

**STATEMENT OF BRIAN SALERNO
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UNITED STATES DEPARTMENT OF THE INTERIOR
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U.S. HOUSE OF REPRESENTATIVES
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“Innovations in Safety Since the 2010 Macondo Incident”

Chairman Bishop, Ranking Member Grijalva, and members of the Committee, thank you for the opportunity to appear here today to discuss the regulatory reforms that the U.S. Department of the Interior (DOI) has implemented since the *Deepwater Horizon (DWH)* tragedy where 11 offshore workers lost their lives and oil flowed into the Gulf of Mexico (GOM) for 87 consecutive days resulting in millions of barrels of total oil spilled.

Over the last five years, the DOI has launched numerous reforms that represent the most aggressive and comprehensive changes to offshore oil and gas regulation and oversight since the enactment of the Outer Continental Shelf Lands Act. One of the most immediate reforms included the division of the Minerals Management Service (MMS) into three independent entities:

1. **Bureau of Ocean Energy Management (BOEM)** ensuring the balanced and responsible development of energy resources on the Outer Continental Shelf (OCS);
2. **Bureau of Safety and Environmental Enforcement (BSEE)** ensuring safe and environmentally responsible exploration and production through vigorous regulatory oversight and enforcement; and
3. **Office of Natural Resources Revenue** ensuring a fair return to the taxpayer from royalty and revenue collection and disbursement activities.

The creation of BSEE out of the former MMS provided for an organization with a distinct mission focus on ensuring safe and environmentally responsible OCS operations through development and promotion of safety standards and processes, along with rigorous compliance and enforcement. BSEE has pursued its oversight mission by implementing a series of comprehensive regulatory reforms; strengthening its internal capacity by improving processes related to inspections, investigations, and enforcement programs; funding research in spill preparedness and response, and technological advancement; and engaging in strategic interagency, international and industry engagements.

ASSESSING AND MANAGING RISK

Managing risk provides the basic framework through which BSEE approaches safety on the OCS. BSEE pursues this objective through a comprehensive program of regulations, technical assessments, inspections, and incident investigations. In addition, we place great emphasis on the establishment of a safety culture throughout industry, the cornerstone of this effort being the

Safety Environmental Management System, or SEMS. SEMS is performance based, and forms a necessary counterpart to our more traditional regulatory oversight activities. We believe this hybrid approach is the most comprehensive way to take safety to the next level.

To further support this overall approach, the Bureau is focusing on building its capacity for analyzing data gained through incident reporting requirements, near-miss reporting, and real-time monitoring. For example, in November 2013, BSEE and the Bureau of Transportation Statistics (BTS) signed an interagency agreement (IAA) to develop the Voluntary Confidential Near-Miss Reporting System (Safe OCS) for use on the OCS. Safe OCS, which will be managed by BTS, has the potential to help identify safety concerns and support collective measures that will help prevent catastrophic incidents that endanger lives and the environment. The trend information will be shared with BSEE, the industry, and the public and provide essential information about accident precursors and potential hazards associated with OCS oil and gas operations.

The Bureau also works with recognized scientific organizations, other international regulators, and the industry to identify and quantify operational risks. These activities, along with increased data collection, will further contribute to BSEE's ability to target the components, operations, and activities that present the highest risk to safety and the environment and ensure that mitigation measures are in place. Through these initiatives and others, the Bureau will continue to ensure that offshore development occurs in a safe and environmentally responsible way.

MAJOR REGULATORY ENHANCEMENTS TO DATE

In the immediate aftermath of the *DWH* tragedy, it was clear that existing regulations had not kept pace with the advancements in technology used during offshore activities. The regulatory reforms that BSEE has initiated and implemented cover a wide range of subjects, all focused on increasing safety and reducing the risk throughout offshore operations. BSEE continues to use a hybrid approach – prescriptive regulations and performance-based measures – focusing on rules that will provide for the greatest enhancement in safety and environmental protection. As offshore operations expand and move into new environments and require new technologies, BSEE will continue to adapt its regulatory approach and oversight responsibilities. Over the last five years, BSEE's regulatory enhancements include:

Promoting Safety Culture and Continuous Improvement at All Levels of Industry – As noted above, the Safety and Environmental Management Systems (SEMS) program is the cornerstone of BSEE's hybrid regulatory approach. The goal is for the SEMS program to encourage the offshore oil and gas industry to look beyond baseline compliance with regulations and move towards a safety culture that promotes continuous improvement in safety and environmental performance. The SEMS program is meant to be a tool through which companies actively manage and improve safety performance related to human behavior, organizational structure, leadership, standards, processes, and procedures – not simply a compilation of required documentation. It also requires industry to maintain an active integrated program that empowers industry workers to participate in safety management decisions. BSEE issued regulations in 2010 and 2012 and will continue to refine the program in future years.

Drilling Safety Rules – Following the *DWH* tragedy, several immediate actions were taken to address specific offshore safety concerns involving drilling operations. The regulations that were issued in 2010 and 2012 required new standards for well design, casing and cementing, and the third party certification of designs. These rules represented an important first step in addressing regulatory gaps in the offshore program. BSEE engineers have since reviewed, analyzed, and approved a total of 579 new well permits for drilling in the GOM that meet these more stringent well-construction standards. Further, despite the new standards recent statistics indicated that new wells are reviewed and approved on average under 60 days.

Access to Subsea Containment Capability – As a condition for approving deepwater drilling operations, BSEE evaluates an operator’s capability to contain a subsea blowout. BSEE also evaluates an operator’s access to all necessary equipment for subsea containment including a capping stack. As a result, there is now containment equipment available for industry deployment. In addition, BSEE has required the providers of the containment systems to demonstrate successful deployment of the systems in the field.

ONGOING REFORM EFFORTS

Proposed Production Safety Systems Rule – In August 2013, BSEE published a proposed rule to address safety systems that prevent the release of hydrocarbons and protect the personnel on the 2,500 OCS production facilities. This will be the first significant revision of these critical regulations since 1988. The proposed rule will address new technology that has been developed in the past 25 years, upgrade requirements for critical safety equipment, and ensure the use of best available and safest technology. The Bureau is currently working to finalize the proposed rule.

Proposed Arctic Rule – In February 2015, BSEE and BOEM published the proposed rule for drilling operations in the U.S Arctic OCS. Using a combination of performance-based and prescriptive standards, the proposed regulations codify and further develop current Arctic-specific operational standards that seek to ensure that operators take the necessary steps to thoroughly plan for and conduct safe exploratory drilling operations within the Beaufort Sea and Chukchi Sea Planning Areas.

The proposed regulations have been developed with significant up-front public input from the State of Alaska, North Slope indigenous communities, industry and non-governmental organizations. The proposed regulations are currently open for additional public comment to ensure transparency and solicit feedback from all stakeholders. Interior will continue rigorous stakeholder engagement as well as formal tribal consultation in the region.

Proposed Well Control Rule – BSEE has reviewed over 400 recommendations following the *DWH* tragedy. On April 13, 2015, BSEE announced proposed Well Control regulations to address some of the key recommendations. This proposed rule includes provisions that increase equipment reliability and build upon enhanced industry standards for blowout preventers (BOP) and, in a comprehensive way, addresses the multiple systems and processes critical to well control operations. The proposed rule requires more stringent design requirements for critical well control safety system equipment and traceability through the lifecycle of the BOP and other

well control equipment, ensuring operability of the equipment. Finally, the rule will provide continuous oversight of deepwater operations through onshore real-time monitoring and additional requirements for third party certification of the performance of critical equipment.

Other Reforms – In 2014, BSEE published an Advanced Notice of Proposed Rulemaking related to aviation safety. In the near future, BSEE plans to publish a proposed rule that will incorporate updated industry safety standards for cranes on fixed platforms; the agency also expects to solicit comments on approaches to improve the existing SEMS regulations.

Increased limits of liability – In coordination with BSEE, the Bureau of Ocean Energy Management (BOEM) has taken action to better ensure responsible parties are held accountable for OCS pollution incidents in the future. BOEM has increased the limit of liability for oil-spill related damages from \$75 million to approximately \$134 million for offshore oil and gas facilities – the maximum allowed under the law – and has established a process for future increases to keep pace with inflation.

BOLSTERING BSEE’S CAPACITY TO REDUCE RISK OFFSHORE

Human Capital

Following the *Deepwater Horizon* tragedy, it was determined that there were significant skill and staffing gaps in career fields crucial to ensuring safe and environmentally sound exploration and development. The Bureau has taken a number of actions to address long-term hiring and retention challenges including offering a suite of available hiring and retention incentives. BSEE has worked diligently to hire and train new inspectors and engineers, but continues to face significant challenges in recruitment and retention within certain job classifications. BSEE will continue to implement its Human Capital Strategic Plan, which addresses anticipated workforce changes and gaps in critical skills and competencies.

Inspection Program

BSEE’s efforts to reinforce its inspection program have been threefold: increase its inspection and engineering workforce, enrich the training of inspectors and engineers, and apply a risk management methodology to conduct inspections. The number of inspectors in the BSEE Gulf of Mexico Region has increased from 55 in April 2010 to 92 currently. BSEE inspectors now specialize in either well or production operations; this specialization allows for more training and time devoted to a specific area of inspection. The engineer workforce in the Gulf of Mexico Region has increased from 106 at BSEE’s inception in October 2011 to 129 currently. This allows for the increased review of permits which requires more analysis to ensure compliance with the enhanced standards.

To ensure that our inspectors and engineers are able to fully assess the latest technological advances, BSEE has implemented a comprehensive training program that ensures they receive the best training currently available. In FY 2014, BSEE offered 79 training courses that resulted in 23,396 contact training hours for 177 BSEE engineers, 113 BSEE inspectors, as well as 20 Coast Guard personnel.

By applying a risk management methodology, BSEE is beginning to shift its inspection program to a risk-based program that more effectively uses the available inspection and enforcement resources. BSEE will in the future target higher risk operations and facilities for supplemental oversight in order to increase the overall performance of offshore operations.

With the increased inspection workforce, BSEE is now positioned to ensure full implementation of the new standards for BOP testing. BSEE inspectors witness BOP testing to observe the skill level of the drilling crews, and to become more involved with the crew's handling of the BOP function. Since October 2010, BSEE inspectors have witnessed 169 on-site BOP tests. Inspectors also conduct detailed reviews of BOP test results; 409 of these detailed reviews have been completed since October 2010. BSEE is considering options that would provide additional oversight using remotely sensed data and real-time monitoring from onshore facilities.

Investigation and Enforcement

BSEE has also taken steps to strengthen its investigation, data analysis, and compliance and enforcement programs. BSEE has reevaluated how it conducts investigations of incidents and potential violations occurring during oil and gas operations on the OCS. Should a safety or environmental incident occur, BSEE has a duty to investigate and determine the causal elements/factors and the appropriate corrective actions. The implications of such determinations will apply to the operator(s) involved in the incident, potentially their contractors and subcontractors, and also may extend to industry-wide practices. These determinations also may have implications for BSEE's own regulatory procedures and standards.

The goal is to improve safety on an operator and company basis, as well as on a system-wide level as appropriate. For the most serious incidents that occur offshore, BSEE conducts in-depth panel investigations, resulting in detailed findings and recommendations. Some panel investigations lead to recommended enforcement actions and/or referrals to other enforcement authorities. BSEE incident investigations can also lead to the issuance of safety alerts, a vehicle to inform industry participants about the circumstances surrounding an incident (or potential incident). For example, in February 2015, BSEE and the U.S. Coast Guard (USCG) issued a Joint Safety Alert addressing a dynamic positioning incident involving an Offshore Supply Vessel which resulted in a loss of position. The alert identified the potential hazard so that other operators could minimize the chance of a reoccurrence.

TECHNOLOGICAL INNOVATION AND ASSESSMENT

BSEE has continued to engage stakeholders from academia, industry, non-governmental organizations, and other governmental agencies to enhance the knowledge base of BSEE's technical personnel and enabled them to better identify regulatory gaps, promote innovative technologies, and encourage risk-based decision making.

BSEE funded the start-up costs for the Ocean Energy Safety Institute (OESI), which provides an independent forum for dialogue, shared learning, and cooperative research among stakeholders. Although OESI was established by BSEE, it is not an extension of the Bureau. Rather the OESI

is a neutral ground for the exploration of issues of offshore risk that are of common concern to industry and regulators. The BSEE operates as one of many participants, with others coming from industry and academia.

In a separate initiative, BSEE is in the process of establishing the Engineering Technology Assessment Center (ETAC or Center) in Houston, Texas. The ETAC will also strengthen BSEE's ability to assess novel and emerging technologies by keeping pace with an increasingly complex industry. In 2015, projects will focus on the evaluation of BOP technology and the determination of Best Available and Safest Technology. Through the Center, the Bureau will work more closely with original equipment manufacturers and participate more fully with standards-setting bodies. The Center will serve as the primary liaison between BSEE and the OESI, and BSEE anticipates that the ETAC engineers will work with OESI on joint industry projects.

Research

BSEE is leveraging the resources of our interagency partners and working with others to conduct important research related to new and emerging technologies, as well as operations in frontier areas to further our efforts to reduce risks across all offshore operations. The Technology Assessment Program supports research associated with operational safety and pollution prevention and is providing regulatory tools to assist in the evaluation of high temperature/high pressure equipment and materials and cutting edge issues involving BOPs and cementing practices.

BSEE is the principal federal agency funding offshore oil spill response research that focuses on improving the methods and technologies used for oil spill detection from aerial and subsea platforms and vehicles, surface and subsea containment, treatment, recovery and cleanup. The Bureau operates the National Oil Spill Response Research and Renewable Energy Test Facility, known as Ohmsett, where many of today's commercially available oil spill cleanup products have been tested. Government agencies including the USCG and the U.S. Navy as well as private industry and oil spill response organizations from around the world train their emergency response personnel with real oil and their own equipment.

Preparedness

BSEE continues to focus on improving the nation's response capabilities through rigorous oversight and research opportunities. BSEE reviews oil spill response plans to verify that owners and operators of offshore facilities are prepared to respond to a worst case oil discharge. BSEE requires that plans be updated at a minimum of every two years or when key changes to an operator's preparedness posture or worst-case discharge scenario change.

In 2014, BSEE conducted 11 unannounced complex table top and/or equipment deployment exercises. These exercises tested operator's oil spill response plans and their ability to respond effectively and efficiently to hypothetical spill scenarios.

Interagency Coordination

BSEE's responsibilities for the regulation of offshore energy development on the OCS are shared in some cases with other federal agencies. The Bureau leverages its limited resources through agreements with federal partners and other agencies through memoranda of understanding or agreement (MOU, MOA) and IAA. For example, BSEE and the USCG have closely aligned jurisdictional and regulatory responsibilities for offshore inspections, incident response and investigations. Under an overarching MOU and six MOA's the two organizations have collaborated extensively to reduce redundancy and ensure consistency and clarity for the regulated community. BSEE has also entered into agreements with other federal partners including the U.S Department of Energy (DOE), U.S. Department of Transportation, Pipelines and Hazardous Materials Safety Administration, The U.S. Environmental Protection Agency, and U.S Army Corp of Engineers.

BSEE signed an interagency agreement with the DOE in 2014. Through the formal Memorandum of Collaboration, BSEE works with Argonne National Laboratory and the National Energy Technology Laboratory on areas of spill prevention research, risk modeling, renewable energy initiatives, and technology research.

BSEE also participates in the Interagency Coordinating Committee on Oil Pollution Research (ICCOPR), which provides a forum for research collaboration that looks at oil spill prevention, preparedness, and response. The ICCOPR, a congressionally-mandated body which is comprised of staff from federal agencies, provides a venue in which agencies share their latest research, regulations, and policies; explore opportunities for collaboration on research; and, identify emerging issues that need national attention. BSEE currently serves as the Co-Chair providing leadership and coordinated research efforts throughout the federal oil spill research community. BSEE also sits on the Scientific and Technical Committee of the National Response Team.

International Collaboration

BSEE's commitment to reducing risk throughout the offshore industry is not limited to the U.S. OCS. Through various multilateral and bilateral relationships, BSEE is helping to share U.S standards and best practices for safety and environmental protection internationally across a global industry. Bureau experts are routinely requested to provide technical assistance and training to other nations who are working to develop their offshore energy resources in a safe and environmentally responsible manner. BSEE engagements include policy assistance, bilateral and multilateral engagements, standards development, international agreements, and participation in international fora. Notable multilateral engagements include BSEE participation in the International Regulators Forum (IRF), International Offshore Petroleum Environment Regulators, Arctic Offshore Regulators Forum, and the Caribbean Oil Spill Cooperation Forum.

BSEE is actively involved in several working groups of the Arctic Council. For example, as a member of the Emergency Prevention, Preparedness, and Response Working Group, BSEE is engaging international partners in joint research activities to better protect resources that could be impacted from spills in Arctic waters.

Through the implementation of the US-Mexico Transboundary Hydrocarbon Agreement, BSEE continues to work with Mexican officials to exchange information and craft procedures for a joint inspections program that supports the safe and responsible exploration and development of hydrocarbon resources along the maritime boundary.

Conclusion

The efforts outlined throughout this testimony represent important milestones in BSEE's ability to achieve its mission to ensure offshore safety, and to protect life, property, and the environment while serving as a significant source of energy for the Nation. In calendar year 2014, OCS leases in California, Alaska, and the GOM provided 528 million barrels of oil and 1.3 trillion cubic feet of natural gas, accounting for more than 16 percent of the Nation's oil production and about 5 percent of domestic natural gas production. BSEE will continue to support domestic energy production from the Nation's offshore resources, while actively working to reduce risk in order to ensure safe and environmentally responsible operations on the OCS.

It is my belief that our work as regulators – on behalf of the American people – is never finished. As our commitment and duty to the American people, we will remain vigilant in instituting reform efforts and lessons learned since the tragic *DWH* event. We will continue to work cooperatively with the regulated community to promote best practices and to support a robust culture of safety within industry. I thank the Committee for inviting me to appear today. I would be pleased to answer any questions.