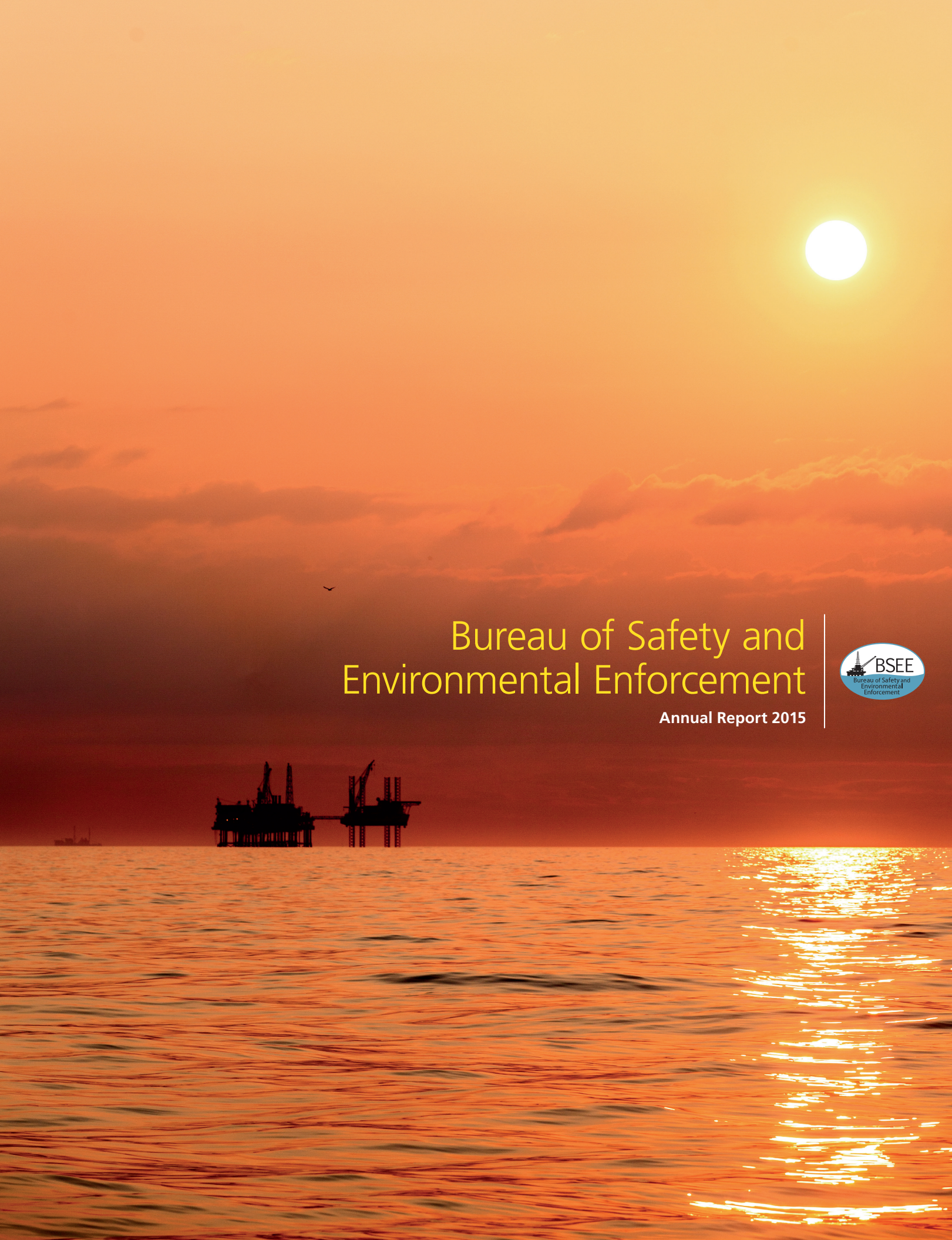


Bureau of Safety and Environmental Enforcement

Annual Report 2015

Contents

Letter from the Director

It is with great pleasure that I convey to you the Bureau of Safety and Environmental Enforcement (BSEE) 2015 Annual Report. As this report demonstrates, the state of the Outer Continental Shelf (OCS) still has not reached its full potential in terms of worker safety and environmental compatibility. From my perspective, as a regulator, 2015 was a year during which many great strides were made, but also a year that contained avoidable industry incidents we must strive to prevent. It was a year during which recurring, but avoidable, equipment reliability issues continued to plague operators, one example being bolt failures.

Despite my belief that we have much work to do, I do want to make it clear that the Bureau's approximately 800 staff spent 2015 tirelessly focused on our efforts to reduce risk offshore, address issues throughout all aspects of OCS energy development and production, and respond to incidents. BSEE staff conducted thousands of inspections, levied millions of dollars of fines when appropriate, and worked closely with other government entities to push the OCS to become as safe as possible. We moved forward with our risk-based inspections protocols and strengthened our commitment to environmental stewardship. We improved our collaborations with numerous Federal and state government agencies and dramatically increased our coordination with the U.S. Coast Guard. During Fiscal Year 2015, we clarified our organizational structure, creating a model that sets policy and procedures at the national level while promoting implementation at the tactical, field level.

Our work during 2015 was conducted during especially challenging financial times for the offshore energy industry. Sinking oil prices meant bankruptcies increased, and yet, beginning in 2015, production started to increase and is now at an all-time high for the Gulf of Mexico Region. In the Arctic, BSEE staff worked hard to enforce stringent environmental regulations throughout the challenging drilling season. In the Pacific, our staff oversaw the aging platforms that dot offshore California. In Texas, our new Engineering Technology Assessment Center filled the staff positions needed to help BSEE meet its goals of staying current with new offshore technologies and overseeing novel technologies that are deployed offshore.

We look forward to many accomplishments in Fiscal Year 2016. We are focused on enhancing our environmental stewardship efforts so that BSEE can help the industry mitigate and reduce risks to the environment. We believe that implementation of the Well Control Rule will be a major step forward in protecting both workers and the environment. It will greatly reduce the possibility that our Nation will, in the future, endure anything like the *Deepwater Horizon* tragedy. Throughout the year, we will continue our work on all our other priorities including the Arctic Drilling Rule, near-miss safety data reporting, data stewardship, environmental risk assessment, environmental stewardship, risk-based inspections, automated permitting, and incident investigation training.

As BSEE approaches its fifth anniversary, we hope readers of this report will see that we have made some big strides in respect to organizational maturity. We continue to invest in our workforce, both in terms of recruiting and training. We have been engaged in efforts to foster the next generations of engineers and scientists through our inaugural Youth Technology Challenge and youth initiatives related to our Oil Spill Preparedness Division. We have modernized reporting structures through advancements such as our ePermits procedure. We have increased visibility of the environmental responsibilities of our Bureau. Our mission is complex, but we know that our Nation depends on us to make America's OCS workers and the marine environment as safe as possible. I believe this report will demonstrate how seriously we take that charge.

Brian M. Salerno
Director

How We See It

BSEE Employees Share Their Perspectives

"One philosophy that I follow is this: Every incident is a notice that something is wrong with men, methods, or material — investigate — then act."

Charles Arnold, Acting Chief, Office of Incident Investigations

"Knowing that I am contributing to helping the Nation meet its energy demands while prioritizing natural wonders and resources makes me very proud to be a part of the BSEE mission in the Pacific Region. Developing my skills and presence as a leader, whether in the role of a staff member or supervisor, makes this contribution much more tangible and rewarding."

Bobby Kurtz, BSEE Geologist

"Playing an active leadership role internationally ensures that BSEE's requirements and expectations for safe and environmentally responsible offshore activities are shared with our global counterparts."

Mark Fleming, International Relations Specialist

"As a BSEE inspector I take pride in knowing I play an important role in protecting the Arctic's pristine environment, while ensuring compliance and safety."

Randy Howell, Industrial Specialist (Petroleum & Natural Gas Production)

"As regulators, BSEE's responsibility is to identify updates and improvements in industry standards and to assure that the best standards are being used industry-wide. The rule-making process is one method used to meet that goal."

Wilbon Rhome, Regulations and Standards Branch

"As inspectors we are most concerned with doing our part to keep the workers safe and protect the Gulf of Mexico environment."

Joseph Sonnier, Inspector - New Orleans District

"Ohmsett provides a great venue for BSEE to conduct research to support our decision-making. For example, being able to conduct a side-by-side comparison of commercial dispersants that may be used for offshore spill mitigation helps us make informed decisions in regard to an operator's oil spill response plans."

Tim Steffek, BSEE Researcher

BSEE inspectors conduct both annual scheduled inspections and unscheduled (unannounced) inspections of oil and gas operations on the Outer Continental Shelf. Inspections encompass all safety equipment designed to prevent blowouts, fires, spills, and other incidents.

BSEE's Tribal and Community Liaison in Alaska often meets with Alaska tribal governments and communities with a stake in offshore energy development. BSEE maintains regular contact with stakeholders in Alaska's Native organizations, tribal governments, and communities, keeping them apprised of general offshore activities and BSEE's role in regulating safety and environmental protection.

Overview of BSEE

Since its establishment in 2011, the Bureau of Safety and Environmental Enforcement (BSEE) has been the Nation's lead agency charged with improving safety and ensuring environmental protection related to the oil and natural gas industry on the U.S. Outer Continental Shelf (OCS). Central to BSEE's mission is the continuous improvement of its regulatory functions involving worker safety, emergency preparedness, environmental compliance, and conservation of resources. The Bureau's efforts extend from the development of improved technologies to the inspection and regulation of offshore facilities to responses when safety or environmental incidents occur.

Headquartered in Washington D.C., just two blocks from the White House in the Interior Department's main building, BSEE's strength lies in the coordination that exists between its national office and its three Region Offices, located in Anchorage, Camarillo (California), and New Orleans. In conjunction with personnel in district offices located along the Gulf Coast, BSEE's Region Office field staff performs the vital functions that greatly reduce the probability of offshore incidents that can lead to worker injury and environmental harm. Research arms in both Texas and New Jersey, a large number of Bureau staff located in Sterling, Virginia, and contracted researchers throughout the country provide BSEE and the energy industry with innovative solutions to safety concerns and new approaches that lessen the impacts of oil spills and other environmental incidents.

BSEE's Mission, Vision, and Principles

Mission: To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.

Vision: Fostering an agile, trusted, and collaborative organization dedicated to reducing risk offshore.

Principles: Clarity, consistency, predictability, accountability.

This report, developed by BSEE staff throughout the U.S., provides an overview not only of the Bureau, but also of the state of the OCS with respect to the energy industry's record of safety and environmental compliance. Readers of last year's annual report will note that the 2014 report was based on the calendar year, whereas the 2015 report (and all future reports) is based on the U.S. Federal fiscal year, which runs from October 1 to September 30. Trend lines in the graphs are based on two-year moving averages.

Focus Areas

In 2015, BSEE continued its ongoing efforts to develop a robust culture of safety, with a strong focus on risk reduction. Throughout the year, BSEE strove to soundly develop every decision and then take action in a way that demonstrated an unwavering focus on worker safety and environmental protection. The Bureau bolstered its capacity for analyzing data gained through incident reporting requirements, near-miss reporting, and real-time monitoring. BSEE also continued to study industry safety processes, so

that future risks could be reduced. Through these initiatives and others, the Bureau strives to ensure that offshore development can occur in a safe and environmentally responsible manner.

During 2015, BSEE strengthened its regulations and programs in the following areas:

Safety on Production Facilities

BSEE continued to advance a production safety systems rule that will provide the first updates to regulations for production safety systems since the late 1980s. This rule is in the final process stage and is expected to be finalized before October 2016. The rule incorporates best practices for equipment and systems that protect the more than 2300 facilities currently producing oil and gas on the OCS.

Well Control during Drilling Operations

BSEE published a comprehensive proposed rule that will address a myriad of systems and processes related to well control operations, including blowout preventers (BOPs). This finalized rule is intended to account for all aspects of well control operations in order to reduce risks that could lead to technical and operational failures, such as those that resulted in the loss of well control and explosion aboard the *Deepwater Horizon* in 2010. The Bureau worked on the development of a final rule after a careful full review of comments from stakeholders and the public. The final rule was just published in 2016.

The Hybrid Approach

BSEE employs a hybrid regulatory approach that combines the predictability of prescriptive regulations with the innovative push of performance-based regulations. Prescriptive regulations define how activities are to be undertaken, what some might call the structured checklist approach. Performance-based regulations specify a performance standard or desired outcome, and do not constrain how compliance is to be achieved. In practice, many regulations contain both prescriptive and performance-based elements. For example, many of BSEE's prescriptive regulations can become more performance-based through BSEE's alternative compliance regulation. Through the alternative compliance regulation, operators can use a method other than that detailed in the prescriptive regulation as long as the alternative method is determind by BSEE to be as safe or safer.

Safety Culture

The Safety and Environmental Management System (SEMS) program is one of the major components of BSEE's hybrid regulatory approach, which combines prescriptive and performance-based rules. The goal of SEMS is to encourage the offshore oil and gas industry to adopt a safety approach that looks beyond baseline compliance with regulations. As more of the industry adopts the SEMS approach, a culture of improved awareness and continuous improvement in operational safety and environmental performance will result. The SEMS program is a tool through which companies actively identify, manage, and improve safety performance related to human behavior, organizational structure, leadership, monitoring of critical equipment and processes, and adoption of standards, processes, and procedures. A SEMS approach replaces a culture that focuses simply on compilation of required documentation. In 2015 BSEE continued to incorporate the principles of SEMS as part of its inspection program, which had traditionally focused on compliance issues.

Safety Alerts

A Safety Alert is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding an incident or a near miss. Safety Alerts also contain recommendations that will help industry prevent the recurrence of such an incident on the OCS. In FY 2015, three Safety Alerts were issued on incidents involving lifting operations, an aviation near miss, and the failure of dynamic positioning systems on a vessel engaged in oil and gas operations.

Arctic Exploration

As part of the Administration's commitment to developing America's domestic energy resources safely, the Department of the Interior (DOI) issued proposed draft regulations in 2015 to help ensure that future exploration in the Arctic is done responsibly and subject to the highest safety standards. The DOI

draft regulations support the Administration's coordinated and deliberative approach to the Arctic by requiring specialized practices when conducting exploratory drilling operations in this unique and challenging environment. The regulations employ a combination of prescriptive and performance-based provisions to compel operators to take the necessary steps to ensure proper internal controls and planning for oil spill prevention, containment, and response.

BSEE is Addressing the Arctic Challenge by:

- Working with Arctic Nations to plan and execute circumpolar spill response exercises;
- Developing databases of Arctic-specific response equipment;
- Addressing questions regarding movement of people and equipment across borders during emergencies; and
- Assessing the risks of oil spills as warmer Arctic waters become more accessible to shipping and hydrocarbon exploration and production.

Research and Collaboration

Among the critical areas that require focused research and collaboration on the part of BSEE are: 1) emerging technologies, 2) reliability of critical safety equipment, and 3) accurate risk assessment. BSEE's work in these three areas includes extensive collaborations with other Federal entities such as the Department of Energy's (DOE) National Labs and the National Aeronautics and Space Administration (NASA). BSEE is also actively engaged in joint research programs with industry to verify the performance of equipment being used to develop high pressure, high temperature (HPHT) reservoirs. BSEE's Best Available and Safest Technology (BAST) program, which assesses the performance of current equipment, helps to ensure that operators have installed state-of-the-art technology for critical operations. Coordination of this activity is fostered by the Ocean Energy Safety Institute (OESI), which provides an independent forum for dialogue, shared learning, and cooperative research among academia, government, industry, and other stakeholders. The OESI is a neutral ground for the exploration of issues related to offshore risk that are of common concern to industry and regulators.

Oil Spill Research

Ohmsett, the National Oil Spill Response Research and Renewable Energy Test Facility, is managed by BSEE in order to better understand offshore oil spills. Ohmsett is the largest outdoor testing facility of its type in North America and is home to a 667-foot long saltwater tank. Located near Leonardo, New Jersey, Ohmsett provides unique oil spill response training, as well as equipment testing, in an environment that mimics those encountered offshore. With the ability to safely use real crude oil in a controlled environment, the staff at Ohmsett are able to perform tests and also offer training for first responders, regulators, scientists, and equipment manufacturers. Among Ohmsett's many initiatives, its cutting edge research includes efforts to improve the measurement of oil slick thickness, develop tools to better quantify oil flow rate during subsea blowouts, and conduct scaled-up tests on oil dispersants.

BSEE is an active participant in the Interagency Coordinating Committee on Oil Pollution Research (ICCOPR), which provides a forum for research collaboration on oil spill prevention, preparedness, and response activities. A congressionally-mandated body, ICCOPR is composed of staff from 15 Federal departments and agencies. It provides a venue for the agencies to:

- share their latest research, regulations, and policies;
- explore opportunities for collaboration on research technology development; and
- identify emerging issues that need national attention.

Beyond the interagency collaboration that ICCOPR fosters, it also creates opportunities for the Federal government to interact with other stakeholders. Through ICCOPR, oil spill response collaborations have been initiated with industry organizations, both domestically and internationally, such as the American Petroleum Institute (API) and the International Association of Oil and Gas Producers (IOGP).

The Ohmsett facility contains 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 in a marine environment under controlled environmental conditions. Ohmsett also conducts research on marine renewable energy systems and other technologies through its research and development activities.

Oil Spill Preparedness

The Bureau reviews industry Oil Spill Response Plans (OSRPs) to verify that owners and operators of offshore facilities in both Federal and state offshore waters are prepared to respond to a worst case oil discharge. In FY 2015, BSEE reviewed a total of 238 OSRPs. To validate the soundness of these plans, the Bureau conducts unannounced complex table-top and/or equipment deployment exercises to test an offshore facility owner/operator's ability to respond effectively and efficiently to a hypothetical spill scenario (Table 2.2). Unannounced exercises, which involve interagency coordination, require an operator to respond as if it were an actual event. The Bureau also audits the applicable training offshore facility owners and operators provide to their employees in order to ensure that industry personnel are proficient in supporting a command and control organization and have the ability to operate their spill response equipment. Finally, the Bureau verifies the preparedness of the offshore community by assessing the quality and performance of response equipment listed in the OSRP, such as skimmers, pumps, booms, and integrated fast response vessels.

Technology Assessment

The Engineering Technology Assessment Center (ETAC), located in Houston, was established by BSEE in FY 2015 for the purpose of assessing novel and emerging technologies related to the OCS. Through ETAC, BSEE aims to keep pace with equipment changes in an increasingly complex industry. Because of this effort, BSEE is able to work more closely with Original Equipment Manufacturers (OEM) and participate with standards-setting bodies such as API, the American Society of Mechanical Engineers (ASME), and the National Association of Corrosion Engineers (NACE). The Center serves as the primary liaison between BSEE and OESI and staff engineers work with OESI on joint industry projects. Activities that are already occurring at the BSEE regional level are supplemented by ETAC, which provides added technical expertise for BSEE staff.

Table 2.1 The amount of activity that falls under BSEE's jurisdiction is extensive. In Fiscal Year 2015 this activity resulted in the production of 554.9 million barrels of oil and 1.35 trillion cubic feet of natural gas. The Energy Information Administration projects domestic offshore production will continue to grow through 2040. Shown below are various aspects of OCS oil and gas industry, demonstrating the complexity of BSEE's oversight responsibilities.

	Alaska Region	Gulf of Mexico Region	Pacific Region	Total OCS
Designated Operators	1	90	6	97
Platforms	1*	2344	23	2368
Total Wells Drilled	1	223	9	233
Weekly Average Number of Rigs/Units	1	92	5	98
Miles of Pipelines	NA	27035	193	27228
Oil (barrels) Produced	608,241	539,900,810	14,416,654	554,925,705
Gas (Mcf) Produced	31,533,879	1,300,430,459	21,188,000	1,353,152,338

* The Alaska Region has one producing project that consists of six federal wells on the OCS, directionally drilled from a gravel island located in state waters.

Table 2.2 BSEE conducts different types of reviews, audits, and verifications, including Government Initiated Unannounced Exercises (GIUE). Combined, these exercises provide the added benefits of improved cooperation, partnership, and government efficiency for Federal and state organizations that have mutual responsibilities regarding regulation of the offshore energy industry.

	Alaska Region	Gulf of Mexico Region	Pacific Region	Total OCS
Table Top GIUE	1	8	2	11
Deployment GIUE	0	6	1	7
Industry Spill Response Training and Exercise Audits	1	74	6	81
Equipment Verification of Capabilities	6	48	17	71

Data Collection and Sharing

In May 2015, BSEE launched the SafeOCS program, an initiative aimed at collecting and analyzing near-miss data. SafeOCS is a voluntary and completely confidential system in which the Bureau of Transportation Statistics (BTS) will collect and analyze near-miss reports so that lessons can be learned before an incident occurs. The aggregated data will be shared with the general public and industry to assist in the identification of safety trends and potential safety issues. BSEE's new regulatory initiatives also mandate the sharing of key data within industry so that equipment reliability issues can be quickly identified and addressed before an incident occurs.

These several achievements represent important steps toward further promoting offshore safety in the forms of protecting life, property, and the environment. BSEE continues to define and implement reforms and to hire the personnel needed to promote a culture of safe and responsible development of America's offshore energy resources.

Renewable Energy

Interest in the deployment of renewable energy projects on the OCS has grown substantially over the past decade. In offshore areas, the greatest strides in the renewable sphere have been made by the wind energy industry. In conjunction with the DOI's efforts to achieve the Administration's energy strategy of further development of new, cleaner energy resources, BSEE has become increasingly involved in safety, environmental oversight, and enforcement issues related to offshore wind energy.

Many BSEE employees have been involved in the development of wind energy safety initiatives since the formation of the Bureau, and even before. From a safety perspective, the OCS presents a unique operating environment for the wind energy industry, with one major obstacle being water depth. Many areas of the OCS will not support traditional wind farm foundations because depth precludes their practical construction. Hurricanes and other open-ocean environmental factors also present distinct challenges.

A number of factors must be taken into account even before a turbine is built, such as seabed topography, bathymetry, sediment types, and meteorological and oceanographic conditions. The wind industry has responded to some of the challenges the ocean poses by developing innovative solutions, such as floating wind turbines and other technologies, many of which have not yet been fully field tested. As offshore wind energy development continues to gather momentum, BSEE is continually considering ways to best adapt

Offshore wind farms have become common in some parts of the world and are being considered in a number of locations in the United States. With more than 53% of the U.S. population living in coastal regions, OCS wind production has the potential to significantly contribute to the Nation's energy needs, but it also poses some level of risk to workers and the environment. BSEE is committed to safeguarding workers and the environment as wind farms advance through design, construction, and production phases.

Expertise for Renewable Energy

BSEE is providing subject matter expertise for reviews of two U.S. Department of Energy (DOE) Offshore Wind Advanced Technology Demonstration Projects in Federal waters:

1. The Virginia Offshore Wind Technology Advancement Project;

and

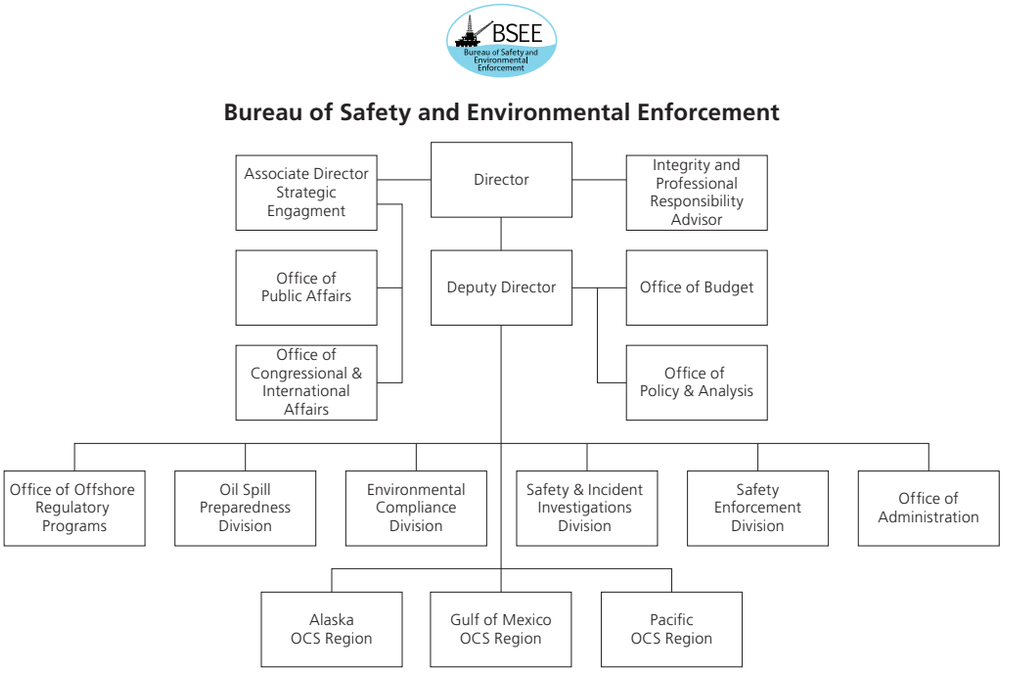
2. The WindFloat Pacific Project.

BSEE also provided BOEM input on the financial assurance level for the decommissioning of Cape Wind, a project on Horseshoe Shoal in Nantucket Sound, Massachusetts.

its SEMS program for the renewable industry. BSEE is working fast to communicate with industry experts and international regulators, and it is initiating contracted studies. BSEE's near-term intention is that the development of regulations, inspection guidelines, and other procedures for oversight of offshore renewable energy facilities will assure that an appropriate regulatory structure will be in place to protect the safety of the facilities, any personnel working on them, surrounding structures, and the marine environment.

BSEE, working with the Bureau of Ocean Energy Management (BOEM), participated in the design review for the subsea transmission cables that will connect to the Block Island Wind Farm (BIWF). BSEE is responsible for oil spill response plans (OSRP) seaward of the coast line, including state waters. The BIWF is the first offshore wind farm in the United States and will have a generating capacity of 30 megawatts. It is scheduled to be online in 2016.

In accordance with S.O. 3299, BSEE and BOEM are in the process of transferring the renewable energy responsibilities of environmental oversight, facility inspections, and regulatory enforcement from BOEM to BSEE. A BSEE-BOEM transition team is managing the effort to re-designate the renewable energy regulations in 30 CFR Part 585. BSEE, in coordination with BOEM, will then draft a series of touch-point documents to guide the interdependencies between BOEM and BSEE, and both Bureaus



will work together to update the interagency Memorandum of Understanding (MOU) so that roles and responsibilities of each are clearly defined when the re-designation is published. There are a number of additional renewable energy MOUs that will require updating because of this change, including those involving DOI, USCG, and DOE.

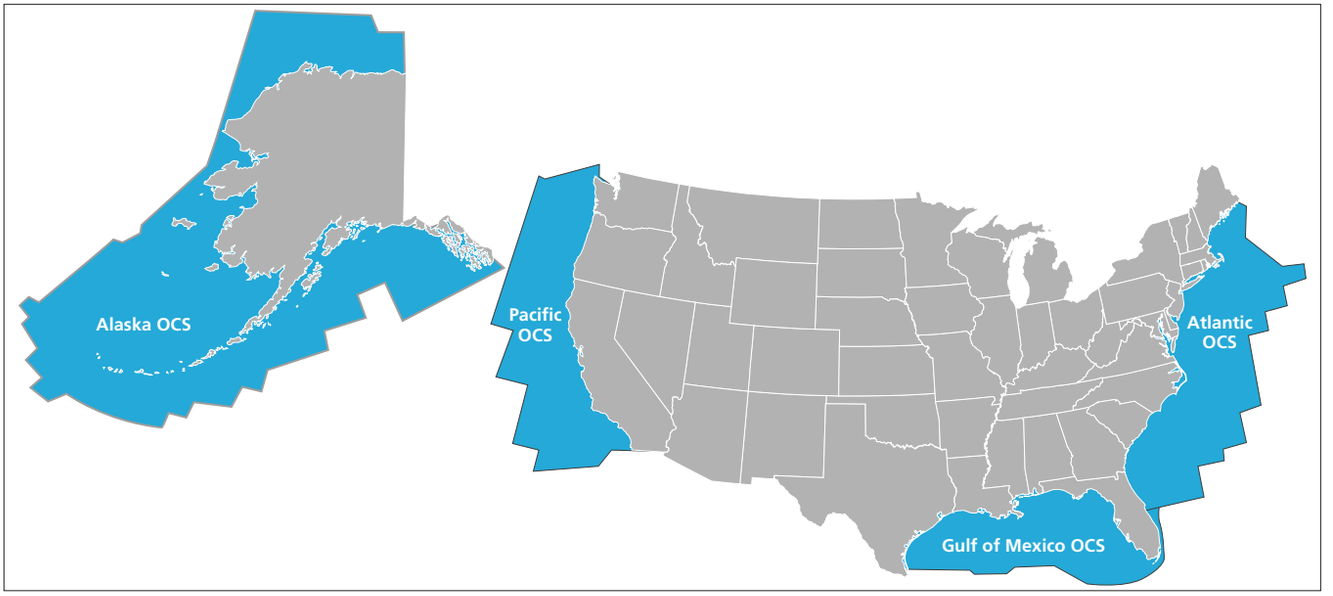
Organization

The Bureau of Safety and Environmental Enforcement has continually tried to balance the need to improve organizational structure while avoiding disruptive changes. In 2015 the Bureau completed its last organizational refinements, which fully preserved the overall structure of a national office in Washington, D.C. and the metropolitan area and three regional offices located in Anchorage, New Orleans, and Camarillo, California.

The 2015 BSEE realignment made the roles of each entity more clear, and sharpened the responsibilities of each component within BSEE. In short, BSEE adopted a national program manager/field implementation model. This model established a clear focus within BSEE for the collaborative development of national policy as well as program oversight criteria that guide the field-based implementation of its programs. Under the new model there are six national program management divisions at headquarters: Office of Offshore Regulatory Programs; Oil Spill Preparedness Division; Safety Enforcement Division; Safety & Incident Investigations Division; Environmental Compliance Division; and Administration.

The six national program management divisions are responsible for the development and oversight of consistent policies and procedures. The three Regional Directors apply resources to execute most policies at the field level. The organizational model encourages cooperative decision-making related to policy development and has produced an operational structure that advances BSEE's mandated goals of safety, environmental protection, and responsible energy conservation on the OCS.

Under the 2015 organizational improvements, the three regional offices continue to review and grant permits, perform inspections that verify compliance and issue citations, take additional enforcement actions to return facilities to compliance, and investigate incidents. Although each BSEE region has a common mission and set of responsibilities, each also faces region-unique challenges and circumstances. The Gulf of Mexico Region (GOMR) has the most extensive exploratory and production activities on the OCS and, as such, oversees a broad range of upstream oil and gas activities. The Pacific Region has not had any new exploration activities in years, yet it continues to have responsibility over a variety of different types of production facilities. In particular, the staff at the Pacific Region Office specializes in the maintenance of maturing assets and the conservation of reservoir resources. The Alaska Region deals with a broad array of climate issues particular to the Arctic and subarctic environments. Presently the Region's



The extent of the U.S. OCS is outlined in this map. BSEE's Gulf of Mexico Region currently oversees Atlantic OCS responsibilities.

work involves regulatory oversight of exploration and potential development activities, many of which remain in proposal stages. Oversight of these frontier operations is critically important as companies explore and plan to further develop the oil and gas resources of the Alaska OCS.

Every organization that is spread across a large geographic area and has diverse functionality faces the same organizational challenges as BSEE. Such organizations must function as one cohesive unit with shared goals, and every component of the structure must be respectful of the role that other components fulfill. Implementation of the 2015 organizational structure borrows from the successful strategies of other organizations and improves the ability of BSEE staff to work as one. Every BSEE employee, from the Director to the newly recruited field staff member, now has a clearly defined role within the BSEE framework, and stakeholders have added clarity with regard to lines of authority, areas of expertise, and employee duties.

Regional Overviews

Gulf of Mexico

The Gulf of Mexico Region (GOMR) continues to be a major focus of oil and gas industry activity on the Outer Continental Shelf even though Fiscal Year 2015 activity contrasted in some ways with prior years. The drop in oil prices, from just below $80 in October 2014 to slightly below $45 in September 2015, meant that offshore activity decreased in many ways. Production, however, steadily increased as new long-term projects came on line. In fact, five deepwater projects began production during FY 2015.

Decreased activity was evidenced by numerous bankruptcies of debt-laden companies operating in the Gulf. The safe wind down of bankrupt assets and proper abandonment was a major focus for GOM regional engineers and inspection staff. The decommissioning support function was enhanced throughout the year to ensure proper decommissioning costs were assessed to every offshore asset.

This dynamically-positioned drillship, the Ocean BlackHawk, is capable of operating in water depths up to 12,000 ft. and can drill to a depth of 40,000 ft. Owned and managed by Diamond Offshore Drilling, the Ocean BlackHawk is currently operating in the U.S. Gulf of Mexico.

The OCS along the U.S. continental Pacific states contains mature fields and aging infrastructure that are often positioned close to sensitive marine environments. With passing time, primary production is declining. The BSEE Pacific Region currently oversees operational and production activity from 23 offshore oil and gas platforms located adjacent to southern California.

A shift in drilling projects occurred as the overall economics for oil and gas changed in 2015. There was a major shift towards longer-term deeper drilling projects, while the activity on the older shelf assets has shown decline, as seen in the diminished number of jackup rigs.

At the start of 2015 there were 24 drillships and 20 jackup rigs in use in the GOMR, which changed to 32 drillships and nine jackup rigs at fiscal year's end. The overall rig activity levels stayed steady at 72. The number of production facilities declined throughout the year, due to lease terminations and the Bureau's focus on "idle iron" removal. Even with the lower number of production facilities in FY 2015, the overall production levels increased from 1,424,918 to 1,661,551 million barrels of oil per day. Natural gas production also saw moderate increases.

The GOMR continued its robust assessment program of conceptual technology through the deepwater operations plan. This program will be supported by ETAC when the Center is fully staffed in FY 2016. A continued focus area for the program is high pressure/high temperature drilling and completions in the deepwater sector.

Throughout the year, the GOMR maintained its focus on compliance through rigorous enforcement. In addition to the daily inspections, issuance of Incidents of Noncompliance (INCs) and civil penalties, the GOMR and Districts conducted in person Annual Performance Reviews of Gulf of Mexico operators. Beyond the full complement of safety and environment inspections of all facilities and rigs in the GOMR, regional staff reviewed post activity reports for environmental mitigations on plans and permits, as well as overall NEPA adequacy.

Gulf of Mexico Collaborations

The GOMR supports Bureau-wide initiatives through communication and cooperation outside BSEE. In the GOMR, collaboration has included Mexican and Brazilian government oil and gas officials, USCG District 8, and oil and gas associations.

Pacific

The OCS of the BSEE Pacific Region contains mature fields and aging infrastructure that are positioned close to sensitive marine environments and the U.S. coastline. Given this environment, the Pacific Region has engaged in increased oversight and maintained its focus on resource conservation. In 2015, the Pacific Region continued to monitor aging facility operations and prepare for eventual decommissioning of numerous platforms. Additionally, the Pacific Region staff has been addressing the long-term preservation issues associated with the shutdown of the main onshore arterial pipeline that transports 65% of the region's production for processing.

The Alaska Region oversees more than one billion acres on the Outer Continental Shelf and more than 6,600 miles of coastline. With pronounced seasonality, this region faces a number of challenges particular to the Arctic environment.

Activity in the region includes proactively testing oil spill containment and recovery equipment and conducting exercises for spills and leaks. The Pacific Region also implements a comprehensive inspection program to assess and maintain the overall integrity of a pipeline. BSEE's Pacific Region continued its expanded efforts during 2015 to improve collaboration and communication with state and other Federal entities, industry, and the public. The overall goal of these efforts was to help make sure that all stakeholders in the region are heard – both industry and the public–as the Pacific Region carried out its responsibilities to regulate energy and mineral resources on the Federal OCS.

Alaska

With pronounced seasonality and relatively unexplored and potentially vast energy potential, Alaska is a unique region. The Alaska Region faces a number of challenges particular to the Arctic environment. During 2015, exploratory drilling resumed in the Chukchi Sea, following a three-year hiatus. This resumption, conducted by Shell, was widely reported by the media and closely followed by Alaska's citizens. The drilling involved the mobilization of a mobile offshore drilling unit, one drillship, and a fleet of support vessels and infrastructure. Shell's exploration well was completed in the Burger Prospect. BSEE's Alaska Region office led a heightened level of regulatory oversight of this drilling program, including rigorous permitting, continuous inspector presence, and SEMS audit observation.

Looking forward, the key challenges being addressed by BSEE's Alaska Region include maintaining region-specific expertise, ensuring that exploration and production projects properly account for the need to protect the Arctic environment, and continuously improving operations in the face of arduous climatic and logistical realities. These realities are faced when BSEE employees perform their continuing oversight of ongoing production at the North Star project off Alaska's North Slope. Upcoming activities include planning for the proposed Liberty Project, a gravel island facility in the Beaufort Sea. From seasonal ice coverage and floating ice to subsistence whale hunts, the challenges posed in the Arctic are unique, yet they are also part of the routine industry operations in Alaska.

Because the Alaskan Native communities are closely connected to the Arctic environment culturally, socially, and economically, during 2015 BSEE's Alaska Region continued outreach to native communities via the Region's tribal and community liaison. The goal of the outreach efforts was to help facilitate the harmonization of offshore exploration and development with the needs of the state's Native communities.

The Alaska Region played a key role in representing BSEE and the United States in international outreach related to Arctic development during 2015. The Alaska Region staff's unique expertise and Arctic experience allowed it to develop important relationships with fellow Arctic offshore regulators, spearheading the development of a new organization called the Arctic Offshore Regulators Forum (AORF). The BSEE Alaska Region represented the U.S. as the 2015 inaugural chair for the AORF management committee. During 2015, the AORF successfully served as a technical and operational forum for offshore oil and gas safety regulators to exchange information, review best practices, and discuss relevant experiences unique to the Arctic. Participation in AORF represents an important aspect of the Alaska Region's efforts to continually improve offshore safety and environmental protection.

One standing interagency (for Federal and state) organization is a permitting coordination group of the IWG (Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska). The local permitting coordination group of the IWG is a Director Level group of DOI and other Federal and state officials that meets in Anchorage to keep each agency apprised of the energy permitting activities undertaken by the other agencies. The ultimate goal of the group is to streamline procedures for energy projects that require permits from multiple agencies while assuring that all the relevant agencies are aware of each other's activities. BSEE was an active participant in this group in FY 2015, and was also engaged in many other outreach and coordination activities within the state of Alaska.

Jurisdiction

BSEE's jurisdiction includes a full range of authorities, policies, and tools to compel safety, emergency preparedness, environmental responsibility, and appropriate development of offshore energy resources in the submerged lands of the OCS. This jurisdiction was established almost five years ago as part of the Department of the Interior's reorganization that improved management, oversight, and accountability of the offshore environment. The Bureau of Ocean Energy Management (BOEM) was also formed from this reorganization and is separately responsible for managing development of offshore resources in an environmentally and economically responsible way. While BSEE works closely with BOEM, BSEE's jurisdiction differs in that it is responsible for safety and environmental enforcement operations from planning and permitting through decommissioning.

To carry out its responsibilities, BSEE seeks to continuously improve its ability to properly regulate offshore oil and gas operations, enhance the safety of offshore energy exploration and development, ensure the protection of the environment, and promote the implementation of the latest advancements in technology. BSEE's hybrid approach to regulation employs prescriptive and performance-based methods to help ensure the safest operations possible. The regulations BSEE enforces typically incorporate widely-accepted industry standards.

BSEE conducts on-site inspections to assure compliance with regulations, lease terms, and approved plans. Annually, BSEE conducts over 20,000 inspections for more than 2,300 facilities. As part of its mandate, BSEE also tests and creates new technologies, operational innovations, and oil spill preparedness and response techniques. These efforts fulfill BSEE's jurisdictional mandate to remain at the leading edge of the ocean energy industry with respect to safety and environmental protection.

BSEE is continuously expanding its role as a world leader in safety and environmental stewardship. With innovative regulatory approaches and appropriate collaboration with industry, BSEE is fostering a culture of safety that reduces the risk of incidents and spills, while enhancing its ability to prepare and respond to those that do occur with prompt and appropriate actions. The U.S. OCS provides the raw material for a substantial amount of our nation's energy needs, but it will always be a difficult and sensitive environment in which to operate. BSEE believes its jurisdictional role is a critical national function, and therefore regulates offshore energy exploration and production with a consistent focus on reducing risks for workers, protecting the environment, and ensuring diligent production of America's vast offshore energy resources.

Public and Stakeholder Engagement

Public input is a critical component of BSEE decision-making as it fulfils its mandate to regulate safe exploration and development of offshore resources. During 2015, public review and comment was solicited for regulatory proposals regarding oil and gas, as well as renewable energy, operations. The proposed Arctic Rule alone received over 100,000 comments from individuals and entities. Following three years of engagement with industry, academia, other technical experts and the public, BSEE issued its proposed Well Control Rule. While the proposed Well Control Rule received fewer comments than the Arctic Rule, the comments that were received demonstrated that many interested parties wanted to discuss technically complex issues. Due to the technical nature of the Well Control Rule comments, BSEE met with a number of stakeholders to clarify their points. For both proposed rules, teams of BSEE subject-matter-experts carefully considered all of the relevant comments in order to inform the final rulemaking.

The Bureau engages with a diverse community of stakeholders, including academia, congressional offices, state representatives, environmental organizations, government agencies (Federal and state), industry, standards development organizations, think tanks, and non-academic scientific organizations such as the National Academy of Sciences. The ongoing dialogue with stakeholders covers a range of topics and improves both the understanding of our policies and practices by stakeholders and BSEE's ability to better formulate policies in development. It is important to keep in mind that members of the Bureau's staff typically live in the same communities as Bureau stakeholders and share many of the same concerns as the local communities. In this spirit, BSEE is eager to foster a robust dialogue through a variety of fora.

A good example of BSEE's efforts to creatively meet public desires is the Rigs-to-Reefs program. As a general rule, oil or gas platforms are decommissioned (dismantled and disposed) once they have outlived their usefulness. Decommissioning follows the terms of the DOI lease that originally authorized the drilling. The Rigs-to-Reefs program allows, under certain environmentally favorable conditions, for the structure to be decommissioned in a particular manner. The result is a biologically valuable artificial reef that is embraced by conservation and recreational fishing interest groups. A successful Rigs-to-Reefs conversion requires a lot of cooperation. In addition to BSEE, the entire process will include the company that owns the platform, other Federal agencies, any of a number of interest groups, contractors who need to remove parts of the reef and topple the rest, and state marine, fisheries and environmental agencies. When completed, the resulting artificial reef is a win-win not just for people, but also for the sessile marine life that encrusts the new reef and the mobile vertebrate and invertebrate species that call it home.

In FY15, BSEE hosted three successful public engagement workshops in Texas that focused on:

- Improving safety through a focus on the human element, March 10, 2015;
- Improving safety in shallow-water operating environments, March 11, 2015; and
- Taking SEMS to the next level, July 29, 2015.

Throughout 2015, BSEE staff worked with stakeholders in order to find new ways to obtain better information through SEMS audits and to create SafeOCS, a new near-miss reporting system. The Bureau also worked with a variety of stakeholders to help develop, and bring online, the latest technological advances, all of which seek to reduce risk offshore. The risks inherent in offshore activities will never be fully eliminated, but by listening carefully to the public and other stakeholders, BSEE understands that it can improve its ability to reduce those risks. No one wants to experience an injury or see a spill occur, and this shared concern is the common ground that should encourage open communication. BSEE remains open to listening and considering input, even as it vigorously fulfils its independent mission of improving safety and protecting the environment in the OCS.

Strategic Engagement

An essential component of BSEE's Strategic Engagement is the work done in the Office of Congressional and International Affairs (OCIA). OCIA serves as BSEE's primary point of contact for the U.S. Congress and BSEE's international counterparts. OCIA is responsible for the coordination of all communication and engagements with these entities and also ensures consistent messaging and effective exchanges of information. The Bureau's national program and regional personnel are critical components of BSEE's effective international engagement strategy, as they are the subject matter experts who share their experience and knowledge with our regulatory counterparts in other countries.

The past year was very busy for BSEE on the international front. In 2015 the Bureau has:

- assumed chairmanship of the International Regulators' Forum, organized and hosted the group's mid-year meeting and developed the agenda and content for the 2015 Offshore Safety Conference;
- helped to establish the AORF;
- increased regulatory collaboration with Mexico regarding safety and environmental protection; and
- engaged in technical exchanges and efforts to build governance capacity with many other countries around the world.

BSEE Director Brian Salerno met with Carlos de Regules Ruiz-Funes, Executive Director of Mexico's National Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (ASEA) to sign a letter of intent to strengthen cooperation, coordination and information sharing related to the development, oversight, and enforcement of safety and environmental regulations for development of transboundary hydrocarbon resources. The signing occurred at the 2015 International Regulators' Forum Offshore Safety Conference.

One of BSEE's primary multilateral engagements is the International Regulators' Forum (IRF). BSEE developed the agenda and content for IRF 2015 Offshore Safety Conference, "From Desktop to Deckplate: A Holistic Approach to Risk Management," held in Washington, D.C. just after the fiscal year ended. The conference provides a forum for regulators, industry, academia, Federal organizations and other practitioners from around the world to openly discuss best practices and industry trends. BSEE also participated in the International Offshore Petroleum Environmental Regulators (IOPER) forum, and hosted a site visit to Ohmsett as part of the group's 2015 Mid-year meeting.

In fulfillment of a recommendation by the Arctic Council's Task Force on Arctic Marine Oil Pollution Prevention, BSEE helped to establish the AORF, and BSEE's OCIA acts as the Executive Secretariat for the group. In addition, BSEE continued to represent the U.S. on the Arctic Council's Emergency Preparedness, Prevention and Response (EPPR) Working Group and participates in the EPPR's projects.

The Bureau continued to focus most heavily on strategic engagement with countries, such as Canada and Mexico, that share boundaries with the United States. In the past year, BSEE strengthened its already strong safety, environmental, and regulatory collaboration with Mexico. BSEE has established close ties with the National Agency for Industrial Safety and Environmental Protection in the Hydrocarbons Sector (ASEA), Mexico's new energy regulator created after Mexico's 2014 energy reforms. BSEE and ASEA demonstrated their commitment to ongoing collaboration by signing a letter of intent in October 2015 that states potential areas in which the two agencies may coordinate.

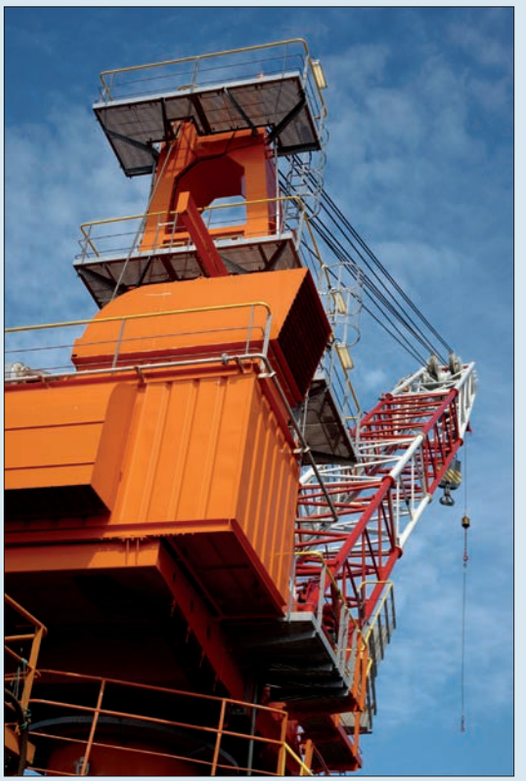
BSEE international responsibilities also involve the Agreement between the United States of America and the United Mexican States Concerning Transboundary Hydrocarbon Reservoirs in the Gulf of Mexico. The Agreement supports the United States' and Mexico's shared duty to exercise responsible stewardship of the Gulf of Mexico when developing offshore hydrocarbon resources. It is built on a commitment to the safe, efficient, and equitable exploitation of transboundary reservoirs. DOI Secretarial Order No. 3333 delegated authority to BSEE to carry out specific responsibilities of the Department under the Agreement, including unitization, inspection and enforcement, and production verification for operations involving a transboundary hydrocarbon reservoir. BSEE's engagement and collaboration with ASEA as well as Mexico's National Hydrocarbons Commission (CNH) is critical to successful implementation of the Agreement.

BSEE also cooperates extensively with Canada, not only through their joint participation in the AORF, but also in direct conversations between BSEE employees and staff with Canada's National Energy Board (NEB), which regulates their energy industry. Part of the discussions with NEB center on the joint efforts of BSEE and NEB to promote an offshore safety culture.

In FY 2015 Bureau staff actively participated in standards development committees, and attended standards-focused conferences both domestically and internationally. These interactions allow BSEE to better assess standards for incorporation into Bureau policies, such as rulemakings. In FY 2015 BSEE's Standards Team hosted the BSEE Domestic and International Standards Workshop in Houston, Texas. This meeting was a one-day workshop that attracted 237 technical experts from around the world in order to discuss updates to standards, gaps in existing standards, and broader industry and regulatory concerns. The 2015 workshop focused on four areas: 1) cementing, 2) quality management and equipment reliability, 3) high pressure-high temperature environments, and 4) emergency disconnect systems.

Lifting incidents on the OCS can damage facilities, injure personnel, and even result in fatalities. Between 2007 and 2014, 16% of fatalities offshore were associated with lifting incidents.

In June 2015 BSEE published a proposed rule to implement best practices and update regulations regarding the safety of cranes mounted on fixed platforms on the Outer Continental Shelf. The proposed rule addresses safety issues including the loading of cranes, their service life, braking systems, and personnel safety. The rule incorporates accepted industry best practices and updates current BSEE regulations.



Regulatory Work & Activities

The Bureau is responsible for establishing regulatory requirements, overseeing compliance and controlling enforcement activities that govern numerous aspects of offshore oil and gas operations. Because of this mandate, BSEE regularly evaluates procedures and regulations in order to stay up to date on industries' technological advances, promote safe and clean operations, and conserve the Nation's natural resources. The foundation of our regulatory program is a set of enforceable regulations that govern numerous aspects of the offshore energy business. The Bureau updates and revises regulations as necessary, to ensure they include the most effective requirements for safety and environmental stewardship on the OCS, but also recognizes the need to temper change with predictable consistency.

BSEE is currently working to improve its rulemaking efficiency in three general ways: 1) by identifying and evaluating regulatory and enforcement needs, 2) through streamlining the regulatory development process to ensure that risk-based, high quality, enforceable, and legally-defensible regulations are generated in a timely manner, and 3) by further incorporating new and updated industry standards into regulations and related enforcement activities. The Bureau will continue to coordinate its regulatory efforts with other Federal agencies to avoid unnecessary duplication and to maximize consistent and efficient regulation of OCS activities. BSEE will also continue to ensure compliance by the OCS energy industry with provisions of Federal laws, including the National Environmental Policy Act (NEPA), the Clean Air Act, the Clean Water Act, the Federal Oil and Gas Royalty Management Act, and the Oil Pollution Act of 1990.

The prioritization of BSEE's rulemaking efforts is based on comprehensive reviews of 1) existing oil and gas regulations, 2) safety and environmental risks, 3) new developments in industry practices and OCS technology, 4) results of BSEE research projects and those of its contractors, and 5) information about other changing circumstances. In addition, BSEE works with industry groups on standards development and it assesses existing relevant standards for possible incorporation into BSEE's regulations. Performance-based regulations are used wherever they can be effectively implemented, which allows BSEE to employ its hybrid regulatory approach that allows a mix of performance-based and prescriptive requirements. In fiscal year 2015, the Bureau advanced several proposed rules on well control, Arctic exploratory drilling, production safety systems, crane safety, and other worker safety and environmental protection topics. One rule that was finalized in FY 2015 addresses the collection of financial data associated with decommissioning activities on the OCS.

During FY 2015, BSEE used a continuum of enforcement tools to identify and respond to violations and promote compliance. These include the issuance of Incidents of Noncompliance, penalties, and orders. All of these actions serve to underscore BSEE's expectation that the industry will engage in safe operations and fulfill all environmental stewardship responsibilities. Annual performance reviews of each operator also assess recurring safety and environmental concerns. In 2015, a new pilot program was instituted that focuses on risk-based inspections of facilities deemed to have a high-risk profile. The study aims to identify and quantify risks that serve as leading and lagging indicators in order to better gauge operator effectiveness. The Bureau is actively evaluating the deployment and use of this methodology which - when combined with findings from our annual inspection program and trends identified in third party SEMS audits - will allow BSEE to effectively focus its attention on operations that pose the greatest risk to safety.

Platforms generally consist of two parts for decommissioning purposes: the topside (the structure visible above the waterline) and the substructure (the parts between the surface and the seabed, or mudline). In most cases the topsides that contain the operational components are taken to shore for recycling or re-use. The substructure is severed 15 feet below the mudline, then removed and brought to shore to sell as scrap for recycling or refurbished for installation at another location. Of more than 2000 production platforms that exist on the OCS, more than 40% of facilities are more than 25 years old. Here, decommissioning of a platform is underway in the Gulf of Mexico with the removal of the topside.

An emerging compliance issue for the Bureau relates to end of life asset management through the decommissioning process. In light of FY 2015's prevailing current market conditions (low oil price), decommissioning emerged as an important topic during the fiscal year. The Bureau addressed this issue by ensuring that operators maintained their commitment to final abandonment and decommissioning. To further assist with such efforts, the final decommissioning rule requires that operators submit financial information from their decommissioning activities. The information will serve to inform BSEE and BOEM about the level of bonding that should be required for future leases.

Permitting and Inspections

For FY 2015, BSEE conducted over 20,000 inspections related to well operations, production, pipelines, meters, and environmental compliance (Table 3.1). These inspections took place at over 2,300 facilities. In conjunction with inspections, BSEE combed through the results in order to find opportunities that can improve its permit and plan review processes. Since FY 2013, when BSEE completed the first phase of development for its ePermits initiative, the Bureau has been advancing its use of this process. It is expect-

Table 3.1 Inspections performed by BSEE on the OCS by region for FY 2015. Note that inspection types are not mutually exclusive, and several functions may be examined during the same inspection. In FY 15 over 20,000 inspections were conducted at over 2,300. facilities. Production facilities are inspected at least once each year and drilling rigs are inspected monthly while active.

Type of Inspection	Alaska	GOM	Pacific	Total OCS
Well Operations[1]	123	1,145	47	1315
Production[2]	2	2,620	165	2787
Pipelines[3]	0	4,441	0	4441
Meters[4]	2	4,737	45	4784
Environmental[5]	134	2,978	0	3112
Other[6]	9	3,541	42	3592
Totals	**270**	**19,462**	**299**	**20,031**

[1] Well operations inspections include: drilling, workover, completion, and abandonment.
[2] Production inspections include production and flaring.
[3] Pipeline inspections involve the review of service and maintenance records and checking safety valves and devices.
[4] Meters inspections involve the review of calibration documents and the physical inspection of seals.
[5] Environmental inspections include: pollution, air quality, and oil spill exercise.
[6] Other includes USCG guidelines, hydrogen sulfide, site security, and compliance inspections.

ed that ePermits will eventually reduce review processing time by 30-40% for permits, plans, and other submitted document reviews. BOEM's ePlans initiative is being conducted in parallel with ePermits, and BSEE is working closely with BOEM on this initiative in order to develop common electronic submissions and processes for both ePermits and ePlans (and to identify points of interagency information exchange).

BSEE completed the second phase of the ePermits initiative during FY 2015, which involved BSEE subject-matter experts documenting the internal business processes that are used to collect the data necessary for permit and plan decision-making by the agency. BSEE and BOEM also completed user requirements in the form of user case documentation so that users and developers can construct the ePermits and ePlans components. In August 2015, BSEE awarded two contracts using the requirement and user case documentation to start development of the new ePermits and ePlans components. Just after FY 2015 ended, in October 2015, initial work started on establishing the permitting framework and the first permit actions, which will relate to the submission of oil spill plans. The current schedules call for initiating the remaining five permit categories at approximately six-month intervals, with completion of the ePermits project in April 2018.

Enforcement Approach

The investigation of incidents is an important function that the Bureau fulfills. These investigations provide essential data, and analysis of the data leads to recommendations and actions that can reduce risk on the OCS. The investigations are designed to identify root causes and patterns that in turn will inform updates to the safety program and regulations. The Bureau has developed a tiered approach to investigations that helps ensure that the level of resources dedicated to an investigation matches the severity of the incident. The Bureau's investigative function provides detailed findings and recommendations.

BSEE's use of a graduated enforcement continuum ensures that operators return to compliance in the quickest and most efficient manner. In those rare cases where the operator is unable or unwilling to comply, the Bureau takes appropriate actions to protect workers and the environment. BSEE's goal is to ensure compliance with all applicable safety and environmental protection requirements and to improve safety and environmental stewardship on an operator, company, and industry-wide basis.

In fiscal year 2015 BSEE issued approximately 2,400 Incidents of Noncompliance (INCs, Table 3.2). BSEE collected over $6 million in 57 civil penalty cases. BSEE staff completed 79 formal incident investigations. During 2015, BSEE used a variety of enforcement tools to respond to violations and to promote compliance. To avoid potential harm to personnel and the environment, BSEE issued 94 facility shut-in INCs and 1,165 component shut-in INCs. In fiscal year 2015, BSEE referred 48 cases / 66 violations for civil penalty assessment, with 3 cases related to contractors. The number of referred civil penalty cases has been fairly steady since 2012, with 56 referrals in 2013 and 58 cases referred in 2014. BSEE also met with 42 operators during 2015 to review annual performance and to recommend specific performance improvement measures. BSEE is currently implementing measures that will ensure that it is prepared to deploy the full range of regulatory and administrative enforcement tools in the coming years. These efforts are aimed at continued improvement of the Bureau's ability to promote safe and environmentally responsible offshore operations.

Table 3.2 When all applicable safety and environmental protection requirements are not met, BSEE issues Incidents of Noncompliance (INC). Upon detecting a violation, the Bureau inspector issues an INC to the operator and uses one of two main enforcement actions, warning or shut- in, depending on the severity of the violation. If the violation is not severe or threatening, a Warning INC is issued. The Warning INC must be corrected within a reasonable amount of time specified on the INC. The Shut-in INC may be for a single component (a portion of the facility) or the entire facility. The violation must be corrected before the operator is allowed to continue the activity in question. Of the 2483 INCs issued by BSEE in FY 2015, 94 were facility shut-in INCs and 1,165 were component shut-in INCs.

INC Category	Alaska Region	Gulf of Mexico Region	Pacific Region	Total OCS
Completion	0	14	0	14
Crane	0	39	5	44
Drilling	0	27	2	29
Electrical	0	82	35	117
General	0	952	40	992
Hydrogen Sulfide	0	8	1	9
Measurement & Site Security	0	121	39	160
Pipelines	0	80	2	82
Pollution	2	95	1	98
Production	0	683	64	747
Well Work-over/Abandonment	0	20	0	20
USCG-related	0	146	8	154
Other	0	17	0	17
Total	**2**	**2284**	**197**	**2483**

Table 3.3 BSEE employs civil penalties when appropriate for legal violations. Ultimately, the goal of the penalties is to promote compliance with Federal safety and environmetal rules. This table lists the ten companies that paid the most in civil penalties for violations on the OCS for FY 2015. All revenues collected as part of the civil penalties program are collected and distributed by the U.S. Department of the Treasury.

Violating Companies	Total Fines Paid ($)	Number of Cases
GOM Shelf	1,230,000	1
Black Elk Energy	619,986	6
Dynamic Offshore	615,000	2
SandRidge Offshore	498,750	3
EnVen Energy	478,000	2
Fairfield Nodal	430,000	1
Tengasco	386,000	1
Chevron	350,000	1
Mariner Energy	295,000	1
Linder Oil Company	150,000	1

Interagency Coordination

The OCS is a complex work environment that is serviced by tens of thousands of employees working for hundreds of private companies. Depending on their activities, these companies fall under the jurisdiction of several Federal entities. Over the past five years BSEE has developed close cooperative relationships with Federal partners on the OCS to make sure that activities are coordinated. These close relationships have strengthened the ability of agencies to deploy resources through intra- and interagency cooperation. The collaboration has also reduced the probability that industry will receive contradictory information or needlessly provide duplicate information.

The Bureau continues to improve upon its longstanding memorandum of understanding (MOU) and a series of subject matter specific memorandums of agreement (MOAs) with the U.S. Coast Guard (USCG) and is focusing on shared resources, cross-training, and cooperation in Federal enforcement efforts on the OCS. One of the more successful engagements is through the BSEE and USCG Response Work Group, which is finding ways to better coordinate respective oil spill exercise and response equipment inspection programs, address lessons learned, communicate updates on field activities, and transfer information seamlessly to all levels of both organizations.

BSEE and the USCG have closely aligned jurisdictional and regulatory responsibilities related to offshore energy development on the Outer Continental Shelf. From offshore inspections to incident response and investigations, the two organizations collaborate extensively to improve interagency coordination, and ensure consistency and clarity for the regulated community.

BSEE has also been partnered with agencies that have experience as High Reliability Organizations (HROs). BSEE believes the OCS energy industry should be viewed as needing to be regulated in a HRO framework because the operations need to have risk reduced because the consequences of failure are unacceptable and potentially catastrophic. BSEE shares the HRO goals of continuous safety improvement, risk informed decision-making, and creation of a safety culture policy. The HROs with which BSEE actively partners include the Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), the Nuclear Regulatory Commission (NRC), BOEM, U.S. Bureau of Land Management, U.S. Office of Natural Resource Revenue, and the Department of Defense. BSEE continues to actively seek new opportunities to share information across U.S. government agencies and with international entities.

This platform sustained heavy damage during a hurricane in the Gulf of Mexico. Because of the harsh conditions on the OCS, BSEE enforces regulations and provides guidance that are designed with severe weather and hurricanes in mind. In addition to safeguarding the men and women who work offshore, these efforts protect the environment by preventing spills. An added benefit is minimization of disruption to oil and gas production in the wake of a storm.

Fires and explosions at offshore oil and gas facilities have the potential to produce catastrophic results. BSEE inspectors therefore pay particularly close attention to leading indicators of fire/explosion risks (e.g., improper welding practices). When a fire or explosion does occur, our investigators probe for root causes.

Safety & Environmental Performance

Given the frenetic pace of activities during the year, for both BSEE and the OCS energy industry, it is important to pause, at least annually, and consider the broader picture. This section presents an opportunity to take a step back from day to day operations, and reflect on the past year's experience with regard to worker safety and environmental protection. Perhaps the most important question one can ask about FY 2015 is, "How did it go?" In the following pages, you will read a full and open assessment of what BSEE observed in FY 2015 (October 1, 2014 through September 30, 2015). Also included are analyses of what went well, what needs improvement, and some thoughts on how we can work together to continue to enhance safety and environmental protection offshore. BSEE's collection and analysis of data in this section also places FY 2015 data in the context of recent years so that trends can be discussed. By the end of this Safety and Environmental Performance section, readers of the report should understand, in some sense, "how it went."

Much of the data presented herein can be traced back to reports from energy industry operators. All operators on the OCS are required to report incidents related to activities regulated by BSEE (30 CFR § 250.187-190), including – but not limited to - those associated with permits and leases. Incidents that must be reported include injuries, fatalities, losses of well control, fires and explosions, oil spills or gas releases, safety system failures, and many other categories. BSEE investigates many of these incidents to identify causes and trends. This information helps us identify appropriate actions in order to prevent the recurrence of incidents and enhance safety and environmental protection on the OCS.

A Comment on Fatality Statistics

Fatalities in this section have been reduced to numbers, which is necessary, but impersonal. BSEE knows that behind each number is a person and his or her family and friends. We hope that readers will understand that the goals of our analyses are to learn so that the acceptable fatality number can be achieved: zero.

Incident data are reported in this section with two-year moving average trend lines for fiscal years 2007 through 2015. The nine-year timeframe allows the 2015 data to be placed in a context for which parallel data exist. Some trends will require more time before conclusions can be drawn, but some seem apparent at a glance. Only by further analyzing the data and trends in this section can areas for improvement be designated. Once such areas are designated, both BSEE and industry will be able to move toward addressing emerging concerns and ultimately reduce risk on the OCS.

Table 4.1 Total number of recordable incidents occurring on the OCS from FY 2007 to 2015. In FY 15, 583 incidents occurred. The following types of incidents require immediate BSEE notification: fatalities; injuries that require evacuation of the injured person; loss of well control; fires and explosions; collisions that result in property or equipment damage of more than $25,000; incidents involving structural damage to an OCS facility; incidents involving crane operations; and incidents involving damage to safety systems and equipment.

Incident Type	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fatalities	5	12	4	12	3	1	4	2	1
Injuries	322	263	260	253	221	280	276	285	206
Loss of Well Control	6	7	7	4	5	3	8	5	3
Fires/Explosions	145	141	148	134	113	132	116	135	105
Collisions	26	28	26	14	11	13	21	16	9
Spills (> 50 bbls)	7	33	7	9	4	5	10	5	7
Lifting	180	185	243	118	110	167	197	210	161
Gas/H_2S Releases	14	22	33	20	17	27	21	21	21
Evacuation Musters	33	43	55	31	36	48	68	52	70
Total	**738**	**734**	**783**	**595**	**520**	**676**	**721**	**731**	**583**

Interpreting Trends

There are many factors that impact OCS events in a given year. It is often the case that factors occurring in one year affect statistics in a subsequent year. Leading and lagging indicators certainly exist within the data included in this report. However, such indicators can be difficult to pinpoint. For example, the low price of oil in 2015 impacted many aspects of operations on the OCS including industry revenues, mergers, acquisitions, and cessation of operations for some financially troubled companies. It is possible that these aforementioned circumstances, and others, impacted the FY 2015 safety data, and also possible that their impacts will be felt in future years. The data in BSEE's FY 2015 Annual Report certainly reveal a trend that suggests a general overall decrease in certain reportable incidents since the Bureau was established, but BSEE cautions that the trends are suggestive, not definitive, with regard to the direction of industry safety outcomes. As the incident database grows with the addition of future years, it should, eventually, become possible to pinpoint leading and lagging indicators that will help guide the interpretation of safety-related analyses. It should be noted that analyses in this report that are normalized on a "per installation basis" are normalized against the number of production platforms, not drilling installations. As such, normalized data presented herein are illustrative of broad trends only.

Incidents & Investigations

BSEE initiated 71 investigations for incidents occurring on the OCS in FY 2015. Of the total, 69 were District Investigations in the Gulf of Mexico Region (GOMR), one was a Panel Investigation in the GOMR, and one was a District Investigation in the Pacific Region.

During the past year, BSEE continued to develop the framework for its national program model for investigations, and the framework was implemented in early FY 2016. The implemented National Investigations Program works to harmonize BSEE's district, regional, and headquarters investigative capabilities so that they can efficiently carry out the mission of investigating incidents and potential violations occurring during oil and gas operations on the OCS. The National Investigations Program sets goals, policies, and initiatives, and conducts training for all employees who may be involved in any phase of an investigation. Investigators from the Safety and Incident Investigations Division work closely with regional and district personnel to ensure that protocols are followed with regard to information collection, incident response, and determination as to the need for an investigation. This integration of national, regional, and district workforce capabilities improves the quality of investigations and also provides a more manageable experience for all parties.

Fatalities

Fatality data are a stark reminder not only of the dangerous working conditions on the OCS, but also of the need for safety vigilance every day, on every job, and by every person connected to the exploration and production of energy on the OCS. Even a single death occurring anywhere on the OCS in a given year should always be considered as too many. Zero should be the only acceptable number in this category and it should

never be considered unattainable. For BSEE, fatalities provide a strong impetus to continue striving toward ever more effective regulatory oversight oriented toward safer offshore operations.

The data presented in Figure 4.1 do show a general downward trend in fatalities over time, but the positive aspects of this trend are tempered by several factors. First, the types of fatality incidents represented are widely varied (see Figure 4.2). In other words, fatalities occurred across a wide spectrum of exploration, development, production, and decommissioning operations on the OCS, therefore the general downward trend can't be tied to one specific location or circumstance[1]. The inherent risks of working offshore can be identified and mitigated, but when risk management is not done well, a single lapse and resulting incident can generate catastrophic consequences and multiple fatalities. The effects of such an event can be seen in the data from prior years, most notably the *Deepwater Horizon* tragedy in 2010. These factors do not mean the fatality data are random, but they do make them highly volatile, pointing to the great need for continued and enhanced vigilance on the part of industry and government alike. Therefore BSEE will continue to exercise robust regulatory oversight, and will work with industry to reduce risk, helping to ensure the trend toward zero fatalities continues.

Over the nine years represented in the graphs, an average of nearly five fatalities per year occurred on the OCS. Even with the recent downward trend, the overall average has changed little from last year. Each of these fatalities was reported to BSEE under the requirements of 30 CFR 250.188(a)(1). Under current practice, BSEE evaluates each and every reported fatality for referral to a panel investigation, BSEE's most comprehensive and resource-intensive investigative tool. All resulting panel investigation reports are posted on BSEE's web site for public viewing, allowing all to benefit from the lessons learned from these tragedies.

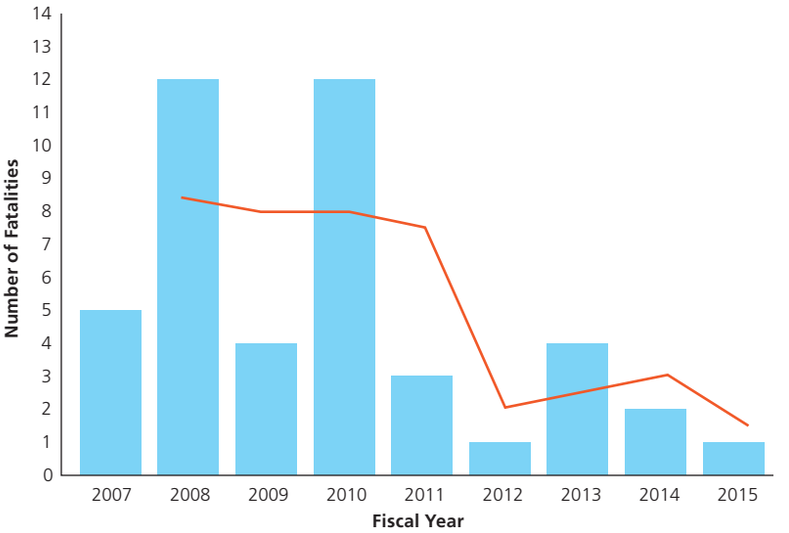


Figure 4.1 Although a general downward trend in the numbers of fatalities seems apparent in this graph, two high fatality years (2008 and 2010) greatly impact the trend line. While the inherent risks of offshore work can be identified and mitigated, a single lapse in proper risk management can be catastrophic and result in a year with a high number of fatalities. Because BSEE sees a single fatality in one year as unacceptably high, the Bureau will continue to exercise robust regulatory oversight, and will work with industry to reduce risk across all areas of the OCS.

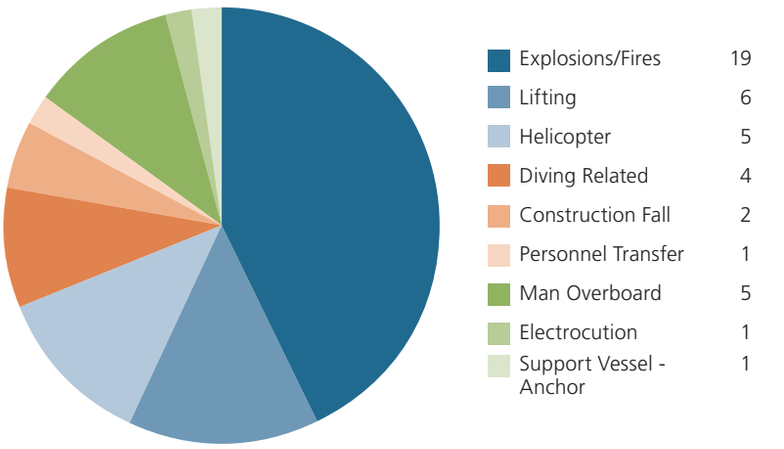


Figure 4.2 This chart demonstrates that the causes of fatalities for the FY 2007-2015 period are widely varied, occurring across a wide spectrum exploration, development, and production activities on the OCS. Given that fatalities cannot be tied to one specific location or circumstance, BSEE continues to robustly enforce safety regulations and encourage vigilance by industry in all risk-associated activities.

Injuries

In recent decades, advances in technology and systems used to support offshore drilling have greatly reduced the amount of direct physical labor required, and risk of injury has likewise decreased. However workers still interact with powerful equipment capable of exerting ever-greater force as drilling extends deeper and farther. In short, risk of injury remains a constant concern on the OCS, an environment where oil and gas production operations, general offshore support operations (e.g.,crane lifting), and other inherently dangerous activities are commonplace.

BSEE requires the immediate reporting of all injuries that require evacuation of the individual from the facility to shore or to another offshore facility (30 CFR 250.188(a)(2)). Operators are also obligated to provide a written report within 15 calendar days those injuries, "that result in one or more days away from

1 These data include fatality incidents that are reportable to BSEE and under BSEE jurisdiction. There may be fatalities resulting from other offshore incidents that are reported to other Federal agencies (e.g., USCG) and are not under BSEE jurisdiction. For example, helicopters in flight are not included, but helicopters on platforms, but not actually in flight, are included.

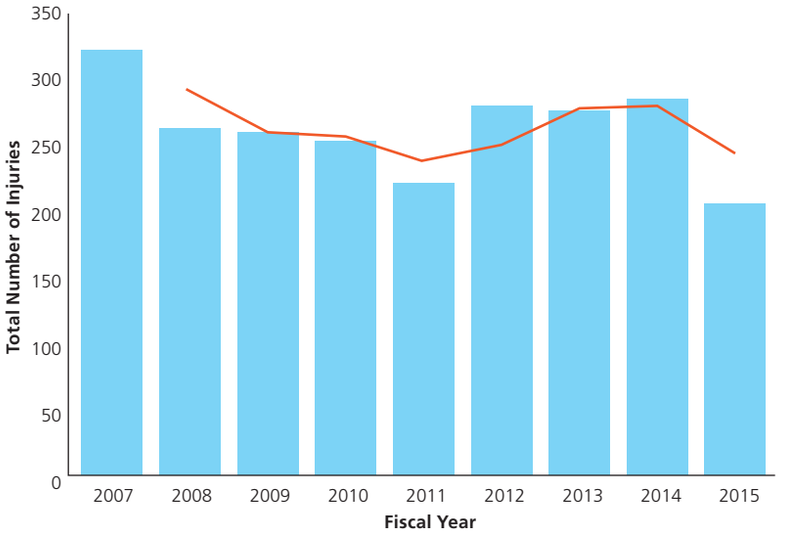


Figure 4.3 Total reported injury incidents generally decreased from 2007 through 2011, then rebounded to somewhat higher levels in 2012-2014 before achieving the all-time low reported for 2015. While some technological advancements in recent decades have decreased the risk of injury for some offshore operations, workers are still performing inherently dangerous activities with ever more powerful equipment in increasingly challenging environments.

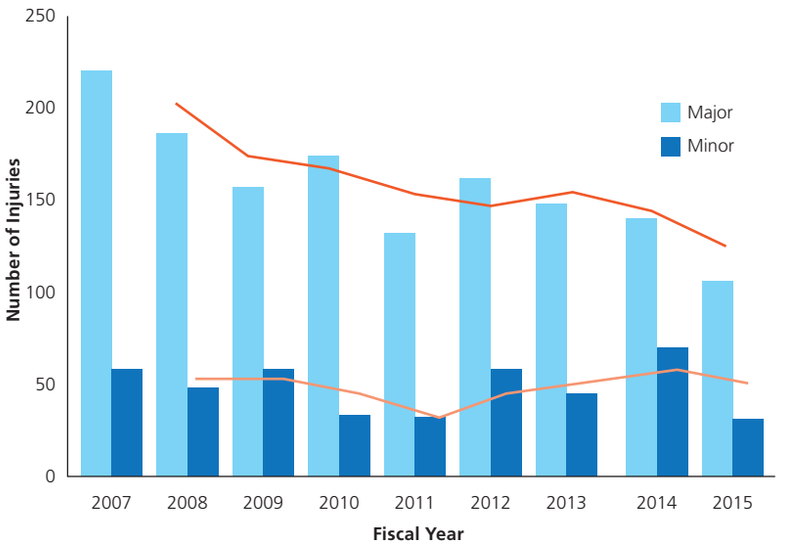


Figure 4.4 Examining injuries by severity category suggests a different trend for major and minor injuries. When an injury causes an individual to miss more than 3 days away from work or more than 3 days of restricted work or job transfer (collectively referred to as DART) it is considered major. If the result is 1-3 DART, the injury is classified as minor.

work or one or more days on restricted work or job transfer." For internal analysis, BSEE categorizes all reported injuries as follows[1]:

- Major = More than 3 days away from work or more than 3 days of restricted work or job transfer (collectively referred to as DART);
- Minor = 1- 3 DART; and
- Other = Injuries that resulted in less than one DART (or those that required evacuation to shore or to another offshore facility for medical treatment but did not result in any DART).

Between 2007 and 2015, aggregate annual recordable injuries on the OCS have ranged from a high of 322 in FY 2007 down to a low of 206 in FY 2015. An average of approximately 263 injuries per year has been reported on the OCS. Total reported injury incidents generally decreased from 2007 through 2011, then rebounded to somewhat higher levels in 2012-2014 before achieving the all-time low reported for 2015 (Figure 4.3). A similar trend emerges when injuries are normalized to the number of operating installations (Figure 4.5), however FY 2015 per-installation data only show a decrease relative to the prior three years. Unfortunately the FY 2015 per-installation injury rate remains higher than the historical average observed between 2007-2011. BSEE's internal data review and analysis suggest that as many as one third or more of injury incidents are attributable to human engineering problems (e.g., human-machine interface, poor working environments, system complexity, and non-fault tolerant systems), and nearly one third more are caused by problems in work direction (e.g.,poor planning, site preparation, selection of workers, and supervision).

Loss of Well Control

Maintaining control of offshore wells is a central theme in BSEE's regulations under 30 CFR 250. The importance of well control is mentioned dozens of times in contexts such as well casing and cementing requirements, blowout preventer (BOP) requirements, well control training, drilling fluids used, requirements for production safety systems, and the need for design information on well control equipment to be included in a company's SEMS plan. BSEE also mandates recurring well control drills, and our inspectors have the authority to order well control drills when they are on a facility. All of these approaches are oriented toward preventing loss of well control (LWC) incidents, which are categorized into the following four types:

- Uncontrolled flow of formation or other fluids to an exposed formation (underground blowout);
- Uncontrolled flow of formation or other fluids at the surface (surface blowout);
- Flow through a diverter; or
- Uncontrolled flow resulting from a failure of surface equipment or procedures.

[1] DART = Days away from work or days of restricted work or job transfer. Recordable injuries include all three categories - Major, Minor, and Other.

Every LWC incident must be immediately reported per 30 CFR 250.188(a)(3). BSEE's comprehensive regulatory approach helps ensure that such LWC incidents are relatively infrequent, however BSEE treats each LWC event extremely seriously. Each incident has the potential to produce injury, loss of life, and damage to the environment.

An average of roughly five and one-half losses of well control occurs each year (Figure 4.7) on the U.S. OCS. Figure 4.7 suggests variability. Overall there seems to be an annual decrease in the occurrence of LWC incidents in recent years, but the numbers still fall within the historical range of 3 to 8 LWC events per year. Therefore, the more conservative viewpoint suggests that, over time, the rate of losses of well control remains relatively consistent and thus is a continued major concern for BSEE.

Roughly eight out of the last ten BSEE investigations of LWC incidents found that the root cause of the incidents was tied to equipment difficulties, in particular the design specifications of wells. Findings such as this illustrate the need for strong oversight, such as BSEE's newly published Well Control Rule.

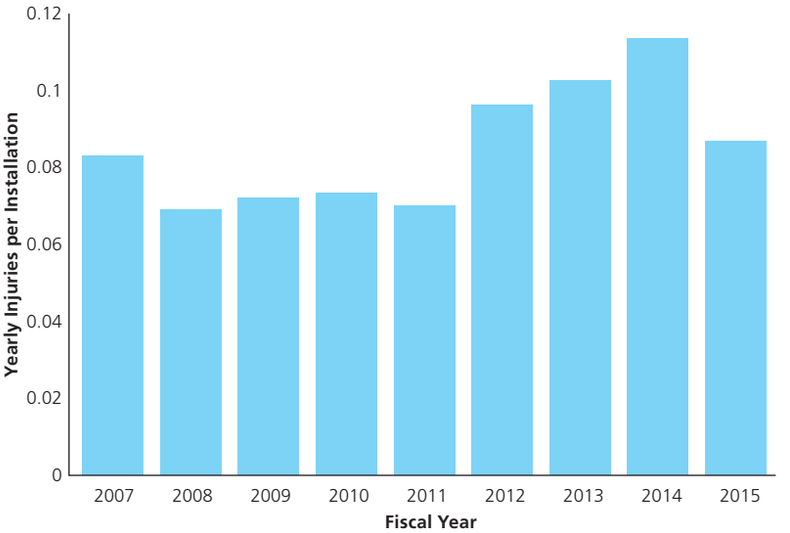


Figure 4.5 When injuries are normalized to the number of operating facilities a slight decline is seen from 2007-2011, then a rebound in 2012-2014 before falling in 2015 to an injury rate slightly higher than the 2007-2011 average.

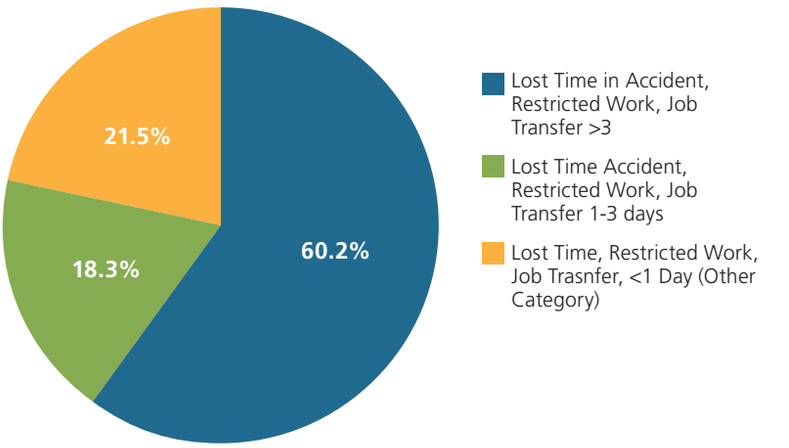


Figure 4.6 Percentage-wise, major injuries account for most of the cases. BSEE's internal data review and analysis suggest that as many as one third or more of injury incidents are attributable to human problems (e.g., human-machine interface, poor working environments, system complexity, and non-fault tolerant systems), and nearly one third more are caused by problems in work direction (e.g., poor planning, site preparation, selection of workers, and improper supervision).

Fires and Explosions

By design, offshore oil and gas facilities must often house multiple industrial functions (e.g., oil and gas extraction, processing, flaring) in areas that lie in close proximity to each other. Space limitations often require housing offshore workers adjacent to these industrial functions. These logistical realities are compounded by the relatively remote and isolated nature of many offshore facilities. Taken together, these factors mean fire and explosion incidents have the potential to produce catastrophic results. For these reasons, BSEE inspectors pay particularly close attention to leading indicators of fire/explosion risks (e.g., improper welding practices), and our investigators probe deeply for root causes after an incident does occur. Only by learning the lesson of a prior fire and/or explosion can we reduce the chance of its recurrence.

The Bureau requires immediate oral report of all explosions, and of fires lasting longer than five minutes (per 30 CFR §250.188(a)(4) and BSEE Notice to Lessees and Operators (NTL) No. 2008-G17). For fires lasting less than five minutes, BSEE requires that reporting occur within 12 hours of the incident. The data presented in Figures 4.8 and 4.9 are based on both types of reports from the OCS energy industry. Figure 4.8 depicts the overall number of fires/explosions by type. There are four general categories of fires and explosions considered by BSEE:

- **Incidental,** where less than $25,000 property or equipment damage occurs;
- **Minor**, where $25,000 to $1,000,000 property or equipment damage occurs;
- **Major**, where over $1,000,000 property or equipment damage occurs; or
- **Catastrophic**, where over $10,000,000 property or equipment damage occurs with destruction of a facility.

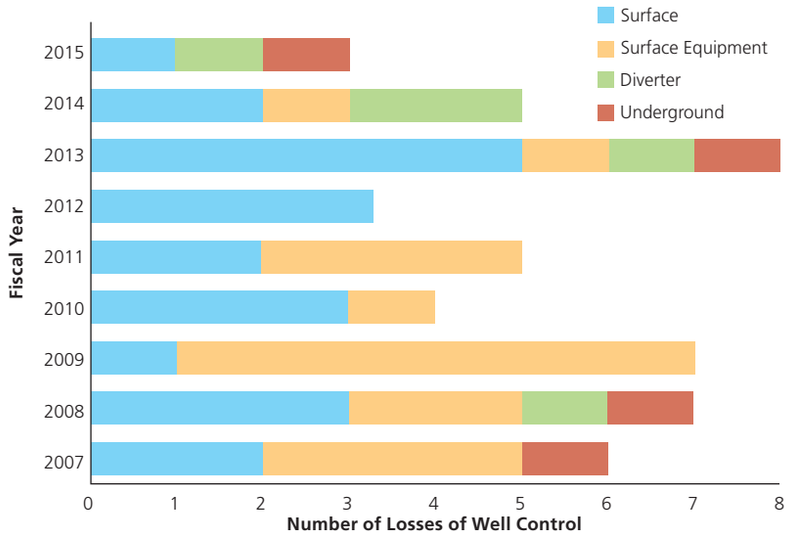


Figure 4.7 BSEE's rigorous regulatory oversight helps to ensure that loss of well control (LWC) incidents are relatively infrequent, even as each incident is treated extremely seriously because of the potential to produce injury, loss of life, and severe damage to the environment. With the exception of 2013, there seems to be an annual decrease in the occurrence of LWC incidents in recent years. With the LCW range now established as 3-8 LWC events per year, BSEE is pushing hard to move industry below three and also to achieve a zero LWC year.

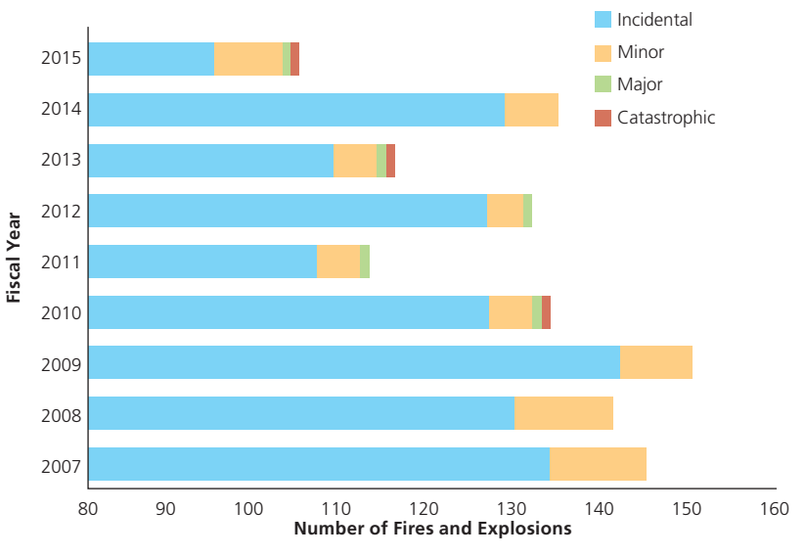


Figure 4.8 Over the nine-year timeframe of this report, an average of approximately 130 fires and explosions per year were reported for the entire OCS. There are four general categories of fires and explosions considered by BSEE: incidental, minor, major, and catastrophic. The data for overall reported fires/explosions are variable, but 2015 was the year with lowest number of fire/explosion incidents.

Bolt Failures

Leadership and staff of BSEE are working to address a recurring problem that raises serious safety and environmental hazard concerns - faulty connector bolts in safety critical equipment currently deployed offshore. There have been a number of failures of bolts that are used to connect blowout preventers, risers, and other subsea equipment at the wellhead. In most cases, these bolts represent a single barrier to the release of fluids from the wells.

Further, these failures occurred with bolts from the three primary manufacturers of these items, which suggests that the problem may be systemic to the manufacturing process. The photograph shown here is of bolt failure for a hydraulic connector flange.

BSEE is working with API standards committees to address the bolt failures and to drive industry reforms that would limit the use of multiple tiers of manufacturing subcontractors during the fabrication process. These efforts are all part of BSEE's overall efforts to drive down the risks associated with offshore oil and gas operations. The implementation of the Well Control Rule, which seeks to improve the performance and reliability of blowout preventers, is another critical part of BSEE's ongoing risk mitigation efforts.

Over the nine-year timeframe of this report, an average of approximately 130 fires and explosions per year were reported for the entire OCS. The annual range is from 105 such incidents (in 2015) to 148 (reported in 2009). The data for overall reported fires/explosions are variable, and in some years could be construed as depicting a downward trend, such as in 2015. However, when the data are normalized against the number of operating OCS facilities, as depicted in Figure 4.9, fires and explosions per installation show an overall increasing trend in recent years.

Due to the nature of offshore facilities, even incidental fires have the potential to create an explosion or become catastrophic. Therefore, BSEE will continue to scrutinize such events very closely, always looking for new ways to enhance offshore safety through rigorous oversight and enforcement in an effort to reduce the number of fires and explosions.

Collisions

Collisions (inclusive of allisions) on the OCS are defined by BSEE in 30 CFR 250.188(a)(6) as "a moving vessel (including an aircraft) striking another vessel, or striking a stationary vessel or object (e.g., a boat striking a drilling rig or platform)." Such incidents can result not only in structural damage to vessels and facilities, but in some instances injury or loss of life. In extreme cases collisions could even contribute to losses of well control. BSEE shares jurisdiction with the United States Coast Guard for many collisions involving oil and gas operations on the OCS (see footnote associated with Fatalities section). BSEE requires that collisions resulting in more than $25,000 in estimated property damage be reported immediately via oral report, followed by a written report within 15 days. In the Gulf of Mexico region, operators may instead opt to file an electronic written report (via BSEE's eWell system) within 12 hours of the occurrence.

Over the nine-year timeframe considered in this report, an average of just over 18 collisions was reported per year (Figure 4.10). The trend in reported collisions over the last three years has been downward, and in FY 2015, the number of reported collisions dropped sharply compared to prior years, down to a historic (within the period of record herein) low in FY 2015 of 9 such incidents. We suggest caution regarding the decline. While BSEE is not currently aware of a particular cause for the drop in collisions in FY 2015, it seems likely the decrease in vessel-heavy offshore exploration drilling due to the drop in oil prices may be a contributing factor. Another factor that may be contributing to the downward trend is that industry is trying to make operations more efficient by reducing the number of support vessels on the OCS.

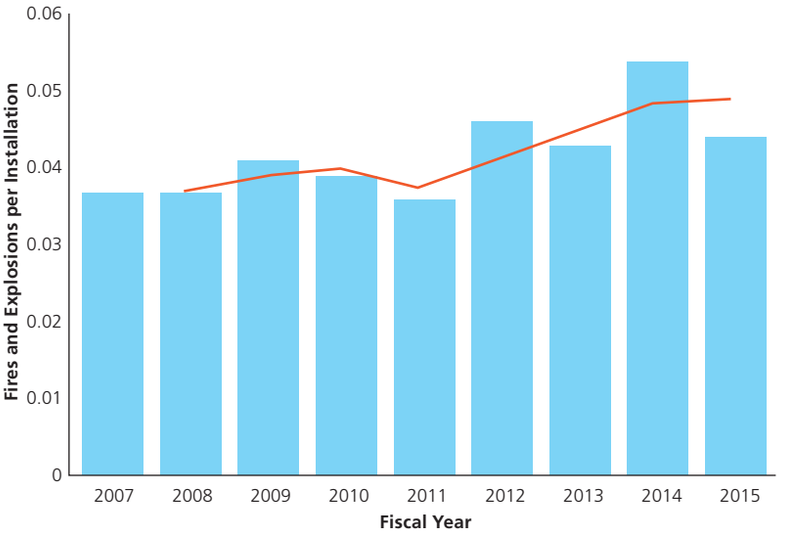


Figure 4.9 When the data for fires and explosions are normalized against the number of operating OCS facilities, there is an overall increasing trend in recent years. This trend runs counter to the trend seen in Figure 4.7, where overall data for fires and explosions from 2007-2015 could be construed to show a downward trend.

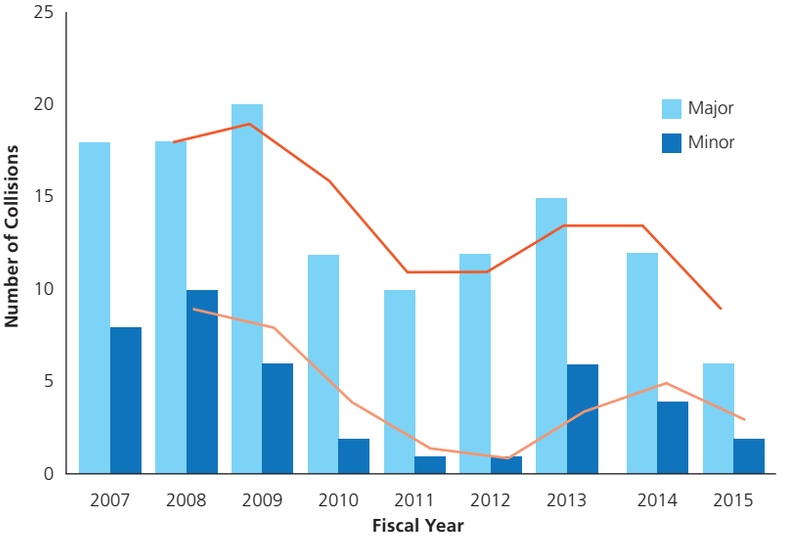


Figure 4.10 Collisions on the OCS can result in structural damage but may also cause injuries, loss of life, and have the potential to contribute to loss of well control. Over the nine-year timeframe considered in this report, an average of just over 18 collisions was reported per year. The trend the last three years has been downward with a sharp dropoff in FY 2015 compared to the previous years. It is possible that the most recent drop is due to the decrease in vessel-heavy offshore exploration drilling due to the drop in oil prices, combined with the fact that industry is trying to make operations more efficient through reducing the number of support vessels on the OCS.

Spills

BSEE's commitment to environmental protection is evidenced by its FY 2015 investment of $6.4 million on 15 new oil spill research projects – which supplement 30 ongoing projects - and its robust oversight of the OCS industry's oil spill preparedness. Although much of BSEE's emphasis is focused on ensuring offshore operators are equipped to prevent, control, and clean up after any potential spill, BSEE also requires the rapid reporting of spills if they occur. Per 30 CFR 250.187 and 30 CFR 254.46(a), operators are required to immediately report to BSEE all spills of oil or other liquid pollutants that are known or suspected to be one barrel in volume or greater. This requirement is in addition to, but does not substitute for, National Response Center reporting requirements.

Per 30 CFR 254.46(b)(2), spills greater than 50 barrels in volume require more detailed reporting and monitoring, and such spills trigger greater investigative response by BSEE, which may require the operator to submit additional information about the response. From FY 2007 to 2015, an average of just over 9.5 spills greater than 50 barrels was reported annually on the OCS. The fewest such spills (four) were reported in

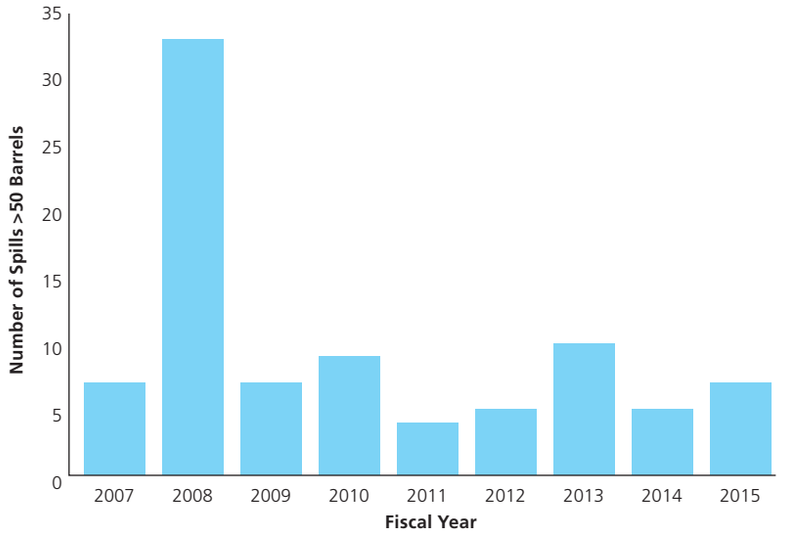


Figure 4.11 From FY 2007 to 2015, an average of just over 9.5 spills greater than 50 barrels was reported annually on the OCS. The fewest such spills (four) were reported in 2011, and the greatest number was reported in 2008.

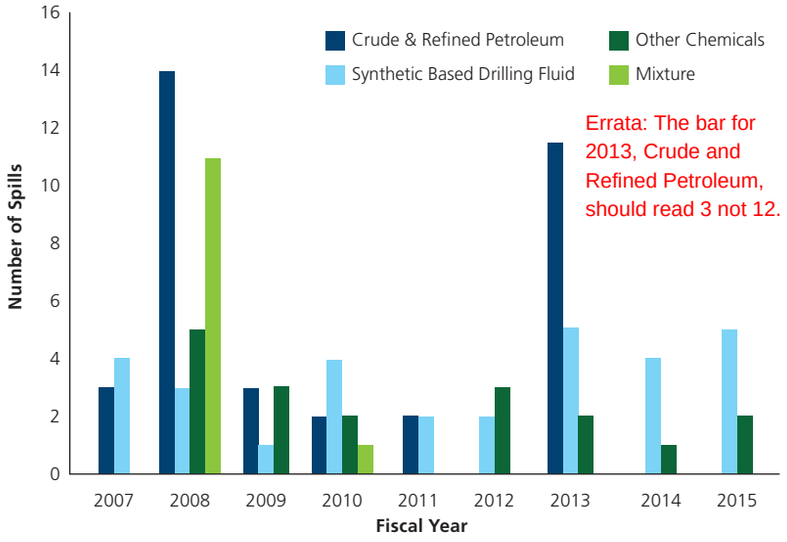


Figure 4.12 From FY2007 through FY2015, 31% of spills greater than 50 barrels were either crude or refined petroleum, approximately 34% contained synthetic-based drilling fluid, approximately 21% contained other chemicals, and nearly 14% were mixtures of products resulting from topside equipment and hurricane-induced failures. Overall there is apparent trend in types of fluids spilled each year, though synthetic-based drilling fluid was the greatest source during most years. The "other chemicals" category includes zinc bromide, calcium bromide, sodium bromide, asphaltene inhibitors, methanol and glycol.

2011, and the greatest number was reported in 2008[1] (Figure 4.11). From FY 2007 through FY 2015, 31% of spills greater than 50 barrels were either crude or refined petroleum, approximately 34 percent contained synthetic based drilling fluid, approximately 21% contained other chemicals, and nearly 14% were mixtures of products resulting from topside equipment and hurricane-induced failures (Figure 4.12). In general, there is no real trend in the types of fluids spilled each year, though Figure 4.12 illustrates that synthetic-based drilling fluid releases have persisted as the greatest source over the past several years.

The total volume of oil or other liquid pollutants released over time in individual spills greater than 50 barrels is depicted in Figure 4.13. Apart from the marked peak in 2010 (coinciding with the *Deepwater Horizon* tragedy) and a lesser peak in 2008 (associated with OCS facilities damaged during Hurricanes Gustave and Ike in the Gulf of Mexico), spills have been variable, though within a certain range. Removing the peaks might reveal a slightly decreasing trend, but additional years of data collection are required before trends can be defined. Even if there were evidence of a decreasing trend, BSEE remains committed to compelling a high degree of preparedness in industry, with the intent of preventing spills and properly responding if they do occur.

Lifting Incidents

Offshore oil and gas installations require frequent and routine lifting operations for personnel and material transfer on board and between vessels and platforms for resupply, and other functions. As with many offshore operations, lifting – typically by crane – carries risk due to close quarters, metocean conditions, and the need to coordinate with ongoing simultaneous operations (drilling, production, etc.). Unfortunately these risks sometimes result in lifting incidents, a subset of which may result in injuries or even a fatality. As such, BSEE pays close attention to lifting practices among OCS operators. BSEE also coordinates regularly with the U.S. Coast Guard, with whom the Bureau often shares overlapping or complementary jurisdiction for lifting incidents[2]. BSEE requires that all lifting incidents (defined as those involving crane or personnel/material handling operations) be immediately reported, per 30 CFR 250.188(a)(8). A follow-up written report is required within 15 days.

Over the course of fiscal years 2007 through 2015, an average of approximately 175 lifting incidents were reported to BSEE per year, with an annual range of 110 (in 2011) to 243 (in 2009). Overall, the number of such incidents – both in terms of gross total annual reports and on a normalized per installation basis – increased from 2011 to 2014, but from 2014 to 2015 the number decreased (Figures 4.14 and 4.15). For FY2015, the calculated rate was one lifting incident per 14.7 installations.

[1] The majority of the spills in 2008 were a result of facility damage during Hurricanes Gustav and Ike.

[2] The data presented here include lifting incidents that are reportable to BSEE and under BSEE jurisdiction. There may be lifting incidents resulting from other offshore operations, such as those related to vessel to vessel transfer of personnel, which are reported to other Federal agencies (e.g.,the U.S. Coast Guard) and are not under BSEE jurisdiction.

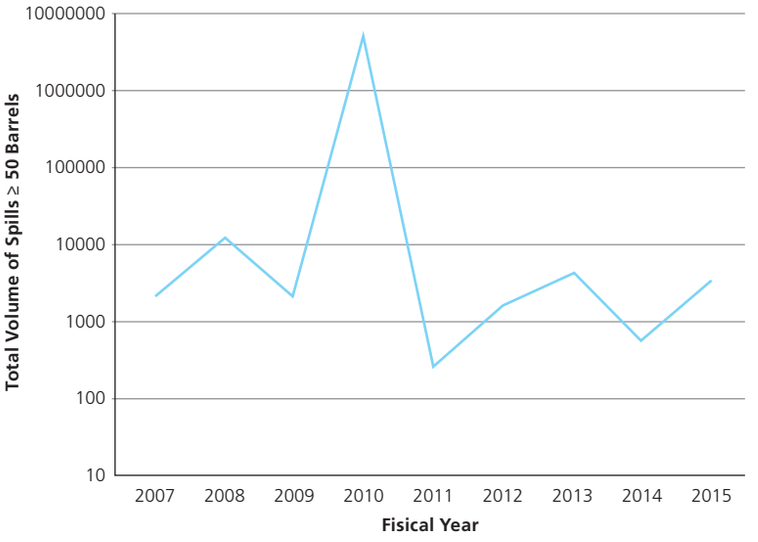


Figure 4.13 Apart from the marked peak in 2010 (coinciding with the Deepwater Horizon tragedy) and a lesser peak in 2008 (associated with OCS facilities damaged during Hurricanes Gustave and Ike in the Gulf of Mexico) spill volumes have been generally been below 10,000 barrels per year in the OCS. Removing the peaks suggests a slight decreasing trend, but BSEE remains committed to further reducing volumes and compelling a high degree of preparedness in the industry to respond properly if they occur.

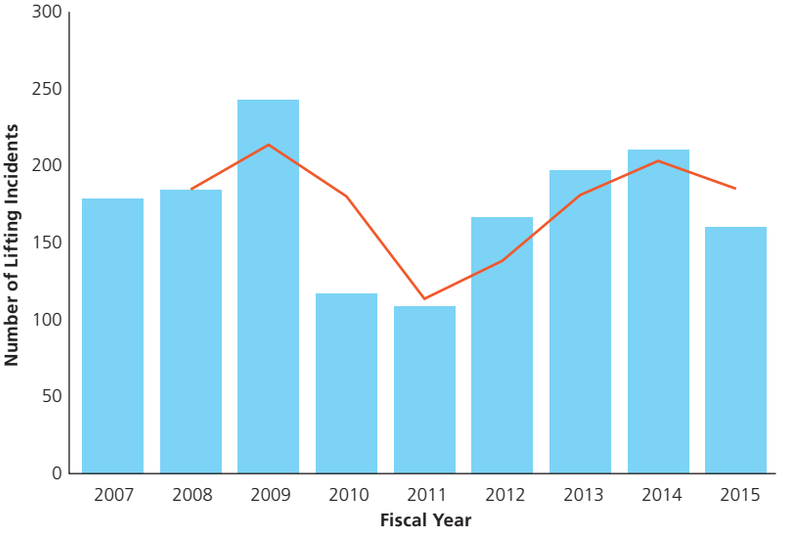


Figure 4.14 Frequent and routine lifting operations for personnel and material are required for offshore oil and gas installations. These operations carry risks, and occasionally these risks result in incidents that can cause injury or even loss of life. Over the course of fiscal years 2007 through 2015, an average of approximately 175 lifting incidents were reported to BSEE per year, with an annual range of 110 to 243. Overall, lifting incidents increased from 2011 to 2014, but were lower in 2015 than the three previous years.

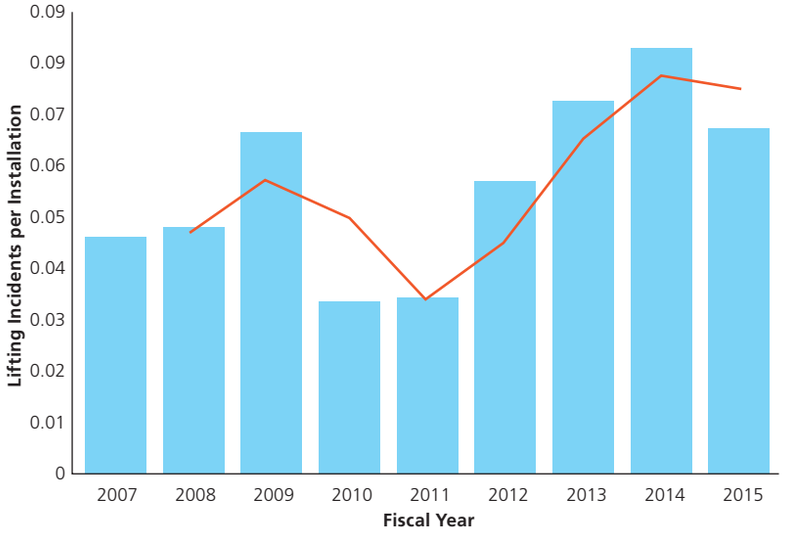


Figure 4.15 When lifting incidents are normalized on a per installation basis, the trends look similar to the trend seen for overall data. For FY 2015, the calculated rate was one lifting incident per 14.7 installations.

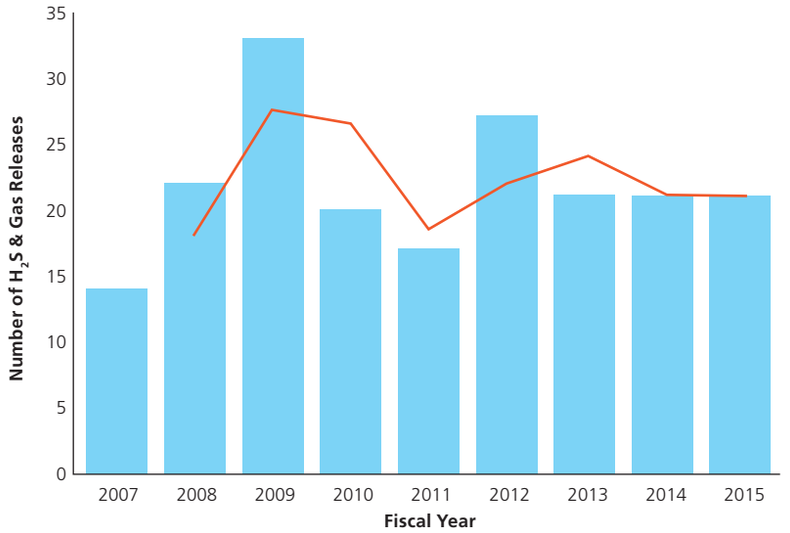


Figure 4.16 Offshore drilling and production requires the careful management of hazardous gases. The risks associated with the gasses varies. Nitrogen gas, for example, is potentially dangerous if mishandled, whereas others are acutely toxic, such as Hydrogen Sulfide (H_2S). H_2S gas requires particular scrutiny during facility design, construction, and operation. The graph shows that gas releases in recent years have remained relatively constant.

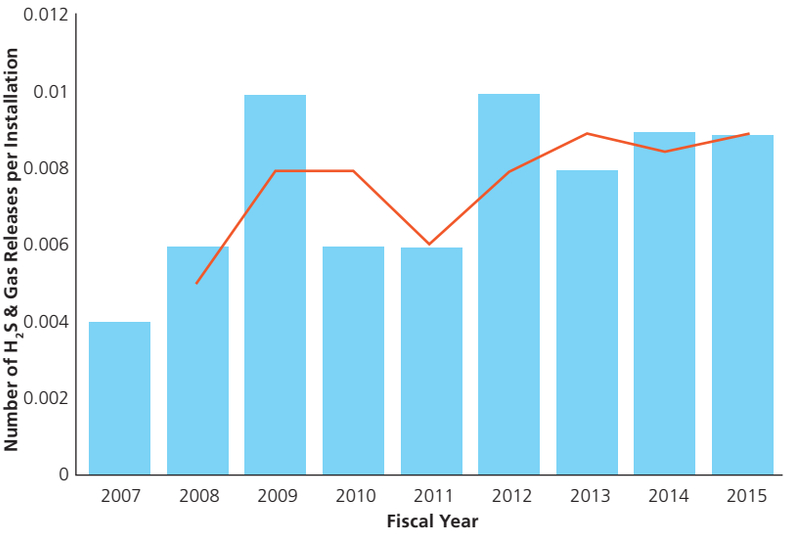


Figure 4.17 Releases of gas or H_2S on the OCS per installation per year from 2007 to 2015.

Gas Releases

The process of offshore drilling and production requires the management – at multiple stages in the process – of hazardous gases. These gases range from those that are potentially dangerous if mishandled (e.g., nitrogen gas) to those that are acutely toxic. In the latter category, hydrogen sulfide (H_2S) gas requires particular scrutiny during facility design, construction, and operation. BSEE regulations require identification of gas hazards prior to initiating operations, appropriate design and institutional controls on gas management during operations, and rapid reporting of most gas releases. There are two basic levels of reporting gas releases:

- All reportable releases of H_2S gas must be immediately reported to BSEE and followed up by a written report within 15 calendar days per 30 CFR 250.188(a)(5). "Reportable releases" are defined at 30 CFR 250.490(l) as those events which result in a 15-minute time-weighted average atmospheric concentration of 20 parts per million H_2S or more anywhere on the OCS facility.
- All gas releases (regardless of type) that initiate shutdown of equipment or processes must be reported to BSEE via written report within 15 calendar days of occurrence, per 30 CFR 250.188(b)(2).

Figures 4.16 and 4.17 illustrate the trend in OCS gas releases over the last nine Federal fiscal years, both by gross occurrences per year (Figure 4.16) and on a per-installation normalized basis (Figure 4.17). In both data presentations, all gas releases reportable under either of two above categories are aggregated. The graph shows that the number of gas releases in recent years has remained relatively constant. Fortunately reportable gas releases on the OCS are not frequent events, generally occurring on less than 1% of offshore installations per year. However, these incidents can rapidly become deadly when they do occur, and the causes can often be tied to human factors and weak institutional controls.

Gas sensors and other safety devices provide a good measure of protection to offshore workers. A key to reducing the number of gas releases will be vigilance in the areas of equipment testing and maintenance, proper work planning and permitting, effective oversight by industry of their own personnel, and vigilant oversight by BSEE of offshore operators.

Muster for Evacuation

Musters of personnel for evacuation of an offshore facility may occur in a variety of circumstances, usually precipitated by some acute hazard to the facility and/or the personnel. Such hazardous situations can include, but are not limited to, gas releases, fires, explosions, losses of well control, and severe collisions. BSEE tracks musters as an independent incident, even though they may be prompted by another type of incident.

All incidents requiring operations personnel to muster for evacuation – for reasons not related to weather or drills – must be reported to BSEE within 15 days of occurrence, per 30 CFR 250.188(b)(3). Over the nine-year timeframe of this report, an annual average of over 48 musters per year was reported (Figure 4.18). The fewest were reported in FY 2010, and the most were reported just last year, in FY 2015. Both the total annual number of musters for evacuation (Figure 4.18), and the musters for evacuation per installation (Figure 4.19) have overall increasing trends during the last five years, although there remains annual variability. In FY 2015, the calculated rate of musters was approximately one for every 34 offshore installations. Currently, there is not sufficient data to determine if there is a particular reason for the recent uptick in musters for evacuation, but this is an area BSEE will be analyzing closely in the coming years.

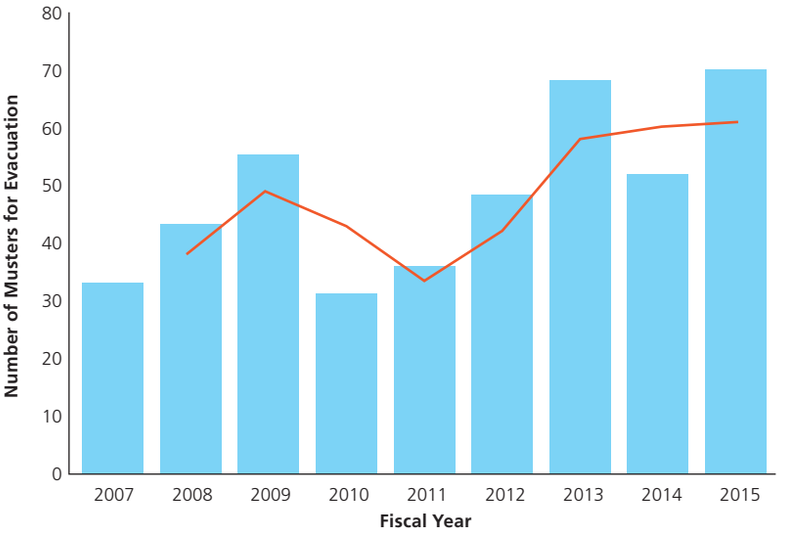


Figure 4.18 Musters of personnel for evacuation of an offshore facility may occur in a variety of circumstances, usually precipitated by some acute hazard on the facility. The total annual number of musters for evacuation have overall increasing trends during the last five years with some annual variability.

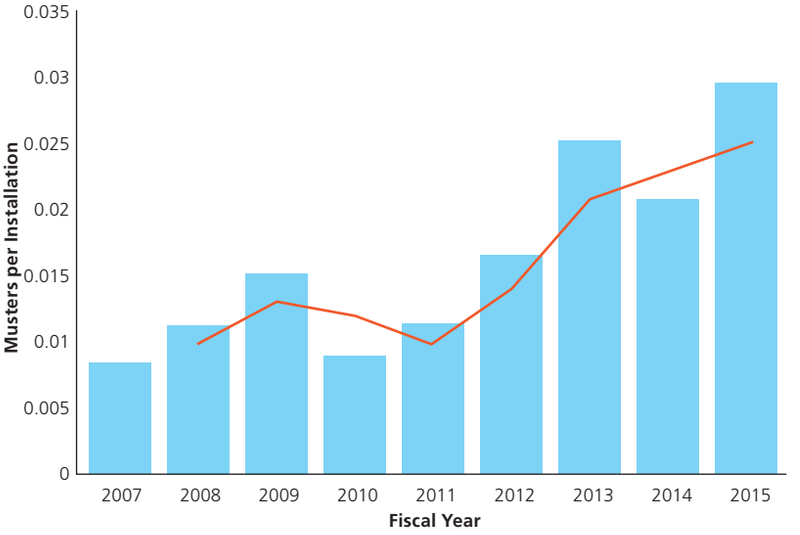
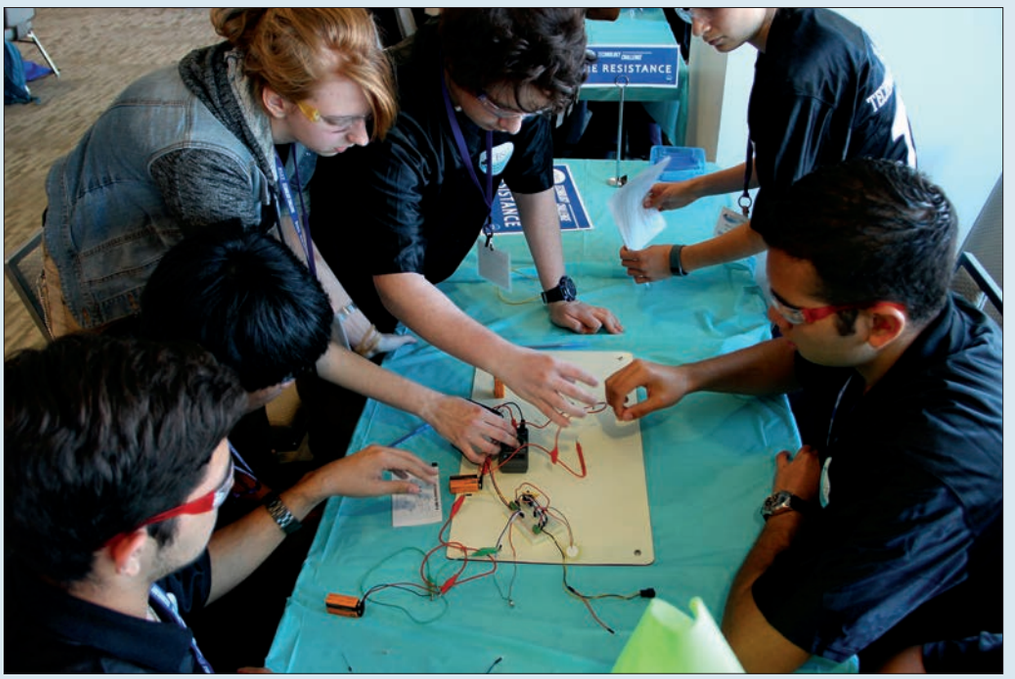


Figure 4.19 Similar to the overall trend for all years, when data are normalized for musters for evacuations per installation the increasing trend for the past five years is apparent. In FY 2015, the calculated rate of musters was approximately one for every 34 offshore installations. Currently, there is not sufficient data to determine if there is a particular reason for the recent uptick in musters for evacuation.

Inspectors are an essential component of the more than 800 staff BSEE has onboard. Inspectors follow national protocols known as the Potential Incident of Noncompliance list which covers all regulated safety and environmental requirements.

In FY 2014, Secretary of the Interior Sally Jewell formalized an ambitious initiative to inspire millions of young people to 'Play, Learn, Serve, and Work' outdoors. BSEE supports this initiative in various ways including engaging youth in STEM education initiatives in order to help build the next generation of the OCS workforce.



Support for 21st Century DOI Workforce

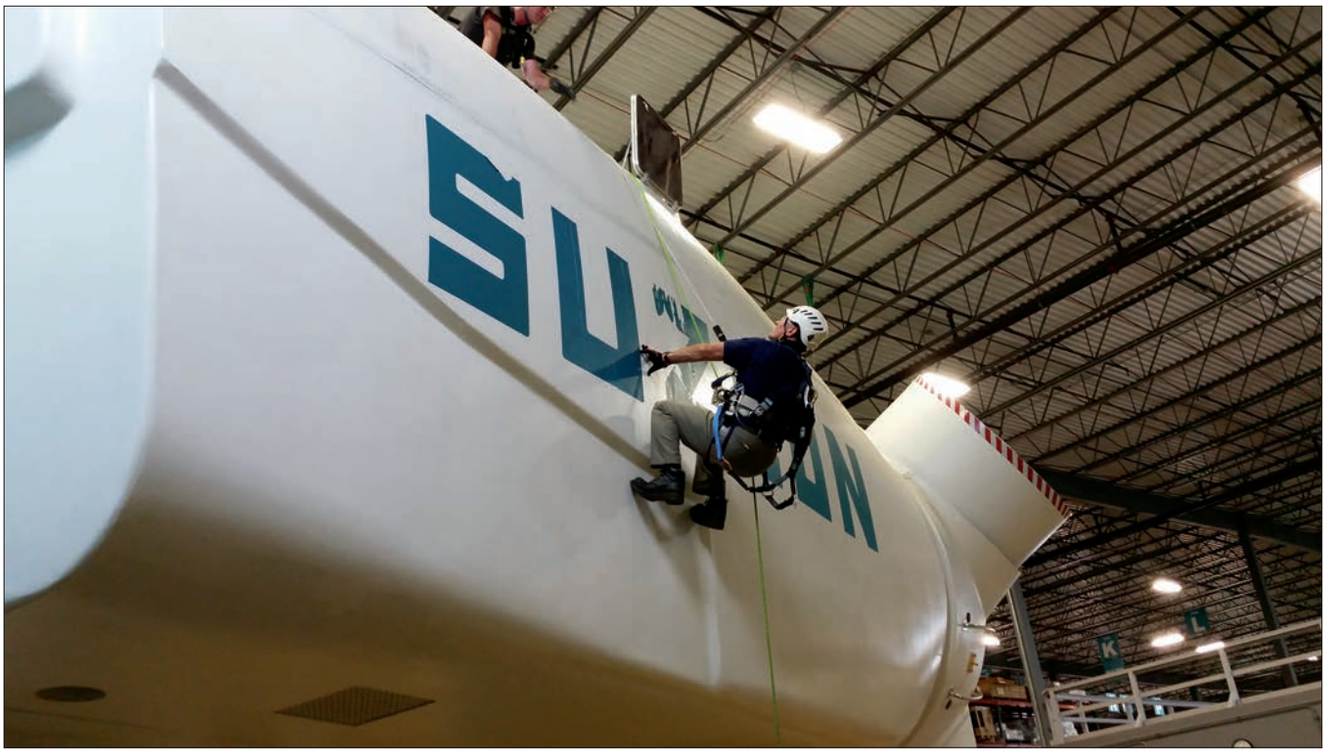
BSEE's vision for the 21st Century includes a fully engaged workforce that reflects the diversity of the United States and ensures that the Bureau achieves its mission area goals. The Bureau benefits from a workforce that is passionate about our mission, dedicated to public service, highly skilled, and knowledgeable. Differences in background, thought, education, and experience contribute to the varied perspectives in the workplace and create a synergy for higher performance and, ultimately, achievement of BSEE's goals.

Hiring

One of BSEE's strategic goals is to value, engage, and support its people so they can excel. Critical to accomplishing this goal is the Bureau's ability to recruit, develop, and retain a diverse workforce. BSEE had 679 employees on board as of October 2012. Through aggressive hiring efforts, BSEE has been able to make significant strides toward recruiting and hiring to its full staffing levels, and had over 800 employees onboard by the end of FY 2015. However, BSEE still has considerable recruiting and hiring to do to reach full staffing levels. The Bureau anticipates achieving full staffing by the end of FY 2017.

Because there is a pay and benefit gap between the Federal compensation structure and what private industry can pay its workforce, it has been challenging for BSEE to recruit and retain staff. Competition with private industry has been a challenge in particular with the recruitment and retention of engineers, inspectors, and staff in other scientific job series. A special pay rate authority provided by Congress for certain critical job series has helped BSEE achieve hiring and retention goals by leveling salaries for technical positions at BSEE against the equivalent positions in the industrial sector. In August 2015, the U.S. Office of Personnel Management (OPM) built upon the legislative authority by approving special pay rates for BSEE's mission critical positions in the Gulf of Mexico Region, including petroleum engineers, civil engineers, geophysicists, geologists, and inspectors. BSEE also sought and received OPM approval for similar special salary rates for mission-critical positions within its Alaska and Pacific Region offices. It is expected that the recently approved OPM special salary rates will further assist with recruitment and retention within these core specialized series that are central to the BSEE mission. BSEE will monitor the impact these new rates have on its recruitment and retention efforts through a newly created Office for Workforce Analysis and Planning within the Human Resources (HR) Division.

To further mitigate the challenges BSEE faces, the Bureau is employing all hiring and compensation flexibilities available to meet recruitment and retention needs. Among the suite of tools HR employs, those most often used relate to consideration of superior qualifications, special hiring needs appointments, student loan repayment, and creditable non-federal/non-military service for leave accrual. The HR Division recently completed a supervisory guide on compensation flexibilities to promote their usage and clarify regulations.



During 2015, BSEE Professionals attended over 23,000 hours of training. Here, a BSEE employee learns to safely ascend a piece of equipment called a turbine nacelle at wind turbine safety training.

Human Capital Campaign

BSEE promotes training for potential and current employees who desire professional growth and career advancement. The Bureau is also dedicated to advancing talent from within through a wide range of training, mentorship, and development opportunities. BSEE is currently working to establish a leadership development program across all areas within the Bureau. This program will be available to BSEE employees in all occupational series and grade levels. By improving their own supervisory and managerial competencies, employees will be able to develop the leadership skills necessary to grow within the organization and serve as effective leaders. To facilitate the development of both leadership and mentoring programs, the HR Division has created an Office for Leadership Development and Engagement, which, when fully staffed, will strive to improve growth opportunities and strategic engagement across the workforce.

The Bureau's National Offshore Training Program (NOTP) provides comprehensive, multi-tiered, professional development opportunities for BSEE inspectors, engineers, and scientists. In Fiscal Year 2015 BSEE held 106 training courses for 979 participants resulting in 23,980 contact training hours. In terms of courses delivered, participants, and training hours, this is an increase of 34%, 2.5%, and 2.5% respectively over Fiscal Year 2014 numbers. Through NOTP, employees further their abilities to create safe and environmentally sound offshore oil and gas operations. The NOTP specifically supports staff involved in inspecting or approving the use of new technologies in areas such as deepwater drilling and subsea operations. The classes are taught by renowned subject matter experts to ensure that every BSEE inspector, engineer, and scientist has continuing education and development opportunities in order to enhance professional competence and personal satisfaction.

BSEE is committed to recruiting and hiring talented employees who work cooperatively to achieve the Bureau's missions. Recruiting, training, and retaining a highly skilled workforce is the mission of both BSEE supervisors and the Bureau's HR department. BSEE is currently on target to be fully staffed by FY 2017.

Improving Processes

The first step of BSEE's efforts to improve its workforce management processes is obtaining knowledge of current and future workforce requirements. BSEE's HR Division then works to fulfill those workforce needs by using aggressive and honest marketing and branding techniques to attract skilled talent at all levels. Tremendous effort is employed, both prior to and following employment, to ensure that employees can perform their jobs at the highest level of competence. A guiding principle for BSEE's HR Division is that managers and employees must have the tools and resources they need if they are to be successful.

BSEE is improving its hiring efficiency through a transition to Monster Government Solutions, which occurred in March 2015. This transition has led to increased efficiency in HR offices, more positive experiences for hiring managers, and a streamlined application process for applicants. The transition to Monster has also enhanced BSEE's systems, allowing for the collection and analysis of data on delays in the hiring process. The Bureau has also hired a workforce analyst to focus on succession and workforce planning activities, and to edit position descriptions for clarity.

Youth Initiatives

By September 30, 2017, the Department of Interior will provide 100,000 work and training opportunities over four fiscal years (FY 2014 through FY 2017) for individuals age 15 to 35 to support Interior's mission. In FY 2014, Secretary of the Interior Sally Jewell formalized an ambitious initiative to inspire millions of young people to 'Play, Learn, Serve, and Work' outdoors. BSEE fully supports the Secretary's mission and asserts that it is critical that the Federal government work now to establish meaningful and deep connections between young people – from every background and every community – and America's great outdoors.

To meet this expectation, BSEE has taken a number of steps to implement the Department's youth initiative. The Bureau has identified leaders in each of BSEE's Regions to coordinate youth-based activities and programs. A core component of BSEE's youth engagement strategy is support of the development of Science, Technology, Engineering, and Math (STEM) programs at schools across the Nation. The goal of this effort is to connect youth with BSEE's mission and the skill sets that exist within the Bureau. In

BSEE often visits colleges and universities, actively recruiting for open positions such as petroleum and civil engineers. Many events target technical degree programs in disciplines such as engineering and geoscience.

particular, BSEE is seeking opportunities to help under-resourced areas develop these programs. BSEE's youth representatives are working to create partnerships with local schools and facilitating teacher training and curriculum design for science classes related to oil and gas incidents. These training initiatives are focused on encouraging children to explore future learning opportunities within the STEM disciplines. When possible, BSEE hosts and participates in youth engagement activities at events that are educational in nature, providing participants an opportunity to interact directly with BSEE personnel.

In FY 2015, BSEE participated in 35 college recruiting events and hosted numerous programs and events. For example, BSEE hosted petroleum engineering students and faculty from the Colorado School of Mines, met with high school STEM students and teachers at the Offshore Technology Conference, and held "Bring a Child to Work Day" for elementary school students. In FY 2016, BSEE plans to increase the number of youth program and events by 20 percent over FY 2015 levels. A number of BSEE staff worked during FY 2015 on the creation, planning, and logistics of the High School Offshore and Technology Stars Challenge, which was held early in FY 2016 (the outcome will be reported in the FY 2016 Annual Report). In addition, BSEE's Oil Spill Preparedness Division continued to develop its youth initiatives, such as hosting students from the Webb Institute and cadets from the USCG Academy.

Several internship programs have been implemented across the Bureau. These programs help students become familiar with the mission and functions of the BSEE offshore program and encourage them to consider career opportunities in the public sector. Through the DOI Pathways Program, BSEE has been able to employ interns, recent graduates, and Presidential Management Fellows. In FY 2015, 24 BSEE staff worked for the government through Federal internships while pursuing their degree. BSEE will continue to pursue recruiting opportunities nationwide and promote engineering internships with colleges and universities across the country. Through its outreach efforts, BSEE was able to help a number of engineering students become familiar with the mission and functions of BSEE's offshore program. BSEE has also used the Recent Graduates Program to provide developmental opportunities for potential employees who have recently completed their studies.

BSEE participating with industry and interagency partners during an Oil Spill Response Exercise.

The prevention of oil spills is a top priority for BSEE, but the Bureau also makes sure that response systems are in place in the event a spill does occur. As part of its oil spill preparedness efforts, BSEE conducts training, inspects operator plans, and constantly tests new approaches and technologies.

Contracted helicopters, such as the one shown here, are the primary mode of transportation for BSEE employees to and from OCS facilities. BSEE inspectors regularly fly to deepwater operations for both announced and unannounced inspections.

Some obsolete, nonproductive offshore oil and gas platforms can be converted into artificial reefs used to support marine habitat through the "Rigs-to-Reefs" program. BSEE cooperates with stakeholders, coastal states, and the offshore industry to benefit marine life on and around oil and natural gas platforms.

Looking Forward

Since BSEE's inception in 2011 there has been a modest decline in OCS fatalities, and certain other safety and environmental metrics have shown moderate improvement. Despite such trends, the OCS remains a challenging place with regard to worker safety and environmental protection. Also, deepwater operations are expected to grow in both number and complexity. This growth will increase the number of hours BSEE staff must work and the suite of technical capabilities they must possess in order to conduct oversight operations. Decommissioning of offshore facilities also represents a new challenge to the Bureau, and the process introduces a new set of safety and environmental risks to address. Although BSEE acknowledges that the industry is under stress due to the decline in oil prices, BSEE must also continue to be the Nation's advocate for the primacy of safety and environmental stewardship throughout the lifecycle of offshore operations. BSEE and industry must remain vigilant despite market conditions. The commitment to safety must not be diminished nor compromised when budgets decrease – for all parties it must remain the top priority. The Bureau is committed to working with industry to resolve systemic problems which affect all operators, and that could further exacerbate industry stress if left unattended. Although the commitment to safety is a matter of policy and law, it also makes good business sense.

Looking forward, the main focal areas for BSEE in FY 2016 and beyond are described in the following paragraphs.

Strengthen, Update, and Modernize Offshore Energy Regulations

The Bureau is working to reseach, draft, finalize, or develop implementation plans for high priority rules, focusing on well control, the Arctic, production safety systems, oil spill response plans and decommissioning costs. Strengthened regulations, updated to reflect the current Outer Continental Shelf (OCS) environment, support BSEE's efforts to meet its mission requirements.

Well Control Rule

The Well Control Rule addresses key recommendations made after the *Deepwater Horizon* tragedy, closes gaps in existing requirements, and updates BSEE regulations to reflect industry best practices. This rule addresses the range of systems and equipment related to well control operations, such as the recent focus on bolt failures. The measures are designed to improve equipment reliability, building upon enhanced industry standards for blowout preventers and blowout prevention technologies. The rule also includes reforms in well design, well control, casing, cementing, real-time well monitoring, and subsea containment.

Arctic Drilling Rule

In 2015, BSEE and the Bureau of Ocean Energy Management (BOEM) released proposed regulations to ensure that future exploratory drilling activities on the U.S. Arctic OCS are done safely and responsibly, subject to strong and proven operational standards. BSEE will continue to prioritize these efforts in FY 2016.

Oil Spill Response Plans

In 2015, BSEE completed development of a more accurate, comprehensive measure and methodology for assessing the capability of mechanical recovery equipment systems that would be used in responding to an oil spill from an offshore facility. Similar work is also being done for both dispersants and in situ burn response strategies. The new approaches, ones that follow on post-*Deepwater Horizon* recommendations on response planning standards, will be used by BSEE in assessing how effectively operators have planned for responding to worst case discharge scenarios contained in their oil spill response plans.

Oil and Gas Production Safety Systems Rule

This rule addresses recent technological advances involving production safety systems, subsurface safety devices, safety device testing, and life cycle analysis. Production systems play a critical role in protecting personnel and the environment. This rule will help to reduce the number of production incidents resulting in oil spills, injuries, and fatalities.

Decommissioning Costs Reporting Rule

In December 2015, BSEE announced that offshore oil and gas lessees and owners of operating rights are required to submit summaries of their actual expenditures for the decommissioning of wells, platforms and other facilities on the OCS. This information will help BSEE to better estimate future decommissioning costs related to OCS leases, rights-of-way, and rights of use and easement. In addition to finalizing the rule's implementation plan, BSEE is drafting a rule amendment to include pipeline cost data and will continue coordination on decommissioning topics with BOEM.

Enhance Key Program Areas

BSEE is moving forward in enhancing key program areas including Investigations, Environmental Compliance, and Enforcement. Policies and procedures to guide the work of these programs will be finalized in 2016. Examples of ongoing priority projects in these areas include the following:

Reportable Incident Notification and Investigation

The Bureau will conduct a pilot phase of its approach to assigning tiers to reported incidents based on incident severity. Following the pilot phase, BSEE will revise and finalize the tiered approach based on pilot phase results.

Environmental Risk Assessment

BSEE is collaborating internally and externally, with Argonne National Laboratories and BOEM, to identify compliance activities for identified environmental risks on the OCS. This project will benchmark environmental risks and review Bureau activities against these benchmarks. The environmental risk assessment will create a broader understanding of the potential risks from industry and the myriad BSEE activities that play a role in mitigating those risks.

Civil Penalty Referral and Assessment Roadmap Pilot

BSEE will test a draft civil penalty referral and assessment roadmap during a nine-month pilot in FY 2016. The Bureau will collect feedback and finalize the roadmap based on employee feedback and pilot phase observations. A finalized civil penalty referral and assessment roadmap will promote increased efficiency by streamlining the current civil penalty referral and assessment process.

Risk-Based Inspections

In the first quarter of 2016, BSEE piloted a new risk-based approach to offshore inspections that will allow BSEE to focus its finite inspection resources in the areas of operations likely to pose the greatest risk to safety and the environment. The pilot program employs a risk analysis methodology for selecting production facilities for more in-depth inspection with a view towards enhancing prevention and awareness.

Automated Permitting

BSEE will continue the transformation to automated permitting tools to increase efficiency and reduce processing time.

In 2016, BSEE will continue its oversight of offshore energy activities, but will also strive to build a robust culture of safety, with a strong focus on risk reduction. We are committed to keep our pledge that every decision and every action is taken with workers and the environment in mind. The Bureau will continue to work with industry to better understand their safety processes so that BSEE, as the Nation's regulator of that industry, can further mitigate and reduce risk and protect both workers and the environment.

Bolster Environmental Stewardship

BSEE is committed to environmental stewardship as a cross-Bureau mission that supports, and is supported by, the safety mission. Part of this effort is the development of the Director-led Environmental Stewardship Collaboration Group. This group is instrumental in helping Bureau experts identify environmental risks to the OCS and propose mitigation strategies. BSEE's environmental stewardship role includes accountability for environmental responsibilities through key activities such as: inspections, permitting, investigations, enforcement, spill preparedness, prevention strategies, and response research. This Group will develop a report containing specific recommendations and actions and that includes the views of interagency advisory members.

Strengthen Data Stewardship

BSEE's Data Stewardship Program and Data Stewardship Council work to modernize data systems, standardize definitions, and increase accessibility of Bureau data. The Data Stewardship Program facilitates informed decision making across the organization and was created to modernize data systems and increase public access to valuable government information. The Data Stewardship Program continues to manage data as an asset to support the Bureau in promoting OCS safety and mitigate risk to the environment through regulatory oversight and enforcement.

Continue Engagement with Federal and International Partners and Stakeholders

BSEE works closely with its Federal partners to ensure we approach regulations in an efficient and consistent manner. The Bureau also leverages resources through agreements with Federal partners and other agencies by employing memoranda of understanding or agreement (MOU/MOA) and interagency agreements. Examples of recent interagency collaboration include the following:

- MOA between BSEE and the U.S. Coast Guard on Floating OCS Facilities
- Interagency Agreement with the U.S. Department of Transportation regarding the Development and Operation of a Confidential Near Miss Reporting System
- Five-year agreement with the National Aeronautics and Space Administration (NASA) to capitalize on the best risk management approaches from the aeronautics industry to inform stakeholders and further strengthen safety protections on the OCS.

Through various multilateral and bilateral relationships, BSEE is also helping to set the standard for safety and environmental protection across a global industry. Bureau experts are routinely sought after 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. We will be working with industry to enhance our voluntary near-miss reporting system, SafeOCS.

BSEE is committed to continuing and strengthening engagement with its global partners, including regulatory counterparts in Mexico, through participation in international agreements, research, and strong participation in several international forums. These forums include the International Regulators Forum (IRF), International Offshore Petroleum Environmental Regulators Forum, International Oil Spill Conference, and the Arctic Offshore Regulators Forum. BSEE hosted the 2015 IRF Offshore Safety Conference and will continue support as chair of the Forum through 2018.

In Closing

In 2016 and beyond, BSEE will continue to build a robust culture of safety, with a strong focus on risk reduction. Every decision and every action will be taken with the workers and the environment in mind. Risks to both will be appropriately considered and mitigated. The Bureau will bolster its capacity for analyzing data gained through incident reporting requirements, near-miss reporting, and real-time monitoring. The Bureau will also continue to work with industry to better understand their safety processes, so that BSEE can further mitigate and reduce risk. Through these initiatives and many others, the Bureau will continue to ensure that offshore development occurs in a safe and environmentally responsible manner.

Protection of the environment is an objective that cuts across all BSEE functions and goes hand-in-hand with our safety mission. Every responsibility we undertake serves an environmental purpose - from permitting to inspections to decommissioning oversight. The Bureau actively monitors, verifies, improves, and enforces industry's compliance with environmental standards during OCS operations, on our own behalf and on behalf of other Federal agencies. These standards include, but are not limited to, environmental laws, regulations, and the environmental provisions, stipulations, and conditions of OCS leases, plans, and permits. The standards and stipulations that BSEE enforces cover topics ranging from air and water quality, marine ecology, species protection, and marine trash and debris. Our efforts in the areas of resource conservation, oil spill preparedness and prevention, and oil spill response research are also critical components of our role as stewards of the American coastal and marine environment. BSEE established the Environmental Stewardship Collaboration Group to address environmental issues and to promote collaboration on environmental issues with BOEM and other entities. BSEE also fulfills its obligation to our Nation's youth, and will be participating in STEM education initiatives in FY 2016 and beyond in order to help build the OCS workforce of the future. In summary, BSEE promotes environmental stewardship through a broad suite of integrated prevention, compliance, research, educational, and preparedness activities.

Glossary of Acronyms

AORF	Arctic Offshore Regulators Forum
API	American Petroleum Institute
ASEA	National Agency for Industrial Safety and Environmental Protection in the Hydrocarbons Sector (Mexico)
ASME	American Society of Mechanical Engineers
BAST	Best Available and Safest Technology, a BSEE program that assesses the performance of current equipment and advocates state-of-the-art technology for critical operations
BIWF	Block Island Wind Farm
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
BTS	U.S. Bureau of Transportation Statistics
CNH	National Hydrocarbons Commission (Mexico)
DOE	Department of Energy
DOI	U.S. Department of Interior
DOT	U.S. Department of Transportation
EPPR	The Arctic Council's Emergency Preparedness, Prevention and Response (EPPR) Working Group
ETAC	Engineering Technology Assessment Center, a BSEE center that assesses novel and emerging offshore technologies that will reduce risks on the OCS
GIUE	Government Initiated Unannounced Exercise
GOM	Gulf of Mexico
GOMR	BSEE's Gulf of Mexico Region
H_2S	Hydrogen Sulfide, a federally regulated gas that is highly flammable and explosive (exposure to this gas can cause effects that range from minor irritation to, in extreme cases, fatality)
HRO	High Reliability Organization, a term for an entity that must be hypervigilant to avoid accidents because the potential results are catastrophic
ICCOPR	Interagency Coordinating Committee on Oil Pollution Research, a congressionally-mandated forum for research collaboration on oil spill prevention, preparedness, and response activities
INC	Incident of Noncompliance
IOGP	International Association of Oil and Gas Producers
IOPER	International Offshore Petroleum Environmental Regulators
IRF	International Regulator's Forum
IWG	Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska
OCIA	Office of Congressional and International Affairs, a BSEE department that coordinates with Congress and international entities
OCS	Outer Continental Shelf, all submerged lands owned by the U.S., but excluding nearshore submerged lands that fall under the jurisdiction of adjacent states
OEM	Original Equipment Manufacturers
OESI	Ocean Energy Safety Institute, a neutral, independent forum for dialogue, shared learning, and cooperative research among academia, government, industry, and other stakeholders
OPM	U.S. Office of Personnel Management
OSRP	Oil Spill Response Plan
NACE	National Association of Corrosion Engineers
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NOTP	BSEE's National Offshore Training Program
NRC	U.S. Nuclear Regulatory Commission
NTL	Notice to Lessees and Operators
PHMSA	Pipeline and Hazardous Materials Safety Administration
SafeOCS	A voluntary and confidential BSEE initiative that collects and analyzes near-miss data
SEMS	Safety and Environmental Management System. This BSEE program is employs a hybrid regulatory approach that combines prescriptive and performance-based rules
SMS	Safety Management System
STEM	Science, Technology, Engineering, and Math, often used in the "STEM education" context
USCG	U.S. Coast Guard


BSEE
BSEE

BSEE in Brief

A Quick Summary of Select Activities from Fiscal Year 2015

For BSEE, 2015 was an active year. The Bureau marked its fourth anniversary and several key aspects of operations showed substantial signs of maturity. BSEE completed the last steps of its reorganization, which clarified the national program/field implementation model. What follows here is a brief list of BSSE's activities for the fiscal year that ended September 30, 2015. The full report contains further details on many of the items detailed here, but a few items in the list are intended to supplement the information contained in the report.

- Clarified our organizational structure, implementing a model that sets policy and procedures at the national level while promoting implementation at the tactical, field level.
- Further advanced promotion of a "safety culture" through enforcement of BSEE's Safety and Environmental Management (SEMS) program.
- Launched BSEE's SafeOCS program, which collects and analyzes near-miss data.
- Issued three Safety Alerts: one regarding dynamic position system failures, one concerning an aviation near miss, and one related to a gas lift mezzanine deck installation that almost resulted in a catastrophic incident.
- Performed over 20,000 inspections.
- Issued over 2,400 Incidents of Noncompliance (INC).
- Levied $6.4 million in civil penalties to promote compliance with Federal safety and environmental regulations.
- Worked closely with U.S. Attorney's office on the successful conviction of an individual who made false statements to BSEE inspectors.
- Assisted with prosecutions related to the *Deepwater Horizon* tragedy.
- Released Talos Energy Panel Investigation Report with findings and recommendations related to the loss of well control and fire that resulted in a tragic death.
- Attended meetings to enhance ability to prepare for potential maritime cyber-attacks.
- Approved the Center for Offshore Safety as the first SEMS Audit Service Provider.
- Maintained 24/7 oversight of Arctic exploration activities and approval of Arctic waters permit that contained rigorous safety requirements.
- Acted as observers during Shell's testing of a new containment dome system.
- Conducted scaled-up tests of oil dispersants.
- Reviewed 238 Oil Spill Response Plans.
- Completed 170 oil spill preparedness inspections, audits, verifications, or exercises.
- Held oil spill preparedness procedures workshop for Gulf of Mexico operators.
- Invested $6 million in new funds for oil spill research projects.

- Collected and analyzed fatality, injury, fire & explosion, lifting incident, and other critical safety data.
- Initiated 71 investigations that spanned various categories of regulatory oversight.
- Deployed experts to assist with safety and environmental oversight of offshore windfarms.
- Co-chaired the successful launch of the FY 2015-2021 Oil Pollution Research & Technology Plan.
- Helped establish, as a charter member, the Arctic Offshore Regulators Forum.
- Collaborated with Mexico, Canada, Tribal nations, Caribbean nations, various state governments, other Federal agencies, and many others.
- Worked with two of Mexico's lead energy agencies related to energy issues – Agency for Safety, Energy and Environment (ASEA) and the National Hydrocarbons Commission (CNH) – to advance terms of the US-Mexico Transboundary Hydrocarbons Agreement.
- Signed a letter of intent with Mexico's ASEA to work closely on many transboundary issues.
- Participated in dozens of conferences and meetings related to safety and environmental stewardship.
- Established new youth initiatives and enhanced preexisting youth programs.
- Participated in STEM4US! event to promote and train a diverse STEM workforce.
- Increased collaboration with U.S. Coast Guard including the establishment of joint inspection plans and Arctic preparedness planning.

The safety of offshore workers, protection of the environment, and conservation of natural resources triangulate the mission of the Bureau of Safety and Environmental Enforcement (BSEE). We are a regulatory agency that is passionate about fairly, yet vigorously, carrying out our responsibilities. This Annual Report, for Fiscal Year 2015, will 1) provide you with an overview of our Bureau, 2) detail our regulatory approach and activities, 3) deliver critical data and analysis concerning Outer Continental Shelf (OCS) safety performance, and 4) catalog the environmental incidents that took place under our jurisdiction.

Here you will find a document that allows you to pause and reflect on what went wrong and what went well during a year that saw the U.S. OCS produce more than 550 million barrels of oil and over 1,300,000,000 Mcf of natural gas. We explain why safety trends suggest that, in many areas, more work needs to be done. BSEE's commitment to safe and responsible development of the natural resources of the OCS is evident in this report. From October 1, 2014 through September 30, 2015 we conducted more than 20,000 inspections and reviewed 238 Oil Spill Response Plans. We also became more involved in the burgeoning offshore wind energy sector, assuming certain oversight duties, for example, related to the Block Island Wind Farm.

We close the report with a look forward, describing the ways we will be helping assure ever safer and more environmentally responsible development of the Nation's OCS natural resources.

Included in this report:

- An overview of BSEE and our mission;
- A clear outline of the responsibilities of BSEE's various components;
- A description of the ways BSEE regulates to ensure safety and environmental compliance;
- Overviews of BSEE's public outreach activities;
- Numerous OCS oil and gas industry safety results;
- Summarized statistics on oil spills and gas releases; and
- BSEE's new initiatives and plans for the future.

BSEE
Bureau of Safety and Environmental Enforcement

Bureau of Safety & Environmental Enforcement

FY 2016 - FY 2019 Strategic Plan

Mission

To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.

Vision

Fostering an agile, trusted, and collaborative organization dedicated to reducing risk offshore.

Principles

Clarity, consistency, predictability, accountability.

Background

BSEE's FY 2016-2019 Strategic Plan is focused on achieving operational and organizational excellence. In order to implement the plan, BSEE has developed three operational and three organizational excellence goals. The operational **goals** cut across the bureau's core functions of permitting, inspections, investigations, enforcement, and preparedness. The organizational goals are designed to help BSEE execute its operational goals. To support implementation of the operational and organizational goals, BSEE has created **strategies** that are critical to the implementation of each goal. For each of the 10 strategies, specific **initiatives** were established so that the strategies can be implemented and the goals achieved. Ultimately, BSEE's Strategic Plan will allow it to fulfill its mission and support the Department of the Interior's 2014-2018 Strategic Plan goals to "Secure America's Energy Resources" and "Build a 21st Century Workforce."

Operational Excellence

Goals	Strategies	Initiatives
Safety: We reduce risk to those working offshore by advancing a culture of safety that encourages industry to go beyond baseline regulatory compliance. **Environment:** We promote environmental stewardship through integrated prevention, compliance, and preparedness activities. **Conservation:** We actively identify and pursue opportunities to improve oil and gas recovery and ensure accurate production measurement.	Ensure a consistent, national approach to detection of noncompliance and incident investigation.	• Use a dynamic tiered approach to investigations to increase BSEE's capacity to identify and reduce unsafe conditions offshore. • Develop and follow procedures to apply enforcement actions consistently to specific violations. • Maintain active dialogues with operators and contractors pertaining to offshore performance via Annual Performance Reviews, Operations Review Meetings, and other meetings as necessary.
	Examine the full life cycle of offshore operations and adapt to changing conditions.	• Improve decommissioning cost estimation methodologies. • Evaluate options to revise BSEE's approach to measurement inspections. • Assess ways to improve ultimate resource recovery. • Expand our renewable energy program to address the safety and environmental implications of this emerging offshore industry. • Employ various methods to evaluate an operator's ability to perform operations on the OCS (Outer Continental Shelf) in a safe and environmentally sound manner.
	Further incorporate risk-based decision making into our core safety functions.	• Supplement mandated inspections with additional risk-based inspections. • Improve the quality and increase the application of SEMS (Safety and Environmental Management System) audits, and integrate them into existing oversight mechanisms • Continue to incorporate appropriate standards, including Best Available and Safest Technology (BAST), and science-based decisions into BSEE's regulations.
	Rigorously enforce all environmental protection and oil spill preparedness requirements.	• Meet all National Environmental Policy Act (NEPA) coordination, environmental consultation, and regulatory coordination needs for BSEE permitting programs. • Verify that operators comply with environmental requirements through inspections, activity monitoring, and review of reports on completed activities. • Apply preparedness verification program policies and procedures involving spill plan reviews, equipment verifications, unannounced exercises, and enforcement actions uniformly across all regulated federal and state offshore facilities.

Organizational Excellence

Goals	Strategies	Initiatives
People: We are an employer of choice: we value, engage, and support our people so they can excel. **Information:** We consistently collect, analyze, and use quality information to drive decision making. **Transparency:** We promote transparency through processes that ensure consistency, efficiency, accountability, and collaboration.	Collaboratively generate nationwide policies, procedures, Notice to Lessees (NTLs), and regulations among headquarters and the regions.	• Implement the national program manager model by focusing on priorities identified in the 2015 national program realignment and using lessons learned to establish new national program priorities. • Prioritize rulemaking through a transparent process that encourages and requires collaboration across the bureau. • Transition to a permanent and consistent development and implementation process for nationwide policies, procedures, NTLs, and regulations. • Use and share research results to inform bureau policies, guidance, and practices, in coordination with our regulatory partners.
	Improve engagement with employees to foster a culture of collaboration within BSEE.	• Further define and communicate roles and responsibilities of all BSEE offices. • Foster intra-bureau interaction and team building through details among headquarters, regional, and district offices to enhance collaboration and trust and minimize barriers to productivity. • Implement an internal communications approach that encourages dialogue and sets expectations for sharing accurate and timely information.
	Develop and sustain a well-trained, high-performing and diverse workforce.	• Continuously assess critical training needs and ensure appropriate technical and leadership training is provided. • Utilize recruitment and retention incentives, and alternative appointment authorities to obtain a highly skilled workforce. • Ensure that processes are in place to recruit, motivate, train, and reward the BSEE workforce in accordance with merit system principles and federal regulations. • Develop and implement diversity and work-place environment programs that promote a diverse and inclusive workplace.
	Maintain productive relationships with the Department, key departmental Bureaus and offices, other government agencies, Congress, our international partners, tribes, and non-governmental stakeholders.	• Periodically review efficacy and implementation of current Memoranda of Understanding/Agreement (MOUs/MOAs) and interdependency documents. • Collaborate and coordinate with BOEM (Bureau of Ocean Energy Management) on all areas of shared responsibility. • Deploy BSEE's full range of communication tools and technology including publications, social media, exhibits and the public website.
	Enhance BSEE's decision making through the collection, management, and analysis of high quality information.	• Implement a data stewardship program to establish comprehensive data management, quality, and release practices. • Conduct and sponsor leading-edge research to address identified knowledge gaps. • Promote and enhance testing, research, and training capabilities of existing BSEE institutions , including the Ohmsett National Oil Spill Response Research and Renewable Energy Test Facility and the Engineering Technology Assessment Center. • Integrate Enterprise Risk Management and the Business Intelligence tool into bureau-wide decision making.
	Deliver high-quality administrative services and products to internal and external customers.	• Drive the continued modernization of IT and information management processes and infrastructure to effectively support our customers' missions. • Maintain strong management control practices that support an effective financial management environment. • Build strategic relationships with customers to ensure we understand their business needs. • Develop and maintain effective reporting practices that provide transparency into administrative operations.