OFFICE OF
INSPECTOR GENERAL
U.S. DEPARTMENT OF THE INTERIOR

A New Horizon

Looking to the Future of the Bureau of Ocean Energy Management, Regulation and Enforcement

Report No.: CR-EV-MMS-0015-2010 December 2010

OFFICE OF
INSPECTOR GENERAL
U.S.DEPARTMENT OF THE INTERIOR

DEC 07 2010

Memorandum

To: Secretary Salazar

From: Mary L. Kendall
Acting Inspector General

Subject: Evaluation – Outer Continental Shelf (OCS) Oil and Gas Operations
Report No. CR-EV-MMS-0015-2010

On May 14, 2010, you requested that the Office of Inspector General (OIG) open an investigation into then-Minerals Management Service's (now Bureau of Ocean Energy Management, Regulation and Enforcement or BOEMRE) performance of its regulatory function, addressing whether specific deficiencies in MMS policies or practices exist that need to be addressed to ensure that operations on the Outer Continental Shelf are conducted in a safe manner protective of human life, health, and the environment.

Similarly, you requested that the OCS Safety Oversight Board (Board) make recommendations to improve and strengthen the Department's overall management, regulation, and oversight of OCS operations.

Since these requests were so similar in nature, the OIG agreed to lead a joint team of OIG and Energy Reform Team members in collecting and analyzing information. The joint team's fieldwork included interviews of more than 140 BOEMRE employees; 2 online surveys sent to nearly 400 BOEMRE employees; a review of over 2,000 documents, including statutes, regulations, policies, procedures, and guidance; and a detailed analysis and synthesis of the information developed from this work.

The joint team also drafted issue papers with proposed recommendations to advance the most pressing and pertinent issues that it developed in the course of 9 weeks, ending July 30, 2010. The joint team advanced its draft issue papers to the Board in early August 2010. The Board issued its report on September 1, 2010.

This report contains the OIG's independent view and analysis of many of the same issues advanced by the Board. It is drafted in the more traditional OIG style, in narrative form, containing some additional explanatory information than was included in the Board's report. The OIG worked very closely with the Board in the development of their report. We have made an effort to follow the general order of the Board's report, and to avoid any significant deviations in the language of the recommendations contained in the two reports. This report does, however, contain nine recommendations that were not included in the Board's report based on additional

OIG work. It also eliminates four of the recommendations included in the Board report that were either covered in other recommendations or not the result of our own work.

This report also includes the results of the surveys we issued to BOEMRE employees. We provide the full, unedited survey charts in the final chapter of the report for readers to draw their own conclusions. We have characterized some of these survey results in various sections of the report. In our analysis of the survey results, we took the position that employees who answered "Neutral" could not take a definitive stance on an issue. When we have characterized survey results that reflect minority opinions, we do so with the support of additional information gained through interviews. While this might be critiqued as a "glass half full" approach, we thought it important to point out some of the lesser weaknesses in BOEMRE's programmatic operations in order to address and correct them.

Since this report issues some time after the Board report, we want to clarify several things:

1. This report does not raise new issues; rather, it expounds upon those issues identified in summary fashion in the Safety Oversight Board report.

2. The issues we raise are based on the information we were able to assemble in a very short period of time. Our findings are indicators of areas that may warrant further review, but they are fully supported by information we developed through interviews, surveys, and document requests.

3. The findings contained in this report are accurate as of the time we completed field work. We would expect to have different findings were we to review the same issue areas today.

4. We recognize that many of the recommendations contained in this report are already being addressed by BOEMRE. We commend BOEMRE for the seriousness with which it took the recommendations and the dispatch with which it is acting upon them.

While we focused on areas in which deficiencies exist, our report is focused on change and improvement for more accountability, efficiency, and effectiveness in a Bureau fraught with challenges, but charged with significant responsibilities.

In the end, we must reiterate the observation contained in the Board report: Overall, the joint team found the BOEMRE employees it interviewed to be a dedicated, enthusiastic cadre of professionals who want nothing more than to do their jobs effectively and efficiently and to see their Bureau reorganize into a robust, high-performing, and respected organization. In that vein, however, these same employees provided us with ample information about the weaknesses of the program and operations, as well as suggestions about how they might best be addressed.

We respectfully request that you provide a written response to this report within 90 days. Your response should provide information on actions taken or planned to address the

recommendations detailed in this report, target dates, and titles of the officials responsible for implementation. Please address your response to:

Ms. Kimberly Elmore
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Table of Contents

Executive Summary

The tragic loss of life and the economic and environmental damages caused by the *Deepwater Horizon* drilling rig disaster and subsequent oil spill turned a national spotlight on Federal oversight of offshore oil and gas operations. This event became a catalyst for change, focusing the actions of the Department of the Interior (Department) on improving safety and oversight of the oil and gas industry to prevent future accidents.

In May 2010, the Secretary of the Interior (Secretary) requested that the Office of Inspector General (OIG) open an investigation to determine, among other things, whether specific deficiencies exist in Minerals Management Service (MMS) performance of its regulatory function, policies, or practices that need to be addressed to ensure that operations on the Outer Continental Shelf (OCS) are conducted in a safe manner protective of human life, health, and the environment. (MMS has become the Bureau of Ocean Energy Management, Regulation and Enforcement, or BOEMRE.)

The Secretary also charged the OCS Safety Oversight Board (Board) to make recommendations to improve and strengthen the Department's overall management, regulation, and oversight of OCS operations.

The OIG volunteered to lead a joint effort in collecting and analyzing information focused on the safety and oversight functions of BOEMRE. Ultimately, 64 OIG and Departmental Energy Reform Team (ERT) personnel (Joint Team) were involved in this effort. The OIG advanced its initial findings and recommendations to the Board in early August 2010. The Board issued its report on September 1.

The OIG continued its analysis of the information collected during this effort. This report contains the OIG's independent view and analysis of, essentially, the same issues advanced by the Board. It is drafted in the more traditional OIG style, in narrative form, and contains more explanatory information than was included in the Board report. As the OIG worked very closely with the Board in the development of its report, we have made an effort to follow the general order of the Board report and to avoid any significant deviations in the language of the recommendations contained in the two reports. This report does, however, contain nine recommendations that were not included in the Board report based on additional OIG work; it eliminates four of the recommendations included in the Board report that were either covered in other recommendations or not the result of our own work.

Using two online surveys sent to nearly 400 BOEMRE employees, interviews of more than 140 BOEMRE personnel, review of more than 2,000 documents, and a detailed data analysis, the OIG addressed issues pertinent to OCS operations management, regulation, and oversight. We certainly uncovered problems in

BOEMRE policies and practices, and survey results illustrate regulatory, organizational, and managerial weaknesses, in addition to pressures applied by industry. We found that, although the span of Federal control extends to industry chiefly through regulations, permitting, and inspections, BOEMRE could benefit from internal analysis of the appropriate role of industry in its operations. The development of rules of engagement that govern all agency relationships with industry would help establish more balance for ensuring operational, safety, and environmental compliance.

While we concentrated on areas in which deficiencies exist, as requested by the Secretary, our report focuses on change and improvement for more accountability, efficiency, and effectiveness in a Bureau fraught with challenges — but charged with important responsibilities.

In the end, we reiterate the observation contained in the Board report: Overall, the Joint Team found the BOEMRE employees it interviewed to be a dedicated, enthusiastic cadre of professionals who want nothing more than to do their jobs effectively and efficiently and to see their Bureau reorganize into a robust, high-performing, and respected organization. These same employees, however, provided us with ample information about the weaknesses of program operations, as well as with suggestions about how such weaknesses might best be addressed.

Finally, we recognize that BOEMRE has been aware of most of the findings and recommendations contained in this report for some time. As a result, BOEMRE has already developed a corrective action plan to address the findings and is in the process of implementing recommendations. It has made many reforms and additional improvements are underway. We issue this report not to prolong the critique but to provide additional, OIG-developed information to assist BOEMRE in making the most informed decisions possible as it goes forward.

Chapter 1: Permitting

Overview

The OIG conducted site visits of the Gulf of Mexico Regional Office and of two of its district offices, as well as the Pacific Regional Office and its district office. We interviewed 26 BOEMRE employees who were directly involved with the permit approval process and found BOEMRE to have been affected by staffing shortages. These shortages made it difficult for the Bureau to respond to an increase in Applications for Permit to Modify (APMs), one of the applications that is part of the permitting process. Further, an absence of BOEMRE policies and procedures standardization has made consistent actions nearly impossible.

The Gulf of Mexico district offices face two difficult challenges: (1) the volume and complexity of APMs, as well as departures, which are approvals granted by appropriate Bureau representatives for operating requirements outside those specified in regulations and (2) the absence of a standardized review process. BOEMRE engineers work after hours on a regular, rotational basis to respond to calls from operators who work on shifts scheduled around-the-clock. These engineers lack access to computer systems that rapidly display the history of a particular operator's activities on the facility, as well as any newly issued APM for which the operator is requesting approval. This undermines the ability of the engineer who is working after hours to make decisions based on up-to-date information. Current staffing levels also are insufficient, requiring mandatory overtime and increasing the risk of mistakes in the review of APMs.

Slightly different concerns affect the Pacific Region, which has an immediate need to address succession issues. In this Region, 80 percent of the permit approval workforce is eligible for retirement within the next 3 years. In fact, one employee has been eligible since 1997, and two have been eligible since 2009. If these and other individuals choose to retire, they will leave the Pacific Region without adequate back-up to conduct required activities skillfully and effectively.

Our interviews also suggest that engineers might be approving departures without proper justification. Of particular concern are departures for deepwater activity.

Introduction

Oil production activity in the Gulf of Mexico has increased significantly during the past several years. At the same time, the workforce associated with approving the day-to-day activities of the oil and gas industry has remained relatively constant.

Drilling and production permit approval operations are governed by two general categories of applications, Application for Permit to Drill (APD) and APM. Together, these encompass nearly all of the well activities on the OCS. APDs cover initial drilling activities, both of exploratory wells and wells intended for

production. APMs apply to production and work-over operations — any modifications to wells or well equipment after the wells have entered production. A work-over APM can encompass drilling, maintenance, or replacement. Engineers at the district level review and approve both permit types.

A primary difference between APDs and APMs is that APDs are reviewed and approved before drilling operations begin, while APMs can be submitted throughout the lifecycles of wells. The around-the-clock, shift-based production operations of the oil and gas industry create situations in which APMs are regularly submitted to BOEMRE staff for approval after regular working hours. Industry's continuous operations schedule has led BOEMRE to make one approving engineer available at all times.

District offices in the Gulf of Mexico Region maintain after-hours coverage by requiring engineers to be on call on a rotational basis. The New Orleans District Office, for example, handles approximately 15 to 20 after-hours calls per week. Each district office handles such calls by rotating on-call responsibility among the various senior engineers (GS-13s). These engineers have been issued cell phones for after-hours or weekend use to respond to operators who are required to notify the office of any proposed revision to an approved operation.

The Pacific Region's procedure for after-hours calls involves a 24-hour answering service that connects operators with an approving engineer. The Region receives an average of three to four after-hours calls a week.

APDs also may include departures, which are additional requests to allow activities that may deviate from regulatory requirements or procedures. During our review of the permit approval process, we considered the use of departures in APDs. Of the 3,370 APDs approved by the Gulf of Mexico Region since 2005, 675 (20 percent) had at least one approved departure. Overall, the Region approved 2,414 departures.

Findings and Recommendations

Gulf of Mexico Region Staffing Needs

Increased industry activity and a lack of effective workforce planning have left many areas in the Bureau vulnerable to staffing issues that may contribute to increased safety risks. Specifically, industry pressure for more rapid permit approval has created an environment in which mistakes may be more likely because overworked engineers are trying to keep pace with increased APM demand.

In particular, our review of the permit approval process revealed staffing shortfalls in the Gulf of Mexico New Orleans District. Here, the submission of APMs outpaces the District's ability to process them.

This situation began with Hurricane Ivan in 2004 and was compounded by Hurricanes Katrina and Rita in 2005. Hurricane damage to wells required operators to repair and, in some cases, permanently abandon wells. Each well activity requires an APM. In the New Orleans District, APMs increased by 71 percent from 1,246 in 2005 to 2,136 in 2009. A BOEMRE employee said this increase is likely the result of the substantial difference in cost associated with plugging and abandoning an intact well ($100,000) compared to repairing and plugging a damaged well ($10 to $15 million dollars). This may have prompted industry to take preemptive measures by temporarily or permanently plugging and abandoning wells considered at risk for being damaged by future hurricanes. The employee also noted the current workload most likely would continue at this or a higher level for the foreseeable future.

Currently the New Orleans District receives 10 more APMs per week than it has the capacity to process. The District has a dedicated work-over engineer and a field engineer who review and approve work-over APMs. The work-over engineer estimates a current 2-month backlog of reviews, or 400 APMs. This backlog continues to grow. The current staff cannot keep up with the increased APM submissions. The engineer also noted that increased scrutiny of APMs after the *Deepwater Horizon* incident has exacerbated the backlog.

The short-term solution to the growing backlog has been to assign the work-over engineer an additional duty hour each day during the week, as well as weekend hours, in an attempt to catch up with the APM backlog. Because of this increased responsibility, the engineer is unable to attend training or take authorized leave. Although all engineers in the office cross-train, they each have too much work to fill the gap in any other way.

While we have not found any evidence that increased workload has led to improper application approval, the fatigue incurred by the high-intensity workload, as well as pressure from operators for shorter review times, creates conditions where mistakes could become more likely. Such continuing staffing shortages could lead to significant increases in processing times, employee burnout, and the possibility of less comprehensive reviews as current employees attempt to keep pace with demands.

Recommendation

1. Review permit staffing needs in the GOM district and regional offices to ensure that staffing levels and breadth of expertise are commensurate with increasing workloads.

Pacific Region Staffing Challenges

The Pacific Region faces a number of staffing challenges related to retirement-eligible employees, hiring shortages, and workload. For example, six Pacific Region engineering staff members who process drilling and work-over permits are eligible for retirement as of January 2011. Another two employees will be eligible as of 2014. These employees account for 80 percent of the permit approval staff. Should they choose to retire, the office would lose more than 200 years of combined experience and institutional knowledge.

Further, hiring new staff is a considerable challenge in the Pacific Region due to increased hiring by the oil and gas industry and a significant industry salary advantage over Federal service. These factors have enabled industry to attract highly qualified petroleum engineers, which has limited the number of qualified applicants available for Federal employment.

The Pacific Region is also the only region without a geographic information systems (GIS) specialist. The Region has asked both Headquarters and the Gulf of Mexico Region for assistance with GIS spatial data analysis, management, and mapping, but neither office has the capacity to assist because of its own staffing shortages. A geophysicist and a biologist, both eligible for retirement in the Pacific Region within the next 2 years, are currently performing GIS responsibilities as a collateral duty. In fact, the Pacific Region's workforce plan, dated July 24, 2008, identifies six critical positions that need to be filled.

When interviewed, Pacific Region employees voiced concern that BOEMRE Headquarters managers may be unaware of their heavy workload. In 2000 and 2001, the Pacific Region completed a detailed work-up of the geophysical interpretation of a field for the Gulf of Mexico Region. Employees believe that taking on additional work for another region may have prompted Headquarters to think that the Pacific Region's staff has a lighter workload than the Gulf Region's staff, when the Pacific Region accomplished this assignment at the expense of completing its own field studies.

As a result of these staffing challenges, the Pacific Region has not been able to fully evaluate the extent and location of its energy resources. Regional staff stated that they should complete more field studies but that they do not have the time or resources to do so. Due to the lack of field studies, regional staff must rely on operators' interpretations of the fields.

Recommendation

2. Develop a succession plan for BOEMRE staff in all regions.

Limitations on After-hours, On-call Duty Engineers

BOEMRE uses Citrix, an information technology service that enables employees to access the Bureau's eWells and Technical Information Management System (TIMS) databases from remote locations. Due to security concerns, Gulf of Mexico Region engineers assigned to after-hours, on-call duty have been advised not to access the eWells and TIMS databases while at off-site locations, although they are allowed to access their BOEMRE e-mail accounts. The restriction handicaps engineers because the eWells and TIMS databases provide application forms and background data that facilitate informed decision-making.

One engineer stated, "It would be a one-time approval. No follow-up because the operator would have submitted the request via eWells and the engineer could go into the system, look at the request real time, and approve or deny the approval immediately." Another engineer stated that the current process involves writing down descriptive information and making an educated guess without a technical drawing: "We do our best to make a reasonable judgment. This usually works well." One engineer said he accesses the eWells and TIMS databases when at the operator's site using the operator's computer and stated, "It does not make sense to be restricted when at home."

The lack of a standard practice to address operators who "shop around" for regulatory approval also limits on-call engineers. Gulf of Mexico Region on-call engineers stated that such operators contact district offices outside their appropriate jurisdictional area, calling various district engineers assigned to after-hours duty, to obtain approval for a departure or APM. In one case, an operator contacted a New Orleans District Office on-call engineer during the drilling moratorium for a drilling departure but was told to wait until further notice. The operator then contacted the Houma District Office and received approval. The operator was subsequently contacted by the New Orleans' on-call engineer, who again denied the request for departure. Even though his request had been denied, the operator continued with the procedure. BOEMRE shut in the subject facility the next day.

Recommendations

3. Develop a comprehensive and current handbook to compile and standardize policies and practices designed to assist permit reviewers in carrying out their responsibilities.

4. Review and revise the permit review protocols to ensure that: (a) permit requests from operators and district responses are documented promptly and properly; (b) BOEMRE engineers have appropriate access to permit databases after hours; and (c) procedures are established that prevent "engineer shopping" by operators.

5. Reexamine after-hours permit review services, the means by which any such services should be provided (e.g., on-call, permanent staff), and the feasibility of limiting its use by requiring operators to submit non-emergency requests and requests that could be reasonably anticipated during normal business hours.

Use of Departures in the Gulf of Mexico Region

We also reviewed the use of departures in the Gulf of Mexico Region. Here, we found that engineers approved departures without proper justification, including departures used in deepwater operations. We also found departures had been approved that circumvented safety requirements, such as delaying the testing of blind shear rams discussed below. We were unable to determine whether the alternative procedures provided levels of safety similar to the original requirements.

The Code of Federal Regulations (Code) defines departures in 30 C.F.R. 250.105 as "approvals granted by the appropriate MMS representative for operating requirements/procedures other than those specified in the regulations." The Code authorizes departures in situations necessary to: maintain well control; properly develop a lease; conserve natural resources; or protect life, property, or the marine, coastal, or human environment. In addition, 30 C.F.R. 250.414(h) requires operators to justify why they are requesting a departure from the regulations.

We reviewed several departures and found that operators were not including required justifications for requested departures. We concluded that some departures had been justifiably approved, based either on American Petroleum Institute (API) standards or the need to alleviate safety hazards. Conversely, some departures were not justified based on API standards. Without the required justification included in a departure's application, it is not possible to evaluate the appropriateness of an approval.

We found multiple departures approved to allow function testing of blind shear rams every 14 days, rather than every 7 days, as mandated by the regulations for all ram blowout preventers (30 CFR 250.449(h)). We found requests to delay this testing often due to the position of the drill string across the blind shear ram and the delay that is involved in moving the drill string to accomplish this test. We could not determine whether these requests were operationally necessary, or were made for operational expediency. BOEMRE supervisors expressed some concern about departures and have at least once called for engineers to "tighten up on all waivers or exceptions."

Recommendations

6. Develop procedures for reviewing departure requests that would standardize the process and ensure operators justify the requests based on concerns for well control; properly developing a lease; conserving natural resources; or protecting life, property, or the marine, coastal, or human environment. (Not included in Board report)

7. Reevaluate departures previously or routinely granted to ensure that they can be justified according to the criteria for departures. (Not included in Board report)

Chapter 2: Inspections

Overview

Inspectors are an important line of defense for ensuring safety and environmental protection in offshore oil and gas development. Our review revealed an inspection program that consists of many experienced, dedicated, and hardworking employees who conduct important work with very little formal training, resources, or, in some cases, management support. The Inspections Program lacks cohesiveness, however, which results in inconsistencies in inspection policies and practices throughout BOEMRE.

We discovered that the informal structure of the Inspections Program has led to poor internal communication and weak management support. In addition, we concluded that BOEMRE could improve the effectiveness of inspections. Poor workforce planning in the Gulf of Mexico Region has reduced the frequency and scope of inspections. Performing unannounced inspections, conducting inspections in two-person teams, witnessing high risk operations, and modernizing the inspections process could help improve the effectiveness of inspections.

Furthermore, we found that BOEMRE does not have a formal training and certification program for its inspectors. Finally, BOEMRE's policy and organizational structure leave little opportunity for inspectors to obtain higher education and career advancement.

Introduction

BOEMRE plays a critical role in ensuring that drilling and production facilities in Federal waters operate safely and effectively. The OIG assessed the effectiveness of the Inspections Program in its entirety by reviewing training requirements and professional development, the inspections statutory and regulatory requirements, the inspections strategy and processes, and the structure of the Inspections Program as a whole.

BOEMRE's inspection program workforce, a total of 61 inspectors, is located within three regional offices: Alaska, Pacific, and Gulf of Mexico. The Gulf of Mexico Region, where most oil and gas production takes place, currently employs 55 inspectors in five district offices. The Pacific Region employs five inspectors, and the Alaska Region employs one inspector.

The Outer Continental Shelf Lands Act of 1953 (OCSLA) requires BOEMRE to conduct scheduled onsite inspections of "all safety equipment designed to prevent or ameliorate blowouts, fires, spillages, or other major accidents" at least once a year at each OCS facility. Federal regulations (30 C.F.R. 250.130) state that inspections are also conducted to verify that operators are conducting operations in compliance with OCSLA, the regulations, the lease, rights-of-way, the

approved exploration plan or development and production plans, and other applicable laws and regulations. OCSLA also directs BOEMRE to conduct periodic, unannounced inspections.

In fiscal year (FY) 2009, approximately 3,100 production facilities and approximately 100 drilling rigs were operating in the Gulf of Mexico. These numbers compare to just fewer than 3,400 production facilities and about 200 drilling rigs a decade ago.

While a decrease in facilities might imply a reduction in inspections workload, increased development in deepwater drilling and production, as well as aging infrastructure, present different challenges to inspectors. The percentage of drilling rigs in deepwater (depths over 1,000 feet) versus shallow water has almost doubled from 19 percent in 2000 to 37 percent in 2009. Furthermore, the oldest operating production facility is 69 years old, while about half of all production facilities have been operating for at least 20 years. The Pacific Region has 23 facilities: 22 for production and one for processing. Alaska Region has one production facility.

The primary focus is on production and drilling inspections. In 2009, the Gulf of Mexico Region conducted 561 drilling inspections and about 3,300 production inspections. The Pacific Region conducted 17 drilling inspections and 187 production inspections. The Alaska Region conducted two production inspections. BOEMRE inspectors also conduct a plethora of other safety and environmental inspections, such as well work-over, well completion, pipeline, well abandonment, and production meter inspections.

The Oil Pollution Act of 1990 imposed overlapping duties on the U.S. Coast Guard and BOEMRE. A memorandum of understanding between these two agencies defines each agency's responsibility and provides for BOEMRE to conduct certain safety inspections on behalf of the U.S. Coast Guard. BOEMRE also conducts inspections on behalf of the Environmental Protection Agency and the U.S. Department of Transportation (DOT).

Findings and Recommendations

Inspections Program Structure

BOEMRE's Inspections Program is not standardized and is poorly defined within the Bureau. As a result, policies and enforcement mechanisms vary among the Gulf of Mexico districts and the regions. Currently, no formal process exists to promote standardization, consistency, and operational efficiency. This informal structure also contributes to a lack of transparency with regard to inspection policies and practices throughout BOEMRE.

Policies, Procedures, and Guidelines

BOEMRE does not have a formal, Bureau-wide compilation of rules, regulations, policies, or practices pertinent to inspections, nor does it have a comprehensive handbook that addresses inspectors' roles and responsibilities. For example, although the informally acknowledged policy in the Gulf of Mexico is to inspect drill rigs once a month, we could not locate such a policy.

Some district offices have developed their own checklists and procedures to supplement the absence of Bureau-wide policies and procedures. Some inspectors stated that they were not provided copies of the Code and do not receive notification when a new Notice to Lessee (NTL) is issued. Further, the Potential Incidents of Noncompliance (PINCs), the national compilation of inspection checklists, is outdated and insufficient because some of the individual items are not clearly written, have not kept up with advances in technology, and do not incorporate all regulations.

The Pacific Region has a more structured program than the Gulf of Mexico Region, with consolidated policies and practices for the inspectors. The Pacific Region's "Offshore Inspection Program Policies and Procedures Document," dated February 2010, provides the framework for the Region's inspection program.

Recommendation

8. Compile a comprehensive and current handbook of all policies and practices designed to assist inspectors in carrying out their responsibilities.

Internal Communication and Management Support

The absence of a well-defined program structure leaves inspectors with no effective outlet to elevate concerns or issues encountered in a district office to the regional offices or Headquarters for review and resolution. Inspectors have few established channels of communication to share professional and technical information and concerns, vet common issues and develop solutions, or make recommendations to management. During interviews, inspectors in some districts expressed the need for more regular local office meetings to discuss current work-related issues, such as new management directives and technical issues. In addition, a number of inspectors expressed the desire to work with other districts to see how they operate.

A consultant hired by the MMS in 2006 to review organizational effectiveness recommended that the Bureau establish an internal communication strategy to unify the organization, enhance employee morale, promote transparency and visibility, and reduce attrition. The report also stated that ineffective internal communication could lead to the spread of misinformation, erosion of employee

trust and confidence, conflicts between employees and management, and lack of a coherent and shared vision. Based on interviews and survey information, we found this recommendation still valid.

Many inspectors expressed the need for more effective leadership in daily operations and for greater management support when faced with pressure from industry. For example, 42 percent of inspectors surveyed believe that Headquarters management does not provide sufficient direction and support, 35 percent surveyed felt that regional management does not provide support, and 33 percent surveyed felt that district management does not provide support. Moreover, many inspectors across the regions expressed belief that all levels of management emphasize quantity versus quality when meeting established inspection goals.

Recommendations

9. Develop an inspection program with strong representation at all levels of the Bureau. The program should facilitate good intra-agency communication in order to promote consistency, effectiveness, and efficiency and should provide strong support to the front-line inspectors.

10. Evaluate the advantages of rotating inspectors among districts and regions.

Inspection Strategy Effectiveness

BOEMRE has revised its inspections strategy during the past few years to accomplish more with fewer resources. As a result, the Bureau has not inspected all facilities annually and has not tested all safety components during each inspection. While just over half of the inspectors who responded to our survey said that the inspection program was operating effectively, nearly half could not say that they believe this to be true. The following sections describe additional areas of the Inspection Program that are in need of improvement.

Disproportionate Resources

BOEMRE needs a robust, sufficiently staffed inspection program that possesses the tools necessary to conduct inspections effectively. The Pacific Region employs five inspectors to inspect 23 production facilities — a ratio of one inspector for every five facilities. The Gulf of Mexico Region employs 55 inspectors to inspect more than 3,000 production facilities — a ratio of one inspector for every 55 facilities. About 47 percent of survey respondents stated that BOEMRE does not have enough personnel to adequately manage the inspections and enforcement workload.

The inspector-to-facility ratio by district office is also disproportionate. In 2009, the ratio at one district office was one inspector to 53 facilities. Another had one inspector to 86 facilities. Furthermore, the amount of deepwater activity varied significantly by district office — in FY 2009, 55 percent of drilling rigs were in deepwater for one district office, while another had no deepwater drilling activity. This has led the individual district offices in the Gulf of Mexico Region to implement new strategies to use available resources more efficiently.

Inspectors also have collateral duties, such as conducting accident investigations, in addition to the various types of inspections they are required to perform. These inspectors, however, often lack the necessary experience, training, or time to fulfill these collateral duties in addition to their inspection responsibilities. Inspectors are also responsible for developing a case if inspection results require a civil penalty and for providing support for the civil penalty reviewing official.

BOEMRE reviews and updates position needs, but a recent strategic human capital management plan for the Gulf of Mexico Region showed that the focus of hiring has been on engineers and geosciences disciplines. Inspectors were not included on the workforce gap analysis performed for the Bureau-wide human capital plan. In the plan, inspectors were not identified as mission-critical, yet support-related positions, such as contracting specialists, human resources specialists, and information technology specialists, were considered mission-critical. We also identified concerns related to the aging inspector workforce. According to the human capital plan for the Gulf of Mexico, 40 percent of inspectors are eligible to retire in the next 5 years.

Recommendation

11. BOEMRE should undertake comprehensive workforce and workload analysis of the inspection program, including succession planning, anticipated workload needs, and increased capacity, and implement appropriate recommendations.

Risk-based Strategy and Production Inspection Sampling

The OCSLA requires BOEMRE to inspect all offshore facilities once a year. In 2008, BOEMRE implemented a pilot program at two district offices to inspect offshore facilities based on a determination of high-risk and low-risk facilities. These offices inspected high-risk facilities each year but inspected low-risk facilities only every other year. The determination of low risk was primarily based on minimal production volume of the facility. One district office, for example, considered 38 percent of the total production facilities as low risk.

This strategy allowed BOEMRE to focus its limited resources on re-inspection of high-risk operations and poor performers. In March 2009, BOEMRE reported that the risk-based strategy reduced the inspection frequency from a 13-month interval

in the Houma District Office and a 15-month interval in the Lake Jackson District Office to a 10-month inspection interval. BOEMRE stated that the reduced time to complete required inspections allowed for more re-inspections and more meter inspections.

To fulfill the annual inspection requirement, BOEMRE intended to rely on the operators to self-inspect the low-risk facilities that BOEMRE inspected only every other year. We found, however, that BOEMRE did not require operators to submit self-inspections of those facilities that did not receive an annual BOEMRE inspection.

BOEMRE also conducted production inspections by using a sampling methodology at three district offices as another approach to use resources more efficiently. This method allows random selection of the safety components to test during a production inspection in place of 100 percent testing on all devices. If a sampled component failed during an inspection, the inspector would move to the next testing tier, which includes more sampled device testing. The inspector may decide at any time to conduct a complete production inspection. The sample inspections are conducted on high-risk facilities annually for 3 years. In the fourth year, a complete production inspection is required. Low-risk facilities receive sample inspections every other year for three inspection cycles. On the fourth inspection, which is performed in the eighth year in the cycle, a complete inspection is done.

Gulf of Mexico Region employees repeatedly told us during interviews that BOEMRE needs to conduct more inspections rather than fewer. On at least two occasions, managers observed that the number of inspections conducted should increase based on risk rather than decrease. In addition, many district office inspectors who use the sampling methodology stated that, in many cases, the methodology actually decreased rather than increased the efficiency of the inspection.

In contrast, inspector presence is more prevalent in the Pacific Region. In addition to conducting the required annual inspection, the Pacific Region also conducts unannounced partial production inspections every other month on each facility. The Pacific Region also conducts Focused Facility Reviews (FFRs) on three production facilities a year to complement the complete and partial production inspections. FFRs cover all aspects of platform operations and management from a systemic perspective and concentrate on areas such as facility condition, safety systems, environmental aspects, documents, and electrical systems.

Recommendation

12. Revisit the inspection strategy to identify sufficient inspection coverage, including reassessing the risk-based and self-inspection approaches. (Not included in Board report)

Unannounced Inspections

Ninety-four percent of inspectors responding to the survey identified a critical need for more unannounced inspections. Unannounced inspections are rare in the Gulf of Mexico. In FY 2009, less than 3 percent of the total inspections performed were unannounced inspections in the Gulf. One district office reported conducting no unannounced inspections, while another identified only one. In the Pacific Region, however, 92 percent of inspections were unannounced.

In the Gulf of Mexico, such inspections are limited by U.S. Coast Guard security restrictions on MARSEC facilities, those facilities that are required to maintain a Maritime Security plan. District offices are required to give 24-hour notice prior to conducting an inspection on these facilities. A 2005 internal directive instructed that facilities must receive a 20-minute, followed by a 5-minute, notification prior to an inspection.

The definition of unannounced inspections and the conditions under which they are conducted also varied from office to office and even within an office. For example, in one district office, one inspector stated that only announced inspections are performed, while another stated that he primarily performs unannounced inspections. Others interviewed stated that the requirements for helicopter pilots to call ahead before landing precludes unannounced inspections. We identified documents, among them an official 2007 MMS policy, that indicate special notification arrangements with certain companies.

Recommendation

13. Clarify the criteria for what constitutes unannounced inspections. Review and clarify the current policies under which unannounced inspections can be performed, including the U.S. Coast Guard MARSEC restrictions, and special notification arrangements with certain companies, so that unannounced inspections can be conducted to the greatest extent practicable.

Witnessing Operations

BOEMRE inspectors currently witness operations only if operations are ongoing at the time of their inspections. At such times, inspectors observe the ongoing operations, such as construction, welding, or crane activities, to ensure that they are performed safely for all personnel, as well as the environment. If inspectors

note unsafe conditions, they can issue INCs and even terminate operations until conditions have improved.

We learned that, in some cases, operators would suspend operations until the inspector leaves the platform to avoid possible INCs. Operators are not required to give advance notice to BOEMRE of certain key operations that inspectors must observe to ensure safety and compliance with all regulations. BOEMRE employees identified critical operations, to include blowout preventer (BOP) hook-ups and testing, marine riser disconnect operations and testing, well work-over/completion operations, and abandonment operations. Some operations, such as the BOP testing, could take more than a day.

Recommendations

14. Identify critical operations conducted on all BOEMRE regulated facilities, and require that operators notify the Bureau about the timing of these operations so that inspectors can view operations first hand to the greatest extent practicable.

15. Examine the viability of performing multi-day inspections of critical operations on rigs and platforms.

Inspection Teams

In 2009, individual inspectors conducted 41 percent of inspections in the Gulf of Mexico and 86 percent in the Pacific Region. Most inspectors interviewed agreed that two-person teams would increase efficiencies, eliminate reliance on an operator representative for observations on safety tests, improve the thoroughness of the inspection, and reduce the ability of operators to successfully pressure an inspector not to issue an INC. During interviews, inspectors also stated that working in teams would protect inspectors from operators making false accusations. In one such case, an inspector was accused of disengaging a safety device.

Recommendation

16. Evaluate the advantages of conducting inspections in two-person teams instead of individually.

Inspection Planning

Several inspectors reported that failure to conduct adequate advance planning for inspections leads to inefficient scheduling of personnel and resources. Some district offices had very little long-term inspection planning, and many inspectors did not know which facility they would be inspecting until the day before or the

day of the inspection. This does not give an inspector enough time to properly plan, which would include obtaining the prior inspection history of the facility and any previous INCs.

Proper planning would also ensure appropriate rotation of inspectors and eliminate conflicts of interest. In addition, the lack of proper planning affects the efficient use of resources. For example, inspectors may travel to one facility more often than needed due to helicopter schedules, or they may find it difficult to coordinate a ride to a deepwater facility when traveling with others conducting inspections closer to shore. One district office noted that production inspections have priority over drilling inspections when it comes to helicopter planning.

Recommendation

17. Conduct advanced planning of inspections to allow inspectors time to prepare for each inspection and ensure efficient use of resources. (Not included in Board report)

Technology

The Pacific Region's inspectors have laptop computers for easy access to regulations, standards, and inspection forms and for purposes of entering and tracking data while they are in the field. These inspectors also use their laptops during on-site inspections to complete forms electronically and print them out for data entry. Gulf of Mexico Region inspectors do not have this capacity. Inspections in the Gulf are still conducted on paper and manually entered into the TIMS database.

Many inspectors stated TIMS is not user friendly, requires manual processes, can be difficult to access, and contains some unreliable data. Further, inspectors noted that inspection forms are not adequate and do not reflect newer technology. On the drilling inspection form, for example, inspectors have no place to document safety device testing and so must write test results in the "Remarks" section of the form.

In addition, a substantial amount of on-site inspection time is used to review operator reports to ensure that the operator conducts and has support for all of the required safety tests, inspections, and training. Some production inspections may require up to 34 report reviews. Some operators provide these reports online, which allows inspectors the option of reviewing them in the office and not during the actual inspection. Although this practice may not be used extensively across all district offices, more consistent use could increase work productivity, especially when poor weather conditions restrict on-site inspections.

Recommendations

18. Analyze the benefits of obtaining electronic access to real-time data transmitted from offshore platforms/drilling rigs, such as operators' surveillance cameras and BOP monitoring systems, and/or other automated control and monitoring systems to provide BOEMRE with additional oversight tools.

19. Update all inspection forms to ensure they reflect all aspects of the inspection and accurately reflect new technology. (Not included in Board report)

20. Analyze ways to perform inspection activities more efficiently by using current technological tools, such as online review of reports and records, and by using mobile technology in the field.

21. Information technology systems should be considered within the context of the reorganization. Specifically, BOEMRE should examine whether TIMS can be upgraded to meet business requirements and address user performance concerns by leveraging more current, web-based, user-friendly technologies together with existing tools already within the Department. BOEMRE should carefully consider factors such as speed, performance requirements, and cost-effectiveness.

Training and Professional Development

New BOEMRE inspectors come into the inspection program primarily through informal, on-the-job training that is provided by experienced inspectors. The Bureau does not have a formal training or certification program, so it tends to look for new inspectors who already have experience, which is usually gained through prior work in the oil and gas industry. This presents challenges to the Bureau in terms of recruiting and retaining the most qualified inspectors, as well as to individuals, who could face unique ethical situations as new regulators.

Inspector Certification

Based on survey results, only 39 percent of inspectors believe that they have received sufficient training to perform their duties effectively. Through interviews and the online survey, most of the training that inspectors receive is mainly on-the-job training or training provided by industry. The training provided does not effectively teach inspectors how to perform an inspection, and inspectors often fall short on knowledge related to new technologies. Some inspectors also noted that they rely on industry representatives to explain the technology on a facility. One survey respondent commented that BOEMRE needs a standardized training program “so that rules and laws are not left up to opinion so often.”

An Inspector Training Update from 1994 states that BOEMRE authorizes 60 hours of training every 2 years for individual inspectors. Discussions with inspectors, however, indicate that training requests are often denied. Moreover, training that is offered is not always deemed particularly valuable. For example, some inspectors expressed concern that industry classroom training discloses how operators "want it, instead of how it should be," and that training is often geared toward engineers, rather than inspectors.

Furthermore, the amount of time and the structure of on-the-job training varied from office to office and from inspector to inspector. Inspectors may conduct inspections on their own based on office policy or the recommendation of the training inspector. This could range anywhere from 2 months to 2.5 years. This process could lead to inconsistent inspections procedures, since on-the-job training also varies depending on the expertise of the training inspector.

In contrast, the Bureau of Land Management (BLM) has an inspector certification program that combines classroom instruction and on-the-job experience. A formal technical review (an examination) is required of each inspector in order to obtain certification. The BLM training program consists of four phases. The first phase requires 6 to 8 months of on-the-job training. The second phase incorporates formal classroom training, which involves six modules that cover information specific to the BLM Inspection and Enforcement Program. In the third phase, students continue on-the-job training until they are certified by a formal technical review — the fourth phase. The entire process can take more than 1 year. Inspectors are required to take refresher training every 5 years following certification. One BOEMRE inspector commented that by going through the BLM certification program in 2008, the inspector "learned more in that 1 year than in 9 years with MMS."

Recommendations

22. Implement a Bureau-wide certificate or accreditation program for inspectors. Consider partnering with BLM and its National Training Center to establish a Department oil and gas inspection certification program, with training modules appropriate to the offshore environment as needed.

23. Develop a standardized training program similar to other Department bureaus to ensure that inspectors are knowledgeable in all pertinent regulations, policies, and procedures. Ensure that annual training keeps inspectors up-to-date on new technology, policies, and procedures.

Inspector Specialization

For the past 15 years, inspectors received cross-training on all types of inspections. Previously, inspectors received specialized training in drilling or

production facilities, and the district offices employed supervisory and lead inspectors in each discipline. This shift occurred with the creation of the GS-1801, inspector (offshore operations and safety) series. A draft training plan covering five core training modules and five areas of operations appears to have been proposed but not implemented.

Many current BOEMRE inspectors agreed that receiving training and conducting work in all inspection areas is beneficial and provides back-up within field offices, but they believe that having experts in the various types of inspections is also practical, efficient, and would lead to more effective inspections. Also, the rapidity of technological advances and the complex nature of deepwater operations indicate a need to increase the expertise in this area. Many inspections performed by BOEMRE are complex and require extensive knowledge, so specialization seems warranted.

Recommendation

24. Consider developing more subject matter experts in each of the various types of inspections within district offices.

Recruiting and Retaining Inspectors

BOEMRE does not have a formal program for recruiting and retaining the most qualified personnel. The disparity between industry and Federal salaries, as reported by BOEMRE staff, limit the number of qualified applicants. Some areas we identified that limit BOEMRE in the recruitment and retention of inspectors include:

- Inspectors are not considered for the Student Loan Repayment Program because Bureau management has determined that the inspector position is not difficult to fill. This Program could provide inspectors incentive to obtain higher education and improve their skills, as well as increase their opportunity for promotion.
- Inspectors do not have a well-defined career ladder within the Bureau. Currently, full performance for an inspector is at the GS-11 grade within a district office. Gulf of Mexico district offices each have one lead inspector and one supervisory inspector, with performance grades of GS-12 and GS-13, respectively. The Pacific Region employs only one supervisory inspector. Inspectors do not have promotion potential above the district office, nor do they have opportunities to move into related positions at higher grades or levels of the organization.
- BOEMRE inspectors may qualify for a 25 percent differential for work they perform under hazardous conditions, such as exposure to explosive incendiary materials and hazardous weather or terrain. The pay differential would allow BOEMRE to be more competitive with industry.

Recommendations

25. Expand, to the greatest extent practicable, the sources from which BOEMRE draws inspector applicants and identify incentives to recruit and retain inspectors. Reevaluate whether inspectors can participate in the Student Loan Repayment Program and are eligible for hazard pay.

26. Develop Individual Development Plans for inspectors designed to achieve career advancement strategies. Such strategies should promote sound succession planning and foster employee development and satisfaction.

Unique Challenges

Most inspectors who responded to the survey reported receiving ethics training. Unique circumstances exist in the Gulf of Mexico, however, because many people are, or have been, a part of the oil and gas community. Several people we interviewed indicated that inspectors likely have worked in industry or have family members in the industry. For example, one inspector reported arriving at a facility where his brother, who worked for the operator elsewhere, was flown to the facility to act as the compliance officer. The inspector informed the company that he could not conduct the inspection with his brother present. Another person worked with the inspector that day.

Some inspectors told us that industry often exerts pressure on inspectors to minimize reporting violations during inspections. For example, facility personnel may make comments, such as "there goes my bonus" or "my wife is sick, and I'll lose my job," to deter inspectors from issuing violations. We also learned that operators frequently appeal INCs once they are reported.

Recommendations

27. Develop and implement clear rules of engagement for operations that are transparent to all entities, including both BOEMRE and industry personnel, particularly relating to industry exerting pressure on inspectors.

28. Further develop ethics rules and training that reflect the unique circumstances of working in BOEMRE, with opportunities for questions and discussions.

29. Require inspectors to disclose relationships and previous employment with industry on a form similar to a financial disclosure form that is updated as conditions change or at least annually. (Not included in Board report)

30. Ensure that BOEMRE managers support and enforce established rules of engagement and ethics rules.

Chapter 3: Enforcement

Overview

BOEMRE is charged with inspecting oil and gas industry platforms. Inspectors review activities on these platforms for safety and for compliance with Federal regulations and guidance. When inspectors find an infraction, they issue an INC, a formal written notification of an operator's noncompliance with a specific regulation, with lease or permit terms, or with the requirement of any notice or order. These documents generally have no fine attached and chiefly require that the item be fixed or brought into compliance.

Consequences resulting from INCs are minimal unless the problem is significant. Our survey results and interviews with inspectors disclosed that operators are sometimes slow to correct identified problems or manipulate the system so as to work around the INC.

Even assessments of civil penalties that result from more serious situations do not serve as particularly effective deterrents. The Oil Pollution Act of 1990 provides the Secretary with authority to assess a civil penalty without regard to time for taking corrective action. Regulations incorporating civil penalty provisions were published by MMS on August 8, 1997. Such penalties cost industry less overall than would the amount of time required to stop production to fix the infraction.

In extensive interviews and surveys, BOEMRE inspectors and other staff said that strengthening enforcement could help ensure that BOEMRE inspectors play a more effective role in enforcing safety compliance by the industry. Our research suggests that a review and revision of civil penalties, the development of strong incentives that encourage operator compliance, and increased application of seldom-used compliance tools would help to revitalize enforcement actions to improve safety in OCS operations.

Introduction

As the primary agency responsible for ensuring that oil and gas companies operating in the OCS comply with pertinent Federal regulations, BOEMRE plays a critical role in safeguarding the environment and in ensuring that production and drilling operations are conducted safely. Interviewees shared their observations of areas that present challenges for inspectors trying to enforce regulations and carry out Bureau guidance. One respondent noted, "The strengths of the [enforcement] program are the people that carry it out. Accordingly, lack of resources or lack of will among those people create weaknesses in the program."

To enforce compliance with BOEMRE's safety requirements in the OCS, the Bureau issues INCs and assesses civil penalties. The three types of enforcement actions associated with an INC are (1) warnings, (2) component shut-ins, and (3) facility shut-ins. Warnings are issued for infractions that pose no immediate

danger to personnel or equipment. For example, a warning may result from an operator's failure to properly maintain records and may require the operator to self-report a plan for corrective action or to identify the corrective action taken within a 14-day limit.

Component shut-ins are issued for malfunctioning equipment that poses an immediate danger to personnel or to other equipment without affecting the overall safety of the facility. These require a shut-down of the equipment until it can be repaired, which, depending on the equipment, can strain an active production facility.

Lastly, INCs result in facility shut-ins — when malfunctioning equipment cannot be shut down without affecting the overall safety of the facility. Both component shut-ins and facility shut-ins take effect immediately upon issuance and remain in effect until the operator reports that the violations have been corrected.

Civil penalties may be assessed for violations that cause injury, death, or environmental damage, or that pose a threat to human life or the environment. The OCSLA and the Code provide that civil penalties may be assessed for any failure to comply with the law or with any lease, license, permit, regulation, or order issued pursuant to the law. Violations for non-functioning safety devices bring an immediate civil penalty assessment. Other violations must be referred by the inspector or reviewing supervisor to determine whether a civil penalty is warranted.

Civil penalties are capped by statute at $35,000 per violation per day but can be adjusted based on the severity of the violation, civil penalty case history, record of compliance, or precedents set by similar cases. BOEMRE reviews civil penalty fines for proposed adjustment every 3 years based on the consumer price index. Civil penalties remained unchanged in 2009 after the civil penalty review.

Findings and Recommendations

INCs as Enforcement Tool

Inspectors can cite offshore oil and gas operations for 827 types of infractions or PINCs. INC violations do not have fines associated with them unless they qualify for and are processed as civil penalties. BOEMRE employees reported that operators regarded the mere issuance of an INC as an effective tool to alter behavior, given the perception that INCs blemish a company's operations record and public image.

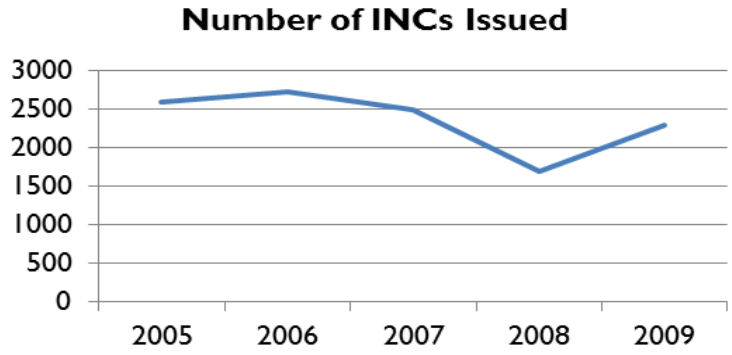


Figure 1. Number of INCs issued by year throughout the Bureau.

One survey respondent noted, however, that "INCs don't carry any penalty other than shame, something some companies don't have and therefore don't care." This is reflected in the number of INCs issued to certain companies. During the last 5 years, one company was issued 1,171 INCs. BOEMRE cannot sanction repeat offenders except through the civil penalty process unless a fine is associated with the INC. If there is no consequence associated with the INC, such as notification to the public of INCs issued, the company does not have an incentive to alter its behavior.

Over the past 5 years in the OCS, the highest number of INCs issued was in 2006 (2,723) and the lowest in 2008 (1,704). The most frequently used INC was G-111, a violation for equipment that is not maintained in a safe condition. G-111 INCs were issued 1,807 times. There was a broad difference in the INC issuance activity between district offices in the Gulf of Mexico during the past 5 years. The New Orleans District Office issued between 387 (2006) and 480 (2009), a difference of 93 (25 percent) between the most and least INCs issued. The Lafayette District had a difference of 418 INCs (a decrease of 53 percent), with the most issued in 2006 (788 INCs) and the least issued in 2008 (370 INCs).

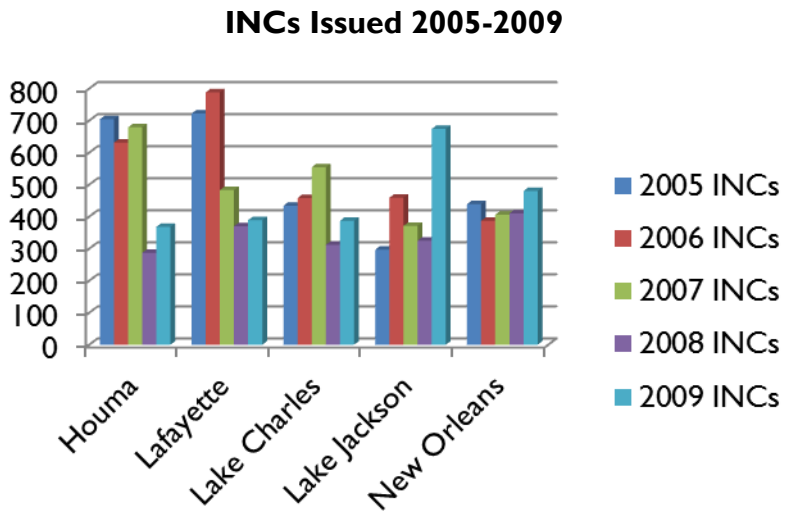


Figure 2. INCs issued by district office between 2005-2009.

If an operator does not correct the violation or ask for an extension or INC rescission, the Bureau may pursue additional enforcement action. Typically, the Bureau issues another INC to the operator for failing to correct the violation, which restarts the period to correct the problem. The failure to correct can lead to a civil penalty. If the operator remains noncompliant, the Bureau can suspend operations on the rig or platform until the violation is corrected.

Operators may appeal to a BOEMRE district manager to request that an INC be rescinded. A number of inspectors felt they received insufficient support from management and that, in some cases, management sided with industry when INCs were questioned. According to interviews and survey comments, some offices have social environments that are not conducive to issuing INCs. For example, inspectors who issue a large number of INCs reported being subject to industry pressure, often without sufficient management support to back them up, while inspectors who do not issue many INCs do not experience the same pressure.

In 2009, 19 percent of inspections in the Gulf of Mexico resulted in at least one INC. Lake Jackson issued INCs for 38 percent of its inspections in 2009. The lowest percent of issued INCs in 2009 occurred at Lake Charles with 15 percent.

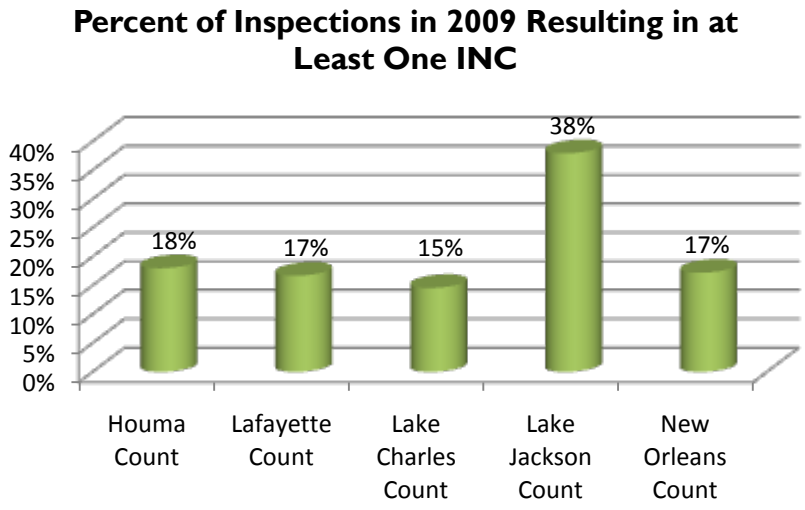


Figure 3. Percentage of inspections in 2009 that resulted in issuance of an INC.

Recommendations

31. Reevaluate the full range of enforcement actions, including INCs, civil penalties, and lease suspensions and cancellations to determine whether enforcement actions deter violations. For example, BOEMRE should consider sanctions for repeat offenders.

32. Ensure that inspectors have the appropriate technology, resources, and management support for the issuance and defense of INCs.

33. Evaluate INCs to determine which, if any, are appropriate for an automatic assessment of a fine and how much the fine should be. BOEMRE's evaluation could be informed by a review of other regulatory agencies.

34. Develop a public notification policy for INCs issued.

Civil Penalty Fines Matrix

We found that the civil penalty process is lengthy and that penalties are considered insufficient and inappropriate to the severity of violations. A successful civil penalty charge occurs only after the BOEMRE district office gathers documentation (60 days), then determines whether to move forward (60 days). BOEMRE allows another 90 days for the regional reviewing officer to consider the charges. It then notifies the company, which results in payment or a scheduled meeting 30 days later. Following the meeting, BOEMRE reviews any

additional information provided by the company, then makes a final decision. Once this occurs, the company has 60 days to pay or to appeal.

Overall, this process takes a year, which may increase if the company files an appeal. One reason cited for the lack of civil penalty cases was the scant documentation provided by inspectors. Of the civil penalties issued in 2009 and 2010, the average processing time was 13 months. The longest penalty phase required 57 months to complete. During the past 5 years, only 154 cases have resulted in collected penalties.

In an environment where many operators pay between $500,000 and $1 million daily to run a Gulf of Mexico facility, more than one-third of inspectors surveyed do not believe that current enforcement penalties are sufficient. Of the 2,298 INCs issued in 2009, only 87 were referred to the civil penalty process, with only 20 resulting in civil penalty collections. In 2009, BOEMRE collected $919,000 in civil penalties, far less than the cost of a 1-day shut-in for a larger facility.

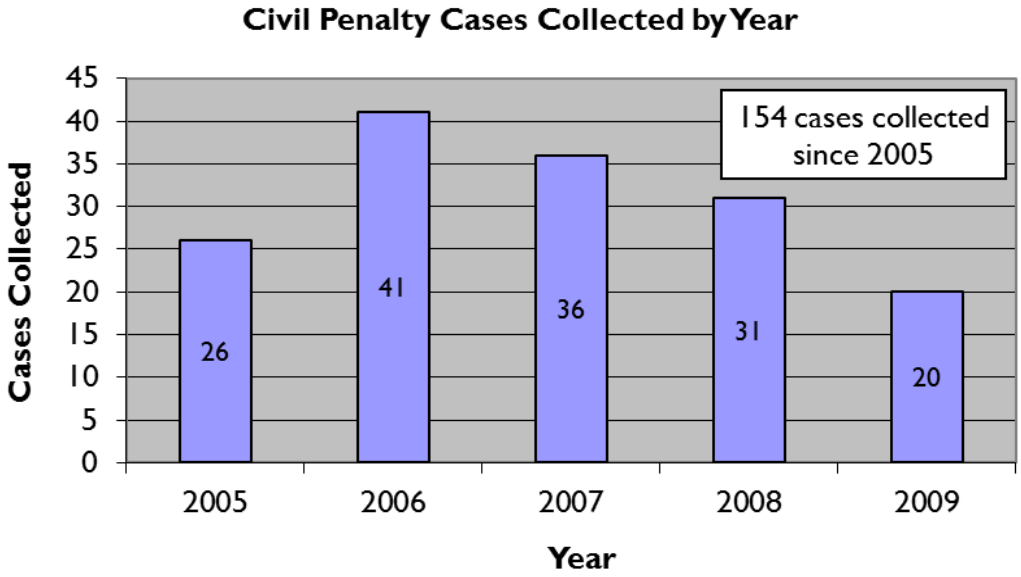


Figure 4. Civil penalty cases collected by year.

According to interviewees, current levels of civil penalty fines may not appropriately reflect the severity of the violations. One inspector noted that a company received an $800,000 fine for an infraction where the threat of serious harm had existed over multiple days. On the other hand, if a death had occurred suddenly and was categorized as a 1-day event, it would have warranted penalties of no more than $35,000 (a per-violation charge), which demonstrates the inequities of the current civil penalty fine matrix.

Currently, shut-ins (either component or facility shut-ins) may be the most effective tool available to address violations. They are being more effective than civil penalties because lost operating costs are more immediate and significantly greater than the maximum amounts of civil penalties. Of the 2,298 INCs issued in

the Gulf of Mexico in 2009, 121 facility shut-ins occurred, even though 1,030 INCs were eligible.

Recommendations

35. Review the civil penalty process to determine whether a civil penalty case can be completed effectively in less than the nearly one-year time period now afforded to assess a civil penalty.

36. Evaluate the rates and the structure of the civil penalty program and, if necessary, initiate the legislative or rulemaking process to ensure that penalties are appropriately tied to the severity of the violation.

37. Evaluate the use of facility shut-in authority to ensure its appropriate and effective utilization.

Follow-up

The number of follow-up inspections has declined by half since 2005 with 103 follow-up inspections conducted. In 2008, however, only 45 were conducted.

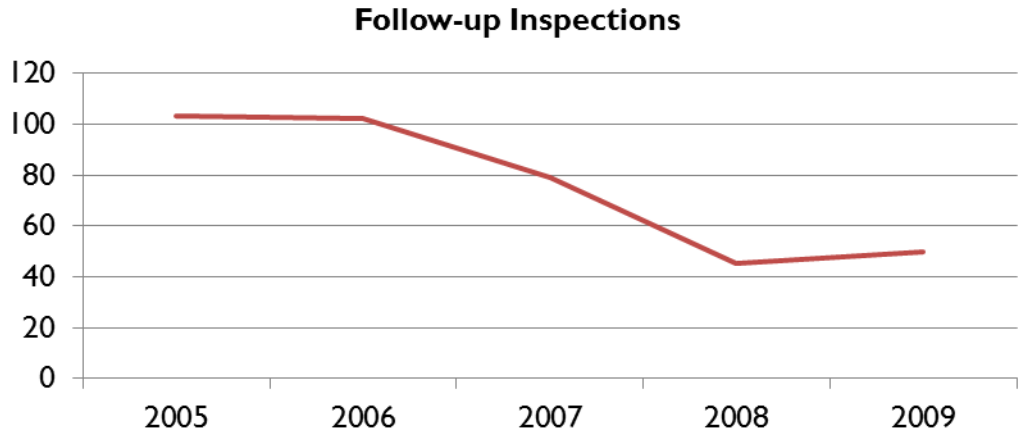


Figure 5. Follow-up inspections conducted between 2005-2009.

Currently the INC issuance system is a paper process. An inspector issuing an INC has four copies (white, green, yellow, and blue). The inspector keeps the white copy and leaves the other three with the operator. The yellow copy is for the operator to keep. The blue copy goes to the contractor and the green copy ultimately is returned to BOEMRE once the violation has been corrected. The green copy, which the operator signs to certify that the violations have been corrected, does not require operators to certify under penalty of perjury that all information submitted to the Bureau is accurate.

If an inspector has called for a facility or component shut-in, the operator has to notify the issuing BOEMRE office that corrections have been made before operations can return to normal. Some operators send in additional information, although BOEMRE has no requirement for them to do so. According to a memorandum issued in 1998, returning a component or facility to service requires the operator to contact the chief [supervisory] inspector or the district supervisor. If neither is available, any of the engineering staff are permitted to grant approval on their behalf.

Operators with poor compliance records can be added to the Monthly Operator Compliance (MOC) Report. Once an operator, facility, or platform is placed on the report, BOEMRE initiates an inspection cycle that allows no more than 4 months between inspections. As a result of being added to the MOC report, the company will be inspected at least every 4 months until it is in compliance, instead of only being subject to the annual inspection.

Of 4,892 inspections, which resulted in 2,298 INCs in 2009, there were only 50 documented follow-up inspections to ensure compliance. This represents a 2 percent follow-up rate. One inspector claimed that his supervisor failed to notify him when an operator made a required correction — even after he had asked his supervisor to do so. Instead, the supervisor gave permission to the company to restart operations without consulting the reviewing inspector. During interviews of BOEMRE personnel, one inspector also noted that operators habitually call the Bureau until they reach someone who is willing, sight unseen, to grant the operator permission to bring the component responsible for a violation back online.

BOEMRE maintains its TIMS database, which tracks INCs and their status. The TIMS application provides the means to collect and analyze offshore lease information, provide data for environmental studies, and collect and analyze information from inspections of offshore platforms and drilling rigs. Data provided by TIMS indicate that 48 percent of the INCs issued did not have a correction date included in the database. Specifically, one of the district offices only recorded completion dates for 10 percent of its INCs, leaving 90 percent unrecorded. When information is improperly reported in the Bureau database, inspectors and managers have difficulty determining whether the proper follow-up has been conducted.

Regulations permit BOEMRE to disqualify, disapprove, or revoke the designation of operator on a single facility or on multiple facilities if that operator demonstrates chronically poor performance. If this happens, the company can no longer serve as operator on that facility or on multiple facilities. BOEMRE also can prohibit the company from acquiring new leases or assignments for a specified time. This tool, however, has only been used once in recent years. Factors BOEMRE may consider in disqualifying an operator include accidents,

pollution events, environmental damages, INCs, civil penalties, and failures to adhere to OCS lease obligations.

Recommendations

38. Require on-site follow-up inspections, or other forms of evidence, to document that operators have made the required corrections to INCs.

39. Improve the INC documenting and tracking system so the status and resolution of INCs are fully documented, properly tracked, and corrected.

40. Consider updating the INC form and other operational reporting documents to require operators to certify under penalty of perjury that all information submitted to the Bureau is accurate.

41. Consider changing the approval process for returning a facility or component to operation by limiting who has approval authority, creating a system for tracking approvals and disapprovals, and ensuring that all staff who have approval authority have access to and properly use the tracking system.

Chapter 4: Environmental and Cultural Resources

Overview

Interviews and survey responses from BOEMRE's environmental community revealed the perception that BOEMRE has emphasized the need to approve lease sales, permits, and drilling plans over its responsibilities for OCS environmental and cultural resources. This emphasis on lease sales and on expediting plans and permits has created an imbalance in how BOEMRE fulfills its dual mandates to develop OCS resources responsibly and to protect the environment. Results of this prioritization include minimized environmental impacts, inefficient mitigation, and an insufficient compliance program.

Introduction

BOEMRE controls exploration, development, and production of minerals on the OCS, while it also safeguards OCS resources. This dual mandate arises from the OCSLA, which states that the OCS is "a vital natural resource reserve held by the Federal Government for the public" and, as such, it "should be made available for expeditious and orderly development, subject to environmental safeguards."

To meet its mandates, BOEMRE determines impacts on OCS marine and coastal environments before, during, and after minerals development. Depending on the activity, involved staff members may include petroleum engineers, physical scientists, archeologists, biologists, physical scientists, and environmental protection specialists, among others. In addition to the OCSLA, the National Environmental Protection Act (NEPA) requires that BOEMRE "use all practicable means" to "preserve important historic, cultural, and natural aspects of our national heritage" and "to the fullest extent possible" consider how proposed, major Federal actions impact the environment.

The environmental and other resource safeguards that BOEMRE implements depend on the stage of minerals development. Before BOEMRE sells a lease, it determines potential environmental impacts for areas under consideration for leasing. After BOEMRE sells a lease, the operator submits an exploration plan to the Field Operations' Plans Section (Section). Plan coordinators check a box on a form to show they have received all appropriate documents. The Section is the designated submittal site for all operators' plans, as well as for approvals of plans and their component parts. The Section coordinates plan schedules and serves as a communication liaison between operators and Leasing and Environment staff. In this capacity, the Section also is involved with mitigation and compliance requests from Leasing and Environment specialists.

Once plan coordinators complete checklists, they submit the plans to the appropriate reviewing officials. The plans are submitted to the Environmental

Compliance Section within Leasing and Environment. A NEPA coordinator then conducts a categorical exclusion review to determine what type(s) of review(s) the proposed activities could trigger. The NEPA coordinator makes a preliminary determination on the review type, which could include a categorical exclusion review with no further analyses, a categorical exclusion review with analyses, or instructions to prepare an environmental assessment or an environmental impact statement (EIS). For example, a categorical exclusion review with analyses might state that a proposed activity triggers an environmental assessment. After determining the type of review, the NEPA coordinator then assigns the work to resource specialists, such as oceanographers and archeologists, based on the regulatory trigger that needs to be addressed. These specialists determine whether a plan requires conditions of approval.

Findings and Recommendations

Environmental and Socio-cultural Impacts

BOEMRE produces NEPA and other regulatory decision documents in which staff members determine if actions such as multiyear lease sales or seismic testing have potential environmental impacts. Problems have arisen when BOEMRE managers have told BOEMRE scientists to reduce the severity of the impacts they identified during their research.

In one case, a scientist was told by his manager that his "conclusion of significance under NEPA means an EIS and delay in [the lease sale]. That would, as you can imagine, not go over well [with Headquarters] and others." He was told to change his findings and, if he did not, "someone else would do it [for him]." A finding of significance could delay a lease sale for up to 2 years. One former employee summed up the perceived attitude of some managers toward NEPA as nothing more than a "green light" to approve oil and gas actions.

Although reporting to the same Regional Director, Leasing and Environment and Field Operations (FO) personnel often have competing priorities and performance indicators. For instance, FO managers' performance appraisals are based, in part, on meeting leasing schedule deadlines or development approvals. On the other hand, scientists and environmental protection specialists are responsible to ensure BOEMRE complies with environmental regulations and protects against or mitigates reasonably foreseeable impacts.

Pressure on the scientists arises when their research identifies potential problems that may stop the leasing and permitting clocks. In one case, a scientist reported that he found significant impacts on Gulf of Mexico marine mammals from proposed seismic explorations. According to this scientist, although a National Marine Fisheries Service EIS supported his findings, BOEMRE hired an outside consulting company to "massage" his reported impacts to get them below the statutory threshold. These types of situations may occur because one person oversees both the leasing and environmental processes. Our review determined that the approval of lease sales has prevailed over the need to fully consider

environmental impacts. The management structure, with its inherent performance conflicts, could distort balanced decision-making.

Recommendations

42. In future institutional structures implemented through the ongoing reorganization, separate the management of environmental functions from those of leasing and development to ensure that environmental concerns are given appropriate weight and consideration.

43. Explore and encourage other processes, policies, and incentives that promote a culture of balanced stewardship and evaluate existing policies and practices that may impede the ability to achieve this balance.

Mission Conflicts and Mitigation Planning

Operators' plans and related documents serve as the blueprints from which they conduct their exploration and production activities. Before BOEMRE approves plans, specialists in different subject matters review them to determine how operators' activities will affect the environment. For instance, a staff biologist might find that a plan shows an anchor placed in an environmentally sensitive area and require its placement farther away as a condition of approval of the plan. These reviews serve as the only avenue available to the specialists to ensure operators mitigate harmful activities, such as setting an anchor in sensitive areas, in their plans.

Reviews oftentimes result in specialists' need for more information than the operators include in their plans and documents. Since discussions directly between the specialists and industry historically have not been allowed, specialists communicate with industry through the designated third party, the BOEMRE FO Plans Section.

The specialists have expressed frustration with actions taken by FO concerning their reviews. Some specialists report that FO coordinators and managers make decisions that benefit an operator at the expense of regulatory compliance. For example, one scientist stated that FO managers "conditionally" approved an operator's plan to set anchors in a sensitive area even though the required remotely-operated vehicle survey had not been conducted. FO managers made this decision after deciding that the survey, as a condition of approval, would unnecessarily delay the operator in conducting its business. Specialists involved in this review stated that FO managers considered the survey "unnecessary due to the nature of the objects being protected," even though the nature of the objects was unknown. One environmental specialist stated that the managers' belief reflects a culture passed down over the years in which FO "calls the shots," and

that they perceive the specialists' actions as arising solely from a desire to shut down industry.

BOEMRE managers described the situation between FO and Leasing and Environment as tense, distrustful, and uncooperative. Managers have reported that personnel in FO and the Leasing and Environment sections who are assigned to different program areas have difficulties working as a team. Within Field Operations, staff members have expressed the belief that Leasing and Environment personnel are too stringent with their analyses and opinions, doing more than is needed, and, therefore, intentionally slow the approval process.

One regional supervisor described scientists as "well-meaning for the most part" but also stated that they use "vague" methods and have "questionable" intentions when they request information from operators. This supervisor expressed the belief that the archeologists use the request for information process as a "hold-up technique" to delay oil and gas actions, saying that information requests "can reset the clock on the plan." Several specialists we interviewed stated that FO staff members rewrite the specialists' requests, even though they do not have the regulatory expertise to do so. Several scientists stated that having a liaison with an environmental regulatory background would be helpful due to the specialized nature of their requests.

Recommendation

44. Consider creating a review panel within BOEMRE to resolve all conflicts regarding information requests, mitigation determinations, and remediation efforts.

Environmental Compliance

Environmental compliance involves conformity with environmental laws, regulations, lease stipulations, and conditions of approval. Nearly all compliance work occurs through document reviews and the tracking of mitigation and monitoring information in the TIMS database. Evidence reviews may result in requests for more information to confirm compliance or to issue an INC. In addition, the Gulf of Mexico Region has an environmental engineer who conducts air quality tests. While the majority of environmental compliance activities occur in the office, the environmental engineer takes on-site air samples at rigs.

BOEMRE scientists report that managers have rewritten or dropped their requests for INCs. One scientist described the dispositions of many INC requests as having fallen into a black hole. Another scientist reported an incident in which an operator failed to notify BOEMRE about a shipwreck within 72 hours, as required by regulations. Instead, the operator notified BOEMRE more than 2 years later. The scientist tried to issue an INC to the operator, but Field Operations "stepped in to salvage the situation." The scientist wanted a diver investigation to identify

the shipwreck and provide the archaeology group with enough information to adequately protect the site. The scientist also wanted to issue an INC for failure to notify within the regulatory timeframe. Field Operations denied both requests based on assurances from the operator that the shipwreck would not be harmed.

Several specialists stated that Leasing and Environment supervisory staff should have INC approval authority for issues related to the environmental regulations their sections oversee. One specialist said that the best person to determine if an operator is complying with a condition of approval is the person who placed the condition on the plan. This person said that the INC is the only tool his staff members have to ensure compliance with environmental regulations.

Another concern expressed was how BOEMRE internally tracks compliance information. According to personnel interviews and a BOEMRE-conducted 2008 Alternative Internal Control Review, TIMS and the environmental compliance program suffer from several weaknesses. These include inadequate training for Leasing and Environment staff to use and access TIMS, inconsistencies among district offices in processing environmental mitigation requirements, and a lack of environmental investigators. Problems with TIMS have led to the inability to adequately document and track environmental mitigation and monitor for compliance.

Recommendations

45. Consider giving Environmental Section supervisory staff INC approval authority for issues related to the environmental regulations they oversee. (Not included in Board report)

46. Review the adequacy of access rights to TIMS and the training of environmental staff in its use. (Not included in Board report)

47. Consider dedicating inspectors for environmental compliance. (Not included in Board report)

Chapter 5: Enhanced Accident Investigations

Overview

A strong and effective accident investigations program is essential to ensure that accidents are properly investigated and that effective recommendations are identified and implemented to prevent future accidents.

We performed site visits to the Gulf of Mexico Region, specifically to three of its five district offices and the Pacific Regional Office and its district office. We found that employees who conduct accident investigations are highly motivated, but that organizational, procedural, and regulatory issues impede the accident investigation program's effectiveness.

Programmatic impediments include insufficient full-time dedicated investigation personnel, accident reporting guidelines for operators, guidelines for conducting investigations, requirements for accident investigator independence, requirements for program peer review, and systems to ensure recommendations are implemented.

Introduction

BOEMRE conducts investigations to identify the causes of accidents and makes recommendations to prevent similar events. BOEMRE investigation guidelines consist mainly of a 2003 manual, a 2009 memorandum, and an accident investigation handbook dated February 2010.

Investigations are initiated after evaluating and identifying significant incidents reported by operators. Completed investigations are followed by report recommendations that generally take two forms: (1) internal recommendations to require reviews or changes to policies and procedures and (2) issuance of industry safety alerts that notify operators of accident causes and recommend preventatives.

Two types of investigations exist: panel and district. Panel investigations involve complex or serious accidents (e.g., fatalities, fires, and explosions) and are conducted by a team appointed by the regional director. The Gulf of Mexico Region has two full-time accident investigators, petroleum engineers, who perform panel investigations. The Pacific and Alaska Regional Offices have no full-time accident investigators and rely on Gulf of Mexico personnel to conduct panel accident investigations. District investigations are typically less complex. They are conducted by an individual or team appointed by the local district supervisor. District office investigations are usually performed as a collateral duty.

Accident investigations are initiated based on the evaluation of incident reports filed by operators. Since 2000, BOEMRE has received over 6,500 incident reports, which resulted in almost 800 accident investigations. Gulf of Mexico investigations included 714 district and 45 panel investigations, while Pacific investigations included 29 district and three panel investigations. Alaska had no incident reports and conducted no accident investigations during this period.

In addition to the regional accident investigation staff, BOEMRE also has an Accident Investigation Board located in Herndon, VA. This office has a small staff of petroleum engineers who provide expertise on accident investigations. The office is also responsible for providing investigation policies and for compiling and analyzing data. This later action facilitates better understanding of the causes of accidents and helps determine appropriate actions to enhance safety and environmental protection. The Accident Investigation Board office also works closely with the U.S. Coast Guard and DOT.

Findings and Recommendations

Collateral Duty Accident Investigators

Representatives of the Gulf of Mexico Regional Office and the Lake Charles and Lafayette District Offices all identified using full-time inspectors as an opportunity to improve the quality of both investigations and inspections. The Gulf of Mexico Regional Office has two petroleum engineers who work full-time as accident investigators on panel reviews, but district offices rely primarily on inspectors to conduct district office accident investigations.

Although district office accident investigations can be significant, which may not be initially apparent, dedicated full-time investigators are not always available to ensure that each investigation is performed adequately. Inspectors are generally required to maintain their normal inspection workload while they conduct district office accident investigations. As recently as June 14, 2010, the Lafayette District Office submitted a written recommendation to the Regional Office to add new positions to help conduct accident investigations Region-wide.

Further, district offices sometimes lack staff with appropriate training in accident investigations. Some types of accident investigations require specialized experience and have complex reporting requirements. Accident investigation training is required for all key regional and district personnel and for all inspectors at the journeyman level (GS-11). Required training includes 24 hours of initial training and 16 hours of refresher training every 5 years. We found at the New Orleans District Office that only 3 of 11 journeymen inspectors had the required training to perform accident investigations.

Another source of training in addition to BOEMRE is the National Transportation Safety Board (NTSB), the U.S. Government's independent agency for investigating transportation accidents. NTSB training includes marine accident investigation with an emphasis on evidence gathering, examination and analysis,

interviewing, and the human factors involved in marine accidents. NTSB employs marine accident investigators and provides training to the Federal Bureau of Investigation and the National Aeronautics and Space Administration.

Recommendation

48. Consider restructuring the accident investigation program to dedicate additional full-time staff with appropriate training in accident investigations.

Operator Incident (Accident) Reporting Guidelines and Requirements

Operators are required to file incident reports for serious events that include fires, explosions, fatalities, serious injuries, loss of well control, and oil spills. BOEMRE operator reporting requirements, however, do not mandate specific information, such as site photographs or identification by the operator of the probable cause of an accident. As a result, BOEMRE often does not have sufficient information to determine whether an accident investigation is necessary.

While some investigations are mandatory, BOEMRE relies on operators' reports to determine the severity of accidents and assess the need to conduct accident investigations. For example, fires only require an investigation if they are considered "major." At the Lake Charles District Office, we identified a potentially catastrophic fire that might never have been investigated based on the operator's initial description.

Platform personnel mistakenly tied a natural gas drain line into an air conditioner drain line. The natural gas backed into the air conditioner motor and caused a serious fire that could have been catastrophic had the natural gas fire migrated to the fuel source and associated containment area, which were located two decks below the air conditioner unit. Fortunately, district office personnel investigated the accident, which ultimately resulted in civil penalties exceeding $400,000 for unsafe work practices.

Recommendation

49. Require operators to provide detailed descriptions of certain types of accidents (e.g., fires) to determine whether accident investigations or other corrective actions are necessary.

We found that guidelines for accident investigations lack sufficient requirements and detail to ensure adequate and consistent conduct and documentation of investigations. As a result, inspectors may miss the opportunity to identify causes

and make proper recommendations for prevention. Further, personnel who conduct investigations often do not use existing guidelines.

Although BOEMRE's March 2010 guidelines address some necessary improvements, they lack detailed requirements for planning investigations, gathering and documenting evidence, and ensuring quality control. We identified the following areas for guideline improvements:

- Preparing and retaining planning documents that identify how the investigation was conducted and include team assignments, timeframes, people to be interviewed, and required site visits.
- Requiring formats or specific detail to document site visits and interviews, specifically identification of dates, times, people interviewed, questions asked, a detailed description of answers, and conclusions drawn from site visits and interviews.
- Requiring detailed and documented review in support of the report's conclusions and recommendations.

We selected seven panel reports and 25 district accident reports for review that were issued by the Gulf of Mexico and Pacific Regional Offices. We reviewed the supporting documentation contained in the investigative files and found that some files were well-organized and documented, while others lacked critical documentation, such as:

- Evidence that an initial site visit was conducted to collect timely witness statements and physical evidence.
- Evidence of interviews to support the report's conclusions.
- Evidence of information provided by the operator that was critical to the investigation.
- Organizational information or other data to assist in the file review, such as team assignments, investigative schedules, and a prior operator inspection compliance history.
- No formal accident investigation file (in some cases). Individual employees had the information we requested.

We interviewed supervisory staff and accident investigators and found that some personnel who conduct investigations were unaware of issued guidelines. Further, some stated they were aware but preferred to use their own undocumented methods for conducting investigations.

Recommendation

50. Develop and implement internal procedures to fully conduct and document accident investigations, including planning, basic investigation, evidence gathering protocol, and supervisory review.

Accident Investigator Independence Policy

BOEMRE has no independence policy for accident investigators to prevent conflicts of interest with industry. OIG investigations previously identified this as an issue, with inspectors and other staff identified as recipients of improper industry gifts, relationships, and favors. Conflicts of interest or their appearance impugn the integrity of the accident investigation process.

On June 12, 2010, a new independence policy for inspectors became effective in the Gulf of Mexico. The policy was designed to provide greater inspector independence by identifying and eliminating improper industry pressure on inspection planning, prohibiting harassment of inspectors who take enforcement actions, and precluding assignments for inspections in the case of prior employment or personal relationships with operators. Although operator accident investigations are subject to the same industry influences as inspections, this policy does not apply to inspectors or to other personnel who conduct accident investigations.

Recommendation

51. To supplement existing ethics requirements and recusal policy, create an independence policy for all accident investigation personnel that includes certifications signed by investigation personnel, prior to commencing work on a particular investigation, affirming the absence of any conflicts of interest.

Peer Reviews of Accident Investigations

BOEMRE has no independent peer review process for catastrophic and complex accident investigations. Peer review has been endorsed throughout the Federal Government as a mechanism for improving the quality of products and processes. Federal agencies use various organizations, laboratories, and advisory groups to review specific processes. For example, the NTSB used the Sandia National Laboratory to peer review its safety board analysis of the 2007 Interstate I-35 Bridge collapse. The Sandia Laboratory and other groups commonly provide these services for a fee through memorandums of agreement or other procurement methods.

Recommendation

52. Explore the utility of an independent peer review process for panel investigations.

Follow-up System for Accident Investigation Recommendations

BOEMRE has no accountability system to determine if internal recommendations or recommendations to issue safety alerts have been implemented. Our review of BOEMRE internal recommendations identified that safety alerts are often not implemented, and, in some cases, are not issued.

If recommendations are not implemented, the causes of accidents may remain uncorrected and contribute to future accidents. Implementation data is required to follow up on operator compliance and to measure program effectiveness.

We reviewed 25 recommendations from seven panel reports issued by the Gulf of Mexico and Pacific Regional Offices. We found that BOEMRE could provide evidence that only one recommendation was implemented. While documentation indicated other recommendations might be implemented in the future, BOEMRE lacked the necessary follow-up system to ensure that the recommendations were being actively tracked for implementation.

A system to follow or track the status of investigative recommendations should contain various attributes, including:

- Appointing a follow-up official to ensure recommendations are tracked and implemented.
- Requiring a specific date for implementation.
- Identifying specific actions required for implementation.
- Maintaining accurate records of the status of recommendations, including details on actions taken for implementation.

We reviewed NTSB statistics collected since 1988 and found that the organization reported over 80 percent of safety recommendations had been implemented. Without a follow-up system to track recommendations, the accident investigation program at BOEMRE cannot accurately account for any of its recommendations or measure Program effectiveness.

Recommendation

53. Establish a system to track investigation recommendations for implementation and verify that they have been implemented.

Chapter 6: Safety

Overview

BOEMRE must serve a pivotal role in fostering a new culture of safety and environmental stewardship. To this end, when developing and implementing its regulations, the Bureau must also consider the importance of protecting human life and the environment. Unfortunately, BOEMRE's process for developing or updating standards and regulations has not kept pace with new and emerging offshore technologies.

Introduction

BOEMRE's current regulatory framework is based on communication methods such as NTLs, and its regulatory efforts have focused more on reacting to problems than on providing proactive guidance to operators. In addition, BOEMRE's review of Oil Spill Response Plans (OSRPs) does not ensure that critical data are correct or that other relevant agencies are involved in the review process. OSRPs do not adequately address the calculation for worst-case discharge scenarios. They also fail to include measures for containing and controlling oil and gas discharges.

Findings and Recommendations

Regulatory Framework

BOEMRE regulates a variety of complex operations and activities associated with leasing and developing offshore oil and gas in the OCS. BOEMRE receives its authority to regulate the industry from a variety of Federal statutes and regulations that have gradually evolved since the passing of the Mineral Leasing Act in 1920 and the Submerged Lands Act in 1953.

BOEMRE's fundamental regulatory authority comes from two legislative acts: OCSLA and the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA). OCSLA authorized the Secretary to grant mineral leases and prescribe regulations in the OCS. FOGRMA designated the Department as responsible for offshore mineral leasing and authorized the Secretary to prescribe rules and regulations necessary to carry out its provisions.

Title 30 C.F.R. contains Federal regulations that implement the provisions and intent of multiple mineral acts, including OCSLA and FOGRMA. Title 30 expands upon the acts and has the binding effect of law. Provisions of the Code may also reference directives and standards developed by independent trade organizations, such as the API or the American Society of Mechanical Engineers (ASME).

In addition to the regulations codified in the Code, BOEMRE issues NTLs and Information to Lessees, formal documents clarifying regulations and standards.

BOEMRE also issues safety alerts — advisories to operators regarding an incident or near miss. These can provide recommendations for reducing risks.

Proposals for new regulations or modifications to current regulations for emerging technologies generally come from regional or district personnel and are based on observations made in the field and research conducted by BOEMRE's Technology Assessment & Research (TA&R) Program. The TA&R Program ensures that operations on the OCS incorporate the best available and safest technologies. It also supports research into operational safety, pollution prevention, and oil spill response.

Federal oversight of an industry that quickly develops new and improved technologies requires an adaptive and responsive regulatory framework. Such a framework is required to ensure safe and environmentally sound energy development and production in the OCS.

Regulations typically take 2 years or more to finalize. Rules with a potential impact of at least $100 million require Office of Management and Budget (OMB) review and can take up to 5 years or more to process and activate. For example, BOEMRE published a rule this year on a safety and environmental management system. According to BOEMRE officials, this proposed rule had been under consideration for nearly 20 years, while a similar program is an established standard of the API. The adoption of this rule into the Code would constitute an enforceable regulation rather than a set of recommended practices.

As a result of the cumbersome regulatory development process, many operational issues are addressed by issuing NTLs, safety alerts, approvals for alternative procedures or equipment, and departures. BOEMRE officials process frequent requests to deviate from current regulations to allow the use of new technologies and standards. The Gulf of Mexico Region has approved 2,414 departures since 2005. The continuing requests to deviate from current regulations place an additional burden on permitting officials, while highlighting the need to update regulations.

BOEMRE may not have sufficient staff with the requisite expertise to review and vet standards developed by industry subject matter experts, such as the API, or to determine the propriety of incorporating such standards into regulations. The API develops and recommends standards for oil and gas operations that can be incorporated into regulation by reference, thus becoming mandatory. BOEMRE can adopt these standards in whole or in part, or it can reject the API standard at its discretion.

The API has created approximately 240 standards for offshore oil and gas development — only 78 are referenced into regulation. Although BOEMRE officials routinely participate in the API's standards development process, the Bureau does not have enough qualified staff to effectively review all standards. A

Bureau official stated that BOEMRE's lack of technical expertise has prevented more of these standards from being referenced into the regulations.

Whether TA&R recommendations are implemented or whether they result in new or updated regulations is unknown because BOEMRE does not have a mechanism to track the recommendations. Although BOEMRE officials confirm that research findings are sometimes used to establish or modify policy, no formal process exists to review the results of each study or track BOEMRE actions that result from a study's conclusions. Absent a formal assessment and implementation process, BOEMRE fails to identify the best and safest technologies in developing new regulations.

A BOEMRE team actively reviews documents from outside sources that may be beneficial for referencing standards into Federal regulations. In addition to the API, BOEMRE reviews work by the ASME, the International Organization for Standardization, and the International Regulators Forum. BOEMRE is a member of the last group, which seeks to improve offshore safety through international collaboration. BOEMRE has entered into memoranda of understanding with various countries to share scientific and technical information.

BOEMRE and industry trade groups have conducted limited research to review the effects of deepwater on equipment and operations. With the exception of requirements for drilling and platform design, BOEMRE regulations make little distinction concerning operations in varied water depth. API as well as BOEMRE's regulatory branch conceded that little research into deep water has been done. Those studies that compare water depths on equipment and operations reveal conflicting results, and are, therefore, inconclusive. For instance, one study concluded that the effect of deep water on blowout preventers is negligible, while another study claimed deep water would necessitate specifically designed equipment. In addition, regulations that specifically address some deepwater activities exist but are scattered throughout BOEMRE regulation subsections.

Recommendations

54. Develop a dynamic regulatory framework that provides for interim and continuing guidance to operators, ensures the proper use of NTLs, addresses gaps and inconsistencies within BOEMRE regulations, and reconciles related Bureau regulations.

55. Ensure that BOEMRE has sufficient staff with the expertise needed to review and vet standards developed by industry group subject matter experts to determine the extent to which those standards should be used in developing regulations.

56. Identify actionable items from the TA&R studies, track concurrence and implementation of those items, document rejected recommendations, and consider broader opportunities for the TA&R Program.

57. Consulting with technical experts, conduct further analysis of the effects of water depth on equipment and operations, and determine the adequacy of current regulations.

Oil Spill Response Plan Review

The *Exxon Valdez* oil spill in 1989 prompted adoption of the Oil Pollution Act of 1990, which strengthened the planning for and prevention of future oil spills. Subsequently, regulations were adopted that require operators to develop and submit OSRPs. To ensure readiness for an actual discharge, BOEMRE is responsible for reviewing OSRPs submitted by operators.

Title 30 C.F.R. 254.21-29 outline the information required for OSRPs. The requirements include an introduction and plan contents, an emergency response action plan, appendices that detail equipment inventory, contractual agreements, a worst-case discharge scenario, dispersant use plan, in situ burning plan, and training. In accordance with the plan, operators must test equipment and have recurring drills to ensure readiness. The OSRP must show that operators can respond quickly and effectively to an actual discharge.

To guide operators in developing OSRPs, BOEMRE issued NTL 2006-G21 in October 2006. This included an attachment that mandates the sections and appendices in each OSRP. In July 2009, BOEMRE issued "Oil Spill Response Plan Review Standard Operational Procedure," which is designed to guide BOEMRE personnel when processing OSRPs. It includes a checklist for determining if OSRPs are complete.

In addition to the requirements placed on the operator by the Oil Pollution Act, BOEMRE conducts drills and equipment inspections to verify compliance and ensure operator readiness. The Gulf of Mexico Region has conducted 15 drills in the past 2 years, 3 of which were major. BOEMRE staff members oversee the exercises, while other Federal agencies are invited to participate. Operators are rated on a pass/fail system. Those who receive a failing grade are required to conduct remedial drills.

BOEMRE also performs inspections to ensure that all equipment listed in OSRPs is available and operational. Bureau officials conduct onsite inspections at companies contracted by industry for spill containment. Inspectors do not, however, verify the availability and presence of third-party equipment listed in the OSRP prior to conducting inspections. Operators' outsourcing of oil spill

containment efforts to third-party contractors alleviates their requirement to maintain their own crews and equipment. They can share costs of equipment and personnel with other operators by contracting one outside source to keep and maintain the necessary equipment and personnel. Operators, however, are accountable for ensuring that the companies under contract have the required equipment, as detailed in their OSRPs. BOEMRE selectively inspects these contractors annually to ensure operator compliance.

Information contained in one operator's OSRP is consistent with that in other operators' plans, which results in similar or "cookie cutter" plans. The consistency of using similar plans offers an economic advantage to operators but also increases the possibility that overlooked mistakes are perpetuated in subsequent versions of plans.

Operators may consolidate OSRPs by including multiple leases or facilities within a region. These are called regional response plans. While there are more than 3,000 platforms in the Gulf of Mexico Region, only about 170 OSRPs exist. The Gulf of Mexico Region reviews these OSRP every 2 years. The Pacific Region reviews only six OSRPs, which is consistent with the number of operators in the region. OSRPs range from 400 to 700 pages in length. Each BOEMRE region designates an OSRP administrator who reviews OSRPs. Plans must be updated and reviewed biannually unless important information changes enough to require more frequent review.

BOEMRE has a memorandum of agreement (MOA-OCS-3) with the U.S. Coast Guard regarding oil discharge planning, preparedness, and response. The memorandum confirms BOEMRE's responsibility for approving OSRPs and identifies U.S. Coast Guard review as elective. Memoranda of Understanding (MOUs) with State authorities reaffirm BOEMRE's role as the primary reviewer. In the MOU with California, BOEMRE's Pacific Region has agreed to review and approve OSRPs required by California in addition to federally-mandated OSRPs.

Numerous Federal agencies conduct studies and reviews that influence OSRPs. Many of those agencies actively participate on regional and national response teams. The EPA reviews and approves dispersants acceptable for use as outlined by the OSRP. The National Oceanic and Atmospheric Administration tracks ocean currents to best anticipate oil dispersion. The National Oil Spill Response Test Facility, operated by BOEMRE, conducts full-scale testing of oil spill equipment. The U.S. Coast Guard functions as the Federal, on-scene coordinator for coastal regions and is responsible for coordinating all Federal containment, removal, resources, and disposal efforts for oil spill incidents.

An effective response to an oil spill requires a well-prepared plan and a coordinated effort by many Government agencies. For the plan to function as designed, correct information in the OSRP is necessary. BOEMRE, however, does not always verify critical information, which might diminish the

effectiveness of an operator's response. Further, coordinated review of OSRPs is essential for all agencies charged with responding to actual spills but is not required.

Since the Oil Pollution Act of 1990, Federal agencies have concentrated efforts to coordinate oil spill responses. For example, Federal agencies established the National Preparedness for Response Exercise Program as a voluntary plan to help synchronize drills and training exercises for offshore spills.

Interviews conducted with BOEMRE staff indicate that routine drills are conducted by Bureau officials — without the participation of other agencies. The U.S. Coast Guard organizational transfer to the Department of Homeland Security (DHS) and its subsequent shift in focus were cited by BOEMRE as reasons for not participating in joint exercises. The requirement for BOEMRE to formally review OSRPs while the U.S. Coast Guard or EPA serves as the Federal on-scene coordinator creates a separation of duties that necessitates collaboration. Neither the U.S. Coast Guard nor the EPA, however, is required to formally review OSRPs before BOEMRE's approval.

Gulf of Mexico Region officials who are tasked with reviewing OSRPs use a checklist to verify that required sections have been included. Certain critical elements of the OSRP are not verified to ensure operator compliance and readiness. For example, the calculation for worst-case discharge that serves as a driver for the response plan is not consistently verified. In Appendix A of the OSRP, operators are required to list existing OCS production facilities with a worst-case discharge volume rating. Upon review of one OSRP, we identified that some of the production facilities were not rated as required.

This brings into question the reliability of the worst-case discharge claimed by the operator. BOEMRE issued additional guidance for operators with NTL 2010-N6 in June 2010 requiring support for the worst case discharge calculation. Although this information may improve the reliability of worst case discharge calculations provided by operators, our review did not reveal any recommended improvements for BOEMRE's regulatory review process. Additionally, OSRP coordinators interviewed during the review described their relevant qualifications, however, it would be beneficial to ensure that all staff reviewing OSRPs exhibit minimum technical knowledge. Moreover, BOEMRE needs to have a consistent process for reviewing the critical elements of OSRPs.

Recommendations

58. Draft a new Memorandum of Agreement with the U.S. Coast Guard, EPA, and other interested agencies, requiring appropriate participation of all parties in the review of OSRPs and any related drills or exercises.

59. Develop a review process for OSRPs that incorporates risk-based and other strategies to ensure that all critical information and spill scenarios are included in the OSRP by operators, and are comprehensively reviewed and verified by BOEMRE and/or other appropriate officials.

60. Determine and ensure technical expertise necessary for staff to conduct comprehensive reviews of OSRPs.

61. Ensure that inspectors verify the availability and presence of all equipment, including third-party equipment, listed in OSRPs prior to conducting inspections.

Oil Spill Response Plan

As required by the Oil Pollution Act of 1990, OSRPs are supposed to increase preparedness for and containment of oil spills. Testimony from BOEMRE staff assigned to the Oil Spill Response Program indicates that reducing the source of spills is not the emphasis of OSRPs. Instead, plans are primarily based on the recovery of oil once a spill has occurred. The provisions of 30 C.F.R. 254 and BOEMRE NTL 2006-G21, which describe the contents of OSRPs, do not require operators to include contingency plans for catastrophic discharges. BOEMRE may address repair measures, such as drilling relief wells, in other areas of oil development planning that offer more details on the containment and control of spills.

The Code establishes a process for determining the volume of oil for a worst-case discharge scenario. Determining the amount of potential discharge guides the response necessary for effective containment of the spill and the reduction of environmental damages. Title 30 C.F.R. 254.26 outlines the process for calculating the worst-case discharge for offshore facilities. The section directs operators to estimate the potential volume of oil released for a period of 30 days, as outlined in 254.26(d)(1). BOEMRE officials said the period defined in the Code is based on the longest suspected period for a potential blowout.

The Code recognizes the sources of potential discharges without consideration for cause. OSRPs are not required and do not contain specific measures to deal with the source of a spill. Operators may possess the technical expertise to identify and repair the source of the spill, but these procedures are not clearly delineated.

The apparent failure of *Deepwater Horizon's* blowout preventer has drawn attention to the need to better prepare for discharge scenarios. This incident demonstrates that unpredicted discharge scenarios demand rapid and effective solutions. Consequently, industry leaders have recently committed resources to improving response capabilities.

Given the duration of flow from the *Deepwater Horizon* well, a maximum 30-day blowout period proved to be inadequate. The Bureau has initiated a review to evaluate maximum blowout periods. The National Incident Command's Flow Rate Technical Group developed an independent estimate of the amount of oil flowing from the *Deepwater Horizon* well during the leak. The group employed new methods to estimate the flow, including mass balance, plume modeling, and riser insertion tube tool.

Recommendations

62. Develop policies and procedures to require detailed descriptions of containment and control measures for the source of possible spills and determine where to incorporate these measures, either in the OSRP or elsewhere in the permitting process.

63. Review calculations for worst-case discharges, with input from the Flow Rate Technical Group, and make recommendations for changes to 30 C.F.R. 254.47, as appropriate.

64. Conduct additional research on containment and control measures to determine appropriate requirements for containing oil discharge at the source.

Chapter 7: Employee Survey Responses

Overview

In June and July 2010, the OIG conducted two online surveys of the workforce in BOEMRE's oil and gas program. The purpose was to learn from frontline personnel which processes and procedures they believe are working well and which need improvement. The first survey covered employees with inspection and enforcement responsibilities, while the second covered personnel with responsibilities in environmental and cultural resource protection activities.

The employees who responded to the survey questions also provided nearly 2,500 narrative comments. These comments provided valuable insight into the oil and gas program and helped us shape our conclusions. The summaries and charts in the following pages present the results from both surveys. For the inspection and enforcement survey, we provide the charts from the inspector workforce, as well as results from the larger body of employees. Both are included because the responses sometimes differed between the two groups.

The totals in the charts may not add to 100 percent due to the rounding effect.

Introduction

We sent 199 surveys to BOEMRE personnel who are responsible for inspection and enforcement activities throughout the Country. Of those, 126 respondents completed the survey — a 63 percent response rate. Nearly three-quarters of those who responded were inspectors, supervisory inspectors, petroleum engineers, or supervisory petroleum engineers — the target audience for this survey. The remainder worked in other supervisory positions, support staff/analysts/ technicians, scientists, and structural engineers. Nearly half were BOEMRE veterans of 10 or more years.

Summary of Inspection and Enforcement Responses

Over 60 percent of the respondents agreed that the BOEMRE inspection/enforcement program is operating effectively. Notable concerns included the quality of leadership and poor communication from the National Office, need for more experienced inspectors, availability of training for new staff, and emphasis on the quantity of inspections versus their quality. Respondents also expressed concern that the program is "too cozy" with industry, that it lends itself to the appearance of impropriety; and that INCs are unnecessarily rescinded due to favoritism to some operators. Recommendations included conducting electronic inspections with laptops, developing a more comprehensive database for the collection of data and scheduling of inspections, and establishing teams to perform more quality inspections. Survey results also

included numerous suggestions for a national inspector training program with formal certification and annual mandatory training.

Some respondents do not feel they have the backing of upper levels of management, particularly in the writing of INCs. Their comments addressed the appearance of favoritism to larger companies and/or companies that employ former BOEMRE employees. Of particular concern were respondent expressions of fear of interference or retaliation, the lack of support by management regarding INCs, and the amount of time consumed while fighting rescissions. A recommendation was made for training on INC preparation.

Some respondents expressed concern with current regulations used for inspections, stating that there are too many waivers/departures issued to the operators. Some also stated that regulations do not have enough "teeth" to allow inspectors to enforce necessary issues yet provide sufficient flexibility to make scientific judgments on a case-by-case basis. A number of respondents requested training on enforcement of these regulations and felt that regulations should be more thorough. Specifically, they felt that recommendations should include specific inspection areas, as well as have more depth. Survey respondents also recommended the use of electronic monitoring of real-time data from offshore platforms/drilling rigs to ensure conformance to regulations and approved plans/permits/applications. Several respondents suggested that penalties be increased and linked to inflation to make them more than just an "operating expense" to the operators.

Multiple respondents also noted that inspection forms were outdated and lacked organization and substance and that important safety issues were not captured. They also requested training in the proper completion of inspection forms. Another suggestion made was the inspector should have the latitude to determine a satisfactory amount of time to correct a deficiency.

A majority of respondents felt that unannounced inspections are an effective enforcement tool, that they should be conducted more frequently, and that they be based on various factors rather than on quotas. The primary concern was the need for pilots to radio ahead due to DHS directives, thereby eliminating the surprise factor of these visits. Several respondents commented that they have witnessed operators making corrections when they saw the helicopter about to land. One recommendation was to develop better methods of monitoring activities to ensure conformance with regulations and approved plans/permits/applications, specifically, to electronically monitor real-time data from offshore platforms and drilling rigs.

Slightly less than half of respondents agreed that the Safety Award for Excellence (SAFE) Award Program encourages operators to comply with safety regulations. They believe, however, that the current award program impacts their ability to write INCs. Several said that they believe favoritism is shown to companies who

employ former BOEMRE employees. Recommendations were made to consider variables other than INCs in the award criteria; establish a Web site where the public could see an "operator report card" that would include such things as the number of INCs, accidents, and history of previous violations; and publicly announce awards to illustrate that the industry works safely and within compliance. Nearly one-third of respondents believe that it is not appropriate for BOEMRE to continue administering the SAFE Award Program.

Overwhelmingly, surveyed BOEMRE employees felt they had received sufficient ethics training, with many receiving that training in the last 2 years. They suggested consideration of face-to-face training every other year or once every 3 years, with opportunity for staff to discuss specific ethical challenges. There was a suggestion that the rules be applied fairly and consistently. Eleven percent of survey respondents still believe the acceptance of gifts and gratuities remains prevalent throughout BOEMRE.

When asked about the strengths of the BOEMRE inspection/enforcement program, survey respondents focused on four areas:

1. **People:** The number one response to this question was that the people who work for the BOEMRE inspection/enforcement program are its strength.

   They are frequently complimented on their knowledge, experience, dedication, and commitment; do more with less; and are hard-working, professional, conscientious, and well-trained. They also believe in the BOEMRE mission and their roles in protecting the environment, and want to make a difference.

2. **Management:** Several comments emphasized the strength of the BOEMRE Inspections and Evaluations Program management staff, particular the effectiveness of management communication and support.

3. **Protecting the Waters/Safety:** BOEMRE staff are focused on keeping the Nation's waters safe and take their role seriously in making this a reality. They are proud of the cradle-to-grave nature of the BOEMRE program and their ability to encourage most companies to operate in a safe manner, thereby saving lives and protecting the environment. They believe that BOEMRE is the Government's eyes in the field and that more accidents would occur if not for the Inspection and Enforcement Program. Several powerful comments were made:

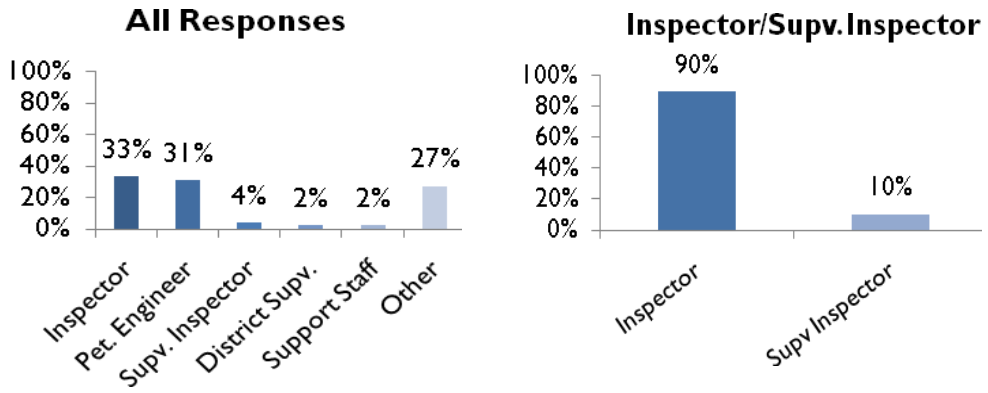
   "We are needed in the oil and gas industry. No matter what we are made to look like in the public eye through the media and government officials, we protect this industry. The amount of safety we provide to protect the workers and the environment seems to have been forgotten in the last few months."

"We remain a strong team that has the safety of the operators offshore, and the environment in mind when we do an inspection."

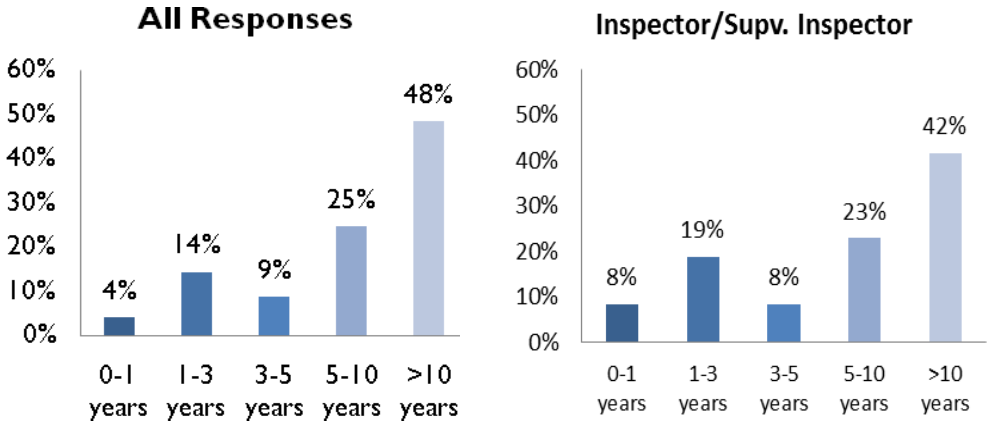
4. **Enforcement:** BOEMRE employees also take pride in their enforcement role and the impact of that role in the protection of the Nation's waters. They believe the regulations are effective when enforced and followed and know they are "keeping industry in a state of readiness because they never know when BOEMRE may show up."

Survey of BOEMRE Inspection and Enforcement Personnel

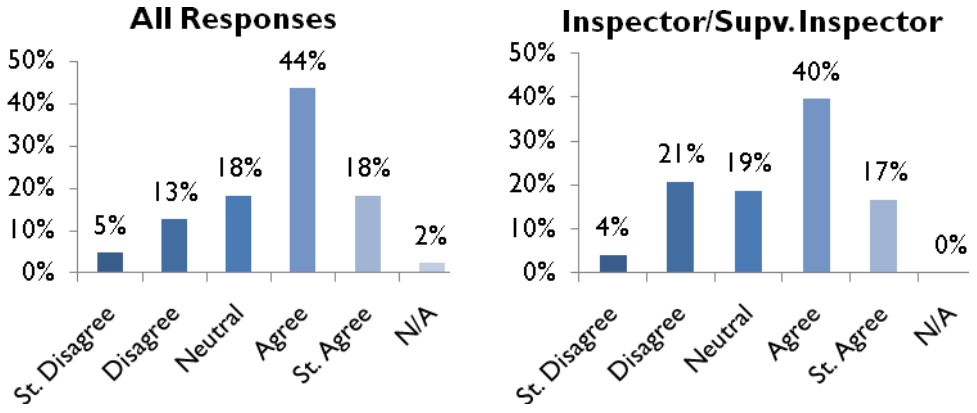
Please identify your position.



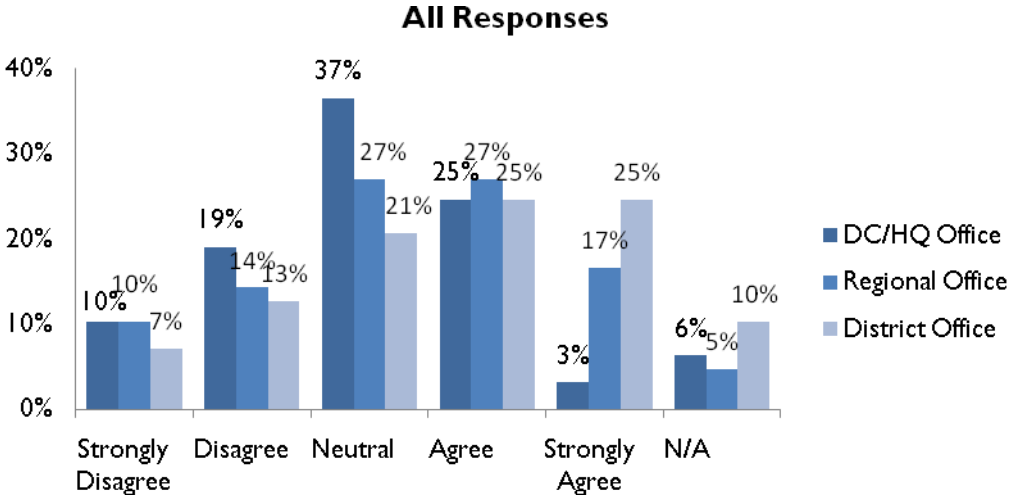
How long have you worked in the BOEMRE inspection and enforcement program?

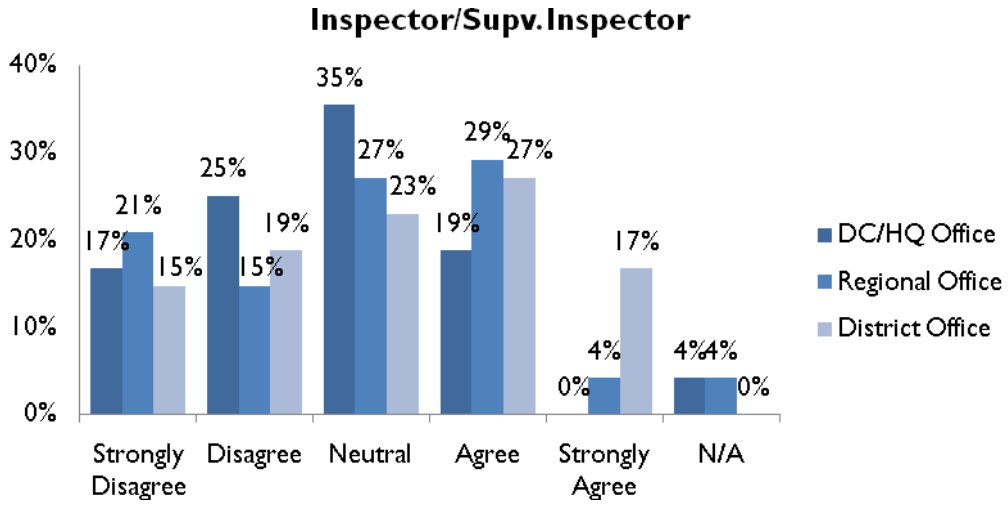


Overall, the BOEMRE inspection/enforcement program is operating effectively.

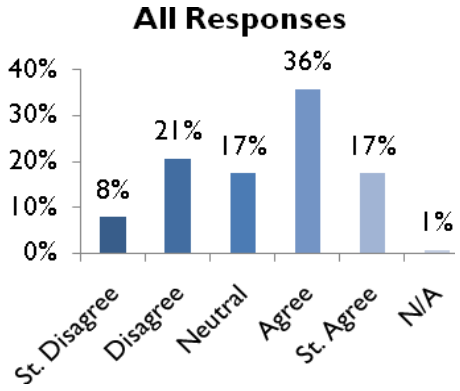


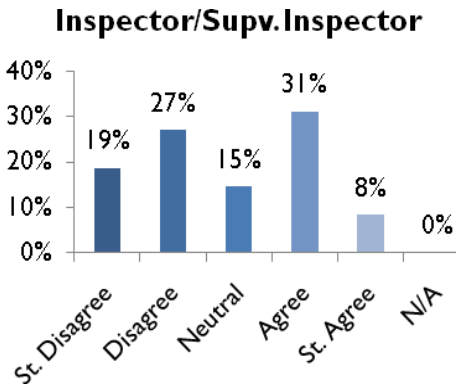
At the following organizational levels, management provides sufficient direction and support for the BOEMRE inspection/enforcement program:



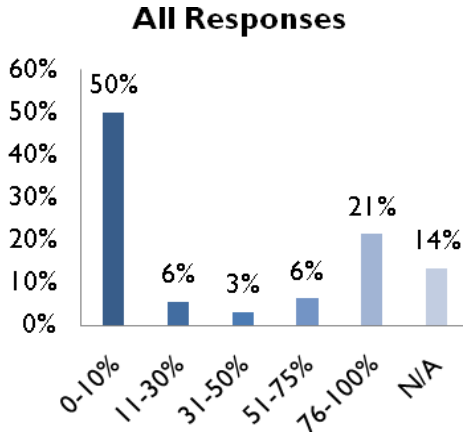


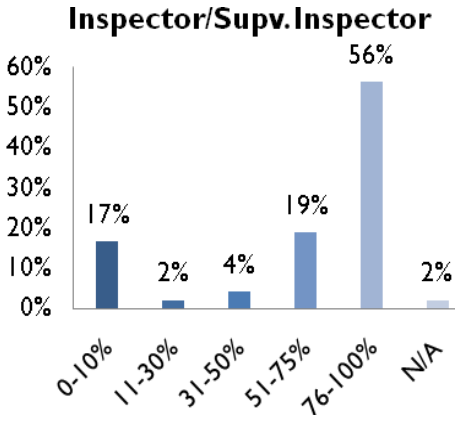
I have received sufficient training to perform my job duties.



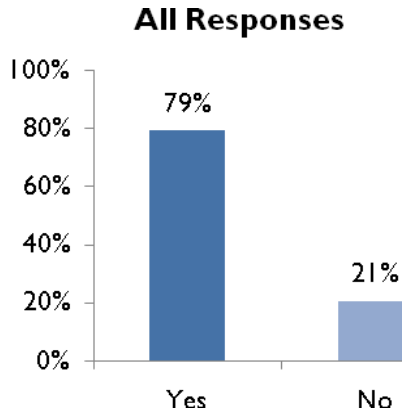


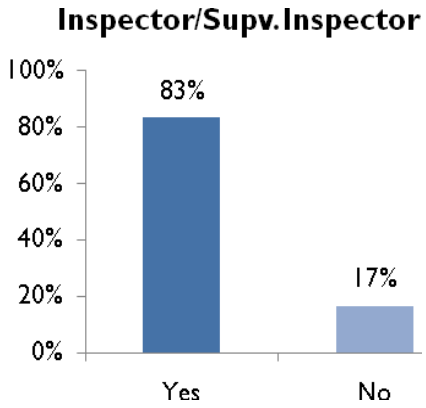
On average, what percent of your work week is spent conducting on-site inspections?



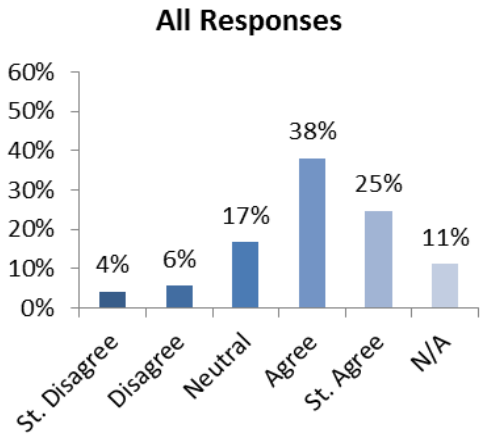


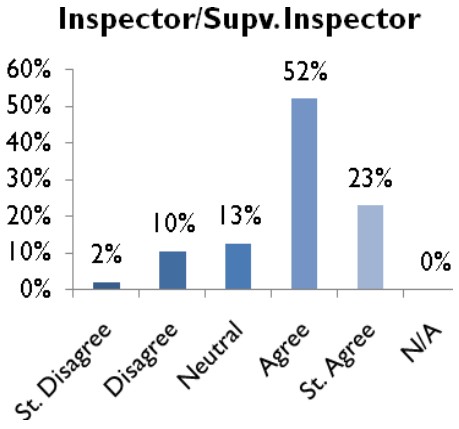
Do you consider this sufficient?



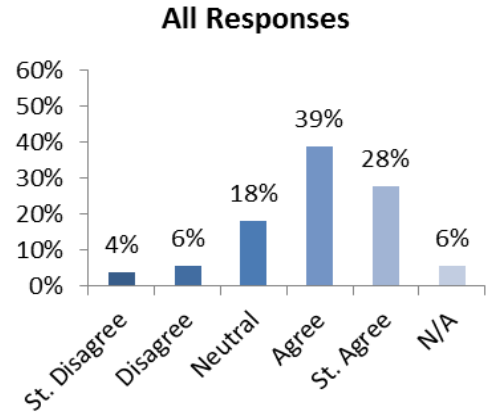


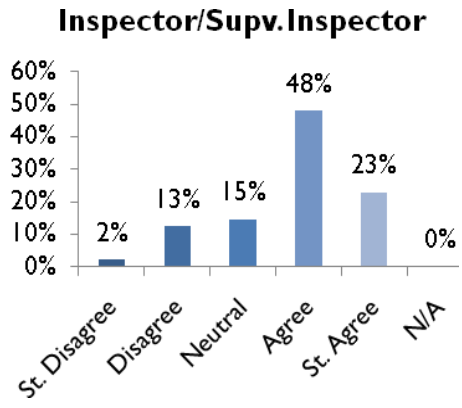
Incidents of Non-Compliance (INCs) and other enforcement actions issued by my office are timely and appropriately resolved to ensure compliance.



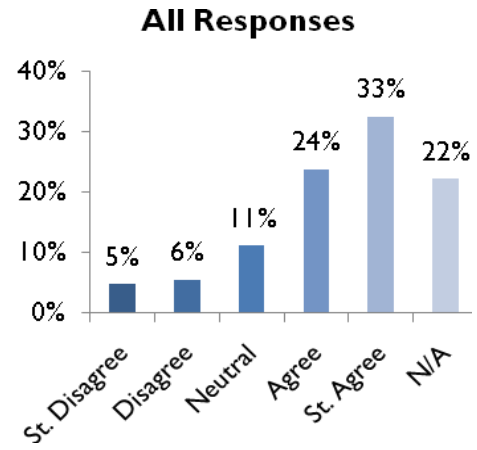


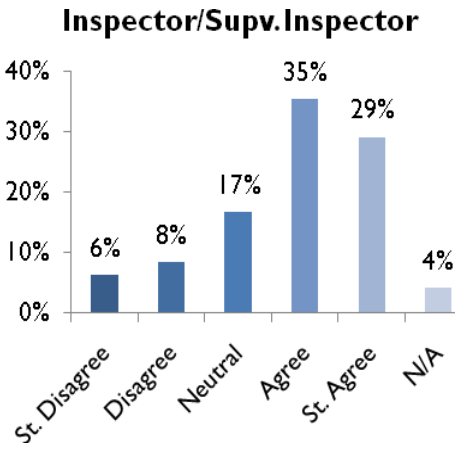
BOEMRE enforcement actions are fair and objective.



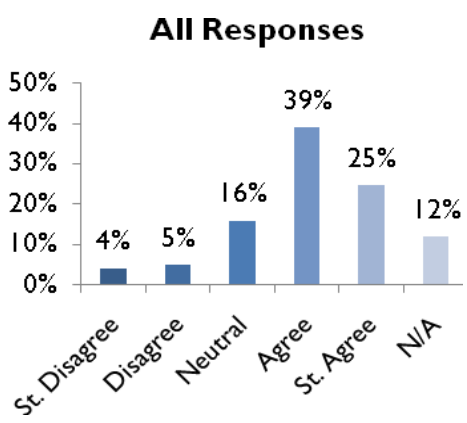


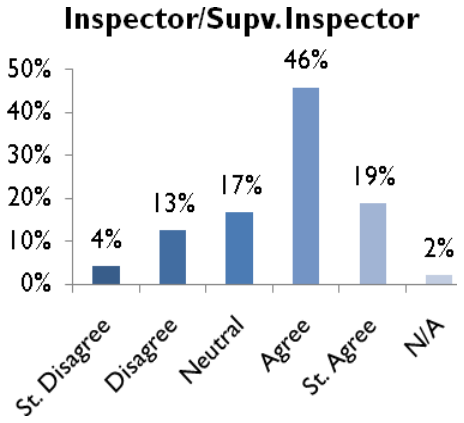
I issue INCs without interference or retaliation from BOEMRE employees, managers/supervisors, and/or operators.



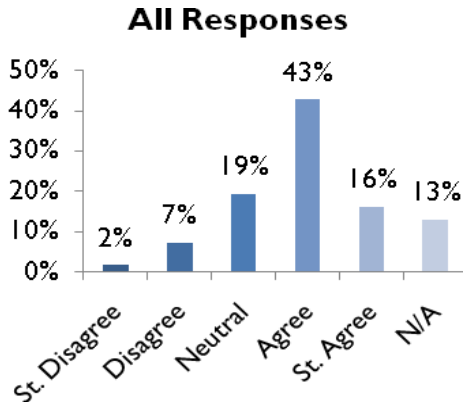


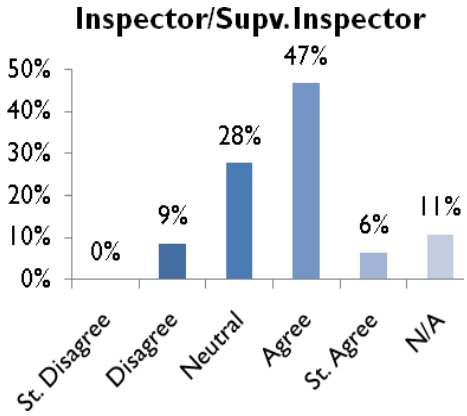
After issues have been identified through the inspection process, all necessary follow-up is conducted to ensure operator compliance.



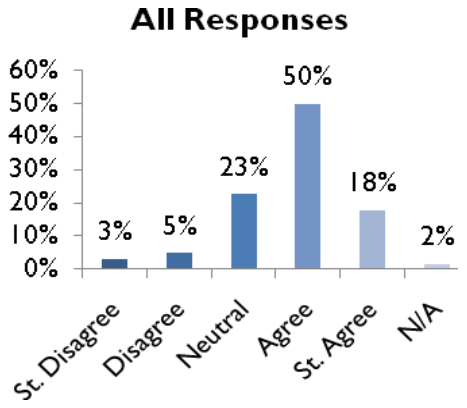


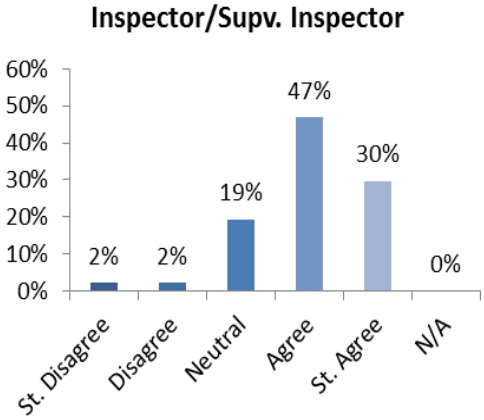
A desk INC is an effective enforcement tool.



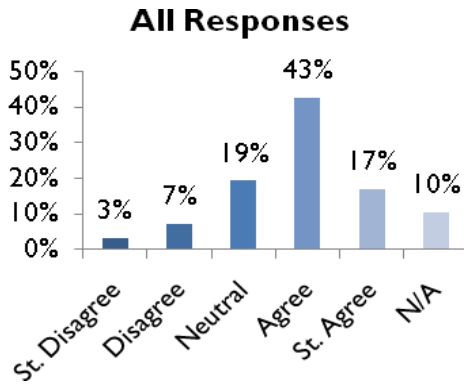


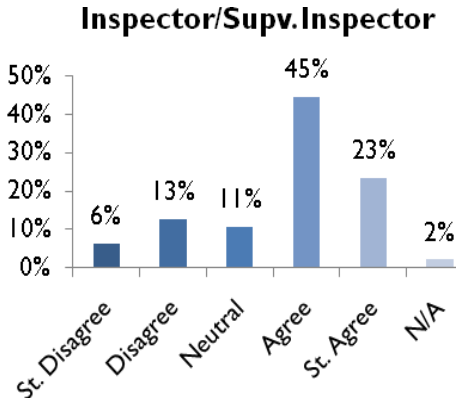
The current BOEMRE regulations ensure that OCS drilling and production platforms operate safely.



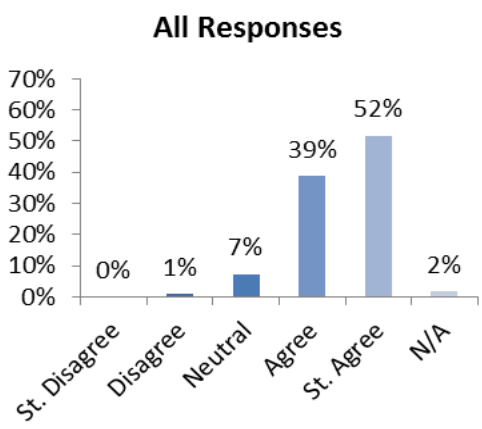


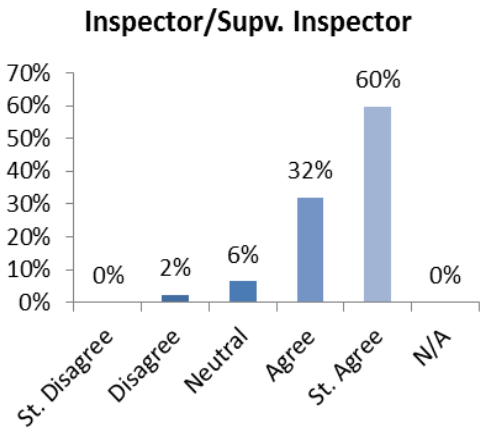
The inspection forms used by BOEMRE inspectors adequately capture the violations that are identified in the field.



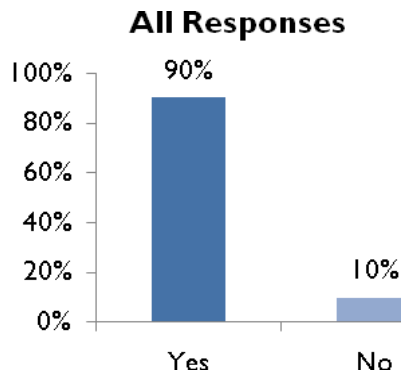


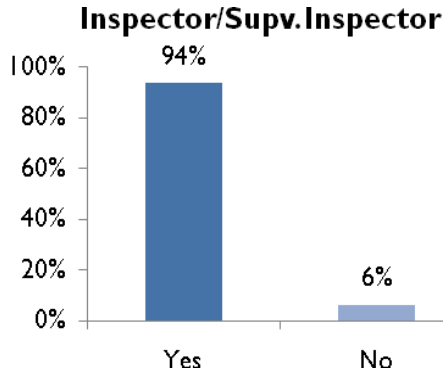
Unannounced inspections are an effective enforcement tool.



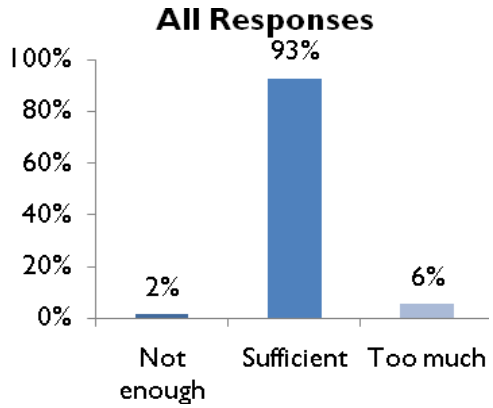


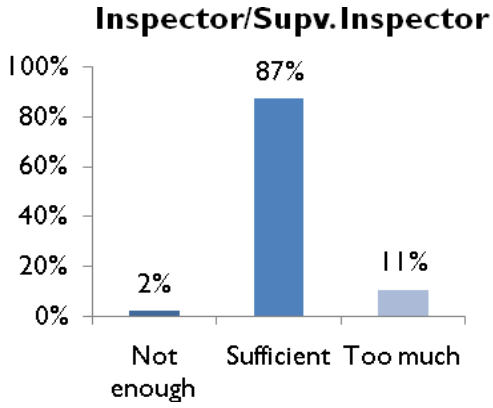
Unannounced inspections should be conducted more frequently.



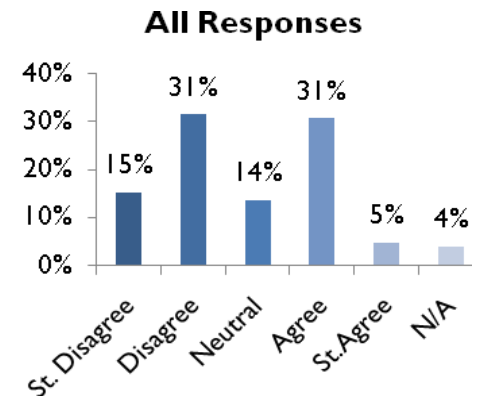


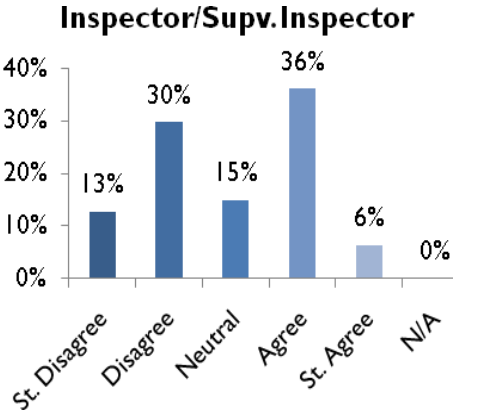
The amount of time BOEMRE provides operators to correct identified deficiencies is:



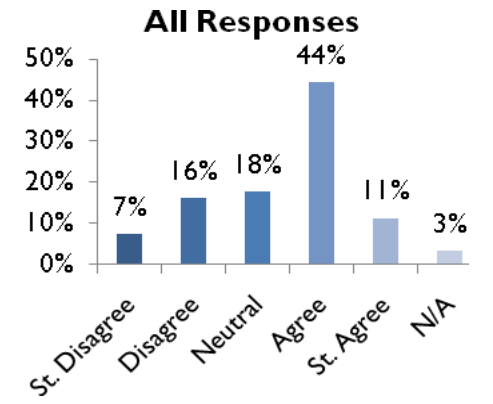


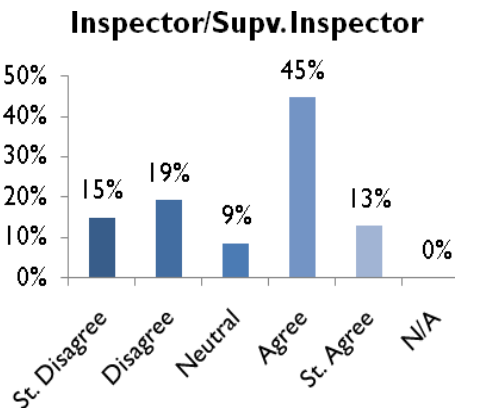
There are enough inspection/enforcement personnel in my office to adequately manage the workload.



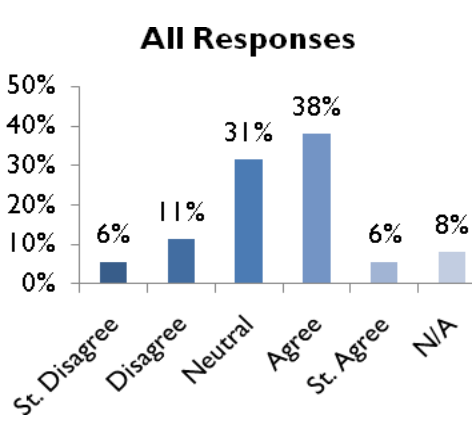


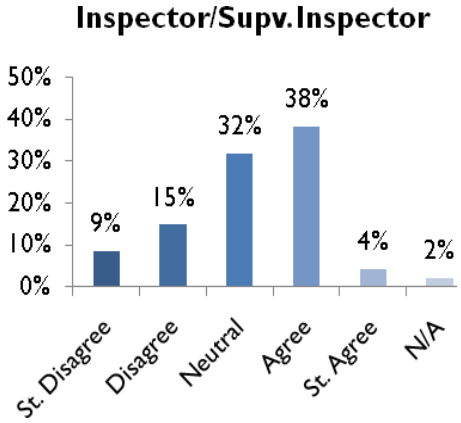
Current enforcement tools and penalties (e.g. INCs and civil penalties) are sufficient to deter operators from violating BOEMRE regulations.



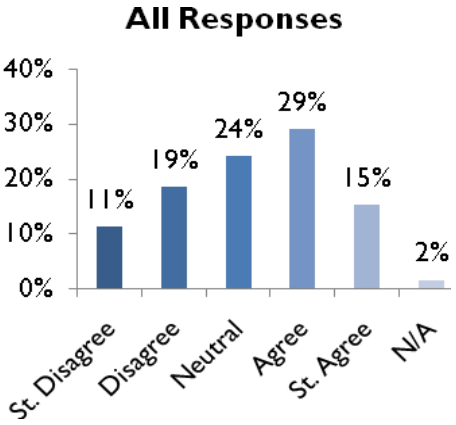


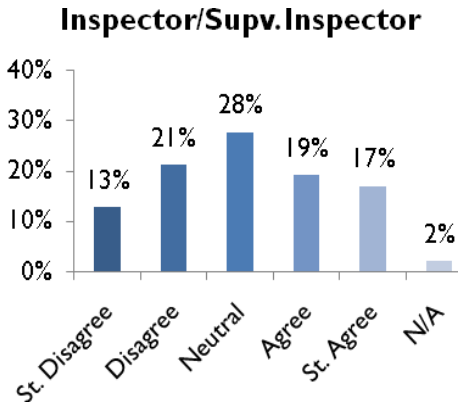
Inspection program information entered into the Technical Information Management System (TIMS) is accurate, complete and provides useful information for inspectors/enforcement personnel and managers.



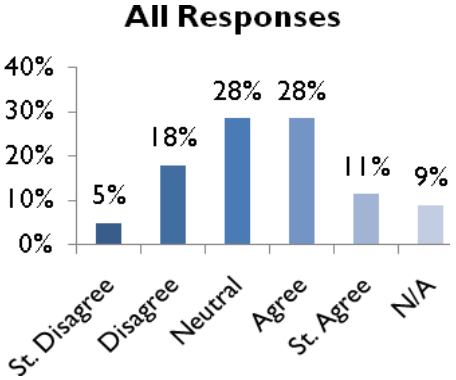


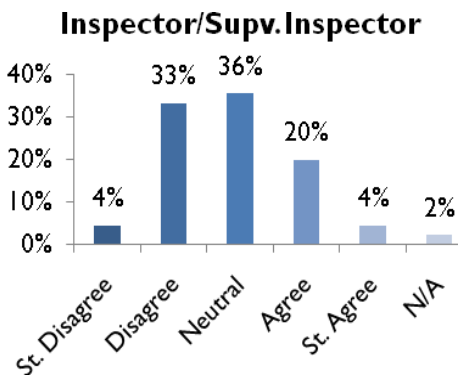
The BOEMRE SAFE award program encourages operators to comply with safety regulations.



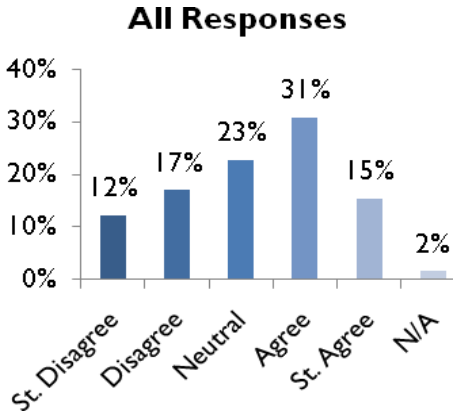


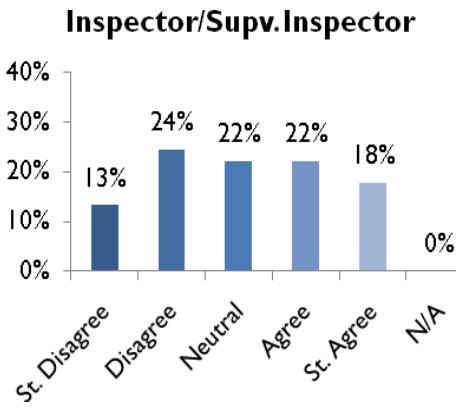
The SAFE award program is administered fairly by the BOEMRE.



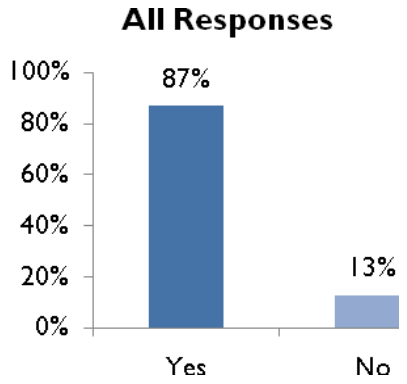


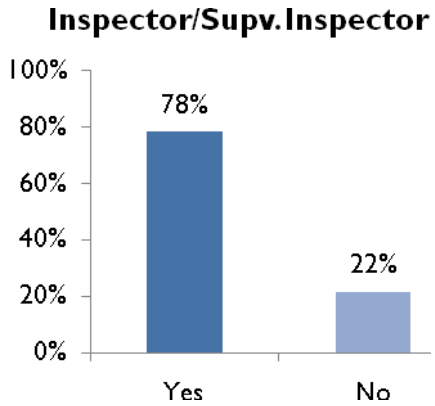
It is appropriate for BOEMRE to administer an awards program for industry.



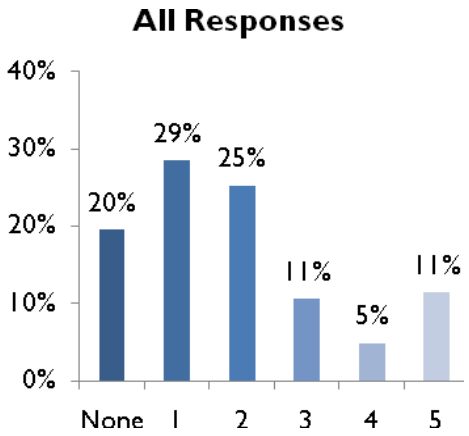


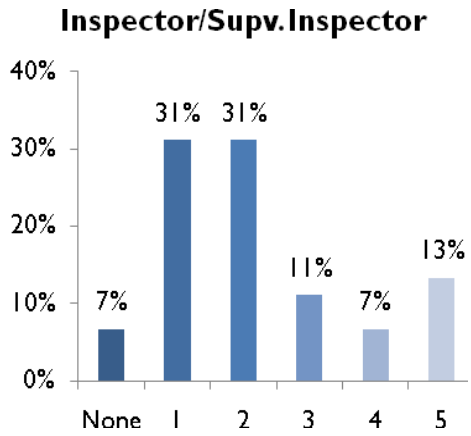
Do you believe you receive sufficient ethics training?



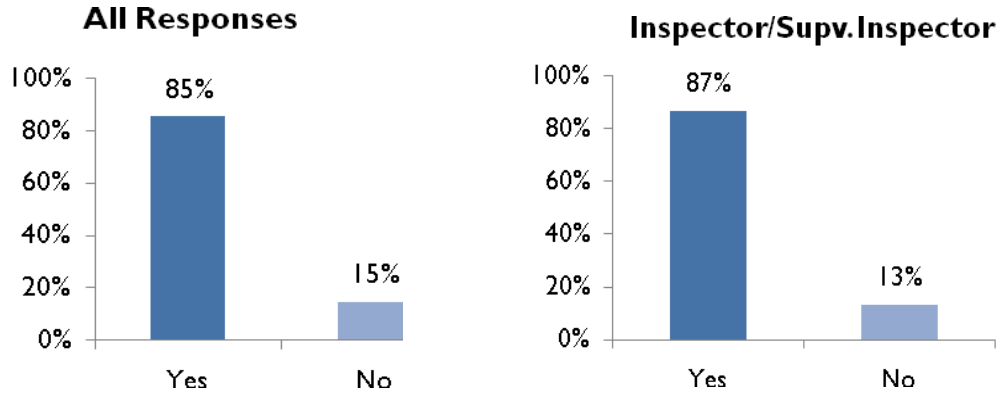


In the last 5 years, how many times have you received ethics training that was not computer-based?

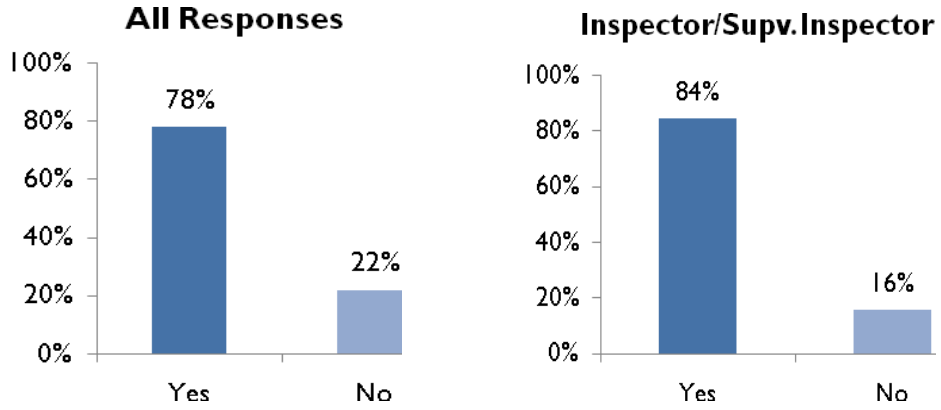




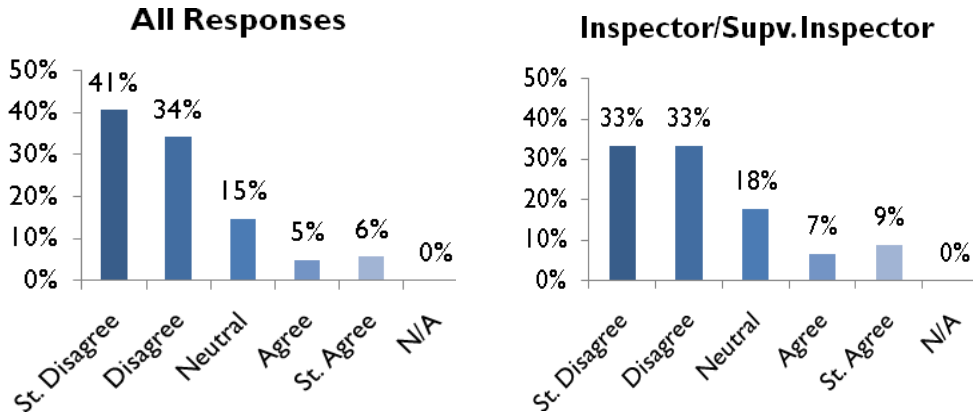
Does the Department provide sufficient oversight on ethics related to gifts and gratuities?



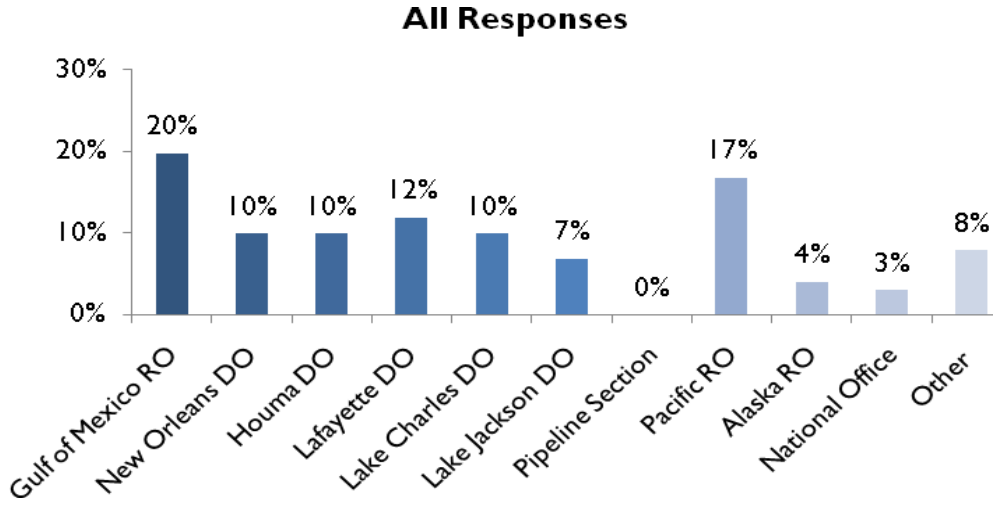
Does the Department provide sufficient oversight on conflicts of interest?

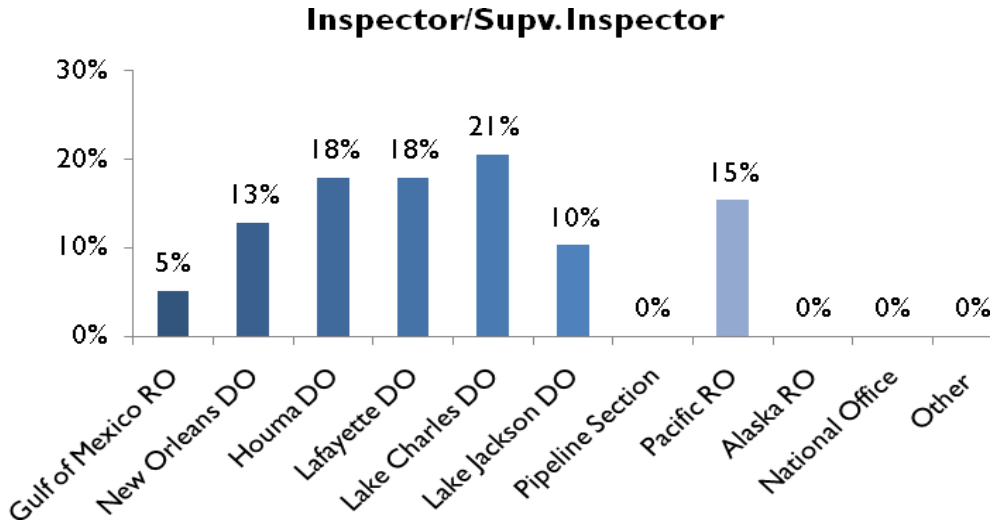


With the recent publicity of ethical lapses, I believe the acceptance of gifts and gratuities is prevalent throughout BOEMRE.



Which office are you assigned?





Summary of Environmental and Cultural Resource Protection Responses

In June 2010, we sent 193 surveys to BOEMRE personnel responsible for environmental and cultural resource protection on the OCS and received responses from 109 employees — a 56.5 percent response rate. Almost two-thirds of respondents were scientists or environmental protection specialists. The remainder were supervisors/managers, support staff/analysts, or those who chose not to provide their job title. Thirty-nine percent of respondents work in the Gulf of Mexico Regional Office, with others working in the Alaska Regional Office, the Pacific Regional Office, and the National Office. For more than 10 years, 35 percent have worked in the Environmental Section while more than half of the respondents have worked in that Section for at least 4 years.

In general, respondents were positive about BOEMRE's efforts to protect the environment. Nevertheless, many survey questions received a significant number of negative responses. For example, nearly 70 percent of respondents either agreed or strongly agreed with the statement, "Overall, BOEMRE ensures that drilling and production activities protect the environment and cultural resources." Those that disagreed primarily cited a lack of independence and authority when dealing with operators. They most commonly complained that BOEMRE's FO Division, which deals directly with operators, takes a pro-development, industry-minded stance on environmental issues, thus preventing environmental staff from being fully effective. Respondents repeated the concern throughout the survey that FO was too pro-industry. Other common themes were a lack of an enforcement mechanism, no follow-up or monitoring of industry after initial NEPA action, inadequate resources (especially staff), and management interference with scientific processes/conclusions.

Respondents' primary complaint with FO was that environmental staff is barred from communicating with operators without going through FO. This effectively gives FO veto power over any action recommended by environmental staff. Many respondents wrote comments saying that FO employees rejected anything that they deemed too burdensome or costly to industry, even if environmental staff felt the action was necessary to prevent damage to the environment or cultural resources.

Some respondents complained that the Environmental Section lacked "teeth," that is, that the office needs the ability to issue INCs with stronger penalties and to shut down operators in extreme incidences of noncompliance. Presently, NEPA analysis is done and mitigation steps are developed. Operators self-report all information on what actual steps are taken. The information is typically filtered through FO. Environmental staff members have no way to ensure that operators are actually carrying out the steps as designed.

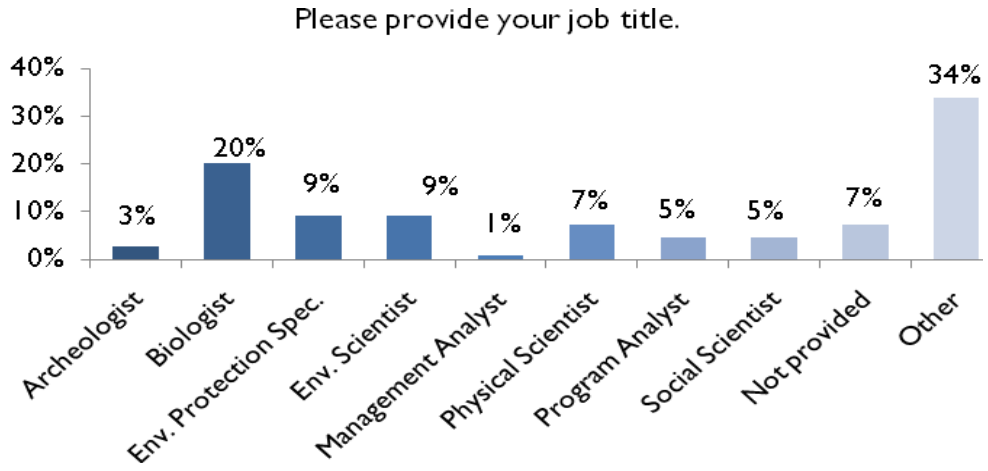
Respondents also commented on insufficient resources to carry out their mission. This included technology, funding, and staffing. Comments like "Significantly staff up!" appeared periodically. Respondents frequently complained about being overburdened, as well: "Staff are overcommitted and cannot perform duties to their highest levels due to a continuous stream of new crises and higher priority assignments." Some went as far as to attribute the cause of staff shortages to high turnover due to low morale and the subsequent waiting period before an empty position is actually filled.

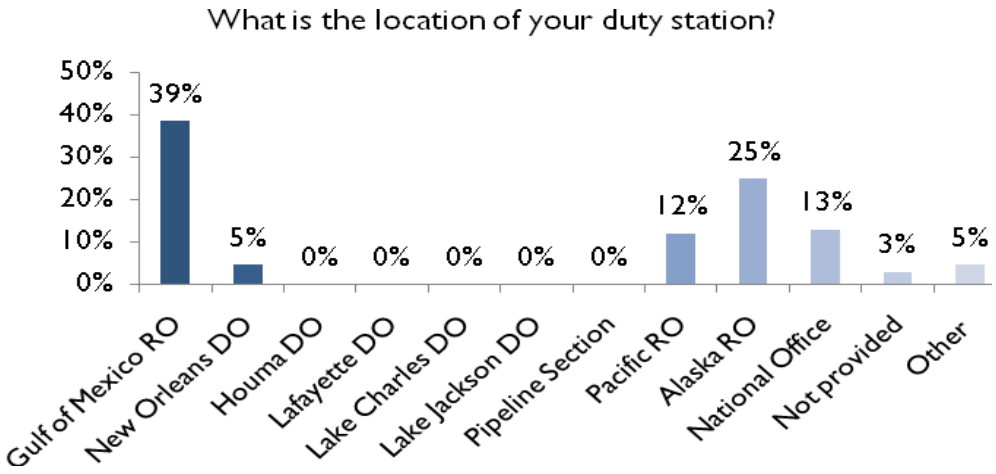
Finally, some respondents felt that management interferes too much with their work. Nearly 20 percent of respondents claimed that they have had their scientific work suppressed, ignored, manipulated, and/or distorted at some point in their careers. Comments on this question indicate that respondents believe the interference is often because their recommendations would cause a "burden to industry."

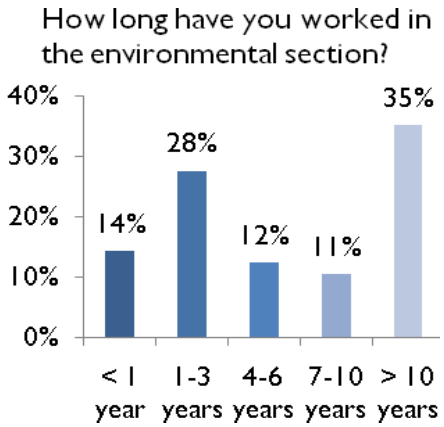
Only one question produced a mostly negative response, “Does the environmental section possess sufficient authority to ensure its determinations are implemented?” On other statements, such as “Current enforcement tools and penalties (e.g., INCs and civil penalties) are sufficient to deter operators from harming the environment and cultural resources,” a majority of respondents responded “Neutral” or “N/A.” “Disagree” or “Strongly Disagree” responses were the second highest received. Questions regarding staff competency, ethics training, and the prevalence of improper gifts all received overwhelmingly positive results. That is, BOEMRE employees believe that the current workforce is extremely competent, that they are well trained in ethics issues, and that respondents felt that the improper acceptance of gifts and gratuities is rare within the Bureau.

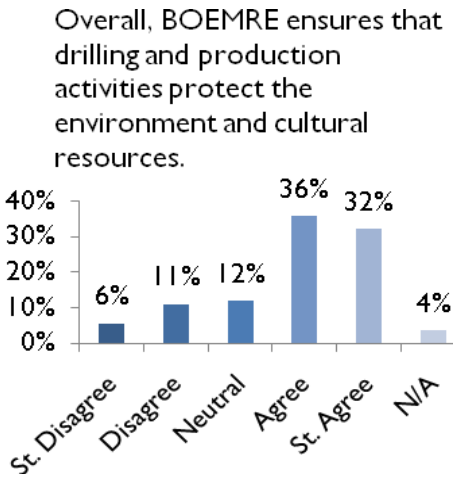
Overall, respondents appeared to feel that BOEMRE is functioning reasonably well. The negative comments regarding the primary issue areas of enforcement authority, interference from FO/management, and inadequate staffing, however, were repeated frequently.

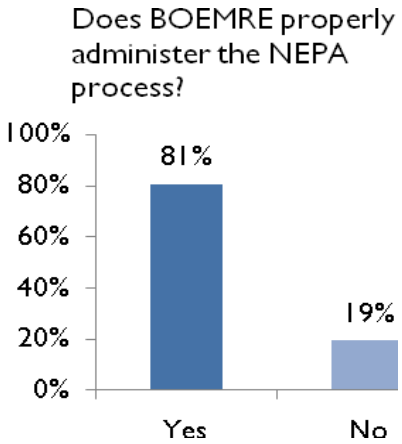
Survey of Environmental and Cultural Resource Protection Personnel

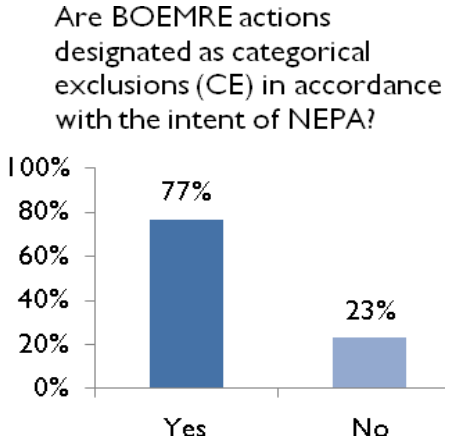



What is the location of your duty station?
50%
40%
30%
20%
10%
0%
39%
5%
0%
0%
0%
0%
0%
12%
25%
13%
3%
5%
Gulf of Mexico RO
New Orleans DO
Houma DO
Lafayette DO
Lake Charles DO
Lake Jackson DO
Pipeline Section
Pacific RO
Alaska RO
National Office
Not provided
Other

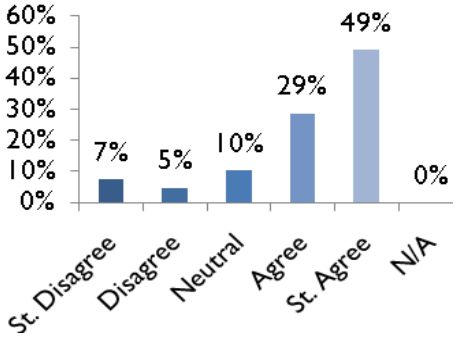

How long have you worked in the environmental section?
40%
30%
20%
10%
0%
14%
28%
12%
11%
35%
< 1 year
1-3 years
4-6 years
7-10 years
> 10 years


Overall, BOEMRE ensures that drilling and production activities protect the environment and cultural resources.
40%
30%
20%
10%
0%
6%
11%
12%
36%
32%
4%
St. Disagree
Disagree
Neutral
Agree
St. Agree
N/A

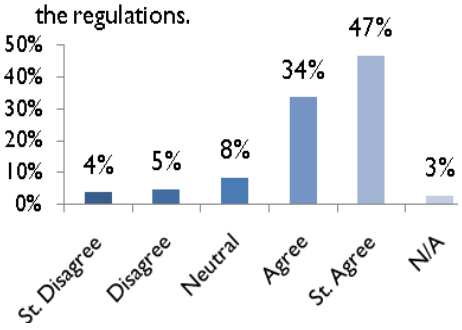

Does BOEMRE properly administer the NEPA process?
100%
80%
60%
40%
20%
0%
81%
19%
Yes
No


Are BOEMRE actions designated as categorical exclusions (CE) in accordance with the intent of NEPA?
100%
80%
60%
40%
20%
0%
77%
23%
Yes
No

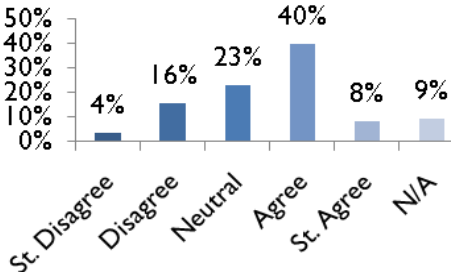
The BOEMRE personnel involved in environmental activities competently perform their duties.



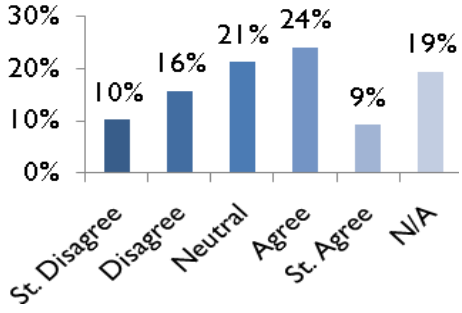
Overall, BOEMRE employees have the necessary skills to competently review and evaluate baseline environmental data to determine whether or not the applicant can meet the requirements of the regulations.



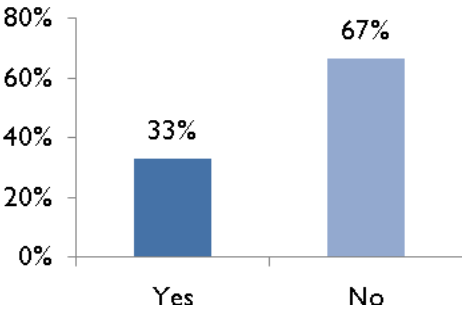
The environmental data required from applicants sufficiently helps to determine actual conditions prior to oil and gas activities.



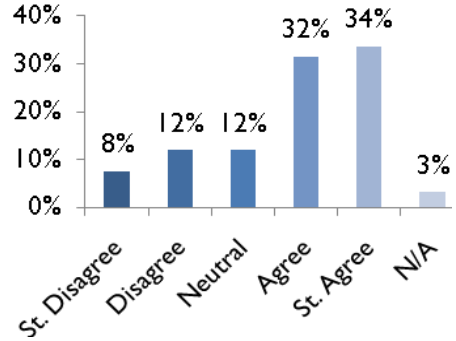
BOEMRE accurately verifies worst case oil spill scenarios for approval of submitted Oil Spill Response Plans.



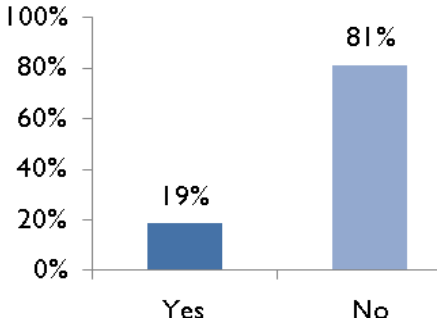
Does the environmental section possess sufficient authority to ensure its determinations are implemented?



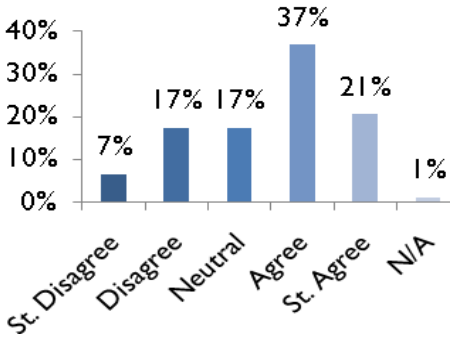
Scientific integrity is maintained throughout the decision-making process employed by BOEMRE



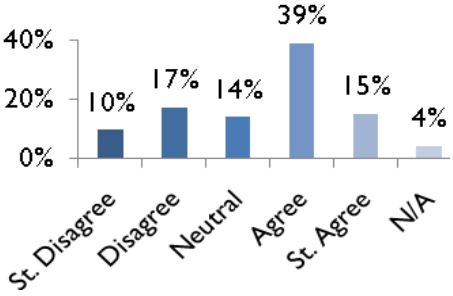
Have any of your scientific determinations been suppressed, ignored, manipulated, and/or distorted?



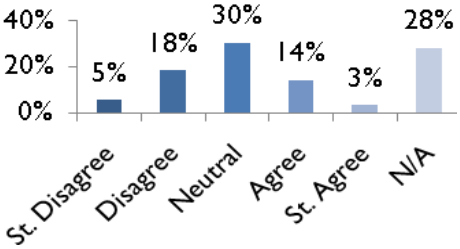
The current structure of BOEMRE allows scientists to fulfill their responsibility to serve the public interest.



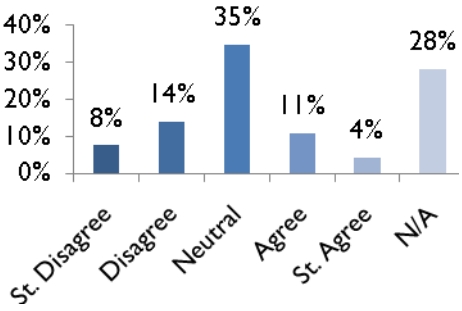
BOEMRE mitigation measures are strong enough to protect against potentially harmful actions by operators.



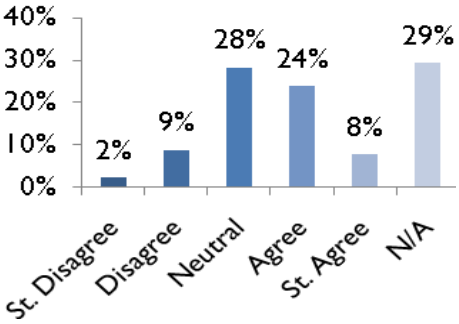
The processes for issuing and resolving INCs for environmental and natural resource issues are satisfactory.



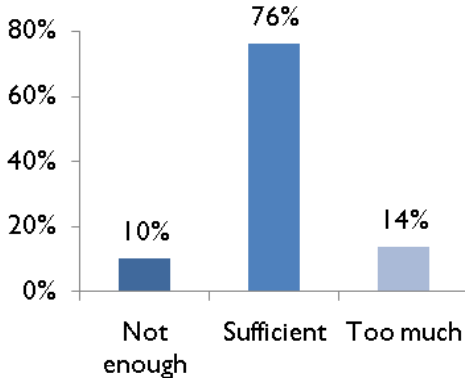
After environmental compliance issues have been identified, all necessary follow-up is conducted to ensure operator compliance.



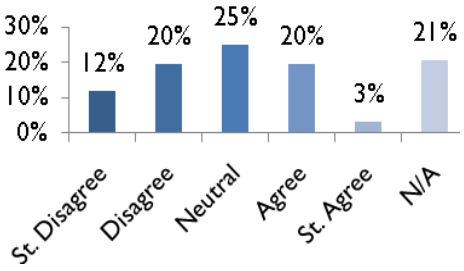
BOEMRE environmental enforcement actions are fair and objective.



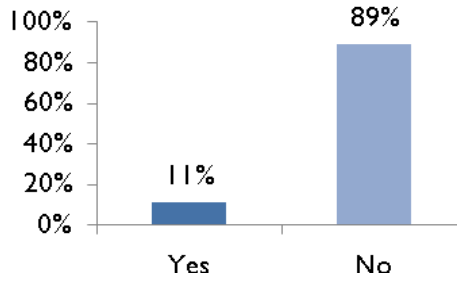
The amount of time BOEMRE provides operators to correct identified deficiencies is:



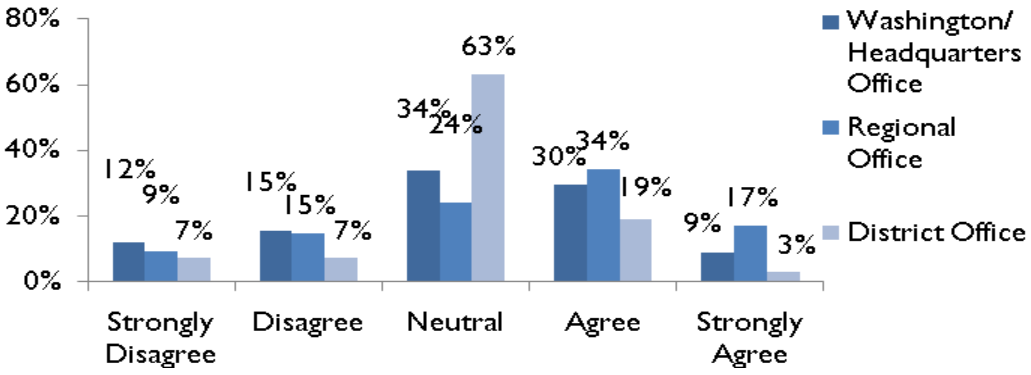
Current enforcement tools and penalties (e.g. INCs and civil penalties) are sufficient to deter operators from harming the environment and cultural resources.



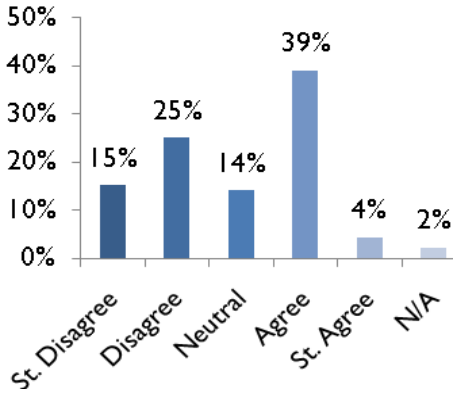
Have you experienced interference in regard to environmental and natural resource enforcement actions?



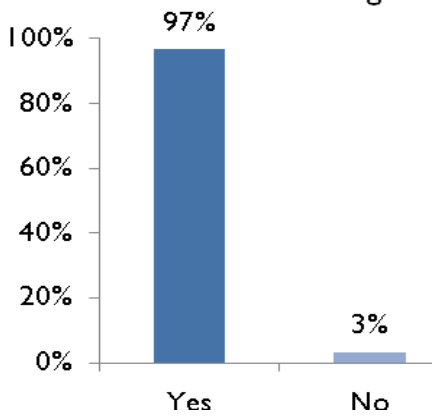
Management provides sufficient direction and support for the BOEMRE environmental sections from the:



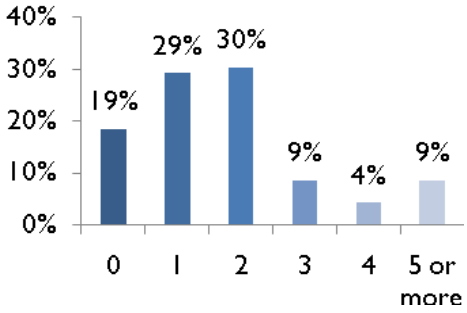
My section is adequately staffed to manage the workload.



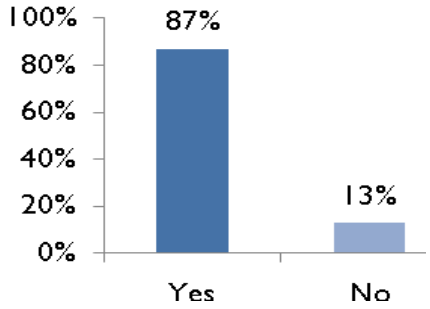
Do you believe you receive sufficient ethics training?



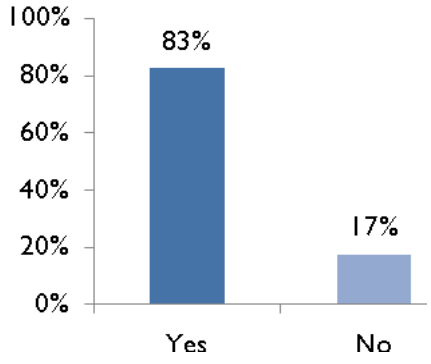
In the last 5 years, how many times have you received ethics training that was not computer-based?



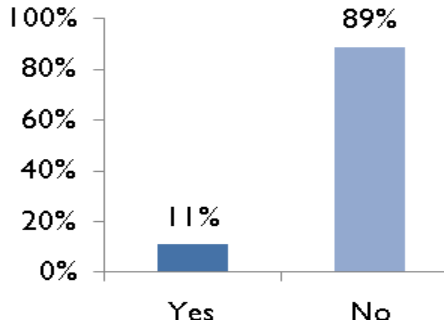
Does the Department provide sufficient oversight on ethics related to gifts and gratuities?

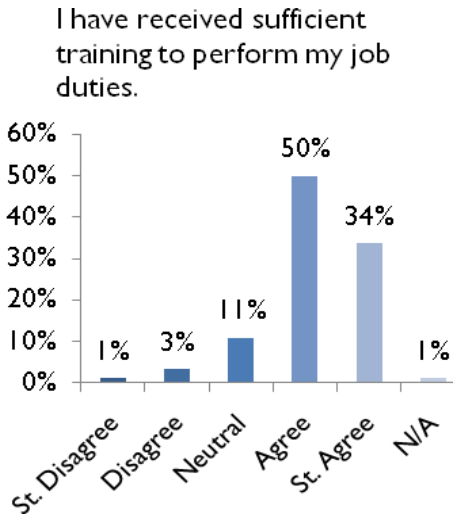


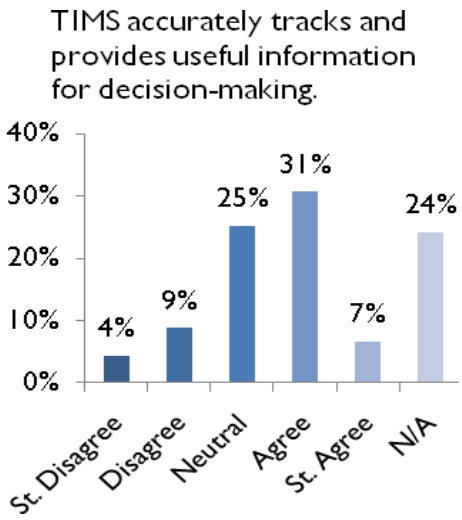
Does the Department provide sufficient oversight on conflicts of interest?



The improper acceptance of gifts and gratuities is prevalent throughout BOEMRE.




I have received sufficient training to perform my job duties.
60%
50%
40%
30%
20%
10%
0%
1%
3%
11%
50%
34%
1%
St. Disagree
Disagree
Neutral
Agree
St. Agree
N/A


TIMS accurately tracks and provides useful information for decision-making.
40%
30%
20%
10%
0%
4%
9%
25%
31%
7%
24%
St. Disagree
Disagree
Neutral
Agree
St. Agree
N/A

Appendix 1: Recommendations

The 64 recommendations in this report are summarized below. In the list, 55 of the recommendations were also contained in the OCS Safety Oversight Board's report issued on September 1, 2010. The Board made four other recommendations that are not included here because we either did not perform the analytical work associated with those recommendations or because the recommendations have been addressed elsewhere in this report. Further, we are making nine new recommendations (notated with *), based on additional work and analysis performed by the OIG.

Chapter 1: Permitting

1. Review permit staffing needs in the GOM district and regional offices to ensure that staffing levels and breadth of expertise are commensurate with increasing workloads.

2. Develop a succession plan for BOEMRE staff in all regions.

3. Develop a comprehensive and current handbook to compile and standardize policies and practices designed to assist permit reviewers in carrying out their responsibilities.

4. Review and revise the permit review protocols to ensure that: (a) permit requests from operators and district responses are documented promptly and properly; (b) BOEMRE engineers have appropriate access to permit databases after hours; and (c) procedures are established that prevent "engineer shopping" by operators.

5. Reexamine after-hours permit review services, the means by which any such services should be provided (e.g., on-call, permanent staff), and the feasibility of limiting its use by requiring operators to submit non-emergency requests and requests that could be reasonably anticipated during normal business hours.

6. Develop procedures for reviewing departure requests that would standardize the process and ensure operators justify the requests based on concerns for well control; properly developing a lease; conserving natural resources; or protecting life, property, or the marine, coastal, or human environment.*

7. Reevaluate departures previously or routinely granted to ensure that they can be justified according to the criteria for departures.*

Chapter 2: Inspections

8. Compile a comprehensive and current handbook of all policies and practices designed to assist inspectors in carrying out their responsibilities.

9. Develop an inspection program with strong representation at all levels of the Bureau. The program should facilitate good intra-agency communication in order to promote consistency, effectiveness, and efficiency and should provide strong support to the front-line inspectors.

10. Evaluate the advantages of rotating inspectors among districts and regions.

11. BOEMRE should undertake comprehensive workforce and workload analysis of the inspection program, including succession planning, anticipated workload needs, and increased capacity, and implement appropriate recommendations.

12. Revisit the inspection strategy to identify sufficient inspection coverage, including reassessing the risk-based and self-inspection approaches.*

13. Clarify the criteria for what constitutes unannounced inspections. Review and clarify the current policies under which unannounced inspections can be performed, including the U.S. Coast Guard MARSEC restrictions, and special notification arrangements with certain companies, so that unannounced inspections can be conducted to the greatest extent practicable.

14. Identify critical operations conducted on all BOEMRE regulated facilities, and require that operators notify the Bureau about the timing of these operations so that inspectors can view operations first hand to the greatest extent practicable.

15. Examine the viability of performing multi-day inspections of critical operations on rigs and platforms.

16. Evaluate the advantages of conducting inspections in two-person teams instead of individually.

17. Conduct advanced planning of inspections to allow inspectors time to prepare for each inspection and ensure efficient use of resources.*

18. Analyze the benefits of obtaining electronic access to real-time data transmitted from offshore platforms/drilling rigs, such as operators' surveillance cameras and BOP monitoring systems, and/or other automated control and monitoring systems to provide BOEMRE with additional oversight tools.

19. Update all inspection forms to ensure they reflect all aspects of the inspection and accurately reflect new technology.*

20. Analyze ways to perform inspection activities more efficiently by using current technological tools, such as online review of reports and records, and by using mobile technology in the field.

21. Information technology systems should be considered within the context of the reorganization. Specifically, BOEMRE should examine whether TIMS can be upgraded to meet business requirements and address user performance concerns by leveraging more current, web-based, user-friendly technologies together with existing tools already within the Department. BOEMRE should carefully consider factors such as speed, performance requirements, and cost-effectiveness.

22. Implement a Bureau-wide certificate or accreditation program for inspectors. Consider partnering with BLM and its National Training Center to establish a Department oil and gas inspection certification program, with training modules appropriate to the offshore environment as needed.

23. Develop a standardized training program similar to other Department bureaus to ensure that inspectors are knowledgeable in all pertinent regulations, policies, and procedures. Ensure that annual training keeps inspectors up-to-date on new technology, policies, and procedures.

24. Consider developing more subject matter experts in each of the various types of inspections within district offices.

25. Expand, to the greatest extent practicable, the sources from which BOEMRE draws inspector applicants and identify incentives to recruit and retain inspectors. Reevaluate whether inspectors can participate in the Student Loan Repayment Program and are eligible for hazard pay.

26. Develop Individual Development Plans for inspectors designed to achieve career advancement strategies. Such strategies should promote sound succession planning and foster employee development and satisfaction.

27. Develop and implement clear rules of engagement for operations that are transparent to all entities, including both BOEMRE and industry personnel, particularly relating to industry exerting pressure on inspectors.

28. Further develop ethics rules and training that reflect the unique circumstances of working in BOEMRE, with opportunities for questions and discussions.

29. Require inspectors to disclose relationships and previous employment with industry on a form similar to a financial disclosure form that is updated as conditions change or at least annually.*

30. Ensure that BOEMRE managers support and enforce established rules of engagement and ethics rules.

Chapter 3: Enforcement

31. Reevaluate the full range of enforcement actions, including INCs, civil penalties, and lease suspensions and cancellations to determine whether enforcement actions deter violations. For example, BOEMRE should consider sanctions for repeat offenders.

32. Ensure that inspectors have the appropriate technology, resources, and management support for the issuance and defense of INCs.

33. Evaluate INCs to determine which, if any, are appropriate for an automatic assessment of a fine and how much the fine should be. BOEMRE's evaluation could be informed by a review of other regulatory agencies.

34. Develop a public notification policy for INCs issued.

35. Review the civil penalty process to determine whether a civil penalty case can be completed effectively in less than the nearly one-year time period now afforded to assess a civil penalty.

36. Evaluate the rates and the structure of the civil penalty program and, if necessary, initiate the legislative or rulemaking process to ensure that penalties are appropriately tied to the severity of the violation.

37. Evaluate the use of facility shut-in authority to ensure its appropriate and effective utilization.

38. Require on-site follow-up inspections, or other forms of evidence, to document that operators have made the required corrections to INCs.

39. Improve the INC documenting and tracking system so the status and resolution of INCs are fully documented, properly tracked, and corrected.

40. Consider updating the INC form and other operational reporting documents to require operators to certify under penalty of perjury that all information submitted to the Bureau is accurate.

41. Consider changing the approval process for returning a facility or component to operation by limiting who has approval authority, creating a system for tracking approvals and disapprovals, and ensuring that all staff

who have approval authority have access to and properly use the tracking system.

Chapter 4: Environmental and Cultural Resources

42. In future institutional structures implemented through the ongoing reorganization, separate the management of environmental functions from those of leasing and development to ensure that environmental concerns are given appropriate weight and consideration.

43. Explore and encourage other processes, policies, and incentives that promote a culture of balanced stewardship and evaluate existing policies and practices that may impede the ability to achieve this balance.

44. Consider creating a review panel within BOEMRE to resolve all conflicts regarding information requests, mitigation determinations, and remediation efforts.

45. Consider giving Environmental Section supervisory staff INC approval authority for issues related to the environmental regulations they oversee.*

46. Review the adequacy of access rights to TIMS and the training of environmental staff in its use.*

47. Consider dedicating inspectors for environmental compliance.*

Chapter 5: Enhanced Accident Investigations

48. Consider restructuring the accident investigation program to dedicate additional full-time staff with appropriate training in accident investigations.

49. Require operators to provide detailed descriptions of certain types of accidents (e.g., fires) to determine whether accident investigations or other corrective actions are necessary.

50. Develop and implement internal procedures to fully conduct and document accident investigations, including planning, basic investigation, evidence gathering protocol, and supervisory review.

51. To supplement existing ethics requirements and recusal policy, create an independence policy for all accident investigation personnel that includes certifications signed by investigation personnel, prior to commencing work on a particular investigation, affirming the absence of any conflicts of interest.

52. Explore the utility of an independent peer review process for panel investigations.

53. Establish a system to track investigation recommendations for implementation and verify that they have been implemented.

Chapter 6: Safety

54. Develop a dynamic regulatory framework that provides for interim and continuing guidance to operators, ensures the proper use of NTLs, addresses gaps and inconsistencies within BOEMRE regulations, and reconciles related Bureau regulations.

55. Ensure that BOEMRE has sufficient staff with the expertise needed to review and vet standards developed by industry group subject matter experts to determine the extent to which those standards should be used in developing regulations.

56. Identify actionable items from the TA&R studies, track concurrence and implementation of those items, document rejected recommendations, and consider broader opportunities for the TA&R Program.

57. Consulting with technical experts, conduct further analysis of the effects of water depth on equipment and operations, and determine the adequacy of current regulations.

58. Draft a new Memorandum of Agreement with the U.S. Coast Guard, EPA, and other interested agencies, requiring appropriate participation of all parties in the review of OSRPs and any related drills or exercises.

59. Develop a review process for OSRPs that incorporates risk-based and other strategies to ensure that all critical information and spill scenarios are included in the OSRP by operators, and are comprehensively reviewed and verified by BOEMRE and/or other appropriate officials.

60. Determine and ensure technical expertise necessary for staff to conduct comprehensive reviews of OSRPs.

61. Ensure that inspectors verify the availability and presence of all equipment, including third-party equipment, listed in OSRPs prior to conducting inspections.

62. Develop policies and procedures to require detailed descriptions of containment and control measures for the source of possible spills and determine where to incorporate these measures, either in the OSRP or elsewhere in the permitting process.

63. Review calculations for worst-case discharges, with input from the Flow Rate Technical Group, and make recommendations for changes to 30 C.F.R. 254.47, as appropriate.

64. Conduct additional research on containment and control measures to determine appropriate requirements for containing oil discharge at the source.

Appendix 2: Objective, Scope, and Methodology

Why We Performed This Review

As a result of the April 20, 2010 explosion and sinking of the *Deepwater Horizon* offshore drilling rig and subsequent oil spill, the Secretary requested that the OIG examine whether deficiencies existed in MMS policies and practices regarding safe offshore operations (MMS is now BOEMRE). In addition, the Department's OCS Safety Oversight Board requested that OIG answer a set of questions regarding BOEMRE's regulations and oversight of offshore operations.

Objective

The objective of our work was to determine if specific deficiencies in BOEMRE policies exist that need to be addressed to ensure that operations on the OCS are conducted in a safe manner protective of human life, health, and the environment.

Scope

The scope of this inspection covers BOEMRE's Federal offshore Oil and Gas Program areas related to the drilling and production permit approval process, inspection and enforcement activities, environmental protection, post-accident investigations, and safety. The period addressed by this inspection was FY 2006-2010.

Methodology

We gained a basic understanding of the oil and gas program for the purpose of identifying potential weaknesses that need correction. To accomplish the objective, we:

- Reviewed applicable laws, regulations, policies, and procedures to become familiar with the requirements of the Oil and Gas Program.
- Interviewed managers, supervisors, and other personnel at BOEMRE's regional and district offices to learn how their Program responsibilities were actually carried out (a limited amount of records were reviewed as necessary to confirm oral statements).
- Conducted two online surveys of BOEMRE employees to obtain input from personnel directly involved in the Oil and Gas Program.
- Analyzed permit, inspection, enforcement, accident investigation, and other data obtained from BOEMRE.

The primary inspection team consisted of personnel from OIG Investigations and OIG Audits, Inspections and Evaluations. Representatives of the Department's Energy Reform Team assisted.

The review was conducted from May through September 2010. The following sites were visited: BOEMRE's National Office, Herndon, VA; Gulf of Mexico OCS Regional Office, New Orleans, LA; District Offices in Houma (Bourg), Lafayette, Lake Charles, and New Orleans, LA, and Lake Jackson (Clute), TX; Pacific OCS Regional and District Offices in Camarillo, CA; and Alaska OCS Regional Office in Anchorage, AK.

We conducted this review in accordance with the "Quality Standards for Inspections" adopted by the Council of the Inspectors General on Integrity and Efficiency.

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