



**U. S. House of Representatives**  
**Committee on Transportation and Infrastructure**  
**Washington, DC 20515**

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October 28, 2011

**MEMORANDUM**

**TO:** Members, Subcommittee on Coast Guard and Maritime Transportation

**FROM:** Staff, Subcommittee on Coast Guard and Maritime Transportation

**RE:** Hearing on "Assuring the Safety of Domestic Energy Production: Lessons Learned from the DEEPWATER HORIZON Oil Spill".

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**PURPOSE**

On Wednesday, November 2, 2011, at 10:00 a.m., in room 2167 of the Rayburn House Office Building, the Subcommittee on Coast Guard and Maritime Transportation will meet to examine the lessons learned in the wake of the BP DEEPWATER HORIZON oil spill, review the latest investigations into the causes of the spill and the Coast Guard response to it, hear the recommendations of those involved in these investigations, and find out what actions the Service has taken or will take in response to those recommendations.

**BACKGROUND**

Coast Guard Regulation of Offshore Drilling

*Safety:*

Under the Outer Continental Shelf Lands Act (OSCLA) (43 U.S.C. 1331 et. seq.), the Coast Guard and the Bureau of Safety and Environmental Enforcement (BSEE), formerly the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE) and the Minerals Management Service (MMS), are responsible for promulgating and enforcing safety regulations governing certain operations of facilities,

fixed and floating platforms, and Mobile Offshore Drilling Units (MODU) on the Outer Continental Shelf (OCS). In order to execute such authority and avoid duplication of effort, the Coast Guard and BSEE operate under a Memorandum of Understanding (MOU) which delineates inspection and enforcement responsibilities between both agencies.

Based on the MOU, BSEE is responsible for inspecting the equipment and procedures aboard facilities, platforms, and MODUs used to drill or extract resources from the OCS. The Coast Guard performs inspections on floating platforms and MODUs focusing on manning and operational procedures including lifesaving, fire-fighting, employee health and safety, as well as hull integrity, vessel stability, means of egress, locations containing hazardous electrical equipment, machinery systems, electrical systems, helicopter facilities, cranes, and navigation. Under the MOU, each agency conducts scheduled and unannounced inspections to ensure compliance with its own requirements. If an inspector notices deficiencies that fall within the responsibility of the other agency, the deficiency is reported to the other agency for action.

The Coast Guard considers a MODU a tank vessel for the purposes of inspection under Chapter 33 of title 46, United States Code. As such, U.S.-flagged MODUs are required to apply for, receive, and maintain compliance with a Certificate of Inspection (COI) issued by the Coast Guard in order to conduct operations on the OCS. The COI ensures the MODU meets U.S. and international standards for marine construction, requires certain safety equipment to be properly installed, certified and maintained, sets minimum manning requirements, and mandates other procedures to ensure the safety of life at sea. Under 46 U.S.C. 3316, the Coast Guard may delegate authority to an approved classification society or recognized organization such as the American Bureau of Shipping to review ship construction plans and conduct inspections, but the Coast Guard reserves responsibility for issuing the COI.

In the case of foreign-flagged MODUs, the flag state or recognized organization working on behalf of the flag state has primary responsibility for ensuring compliance with applicable international standards. The Coast Guard does not generally perform a flag state inspection (as are done on U.S.-flagged MODUs) on foreign-flagged MODUs operating on the OCS. Under 46 U.S.C. 3303, if the MODU's flag state has an inspection and certification program equivalent to that of the U.S., and if the flag state is a party to the International Convention for Safety of Life at Sea (SOLAS), the Coast Guard requires the MODU to undergo a Port State Control (PSC) examination and receive a certificate of compliance which states it passed such inspection before it can operate in the OCS. A PSC inspection ensures the MODU is operating in compliance with its flag state certificate, is in compliance with SOLAS and other international conventions, and that the crew is properly trained in lifesaving and firefighting procedures.

*Security:*

Under 46 U.S.C. 70102, the Coast Guard is required to conduct periodic vulnerability assessments of certain facilities and vessel types to determine their risk of being involved in a transportation security incident. The assessments identify threats to the assets, as well as weaknesses in physical security, security procedures, security training and response plans. The Government Accountability Office (GAO) recently found that the Coast Guard has yet to conduct vulnerability assessments on 12 of the 50 facilities required to undergo such assessments (GAO-11-883T). The GAO also found that vulnerability assessments are not conducted on any MODUs operating on the OCS.

Under 46 U.S.C. 70103, the owners or operators of all facilities and platforms, as well as all U.S.-flagged vessels and MODUs operating on the OCS are required to submit to the Coast Guard for approval a facility or vessel security plan. The security plans identify the individual responsible for implementing security actions, establish security procedures, identify areas where controlled access is necessary, describe security equipment installed, and provide for training and drills of security procedures at the facility or aboard the vessel. A facility or vessel may not operate without an approved security plan.

The Coast Guard is required to inspect such facilities to ensure compliance with the plan at least two times per year. With respect to vessels, the Coast Guard ensures compliance with the security plan during periodic safety boardings and inspections.

The owners or operators of foreign-flagged vessels and MODUs are not required to submit vessel security plans to the Coast Guard for review and approval. Instead, the Coast Guard requires owners or operators of foreign-flagged vessels and MODUs to have security plans approved and verified by their flag state or recognized organization on behalf of their flag state, and must carry on board a valid International Ship Security Certificate issued in accordance International Ship and Port Security Code.

*Oil Spill Response:*

Section 311 of the Federal Water Pollution Control Act (33 U.S.C. 1321) requires the owner or operator of a tank vessel, nontank vessel over 400 gross tons, offshore facility, and onshore facility to prepare a response plan for spills of oil or hazardous substances. The plans must identify a qualified individual with authority to implement removal actions, identify and ensure by contract the personnel and equipment needed to remove to the maximum extent practicable a worst case discharge, and describe the training, equipment, and other response actions that will be undertaken during a spill.

The Environmental Protection Agency (EPA) has authority to review and approve response plans for onshore facilities. BSEE is responsible for the review and approval of response plans for offshore facilities, and the Coast Guard is responsible for the review and approval of response plans for tank and nontank vessels. In the case of a MODU,

two response plans are submitted. One plan is submitted to BSEE usually by the lessee of the rights to the oil or gas production site which covers the response actions that would be taken when the MODU is in the process of drilling a well. A second plan is submitted by the owner or operator of the MODU to the Coast Guard covering response actions that would be taken when the MODU is operating in its capacity as a nontank vessel, such as when it transits between drilling sites. An owner or operator cannot conduct operations without an approved response plan.

### Explosion and Sinking of the DEEPWATER HORIZON

The DEEPWATER HORIZON was a dynamically positioned mobile offshore drilling unit (MODU) owned by Transocean Ltd. Transocean was under contract with British Petroleum (BP) to use the DEEPWATER HORIZON to drill an oil and natural gas well at the Macondo exploration site in an area of the Gulf of Mexico known as the Mississippi Canyon Block 252 (MC 252). BP purchased the lease rights to MC 252 in 2008 for \$34 million and became the legal “operator” for any activities on that block. For the purposes of the Macondo site, BP partnered with two other companies, Anadarko Petroleum Corporation and MOEX Offshore to drill the well. BP owns a 65 percent share of the well, followed by 25 percent for Anadarko Petroleum, and 10 percent for MOEX Offshore.

On the evening of April 20, 2010, workers aboard the DEEPWATER HORIZON had completed the process of drilling the well and were conducting “temporary abandonment” procedures. The temporary abandonment process involves stabilizing the pressure in the drilled well, testing the integrity of the well and its casement, installing a cement plug, and in the case of the Macondo well, setting a lockdown sleeve over the well head. Once this process is complete, the MODU is free to remove its blow out preventer (BOP) and detach from the well. Later, a production rig is moved into place over the well to begin the extraction of oil and natural gas.

As workers were conducting integrity tests, pressure readings indicated problems with the well. At approximately 9:40 p.m., drilling mud began spewing into the DEEPWATER HORIZON followed shortly thereafter by natural gas. Efforts to close off the well by activating the rams and annular preventers on the BOP failed. At 9:49 p.m. the first of two explosions occurred. Eleven workers who were aboard the MODU at the time of the blowout and explosion were killed. On April 22, 2010, the DEEPWATER HORIZON sank and oil and natural gas began spewing from the uncontained well. It took the federal government and the responsible parties 87 days to secure the damaged blowout preventer and stop the flow of oil into the Gulf of Mexico.

## Recent Reports on the DEEPWATER HORIZON Oil Spill

### *Joint Investigative Team (JIT) Report:*

Pursuant to the MOU, the Coast Guard and BOEMRE (the predecessor to BSEE) conducted a joint investigation into the causes of the blowout, explosion and subsequent sinking of the DEEPWATER HORIZON. Volume I, released on April 22, 2011, addressed the areas of the investigation for which Coast Guard had responsibility, including the factors related to the vessel and its systems that caused the marine casualty. The Coast Guard investigation specifically examined the explosion, fire, evacuation, vessel sinking of the MODU, and the safety systems of DEEPWATER HORIZON and its owner-operator, Transocean. Volume II, released September 9, 2011, addressed the areas of BOEMRE responsibility, including the causes of the well blowout, drilling operations, and well abandonment procedures. This hearing will only focus on Volume I.

The Coast Guard investigation revealed numerous systems deficiencies that had an adverse impact on the ability to prevent or limit the magnitude of the disaster. These included poor maintenance of electrical equipment that may have ignited the explosion, bypassing of gas alarms and automatic shutdown systems that could prevent an explosion, and lack of training of personnel on when and how to shutdown engines and disconnect the MODU from the well to avoid an explosion and mitigate the damage from an explosion.

The Coast Guard investigative team also criticized the oversight and regulation of DEEPWATER HORIZON by its flag state, the Republic of the Marshall Islands (RMI). The Coast Guard investigative team faulted RMI for delegating all of its inspection activities to recognized organizations, without itself conducting onboard oversight surveys.

The Coast Guard investigative team made 52 recommendations for the Commandant of the Coast Guard to undertake to improve the safety of offshore drilling operations and the inspection of MODUs. The recommendations call on the Commandant to revise U.S. regulations and exercise greater oversight of foreign-flagged MODUs operating on the OCS and to work with the International Maritime Organization (IMO) to review and revise the international safety regulations governing MODU construction and operations. The Coast Guard investigative team made an additional 13 administrative recommendations, most of which involve the presentation of awards to workers aboard the DEEPWATER HORIZON and the offshore supply vessel DAMON B. BANKSTON for actions taken to save lives.

The Commandant's Final Action, released on September 9, 2011, as an enclosure to Volume I provides Admiral Papp's opinions of, and plan of action for the various recommendations contained within the report. Of the 52 recommendations made to improve the safety of offshore drilling operations and inspections of MODUs, the Commandant concurred fully with 11. The Commandant notes that he has already taken

or will take the suggested action with respect to these recommendations. He partially concurred, or concurred with the intent of another 31 recommendations. The Commandant noted he will further evaluate these recommendations and determine what, if any, action is appropriate. Finally, he did not concur with the remaining 10 recommendations and will not be taking any action regarding them.

The Commandant also dismissed the criticism of RMI and the actions of its recognized organizations, the American Bureau of Shipping and Det Norske Veritas, in the inspection and certification of the DEEPWATER HORIZON. The Commandant found that both RMI and its recognized organizations met all international guidelines for inspection of MODUs under SOLAS. Therefore, any deficiencies were the result of “inadequacies with the guidelines”. The Commandant noted that the IMO is currently revising such guidelines in response to the disaster.

Volumes I and II of the JIT and the Commandant Final Action available on the internet at the following website: <https://homeport.uscg.mil/mycg/portal/ep/home.do>.

#### *Incident Specific Preparedness Review:*

Following major oil spills, Coast Guard internal regulations call for an Incident Specific Preparedness Review (ISPR). On June 14, 2010, Admiral Papp chartered an ISPR for the Deepwater Horizon oil spill. The ISPR team was composed of independent industry and oil spill experts led by retired Coast Guard Vice Admiral Roger Rufe. The Commandant tasked the ISPR team with reviewing the integration of the National Contingency Plan (NCP) with other plans, the effectiveness of the response by the Federal On Scene Coordinator (FOSC), communication with federal, state, local and industry representatives, the effectiveness of the Coast Guard’s overall performance, and the actual response efforts taken, including the training and experience of responders.

The ISPR made the following observations and recommendations:

- The Coast Guard’s Marine Environmental Response mission and programs have atrophied and been displaced as a result of the new sector construct and new homeland security missions. The Coast Guard must reverse this trend.
- Area Contingency Plans (ACPs) were ineffective for this spill. The Coast Guard should issue comprehensive guidance on ACPs to address these inadequacies.
- Environmentally Sensitive Areas (ESAs) were not adequately identified in plans and, therefore, not adequately protected. The Coast Guard should issue national guidance on identifying ESAs and work more closely with State and local partners to ensure ESAs are addressed appropriately.
- Alternate response methods, such as dispersants and in situ burns, were vital to the response effort, but were hampered by a lack of policy. Policies, protocols and guidelines should be established and articulated in the ACPS to govern the use of such methods.

- Dispersant issues, such as toxicity, volumetric limitations, and impacts on ESAs should have been foreseen as part of the National Oceanic and Atmospheric Administration (NOAA)/EPA preparedness programs, and should have been researched and addressed well before this event.
- Effective Daily Recovery Capacity (EDRC) guidelines should be revised to incentivize companies and oil spill removal organizations to invest in response research and development.
- The NCP is not well understood at the state and local level. The Coast Guard needs to conduct outreach to improve understanding of how spill response works under the NCP.
- The performance of crisis leaders during this incident was uneven at best. In some cases, it undermined public confidence in government and corporate officials. However, the National Incident Command (NIC) structure worked very well and highlighted the need for having national level leaders who are capable of handling such large scale events.

The Coast Guard received the ISPR in February 2011 and the Commandant issued a Final Action Memo on March 18, 2011. The memo notes that the Service is already taking steps to address many of the ISPR's findings and recommendations, including efforts to review all ACPs, and coordinate with EPA on developing appropriate standards and protocols for dispersant use. The memo further stated that remaining recommendations of the ISPR would continue to be evaluated by the Coast Guard.

The ISPR report is available on the internet at the following website:  
<http://www.useg.mil/foia/docs/DWH/BPDWH.pdf>.

*The Federal On Scene Coordinator Report:*

Under the NCP, the FOSC is the designated federal official responsible for monitoring or directing responses to all oil spills and hazardous substance releases. The FOSC coordinates all federal efforts with, and provides support and information to, local, state and regional response communities. The FOSC is also required to provide a report on actions taken to respond to a spill to the National Response Team (NRT), which is an organization of 15 federal departments and agencies responsible for coordinating emergency preparedness and response to oil and hazardous substance pollution incidents.

The FOSC is an official of either EPA or the U.S. Coast Guard, depending on where the incident occurs. EPA FOSCs have primary responsibility for spills and releases to inland areas and waters, while Coast Guard FOSCs have responsibility for coastal waters and the Great Lakes. For the DEEPWATER HORIZON oil spill, this position was held by a Coast Guard official. Rear Admirals Mary Landry, James Watson, and Paul Zukunft all served as the FOSC at various times during the spill.

In September 2011, the Coast Guard released the FOSC report on the response effort to the DEEPWATER HORIZON oil spill response. It covers federal response

efforts from April 20, 2010 through March 1, 2011. The FOSC report does not contain any recommendations for action, rather it chronicles the response effort and makes observations on lessons learned.

The key points noted by the FOSC in the report are:

- Several issues developed with command and control of the response effort, especially relating to misunderstandings by state and local officials regarding the response to incidents under NCP versus the National Response Framework (NRF) created under the Stafford Act, as well as the integration of local officials into the response.
- The Coast Guard and other agencies faced challenges in providing sufficient numbers of personnel to manage the response over the duration of the spill.
- Most booming was often counter-productive to protecting coastal areas, but made necessary by public and political demand.
- Several logistics issues developed associated with procuring sufficient supplies such as boom and other response equipment to combat the spill.
- Safety was a priority and resulted in an exceptionally low injury incidence rate.
- ACPs were not always adequate and need to be readdressed to factor in appropriate roles for state and local agencies.
- Standardized protocols governing the use of vessels of opportunity need to be established before an incident.
- The solvency of BP as the responsible party was crucial to response operations.
- Oil Spill Liability Trust Fund (OSLTF) caps were not designed for a Spill of National Significance (SONS), such as the Deepwater Horizon oil spill, and hindered the response effort.
- The response highlighted the need for a common information reporting template.
- NOAA's Environmental Response Management Application (ERMA) was utilized as the Common Operating Picture (COP) and was vital to the success of the response. It should be adopted as the COP for all future response efforts.
- Responses of this size require a robust and well-trained external affairs staff.

The FOSC report is available on the internet at the following website:  
<https://homeport.uscg.mil/mycg/portal/ep/home.do>.

## Previous Reports on the DEEPWATER HORIZON Oil Spill

### *Report of the National Incident Commander*

Admiral Allen, the former Commandant of the Coast Guard and National Incident Commander for the BP DEEPWATER HORIZON oil spill, provided a report to the Secretary of Homeland Security on his actions during the spill and his recommendations for improvements to spill prevention and response. In his report, Admiral Allen made the following recommendations to improve response to future spills:

- Ensure all appropriate federal, state, local and tribal government authorities and response structures are written into response plans and their elected leadership is invited to participate in oil spill response exercises.
- De-conflict and reconcile the roles of the NIC under the NCP and the Principal Federal Official under the NRF to ensure that both regulation and policy provide for a single individual to serve as the President's designee.
- Ensure the NIC has the appropriate organic authorities.
- Empower and grow the National Response Team roles and responsibilities to better serve as the primary body for planning, policy, and coordination for oil spill response.
- Incentivize the private sector to develop 21<sup>st</sup> century oil spill response capabilities.

The NIC report is available on the internet at the following website:

<http://www.nrt.org>.

### *National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling*

On May 22, 2010, President Obama signed an executive order creating the National Commission on BP Deepwater Horizon Oil Spill and Offshore Drilling. The bipartisan Commission was charged with examining the relevant facts and circumstances concerning the root causes of the Deepwater Horizon oil disaster, developing options for guarding against oil spills associated with offshore drilling, as well as making recommendations for changes to Federal laws, regulations and industry practices to improve the safety of the offshore drilling industry. On January 11, 2011, the Commission presented its report to the President. On February 11, 2011, the Subcommittee on Coast Guard and Maritime Transportation and the Subcommittee on Water Resources and Environment held a joint hearing on the Commission's recommendations.

The Commission made several recommendations to change offshore oil drilling industry practices and revise Federal government oversight of the industry through amendments to existing laws and regulations. The following recommendations pertain to the Coast Guard:

- EPA and Coast Guard should establish distinct plans and procedures for responding to a “Spill of National Significance” (SONS).
- EPA and the Coast Guard should bolster state and local involvement in oil spill contingency planning and training and create a mechanism for local involvement in spill planning and response similar to the Regional Citizens’ Advisory Councils mandated by OPA.
- The Coast Guard should issue guidance that offshore barrier berms and similar dredged material barriers generally will not be authorized as an oil spill response measure in the National Contingency Plan or Area Contingency Plans.
- The National Response Team should develop and maintain expertise within the Federal government to oversee source-control efforts.
- The National Response Team should develop and maintain expertise in the Federal government to obtain accurate estimates of flow rate or spill volume early in a source-control effort.
- The Coast Guard should provide scientists with timely access to the response zone so that they can conduct independent scientific research during an oil spill response and long-term monitoring in the future.

The Commission’s report is available on the internet at the following website:  
<http://www.oilspillcommission.gov/final-report>.

### WITNESSES

Rear Admiral Paul Zukunft  
 Assistant Commandant for Marine Safety, Security and Stewardship  
 United States Coast Guard

Admiral Thad Allen (Retired)  
 National Incident Commander  
 DEEPWATER HORIZON Oil Spill

Vice Admiral Roger Rufe, USCG (Retired)  
 Chairman, Incident Specific Preparedness Review  
 DEEPWATER HORIZON Oil Spill

Mr. Stephen Caldwell  
 Director, Homeland Security and Justice Issues  
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 Mr. Frank Rusco  
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