

Safety Alert No. 351
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BSEE Identifies Rig Operations Hazards during Risk Based Inspections



BSEE Inspectors conducting Rig Operations Hazards Performance Based Risk Inspection

The Bureau of Safety and Environmental Enforcement recently conducted a review of 2016 through 2018 compliance and incident data to identify safety trends throughout the Gulf of Mexico. The analysis pointed to a potential risk associated with rig operations. During the time frame reviewed, one fatality occurred and other high-potential injuries were associated with rig floor equipment. Due to the recent events and their associated severity, BSEE developed a unique Performance Based Risk Inspection (PBRI) protocol that focused on reducing the likelihood of similar incidents and compliance issues Gulf-wide. BSEE inspected 11 rigs in the Gulf of Mexico over a multiday period.

At the completion of the inspections, BSEE reviewed the results and conducted additional reviews on Safety and Environmental Management System specific items, e.g., personnel competency, identified safe zones, communication between Operators and Contractors, and short-service employees (SSEs). BSEE concluded:

- The interactions between the operators and contractors occur frequently enough to allow for discussions of responsibilities, work scope, and hazard and risk mitigation. However, the process for pre-spuds, morning calls, and field engagement meetings are not defined and seldom documented.
- Most of the emergency response and evacuation drills, excluding spill drills, are conducted regularly, but operators and contractors are not performing analyses or critiquing each drill to identify and correct weaknesses.

- A wide array of policies are in place to manage SSEs , but the policies (1) were not understood by offshore rig management, (2) did not require identification of SSEs, and (3) did not set a requirement on the number of SSEs working on location at one time.
- The majority of operators and contractors had Fitness for Service programs, but there was a lack of evidence to support management's commitment to fatigue and fitness for duty programs, nor were the programs fully implemented.
- BSEE witnessed good applications of safe zones and training. However, multiple locations operating on the OCS lacked Safe/Drop zones on the rig floor and the associated training.
- Improvements are needed in fall protection equipment inspections, familiarity with fall rescue plans, and storage and labeling of equipment inventory.
- BSEE identified effective implementation of Hazard Communication programs during the PBRI which covered available hazardous chemical lists, Safety Data Sheets throughout the rigs, containers being properly labeled and employees being trained.
- Operators and rig contractors regularly inspected third party equipment to ensure the equipment was properly grounded; however, some inspections are not consistently documented or referenced to a global standard.
- The inspection of man riding equipment by BSEE during the PBRI indicated there were potential gaps regarding the requirement of a designated spotter to ensure that the crane/winch/tugger operator has a visual line-of-sight during the entire personnel lift process on the rig floor.
- Most operators and rig contractors had sufficient integrity programs implemented for their critical equipment to ensure that equipment is fit for service, but some had gaps.

Therefore, BSEE recommends that operators and, when appropriate, contractors:

- Review established procedures for both internal and external communication of safety and environmental information. Consideration should be given to ensure the evaluation of potential hazards in the workplace and communicating information to employees and other affected parties prior to the start of well operations programs.
- Review periodic drill schedule to ensure the inclusion of spill drills and procedures to allow for an analysis and critique of each drill.
- Review SSE procedures, which define the process for managing SSEs fulfilling rig crew positions that are (1) new to the rig contractor company, (2) new to the person filling the position, or (3) new to the rig. Operators should ensure all SSEs have completed required training for the position, consider the percentage of SSEs who make up a crew, and consider identifying SSEs as such on the personnel on board list and by issuing them colored hard hats that identify them as SSEs.

- Review requirements to oversee and minimize risk to offshore employees by developing and implementing procedures for examining and assessing the fitness, which includes fatigue, of their offshore crews. Additionally, operators should assign a representative(s) who is responsible for establishing, implementing and maintaining the fitness for duty procedures.
- Ensure all restricted access and safe zones are sufficiently identified and communicated to personnel, and enforced by crewmembers and supervisors.
- Review fall protection programs and rescue plans, and ensure procedures exist for verifying that fall prevention equipment is provided, personnel are trained, and storage and inspections of equipment are conducted properly.
- Review each 3rd party equipment inspection checklist and ensure it includes grounding. See references API RP 14F, Paragraph 6.10.3 and API RP 14FZ, Paragraph 6.10.3 and documentation requirements.
- Review man riding procedures and consider including requirements for an effective line of sight communication (or alternative) with a dedicated observer.
- Review mechanical integrity systems to verify all work orders, preventative maintenance tasks, and corrective maintenance tasks are being properly prioritized and effectively addressed.

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A Safety Alert is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding a potential safety issue. It also contains recommendations that could assist avoiding potential incidents on the Outer Continental Shelf.