units on the U.S. Outer Continental Shelf.

Published an advanced notice of proposed rulemaking on regulations that will require certain vessels operating on the OCS to develop, implement and maintain a Safety Management System.

BSEE and the USCG announced a new MOA to strengthen the working relationship between their two agencies on the management of safety and environmental protection responsibilities on the OCS. The new MOA was effective on April 30, 2013.

Published draft revisions to the Marine Safety Manual (MSM, Volume III, Chapters 20-26 Marine Industry Personnel).

BSEE and the USCG signed a MOA for regulating MODUs on the OCS. Through this agreement, both BSEE and the USCG will work together to identify and coordinate responsibilities for the inspection and oversight of MODUs.

The Coast Guard has encouraged drilling contractors and Flag Administrations who employ foreign vessels in GOM to provide marine crews for their MODUs consistent with the interpretation in Appendix I to USCG Deepwater Horizon investigation.

The USCG upgraded its OCS training by sending Offshore Inspectors to training for MODUs and production units at the ABS Academy, taking advantage of similar industry provided training, and working with BSEE to send Coast Guard Offshore Inspectors to some of their training programs.

The USCG is planning to establish a single Officer in Charge, Marine Inspection (OCMI) to oversee marine inspection activity for all MODUs and floating OCS facilities (such as FSUs) engaged directly in, capable of engaging directly in, or being constructed to engage directly in oil and gas exploration or production in offshore waters of the Eighth Coast Guard District.
Published a final rule on nontank vessel response plans and other response plan requirements.

Issued an ALCOAST related to cyber security and the Marine Transportation System.

Published proposed changes to its maritime safety training requirements to cover all persons other than crew working on offshore supply vessels (OSVs) and mobile offshore units (MOUs) engaged in activities on the U.S. Outer Continental Shelf (OCS), regardless of flag.

Published interim voluntary guidelines concerning fire and explosion analyses for MODUs and manned fixed and floating offshore facilities engaged in activities on the U.S. OCS.

Published an Interim Rule regarding Offshore Supply Vessels of at least 6,000 GT ITC to ensure the safe carriage of oil, hazardous substances, and individuals other than crew by requiring U.S.-flagged OSVs of at least 6,000 gross tonnage as measured under the Convention Measurement System to comply with existing regulatory requirements and international standards for design, engineering, construction, operations and manning, inspections, and certification.

Proposed to increase the limits of liability for vessels, deepwater ports, and onshore facilities, under the Oil Pollution Act of 1990, as amended (OPA 90), to reflect significant increases in the Consumer Price Index (CPI).

Solicited comments on a policy to help vessel and facility operators identify and address cyber-related vulnerabilities that could contribute to a Transportation Security Incident.

Developing revisions to Subpart N Regulations which covers the safety and security of MODUs, floating and fixed facilities on the OCS.


The USCG has a Federal Advisory Committee, tasked by the Secretary of Homeland Security to provide recommendations and advice on all matters and actions concerning activities directly involved with or in support of the exploration of offshore mineral and energy resources insofar as they relate to matters within U.S. Coast Guard jurisdiction. This advice also assists the Coast Guard in formulating the position of the United States regarding the offshore industry in advance of International Maritime Organization meetings.

NOSAC Completed Reports since 2010:

» Dynamic Positioning Operational and Installation Guidelines – Final report submitted February 9, 2011


» Certification and Standards for Large OSVs – Final report submitted May 19, 2011


» Accommodation service vessels engaged in OCS activities – Final report submitted November 14, 2013


» Additional Lifesaving and Fire Fighting Requirements on the OCS – Final Report submitted November 14, 2013


» Review of Coast Guard Marine Casualty Reporting – Final Report submitted November 14, 2013


» Marine Casualty Reporting on the OCS – Final report submitted September 20, 2014

» OSV Purpose and Offshore Workers – Final report submitted November 19, 2014

» Training and Manning on MOUs and OSVs Operating on the OCS – Final report submitted November 19, 2014

» Commercial Diving Safety on the OCS – Final Report submitted April 8, 2015
### Additional Government Resources

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