

SAFETY ALERT



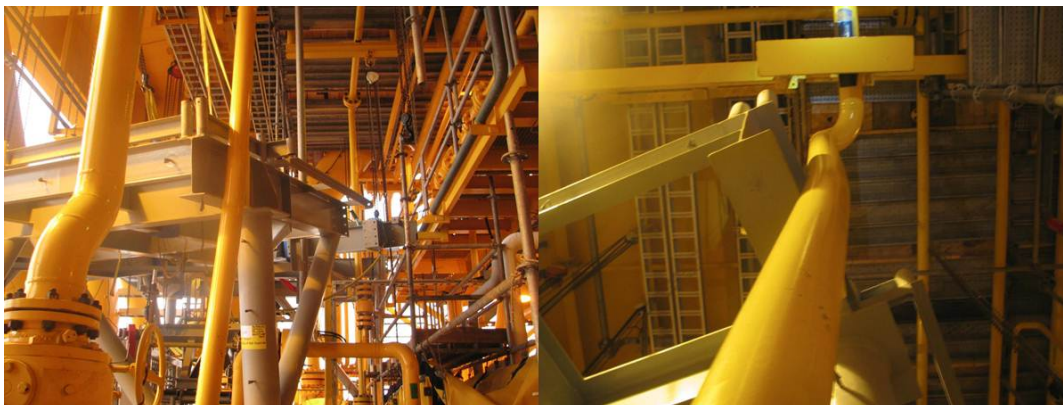
Safety Alert No. 317
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CATASTROPHIC INCIDENT AVOIDED

Failure to communicate hazards and to provide adequate management oversight during a critical lift resulted in equipment damage and the near miss of a catastrophic incident.

During the installation of a gas lift mezzanine deck on a deep water floating facility, the 6,500 pound structure shifted unexpectedly. This shift caused the load to jam between an existing, high pressure gas lift piping and a 4-inch valve, damaging the still-pressurized gas line and gouging the 4-inch valve body. In a subsequent attempt to free the active gas lift piping, the lifting crew performed a cold cut on a U-bolt brace without a change request or permits to work. A rupture of the line or valve could have led to a significant gas release, fire and/or explosion. The Offshore Installation Manager (OIM) averted disaster by stopping the job during a regular inspection walk on the platform.



Deck against Gas-Lift Line

Bowed Gas-Lift Line

BSEE and the work crews involved in this incident have concluded that insufficient identification and communication to the work force of the risks, inadequate supervision and deviations from the original documented plan led to equipment damage and a near catastrophe.



Deck Jammed Between Gas-Lift Line

U-bolt Cut

The investigation identified several factors/findings contributing to this incident:

- The Offshore Construction Manager (OCM) who was responsible for overseeing the critical lift was called away during the lift. He did not leave a hard copy of the Lift Plan with the work crew. The job proceeded without him or the work plan present.
- Although the pre-job Hazard Analysis identified the risk of an accidental rupture of pressurized gas lines in proximity to the area where the lift was occurring, and it recommended a lift strategy that reduced the potential to damage the identified gas lines, this information appears not to have been transferred to the workforce.
- The Lift Plan outlined a lifting procedure but did not provide background on the assumptions and potential risks that were to be mitigated by those instructions, neither did it provide guidance on potential risks and safeguards should the workers need to deviate from the plan.
- The Job Safety and Environmental Impact Analysis (JSEA), as documented, did not include a discussion of the proposed path for the lift, the identification of the active gas lines in proximity to the work area, or the potential risks should the lines be damaged during the lift.
- The crew did not use the safety procedures, e.g., the use of tag lines outlined in the Lift Plan. They also did not place chain fall beam clamps in pre-defined locations; arrange rigging points; or utilize a hold back chain lever hoist attached to the lower portion of the deck leg as required in the Lift Plan.
- Because the pressurized gas line hazards and recommended mitigation steps presented in the pre-job Hazards Analysis were not included in the JSEA, it is not clear if the workers/contractors recognized the risks posed by the pressurized lines near the work site.
- “Stop Work Authority” was discussed with and acknowledged by the work crew as indicated in the JSEA, but it was not utilized by any individual associated with the lift.
- Changes were made during the work activity (e.g. cutting the U-bolt brace) without first analyzing the potential hazards or notifying other personnel onboard the facility.
- Communications between the contractor and operators did not adequately inform critical personnel of the activities that were underway on the facility.

The OIM appropriately implemented Stop Work Authority as soon as he discovered what was going on. Following incident investigations by the Operator, Contractor and Subcontractor, the companies implemented a joint stand-down of operations to ensure the seriousness of this situation could be addressed and used to improve future operations.

BSEE recommends that all OCS Operators and Contractors ensure that the components of your Safety and Environmental Management System (SEMS) are comprehensive, understood, followed by all personnel and enforced during all OCS work activities.

- When communicating work instructions, consider highlighting the potential hazards and the appropriate mitigation steps that have been incorporated into all work plans and procedures. (*Hazard Recognition/Safe Work Practices*)
- Ensure that supervisors and work crews have access to enough information about the job they are doing to enable them to recognize when they have deviated from the work plan and if the deviation poses new or different risks. (*Safety and Environmental Information*)
- Reinforce the message that everyone has the right and the responsibility to stop work when they perceive that there may be a safety concern. Operators and contractors should review methods of initiating a “stop work” event, and look for actual and perceived barriers to its use, to ensure that the use of “stop work” will be effective. (*Stop Work Authority*)

A **Safety Alert** is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding an accident or a near miss. It also contains recommendations that should help prevent the recurrence of such an incident on the Outer Continental Shelf.