

Safety Alert

BOEM

U.S. Department of the Interior
Bureau of Ocean Energy Management,
Regulation, and Enforcement
Gulf of Mexico OCS Region

Safety Alert No. 289
27 September 2010

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Failure to Follow Lock-Out/Tag-Out Procedures Results in Gas Release

Recently, construction contractors were involved in the removal and overhaul of two turbine compressors located on a production platform. The platform is also equipped with a reciprocating compressor which remained in-service. As outlined in the Job Safety Analysis (JSA), the construction crew utilized plumber's plugs to isolate the production process piping's open flanges, unaware that the suction piping was common between the two turbines and reciprocating compressor. When the reciprocating compressor shut down due to a process upset, flow continued from the low pressure oil wells. Pressure then increased on the low pressure system and migrated through the #1 turbine suction shut-down valve, dislodging the plumber's plug from the suction piping. Gas escaped inside the compressor building and activated a near-by gas detector, resulting in a total platform shut-in.

A BOEM investigation into the incident revealed the following findings:

- The Operator's Lock-Out and Tag-Out (LOTO) policy states that "when isolating pressurized systems, a positive method of isolation such as double block and bleed or blinding is required". The JSA recommended eliminating or reducing hazards by using "blind flanges or plumber's plug to close the line".
- There was a lack of Operator oversight in enforcing the Operator's LOTO policy.

Therefore, the BOEM recommends the following:

- Identify common tubing and/or piping with their respective hazards prior to performing the JSA (see Safety Alert No. 276 – Job Safety Analysis). Safety Alert No. 276 discusses a systemic approach to identifying those tasks having potential severe or fatal consequences, and conducting the necessary Job Hazard Analysis (JHA) and/or JSA to identify those hazards. It eliminates the hazard or reduces the severity of the consequence through the use of design engineering, administrative controls, or written procedures and/or guidelines.
- Utilize a positive method of isolation such as a double block and bleed or blinding when isolating a pressurized system.
- All personnel involved in any type of LOTO should familiarize themselves with the Operator's LOTO policy. Operators are reminded that BOEM considers a failure to follow company LOTO procedures to be a violation of 30 CFR 250.107(a), since you must protect health, safety, property and the environment by performing all operations in a safe and workmanlike manner.

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