

[ERRATA]

S. HRG. 112-51

OIL AND GAS DEVELOPMENT

HEARING
BEFORE THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED TWELFTH CONGRESS
FIRST SESSION
ON

S. 516

S. 843

S. 916

S. 917

MAY 17, 2011



Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

67-632 PDF

WASHINGTON : 2011

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

[ERRATA]

S. HRG. 112-51

The referenced hearing held before the Senate Committee on Energy and Natural Resources was inadvertently printed without the responses to questions from Secretary Salazar. This errata provides those responses as part of the hearing record.

RESPONSES OF SECRETARY SALAZAR TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Mr. Secretary, what are the greatest challenges facing your regional headquarters in the Gulf? Other than critical pay authority for highly qualified engineers, what can Congress do to ensure better morale in your agency and aid in recruitment?

Answer. The reforms and organizational changes that we have put in place since the Deepwater Horizon explosion and spill are far-reaching and their success depends in large part on providing the new agencies with the financial resources, tools, training and culture to be effective. Improving the safety of offshore drilling and the effectiveness of government oversight of this inherently risky activity will require a substantial infusion of resources into the offshore regulator. We agree with the Commission's strong recommendation for a substantial increase in the resources devoted to government oversight of offshore activities because an effective regulator is so clearly in the public's—and in industry's—interests. The budget allocation in the current draft of the Department's FY 2012 appropriations bill falls short of providing the full funding required to implement the reorganization of BOEMRE and inadequately funds the operational capacity required to implement all of our necessary and far-reaching reforms. For example, it does not provide the requested increase in offshore inspection fees of \$55 million that could help to fund the additional needs. Increased resources are essential to creating an efficient, effective, transparent and stable development and regulatory environment.

Question 2. Mr. Secretary, DOI has now issued a number of deepwater drilling permits. We all know the issuances started as soon as operators could prove access to subsea containment. Can you describe for this committee the process and authorities behind the Notice To Lessees and this requirement?

Answer. Under the Outer Continental Shelf Lands Act (43 U.S.C. 1331, et seq.), the Secretary of the Interior is authorized to regulate the exploration, development, and production of mineral resources on the Outer Continental Shelf. The Secretary has delegated this authority to the Director of the Bureau of Ocean Energy Management, Regulation and Enforcement. Notices to Lessees are authorized in the BOEMRE regulations at 30 CFR 250.103, and have historically been issued by the bureau as guidance documents to clarify certain bureau regulatory requirements and to outline the information to be provided in the various submissions required of lessees on the OCS.

After the Deepwater Horizon explosion and spill the Department began the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history. These reforms strengthen requirements in areas ranging from well design and workplace safety to corporate accountability, and are necessary to ensure that the United States can safely and responsibly expand development of its energy resources.

In November, 2010, BOEMRE issued NTL 2010-N10 informing lessees and operators that a statement, signed by an authorized company official, is required to be submitted with each application for a well permit stating that the operator will conduct all authorized activities in compliance with all applicable regulations. This NTL clarifies, supplements, and provides more detail about existing regulations, including 30 CFR 254.5(d), and is intended to assure compliance with the requirements of 30 CFR 254.23, 254.24 and 254.26(d). In particular, the NTL provides that BOEMRE will evaluate whether an operator has submitted adequate information demonstrating access to and ability to deploy adequate surface and subsea containment resources.

Industry first demonstrated the ability to contain a subsea spill in mid-February 2011. At that time, we were able to resume issuing deepwater drilling permits.

Question 3. Mr. Secretary, one of the bills under consideration would create a joint permitting office for Alaska OCS issues. The Chukchi Environment Impact Study

(“EIS”) is a real driver in our desire to coordinate better. When will BOEMRE finish this work and finalize the Chukchi EIS?

Answer. On August 18, 2011, BOEMRE released the final supplemental environmental impact statement for the Chukchi Sea Lease Sale 193, held in February 2008. The supplemental EIS addresses concerns raised by the U.S. District Court for the District of Alaska in its July 21, 2010, decision remanding Lease Sale 193 back to the agency, and incorporates additional public comment. It also includes a new analysis of the potential environmental effects of a hypothetical Very Large Oil Spill scenario.

The final supplemental EIS is available online at: http://alaska.boemre.gov/ref/EIS_EA/2011_041_FSEIS/2011-041x.htm. BOEMRE is now accepting public comments on the document, and any comments received within the comment period will be considered by the Secretary in determining whether to affirm, modify, or cancel the Lease Sale. The final decision is due to the District Court no later than Oct. 3, 2011.

Question 4. Mr. Secretary, there is a pending exploration plan for work in the Chukchi in 2012. BOEMRE has previously indicated that it will work on this Exploration Plan in parallel with finalizing the Chukchi EIS. Is this still the case? BOEMRE has begun to review the Chukchi exploration plan and provide feedback to the applicant on data gaps and information needs. Is that right?

Answer. On May 12, 2011, Shell submitted to the Department a Revised Exploration Plan (EP) and associated Revised Oil Discharge Prevention and Contingency Plan in support of a proposed exploration drilling program on its Chukchi Sea leases. However, activities involving these leases are restricted because of the remand issued by the Federal Court for the Alaska District on July 21, 2010. Therefore BOEMRE is treating the Chukchi EP as a draft and will not take any official action on the draft EP until after a decision is made to reaffirm Chukchi Sea Lease Sale 193.

A copy of the revised plan and related information can be found at: http://alaska.boemre.gov/ref/ProjectHistory/2012_Shell_CK/2012x_.HTM

Question 5. Mr. Secretary, as I understand it, the Large Spill Analysis is quite different and distinct from the Worst Case Discharge (“WCD”) at the well sites set forth in the Chukchi Exploration Plan. Is that right?

Answer. Yes. A very large oil spill (VLOS) scenario is hypothetical, and is not an analysis of a well that any operator has actually proposed to drill. When an operator submits an Exploration Plan, that plan must specify the wells it proposes to drill and include an oil spill response plan that includes Worst Case Discharge values for these proposed wells. These values take into account specific depth, pressure, oil and anticipated reservoir properties for the proposed wells. These values may be lower than the hypothetical VLOS scenario used for the overall environmental analysis.

The final supplemental SEIS contains further discussion (at p. 126) of the similarity and differences between the very large oil spill scenario and the worst case discharge analysis.

Question 6. Mr. Secretary, I am concerned that the BOEMRE’s work on the Very Large Spill analysis is going to create confusion and backlash, because the general public will not distinguish between this analysis and the much, much lower WCD of the specific wells. What is BOEMRE doing to make this distinction clear?

Answer. In general, the values for worst case discharge (WCD) under the regulations may be higher or lower for a specific well than a very large oil spill (VLOS) scenario. The revised Draft SEIS for Lease Sale 193, issued in May 2011, was the first National Environmental Policy Act (NEPA) document post-Macondo that included an analysis of a VLOS scenario to more thoroughly address the potential for oil spill impacts. The discussion in that document and in the final supplemental EIS, issued on August 18, presents the similarities and differences between the VLOS scenario and the WCD analysis. Similar and appropriate discussion will be included in all future NEPA documents.

Question 7. Mr. Secretary, why does every different agency with an interest in a project have to do its own EIS? For instance there is a National Oceanic and Atmospheric Administration/National Marine Fisheries Service EIS in the works and it seems that a key role of a coordinating office—whether that’s the President’s coordinating task force or one perhaps established by legislation under consideration—would be reconciling one EIS against another. But, in order to increase efficiency, couldn’t BOEMRE’s comprehensive EIS be used for all of these purposes since other agencies are involved in creating it anyway?

Answer. We have learned through the tragedy of the Deepwater Horizon event that environmental analysis of the potential impacts of development activities is both necessary and important. Federal agencies establish their own National Envi-

environmental Policy Act procedures, in line with requirements of the Council on Environmental Quality, for the specific agency's authorities and decisionmaking processes. Agencies are, however, encouraged to incorporate by reference information, findings, and recommendations from existing studies and NEPA analyses into subsequent NEPA analyses and documents in order to make them more concise and focused. Additionally, when it is possible for one NEPA document to include the analyses to support decisions for multiple Federal actions, different Agencies may either work together (dependent upon need, timing, and available resources) as co-lead agencies on an EIS (as the National Oceanic and Atmospheric Administration (NOAA) and BOEMRE are doing in the Gulf of Mexico for seismic activities), or one Agency may adopt the NEPA document of another agency (as NOAA preliminarily plans to coordinate on BOEMRE's Atlantic Coast seismic EIS), if the necessary information is included to support the decisions of the adopting agency.

On May 23 BOEMRE and NOAA announced a new collaborative effort, implemented through a Memorandum of Understanding, that will increase coordination and collaboration between the two agencies to support environmentally sound offshore energy development. The MOU, which is consistent with recommendations from the President's Commission on the Deepwater Horizon Oil Spill and Offshore Drilling, specifies how the two agencies will cooperate and coordinate by:

1. Defining specific processes to ensure effective and timely communication of agency priorities and upcoming activities;
2. Identifying and undertaking critical environmental studies and analyses;
3. Collaborating on scientific, environmental and technical issues related to the development and deployment of environmentally sound and sustainable offshore renewable energy technologies; and
4. Increasing coordination and collaboration on decisions related to OCS activities, including with respect to research and scientific priorities.

Question 8. Can you please describe in detail the President's plan for extending offshore leases affected by the moratorium, including what classes of leases, which areas, or which specific leases will see such extensions? Will all extensions be one year?

Answer. The details of this policy, originally announced by President Obama as part of the Administration's Blueprint for a Secure Energy Future, were provided by Secretary Salazar in a June 16, 2011, memorandum directing BOEMRE to issue a Notice to Lessees and Operators (NTL) describing how operators can request extensions for up to one-year or until drilling activities commence (whichever is less) on their qualifying deepwater leases. As described in the memorandum, in order to qualify for such a suspension, leaseholders must demonstrate that there was no oil or gas production on the lease as of May 15, 2011; that the lease is in deepwater (depths greater than 500 feet); and that the lease is scheduled to expire on or before December 31, 2015. The lease extensions will provide lessees and operators additional time to proceed with exploration and development of their leaseholds while fully complying with important safety, environmental, spill response and containment requirements. A copy of the memorandum can be found at: <http://www.interior.gov/news/pressreleases/Interior-Implements-Steps-to-Increase-Responsible-Domestic-Energy-Production.cfm>

RESPONSES OF SECRETARY SALAZAR TO QUESTIONS FROM SENATOR LANDRIEU

Question 1. Secretary Salazar, as you know, the President on Saturday announced in his radio address that he would extend "drilling leases that were affected by the moratorium." When the moratorium was in place, companies were not allowed to participate in any activity related to the development of new wells. They could not file permit applications, they could not explore—they simply couldn't develop their leases. As such, Senator Hutchison and I introduced the LEASE ACT, as a matter of fairness to give this time back to these lease holders. I am very encouraged to hear the President's remarks and I am hoping you can speak specifically to how the agency is going to extend these leases? Will all leases in the Gulf be extended? For how long will they be extended? Please be very specific.

Answer. The details of this policy, originally announced by President Obama as part of the Administration's Blueprint for a Secure Energy Future, were provided by Secretary Salazar in a June 16, 2011, memorandum directing BOEMRE to issue a Notice to Lessees and Operators (NTL) describing how operators can request one-year extensions for their qualifying deepwater leases. As described in the memorandum, in order to qualify for such a suspension, leaseholders must demonstrate that there was no oil or gas production on the lease as of May 15, 2011; that the lease is in deepwater (depths greater than 500 feet); and that the lease is scheduled

to expire on or before December 31, 2015. The lease extensions will provide lessees and operators additional time to proceed with exploration and development of their leaseholds while fully complying with important safety, environmental, spill response and containment requirements. A copy of the memorandum can be found at: <http://www.interior.gov/news/pressreleases/Interior-Implements-Steps-to-Increase-Responsible-Domestic-Energy-Production.cfm>

Question 2. On May 2nd, Director Bromwich stated that his agency has broad authority to regulate service companies who provide services to oil and gas operators. This is very troublesome to many of my constituents who provide these services to oil and gas operators. Can you please explain how BOEM will seek to regulate these service companies? In addition, can you point to the specific law or regulation that gives BOEM the authority to regulate offshore service companies?

Answer. Over the past year and in the wake of the Deepwater Horizon oil spill, we have been implementing a number of critical reforms to strengthen the regulation of offshore oil and gas drilling and strike the appropriate balance between resource development and regulatory oversight. An important component in this reform strategy is the judicious exercise of regulatory authority over not only offshore operators, but contractors as well—as their work must also be done safely in order for development to proceed responsibly. Our legal authority encompasses the activities of all entities involved in developing offshore leases, to be exercised as we deem appropriate and as safety demands. The reason that the historical practice, has focused on regulating operators was that it served to preserve clarity and the singular responsibility of the operator. We believe that we can hold operators responsible—and in most cases solely responsible—without sacrificing the ability to pursue regulatory actions against contractors for the most serious violations of agency rules and regulations.

Question 3. Secretary Salazar, I would like to take a moment to discuss with you some of the provisions in S. 917, the OCS Reform Act of 2011. For instance, Section 4 of the bill seeks to change the National Policy for the Outer Continental Shelf to be more environmentally friendly. However, my staff has found that the National Policy currently in law already has environmental safeguards built in and in addition, your agency, BOEM has reviewed the environmental protections under current law and has made changes post Deepwater Horizon where necessary. As such, in your opinion, do our current laws and regulations do enough to protect our environment while safely producing domestic oil and gas? Doesn't the current law already have enough environmental safeguards, making this provision irrelevant?

Answer. As noted in this question, a number of the changes in S. 917 highlight the need for increased safety of operations and consideration of the marine and coastal environment, including the need for integrated programs for both environmental research and technological research and development. A focus on strengthened safety and oversight and the environmental impacts of offshore oil and gas operations are—and have been—priorities of the Administration and have been reflected in a number of the reforms that the Department has made since the Deepwater Horizon spill. Statutory changes will ensure compliance with these important safety and environmental protection obligations in the future.

Question 3a. In addition, Section 10 of this legislation would create a “National Commission” whose purpose is to examine and report on the facts and causes relating to the Deepwater Horizon explosion. I don't necessarily have anything against this, except that establishing a Commission now seems very untimely and outdated given the President's Commission and other investigations. This is what I mean about this legislation needing to be modified. We simply are not in the same place we were last year. Do you agree that establishing a Commission now is untimely? Is there a need to establish this Commission?

Answer. Chairman Bingaman's and Ranking Member Murkowski's amendment in the nature of the substitute for S. 917 did not include the provision creating a national commission. We note, however, that over the months during and since containment of the spill associated with the Deepwater Horizon explosion, multiple reviews and investigations—some still ongoing—have resulted in reports indicating the need for change. Bodies ranging from the President's Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, the Department of the Interior's Inspector General, the Department's own Safety Oversight Board, to multiple Committees of the House and Senate, have indicated the need for reform not only of the way the Department does business but of the way oil and gas operations are carried out on the Outer Continental Shelf. We believe that these investigations have been beneficial, and have served to highlight the need for the kinds of reforms that this Administration is implementing to the way oil and gas operations are carried out on the OCS.

Question 3b. Finally, this legislation has a conflict of interest section that puts restrictions on pre and post employment of BOEM employees, gift restrictions and heightened penalties for employees that violate these regulations. I know that Director Bromwich is actively trying to recruit new employees to work at BOEM. The conflict of interest provisions in this legislation seem very onerous. Can you please tell me whether the agency has in place regulations to mitigate conflicts of interest? Or how the Department of Interior addresses conflicts of interest? If your Department does have these regulations, is there a need to treat BOEM different from your other agencies? Do you feel that this section could hamper your Department's efforts to attract top notch employees?

Answer. BOEMRE Director Bromwich has recently noted that the bureau issued a tough new recusal policy last year that requires employees in district offices, where inspections and permitting functions reside, to notify their supervisors about any potential conflict of interest and request to be recused from performing any official duty in which such a potential conflict exists. Examples include: inspectors are now required to recuse themselves from performing inspections of the facilities of former employers. Also, our inspectors must report any attempt by industry or other bureau personnel to inappropriately influence or interfere with their duties. BOEMRE will also soon be issuing a broader version of the policy that applies these ethical standards across the agency.

This policy does present operational challenges for some district offices in the Gulf region, which are located in small communities where the primary employers are offshore companies. However, the need for tough rules defining the boundaries between regulators and the regulated is compelling and necessary to assure the public that our inspections and enforcement programs are effective, aggressive, and independent. Already there is evidence that these new rules are being followed. An internal review conducted by the bureau found more than 50 instances, from September 2010 through April 2011, in which inspectors in the Gulf of Mexico appropriately recused themselves from a specific assignment in compliance with the policy.

We note that the changes in S. 917 would criminalize legal employment by employees of the two new bureaus even if they did not violate the behavioral restrictions of 18 USC 207 and 5 CFR 2641. Current regulations impose no restrictions concerning the organization from which an employee may seek post Federal employment; instead, all restrictions pertain to the nature of the work the employee may perform for the organization as compared to the responsibilities carried out while employed by the Federal Government. We would like to continue working with the Committee on this issue.

Question 4. As you know, Mr. Secretary, I have been watching the permits number very closely. As of yesterday, only 53 shallow water permits have been issued since June 8, 2010. As a reminder, shallow water permits were not put under the moratorium and they were not supposed to be affected by it. However, anyone watching the situation in the Gulf knows that is not the case. In 2010, from January to April, 42 shallow water permits were issued. In 2009, 48 shallow water permits were issued during the same time frame. In 2011, BOEM has only issued 25 shallow water permits during the January-April period. This is almost a 50 percent reduction from 2009 levels. Clearly, the permitting process has been slowed for the shallow water industry, which wasn't supposed to be affected by the moratorium. As such, can you please walk us through the permitting process at BOEM? I am told that the individual departments do not talk during the permit review, so there is no collaboration. How many people are involved in the review process and how do they work together?

In particular, can you explain whether there are inefficiencies in the system that can be reformed to speed up the process to get our permit numbers back to historic levels? While it is true that at the time of the Deepwater Horizon accident offshore production levels were at an all-time high, the EIA has estimated that production in the Gulf of Mexico will decline by 680,000 barrels a day by 2012. This is a significant decline, and is about half of the global exports from Libya.

Answer. Continuously updated information regarding the status of drilling permits can be found at: http://www.gomr.boemre.gov/homepg/offshore/safety/well_permits.html

As of September 1, 2011, 70 new shallow water well permits have been issued since the implementation of new safety and environmental standards on June 8, 2010, including permit applications submitted prior to this date. This is an average of more than 7 per month since fall of 2010, compared to an average of 8 permits per month in 2009.

The permit application review process has always involved a back-and-forth exchange of documents and information between the applicant and the BOEMRE Gulf

of Mexico Region. In that process, permit application submittals are initially reviewed by BOEMRE staff, any deficiencies are identified, and the applications are “returned” to the operators so that the applications can be “resubmitted” with the corrected or missing information. The submission, return, and resubmission of a permit are accomplished through the eWell system, a browser-based permit review software application. The eWell system’s submittal, return, and resubmittal process facilitates iterative, on-going review and communication between the operator and the BOEMRE drilling engineer reviewing the permit in an efficient manner that allows the application to be modified and corrected. The process may include several rounds of submission and return.

Because of this process, the Gulf Region has never had to formally deny a permit application, though there have been situations in which an operator has “withdrawn” an application because of a decision by the operator not to move forward with drilling the well. Absent a withdrawal, the agency and the operator work cooperatively, however long it may take, to ensure that all regulatory requirements are met so that the application may be approved. Depending on the specific characteristics of the well, the applicable regulatory requirements, and the company’s readiness to demonstrate compliance with the requirements, this process can take anywhere from a few days to many months.

Before a drilling permit can be approved, there are many direct and related approvals that must be in place. These may include but are not limited to: approval of the Exploration Plan (EP) or Development Operation Coordination Document (DOCD) under which the specific drilling permit is requested; compliance with regulations requiring an Oil Spill Response Plan; compliance with the National Environmental Policy Act; approval of an Oil Spill Financial Responsibility (OSFR) document; a geological and geophysical review of all the relevant hydrocarbon bearing zones; determination and verification of worst case discharge scenarios; and a demonstration that blowout preventer control systems comply with regulations.

The drilling application review process has never involved a submittal followed by a simple approval or denial. Rather, BOEMRE is always interactively working with the applicants. Given the additional regulatory and informational requirements that have been developed and implemented since the Deepwater Horizon incident, the time required to prepare and review deepwater permit applications has increased as both the operators and the reviewing engineers adapt to the changed landscape. The review process, however, remains on-going, interactive, and open-ended.

Director Bromwich has devoted a team to reviewing and improving BOEMRE’s drilling permit review and approval process, a central element to ensuring that proposed drilling operations will be conducted safely. This review and evaluation process must be rigorous but efficient, so that proposed operations are not unduly delayed by the process. The team has been working on plans to address the permitting workload in light of current resources, and is developing a comprehensive handbook of related policies and practices. This handbook will be designed to assist permit reviewers in carrying out their responsibilities and ensure greater consistency across our offices and clarity for industry.

BOEMRE has also been in constant communication with industry representatives and individual operators about the permitting process, and has already addressed specific issues with plan approval and permitting processes that include:

- issuing two guidance documents to provide clarity regarding the steps in the permitting process and the requirements that must be satisfied to meet the standards;
- issuing a permitting checklist so that operators can confirm their drilling permit applications are complete before they submit them, thus minimizing the need to return applications because necessary information is missing; and
- development of information technology solutions to improve the efficiency of processes while providing operators with greater transparency into the status of the permit applications.

The goal through this process has been to provide greater clarity, transparency and consistency in the permitting process.

RESPONSES OF SECRETARY SALAZAR TO QUESTIONS FROM SENATOR HOEVEN

Question 1. During the May 17, 2011, committee hearing in Energy and Natural Resources, you testified the Department of Interior has 30 days to approve exploration plans but no deadline to act on permits. Would 60 days be sufficient to review and either approve or deny a permit? If not, would 90 days be sufficient to review

and either approve or deny a permit. If neither 60 nor 90 days are sufficient, how many days would the Interior need to review and make a decision on a permit and why?

Answer. Operators continue to receive permits in both shallow and deep water under the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history. These reforms, launched in response to the Deepwater Horizon explosion and spill, strengthen requirements in areas ranging from well design and workplace safety to corporate accountability, and are helping ensure that the United States can safely and responsibly expand development of its energy resources. BOEMRE is always interactively working with the applicants. Given the additional regulatory and informational requirements that have been developed and implemented since the Deepwater Horizon incident, the time required to prepare and review deepwater permit applications has increased for both the operators and the reviewing engineers. The review process, however, remains ongoing, interactive, and open-ended. Given the importance of ensuring that permit applicants satisfy these safety and environmental standards, statutory time constraints on permit approval are not warranted and could constrain the ability to ensure that permits meet safety standards.

Continuously updated information regarding the status of drilling permits can be found at: http://www.gomr.boemre.gov/homepg/offshore/safety/well_permits.html

Question 2. On average, how many days does it take the Interior to either approve or deny an Outer Continental Shelf permit?

Answer. The permit application review process has always involved a back-and-forth exchange of documents and information between the applicant and the BOEMRE Gulf of Mexico Region. In that process, permit application submittals are initially reviewed by BOEMRE staff, any deficiencies are identified, and the applications are “returned” to the operators so that the applications can be “resubmitted” with the corrected or missing information. The submission, return, and resubmission of a permit are accomplished through the eWell system, a browser-based permit review software application. The eWell system’s submittal, return, and resubmittal process facilitates iterative, on-going review and communication between the operator and the BOEMRE drilling engineer reviewing the permit in an efficient manner that allows the application to be modified and corrected. The process may include several rounds of submission and return. Because of this process, the Gulf Region has never had to formally deny a permit application, though there have been situations in which an operator has “withdrawn” an application because of a decision by the operator not to move forward with drilling the well. Absent a withdrawal, the agency and the operator work cooperatively, however long it may take, to ensure that all regulatory requirements are met so that the application may be approved. Depending on the specific characteristics of the well, the applicable regulatory requirements, and the company’s readiness to demonstrate compliance with the requirements, this process can take anywhere from a few days to many months.

RESPONSES OF SECRETARY SALAZAR TO QUESTIONS FROM SENATOR SHAHEEN

In the wake of the Exxon Valdez spill, the Oil Pollution Act was enacted, which, among other things, created an Interagency Committee to focus oil spill research and development activities among various federal agencies. Yet, the Deepwater Horizon spill highlighted the lack of oil spill technology and response capabilities necessary to address a spill like the one we saw unfold last summer. There was a perception that we were still using the same technologies to clean up Deepwater Horizon that we used twenty years ago to clean up Exxon Valdez.

In developing legislation last year with Sen. Mark Udall and Chairman Bingaman to address this critical area of need, we heard some reoccurring themes among those working in oil spill R&D field.

One was the lack of dedicated funding for oil spill R&D activities, which was reinforced by the President’s National Oil Spill Commission. We attempted to correct this in the legislation Chairman Bingaman, Sen. Udall and I introduced, setting aside \$25 million a year from oil and gas royalties to fund these critical oil spill R&D activities.

Question 1. Would you agree that we need to find dedicated sources of funding to pay for oil spill R&D?

Answer. As intended by the Oil Pollution Act of 1990, the companies that produce and transport oil are supporting research to improve oil spill response capabilities, with funding for related activities appropriated from the Oil Spill Liability Trust Fund (OSLTF)-including funding for R&D. The OSLTF derives funding from:

- an 8-cent-per barrel tax, collected from the oil industry on petroleum produced in or imported to the United States. This is the largest source of revenue for oil spill research;
- transfers from other existing pollution funds. While no additional funds remain to be transferred, total transfers into the trust fund since 1990 have exceeded \$550 million;
- interest on the trust fund principal from U.S. Treasury investments;
- cost recoveries from those responsible for oil incidents;
- fines and civil penalties for violations of the Oil Pollution Act financial responsibility requirements, the Clean Water Act, the Deepwater Port Act, and the Trans-Alaska Pipeline Authorization Act.

With respect to activities within the Department of the Interior's jurisdiction, in September 2010, the Administration requested an additional \$8.6 million as a 2011 budget amendment to the Department's budget for oil spill research to address key research gaps brought to light by the spill and the associated containment and response efforts. A total of \$11.7 million was enacted in the FY 2011 continuing resolution, an increase of \$5.4 million over FY 2010. The FY 2012 budget request for oil spill research is \$14.9 million and 22 full time employees, which is a net increase of \$8.6 million and 4 full time employees over the FY 2010 enacted level. This increase was needed to address several key knowledge gaps brought to light by the Deepwater Horizon oil spill and its troubled and lengthy spill containment and response efforts. The additional \$8.6 million will provide contract research and four full time employees needed to manage the development and monitoring of studies.

Other agencies in government have received or requested additional funding for R&D activities, as well. For example, the Environmental Protection Agencies received approximately \$2 million in the supplemental appropriation for research on dispersants, and NOAA's Office of Response and Restoration received a \$2.9M increase in the FY 2012 President's Budget Request that would fund competitive external grants to increase NOAA's spill response capacity and development.

The Department has also announced the formation of the Ocean Energy Safety Advisory Committee, comprised of representatives from federal agencies as well as the offshore oil and gas industry, academic institutions, and other non-governmental organizations. Dr. Tom Hunter, the former head of the Sandia National Laboratory who was central to the Macondo well control effort, was selected by the Secretary to chair this committee, which will be a center of excellence charged with driving research and development and technical innovation across government and industry in the areas of drilling safety, well control and subsea containment, and oil spill response. The Administration has proposed that Congress pass legislation to formalize this collaboration by authorizing an Ocean Energy Safety Institute to connect government, industry, academia, and outside experts devoted to developing cutting-edge safety, containment, and response capabilities.

Question 2. Since the BP spill, has there been any change in the amount of money spent, either by government or by industry, on research and development for new technology that aids in response and clean-up?

Answer. As indicated in the previous response, with respect to activities within the Department of the Interior's jurisdiction, in September 2010, the Administration requested an additional \$8.6 million as a 2011 budget amendment to the Department's budget for oil spill research to address key research gaps brought to light by the spill and the associated containment and response efforts. A total of \$11.7 million was enacted in the FY 2011 continuing resolution, an increase of \$5.4 million over FY 2010. The FY 2012 budget request for oil spill research is \$14.9 million and 22 full time employees, which is a net increase of \$8.6 million and 4 full time employees over the FY 2010 enacted level. This increase was needed to address several key knowledge gaps brought to light by the Deepwater Horizon oil spill and its troubled and lengthy spill containment and response efforts. The additional \$8.6 million will provide contract research and four full time employees needed to manage the development and monitoring of studies.

The Department has also announced the formation of the Ocean Energy Safety Advisory Committee, comprised of representatives from federal agencies as well as the offshore oil and gas industry, academic institutions, and other non-governmental organizations. Dr. Tom Hunter, the former head of the Sandia National Laboratory who was central to the Macondo well control effort, was selected by the Secretary to chair this committee, which will be a center of excellence charged with driving research and development and technical innovation across government and industry in the areas of drilling safety, well control and subsea containment, and oil spill response. The Administration has proposed that Congress pass legislation to formalize this collaboration by authorizing an Ocean Energy Safety Institute to connect gov-

ernment, industry, academia, and outside experts devoted to developing cutting-edge safety, containment, and response capabilities.

The Deepwater Horizon explosion and resulting oil spill have placed a renewed emphasis on ensuring the safety and protection of our oceans and shorelines. Ohmsett laboratory has been operated by BOEMRE for 17 years as part of our mission to ensure that the best and safest technologies are used in offshore oil and gas operations. It is the largest outdoor saltwater wave/tow tank facility in North America and is the only facility where full-scale oil spill response equipment testing, research, and training can be conducted with oil in a marine environment under controlled environmental conditions.

Ohmsett plays a critical role in developing effective response technologies by providing independent and objective performance testing of full-scale oil spill response equipment, as well as training first responders who will be using this equipment. Many of today's commercially available oil spill cleanup systems and services have been tested at Ohmsett, as have equipment and technology currently under development. The facility is capable of hosting the testing and evaluation of a broad range of oil spill response systems and technologies, including chemical treating agents and dispersants, fireresistant containment booms, remote sensing and detection instruments, sorbent materials, temporary storage devices, viscous oil pumping units and oil water separators.

Ohmsett is the most cost-effective method for companies to obtain response experience using real oil. The Ohmsett test tank allows testing of full-scale equipment, and the tank's wave generator simulates realistic sea environments while state-of-the-art data collection and video systems record test results.

Question 3. The President's requested FY2012 budget includes a substantial increase in the funds for oil spill R&D, up to \$14 million from \$6 million. What is the plan for how this money would be spent?

Answer. As noted above, this request is intended to provide an additional \$8.6 million to the Oil Spill Research Program for contract research that will address several key knowledge gaps brought to light by the Deepwater Horizon spill and its spill containment and response efforts, as well as four FTEs that are needed to manage the development and monitoring of these studies. *Question 4.* Do you feel that the Department of the Interior should have a central role among other federal agencies in promoting and funding oil spill R&D efforts?

Answer. The Department, through BOEMRE plays a key role in initiating applied research to support decision making relating to offshore energy development, has long conducted research in oil spill containment and response, and provides response training at its OHMSETT facility. The Department will continue to play a leadership role in both technology assessment and stimulation of innovation on a larger scale than its usual study efforts, and will continue to coordinate its efforts with other relevant federal agencies.

Oil Spill R&D Planning

Another theme we've frequently heard is that the Interagency Committee created under the Oil Pollution Act has not worked. There was a sense among those we spoke to in crafting our bill last year that the Committee lacked leadership and direction. As one example, the Oil Pollution Act required the Interagency Committee to develop an oil spill R&D plan, which they did. However, the plan is dated April 1997 and has not been updated since.

Question 1. In your view, what can we do to better focus and coordinate our federal oil spill R&D efforts? How can we ensure that there is a known and understood path forward on federal oil spill R&D efforts?

Answer. The Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) continues to serve as a forum for its federal members to coordinate and maintain awareness of ongoing oil pollution research activities. Members of the ICCOPR interact in a number of venues, including conferences, workshops, meetings of the National Response Team Science and Technology Subcommittee, and through formal meetings. Formal meetings of the ICCOPR are normally scheduled on a semi-annual basis. The Oil Pollution Research and Technology Plan is currently being revised.

As noted in the response to question in the previous section, the Department has announced the formation of an Ocean Energy Safety Advisory Committee, comprised of representatives from federal agencies as well as the offshore oil and gas industry, academic institutions, and other non-governmental organizations. It is intended that this committee will be a center of excellence charged with driving research and development and technical innovation across government and industry in the areas of drilling safety, well control and subsea containment, and oil spill response.

Building on pre-existing efforts, the Administration has taken additional efforts to advance R&D efforts in the wake of the Deepwater Horizon oil spill. For example, as mentioned above, the Department of the Interior has announced the formation of the Ocean Energy Safety Advisory Committee, comprised of representatives from federal agencies as well as the offshore oil and gas industry, academic institutions, and other non-governmental organizations. Dr. Tom Hunter, the former head of the Sandia National Laboratory who was central to the Macondo well control effort, was selected by the Secretary to chair this committee, which will be a center of excellence charged with driving research and development and technical innovation across government and industry in the areas of drilling safety, well control and subsea containment, and oil spill response. The Administration has proposed that Congress pass legislation to formalize this collaboration by authorizing an Ocean Energy Safety Institute to connect government, industry, academia, and outside experts devoted to developing cutting-edge safety, containment, and response capabilities.

Question 2. How can we get federal agencies that play a critical role in oil spill R&D, including the Interior Department, to better work together?

Answer. As noted in the response to question 1, the Administration is implementing policies that will assist in focusing and driving future oil spill R&D efforts.

Role of Science

I think one of the most troubling things we learned from the BP disaster in the Gulf was that science had taken a back seat in the permitting process. At the time, one of the scientists who worked for the Minerals Management Service was quoted in the New York Times as saying that MMS scientists “are simply not allowed to conclude that drilling will have an impact” on the environment (U.S. Said to Allow Drilling Without Needed Permits, 5/13/2010).

Question 1. In your opinion, over the past year has there been any change in the culture within the Department of the Interior to take science seriously in the decisionmaking process, and, if the answer is yes, please provide some concrete evidence of that change?

Answer. Significant reforms have taken place at the Department, including in the offshore program, over the first 2 1/2 years of the Obama Administration, and a focus on science has played a key role in these reforms. We have elevated the role of science in bureau decision-making. One of the guiding principles of our reform agenda for offshore energy development has been a fundamental change in the approach to decision-making, which includes a renewed commitment to develop thorough, credible and unfiltered scientific data. The reorganization of the bureau will ensure independent and rigorous enforcement of safety and environmental regulations and the augmentation of science efforts in bureau activities through added capacity and expertise. Toward this end, last September a Secretarial Order was issued establishing a Scientific Integrity Policy for the Department that will cultivate and reinforce a culture of scientific integrity. In the offshore program, we have to devote greater resources to, and elevate the role of, our scientists within the offshore regulators.

For example, in March 2010 the Department announced the proposed 2012-2017 offshore oil and gas leasing program, providing a new approach to oil and gas activities on the OCS aimed at promoting the responsible, environmentally-sound, and scientifically-grounded development of oil and gas resources. Through this proposal, a new emphasis on both science-based decision-making and public outreach was announced. This included cancelling certain lease sales and clarifying that full environmental analysis through an Environmental Impact Statement will be required prior to any decision to lease in any additional areas.

The Deepwater Horizon explosion and spill focused our attention on the Gulf of Mexico and further fueled this drive to reform. The reforms put in place in response to that disaster have created a strong and independent agency with the resources, tools and authority it needs to hold offshore operators accountable. The bar on industry’s safety practices and equipment has been raised, and companies that want to drill now must explain how they will deal with catastrophic blowouts and oil spills.

Science has been returned to its rightful place in decisions about offshore oil and gas development. We are conducting a new environmental analysis in the Gulf of Mexico that will help provide information to guide future leasing and development decisions there. We also continue to work with other federal agencies to conduct thorough environmental analysis and scientific study, to gather public input and comment, and to carefully examine the potential safety and spill risks as new areas are evaluated for potential oil and gas exploration and development on the OCS.

The science resources available at the Department of the Interior are some of the most robust in the United States and include thousands of scientists in the United States Geological Survey (USGS), the United States Fish and Wildlife Service, the National Park Service and BOEMRE. The various programs in the USGS and the science and research programs within BOEMRE also play key roles in providing scientific information concerning impacts from offshore energy and mineral exploration.

Specific examples of this science-based approach include the science gap and sufficiency report issued in June 2011 by the USGS. That report, requested by Secretary Salazar, evaluates the science needed to better inform decisions regarding oil and natural gas exploration and development in the Beaufort and Chukchi Seas off Alaska by identifying what the science gaps were in OCS development in the Arctic. While there is significant potential for development in this area, it is a frontier area with harsh weather conditions and unique fish and wildlife resources that Alaska's indigenous people rely on for subsistence. The report summarizes the large volume of existing scientific information, much of it conducted under the auspices of the Environmental Studies Program of the Bureau of Ocean Energy Management, Regulation and Enforcement; identifies where knowledge gaps exist; and provides initial guidance on new and continuing research that could improve decision-making.

The information identified in this report, which can be found at <http://pubs.usgs.gov/circ/1370>, will help inform the Department's determinations about what we need to know to develop our Arctic energy resources in the right places in the right way. Among the major areas noted in the report where additional scientific research, analysis and synthesis could reduce uncertainties include the following:

- Developing a better understanding of the effects of climate change on physical, biological and social conditions as well as resource management strategies in the Arctic;
- Developing foundational geospatial data on the Arctic Outer Continental Shelf;
- Synthesizing existing scientific information on a wide range of topics on the Arctic;
- Building upon advances in spill-risk evaluation and response knowledge by developing better information on key inputs to spill models (such as oceanographic, weather, and ecological data);
- Improving dialogue and using collaborative, comprehensive science planning, both domestically and internationally.

Another recent specific example is the use of the Outer Continental Shelf Scientific Committee, chartered to advise the Secretary of the Interior, through BOEMRE, on the feasibility, appropriateness, and scientific value of the bureau's OCS Environmental Studies Program. The Scientific Committee is a vital part of the Department's ongoing efforts to ensure that the appropriate scientific information is available on which to base decisions affecting offshore energy production on the OCS.

In February 2011, the Department announced the establishment of a new policy to ensure and maintain the integrity of scientific and scholarly activities used in Departmental decision making. The policy follows on the Memorandum to the Heads of Departments and Agencies on Scientific Integrity issued in December and includes the designation Dr. Ralph Morgenweck, U.S. Fish and Wildlife Service Senior Science Advisor, to serve as the Department's first Science Integrity Officer. This new policy, which will be updated as necessary, is based on the principles found in Secretarial Order 3305 and guided by the Office of Science and Technology Policy memo, issued in December 2010. The policy applies to all Departmental employees when they engage in, supervise or manage scientific or scholarly activities; analyze and/or publicly communicate scientific or scholarly information; or use this information or analyses to make policy, management or regulatory decisions. Additionally, the policy includes provisions for contractors, partners, grantees, leasees, volunteers and others, who conduct these activities on behalf of the Department.

Under this new policy, the Department will:

- Use clear and unambiguous codes of conduct for scientific and scholarly activities to define expectations for those covered by this policy.
- Facilitate the free flow of scientific and scholarly information, consistent with privacy and classification standards, and in keeping with the Department's Open Government Plan.
- Document the scientific and scholarly findings considered in decision making and ensure public access to that information and supporting data through established Departmental and Bureau procedures-except for information and data

that are restricted from disclosure under procedures established in accordance with statute, regulation, Executive Order, or Presidential Memorandum.

- Ensure that the selection and retention of employees in scientific and scholarly positions or in positions that rely on the results of scientific and scholarly activities are based on the candidate's integrity, knowledge, credentials, and experience relevant to the responsibility of the position.
- Ensure that public communications policies provide procedures by which scientists and scholars may speak to the media and the public about scientific and scholarly matters based on their official work and areas of expertise. In no circumstance may public affairs officers ask or direct Federal scientists to alter scientific findings.
- Provide information to employees on whistleblower protections.
- Communicate this policy and all related responsibilities to contractors, cooperators, partners, permittees, leasees, grantees, and volunteers who assist with 22 developing or applying the results of scientific and scholarly activities on behalf of the Department, as appropriate.
- Encourage the enhancement of scientific and scholarly integrity through appropriate, cooperative engagement with the communities of practice represented by professional societies and organizations.
- Examine, track, and resolve all reasonable allegations of scientific and scholarly misconduct while ensuring the rights and privacy of those covered by this policy and ensuring that unwarranted allegations do not result in slander, libel, or other damage to them.
- Facilitate the sharing of best administrative and management practices that promote the integrity of the Department's scientific and scholarly activities.

Question 2. As we restructure the handling of drilling permits within the Department of the Interior, how can we instill a commitment to scientific integrity within the new administrative units?

Answer. Director Bromwich has devoted a team to reviewing and improving BOEMRE's drilling permit review and approval process, a central element to ensuring that proposed drilling operations will be conducted safely. This review and evaluation process must be rigorous but efficient, so that proposed operations are not unduly delayed by the process. The team has been working on plans to address the permitting workload in light of current resources, and is developing a comprehensive handbook of related policies and practices. This handbook will be designed to assist permit reviewers in carrying out their responsibilities and ensure greater consistency across our offices and clarity for industry.

We have also elevated the role of science in bureau decision-making. One of the guiding principles of our reform agenda for offshore energy development has been a fundamental change in the approach to decision-making, which includes a renewed commitment to develop thorough, credible and unfiltered scientific data. The reorganization of the bureau will ensure independent and rigorous enforcement of safety and environmental regulations and the augmentation of science efforts in bureau activities through added capacity and expertise. Toward this end, last September a Secretarial Order was issued that establishes a Scientific Integrity Policy for the Department that will cultivate and reinforce a culture of scientific integrity. In the offshore program, we have to devote greater resources to, and elevate the role of, our scientists within the offshore regulators.

By the end of the current fiscal year, we intend to separate the former MMS's resource management and leasing functions from its safety and environmental enforcement responsibilities by establishing the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM).

BSEE will be responsible for overseeing the safety and environmental and regulatory compliance of offshore oil and gas and renewable energy operations. The functions of BSEE include oil and gas permitting, facility inspections, regulations and standards development, safety research, field operations, environmental compliance and enforcement, review of operator oil spill response plans, production and development conservation, and operating a national training center. This will provide the engineers who review permit applications and the inspectors who ensure compliance with our workplace and drilling safety regulations with greater independence, more budgetary autonomy, and clearer mission focus. The mission of BSEE will be to independently and rigorously enforce safety and environmental regulations. Our goal is to create a toughminded, but fair, regulator that can effectively keep pace with the risks of offshore drilling and will promote the development of a safety culture in offshore operators.

BOEM will be responsible for promoting and managing the development of the nation's offshore resources, including oil, gas and renewable resources. This mission

involves ensuring that the nation's offshore energy resources are made available for wise and economically sound development with appropriate protections for the environment. The structure that we have developed and that we are implementing ensures that effective reviews of the environmental impacts of proposed projects in our oceans are closely analyzed and well-understood; that these impacts are given appropriate weight during decision-making related to resource management; and that the appropriate balance is struck. These processes must be both rigorous and efficient so that operations can go forward in a timely way and with confidence that appropriate steps to mitigate potential environmental effects are taken.

We are creating the senior position of Chief Environmental Officer within BOEM, who will be responsible for ensuring that environmental concerns are appropriately balanced in leasing and planning decisions and for coordinating and promoting scientific research relative to our oceans.

Question 3. There is a need for balance between making sure that permits are issued in a timely manner and the time it takes to make sure that the drilling will be done in a safe and environmentally responsible manner. Do you feel that any of the proposed legislation we are considering today achieves the correct balance?

Answer. We agree that striking this balance is a key component of the program. As noted in the Department's testimony for this hearing, S. 917 includes several new planning requirements intended to promote safe and responsible development. These include a requirement for detailed descriptions of equipment and plans to address potential well blowouts, which is consistent with Notice to Lessees 2010-N06, issued by BOEMRE and that clarifies that current regulations require that new filings for drilling permits, exploration plans, or development plans contain information specifically addressing the possibility of a blowout and the detailed steps that lessees or operators would take to prevent blowouts.

The legislation would also extend the deadline for the Department to review and approve exploration plans; require that lessees obtain a drilling permit after approval of an exploration plan; and require that, prior to approval of such a permit, an engineering review of the well system be completed and reviewed. The Administration supports this authority providing for longer review time and stronger reviews of exploration plans prior to drilling.

Question 4. Have we learned anything from the scientific work that has been done since the spill occurred that will help ensure that future drilling operations are done safely?

Answer. We are using spill-related scientific work to understand what happened; to inform our reform and restoration efforts; and to help guide future development on the OCS.

We have also elevated the role of science in bureau decision-making. One of the guiding principles of our reform agenda for offshore energy development has been a fundamental change in the approach to decision-making, which includes a renewed commitment to develop thorough, credible and unfiltered scientific data. The reorganization of the bureau will ensure independent and rigorous enforcement of safety and environmental regulations and the augmentation of science efforts in bureau activities through added capacity and expertise. Toward this end, last September Secretary Salazar issued a Secretarial Order establishing a Scientific Integrity Policy for the Department that will cultivate and reinforce a culture of scientific integrity. In the offshore program, we have to devote greater resources to, and elevate the role of, our scientists within the offshore regulators.

On the ground, industry has worked through the Marine Well Containment Company and the Helix Containment Group to develop well containment systems, cutting edge technology that meet the new, more stringent, requirements established by BOEMRE in its regulations.

In addition, a significant amount of science has been, and continues to be, carried out in the Gulf Region as a result of the spill. This science is contributing, for example, to our knowledge of the fate of oil released from such depths, as discussed in the response to the next question. Similarly, information and experiences from the Deepwater Horizon spill, as well as the Exxon Valdez spill, have been used by the USGS to evaluate and inform the science needed to better inform decisions regarding oil and natural gas exploration and development in the Beaufort and Chukchi Seas off Alaska.

Question 5. It appeared in news reports that we had a difficult time even figuring out where the oil from the spill went. Has there been any recent scientific work that has helped us determine what happened to the oil?

Answer. There has been some new work on this topic, and more will be published by the end of the year in a special issue of the Proceedings of the National Academy of Sciences. Although it is still premature to draw final conclusions regarding details of the fate of the oil, some of these studies help to shed new light on this question.

Scientists working on the oil flow rate from the well at first were puzzled by the fact that the apparent flow rate from the oil well, as measured by the oil on the ocean surface by the USGS estimated much less than the rate measured directly at the well in the deep sea by the Woods Hole Oceanographic Institution. A recent publication in the journal *Geophysical Research Letters* by a team of NOAA scientists, who measured hydrocarbons evaporating from the ocean surface to the atmosphere, may help resolve this paradox indicating a large portion of the oil remained subsurface. These new data could explain the lower apparent flow rate at the ocean surface in the earlier USGS estimate. Also, research publications by David Valentine and colleagues at the University of California Santa Barbara demonstrate that microbes rapidly consumed methane in the deep ocean. The USGS has published data (available at <http://www.usgs.gov/oilspill>) from shoreline surveys that will help determine the impact of the oil that made landfall. Research into the oil's migration and distribution around the Gulf of Mexico is continuing and may help provide a more complete picture of where the oil went over time.