



**U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region**

Safety Alert No. 227
March 8, 2005

Contact: Glenn Woltman
(504) 736-2438

Explosion and Fire on Platform Caused by Improper Welding and Burning Practice

Recently, scheduled maintenance work was performed on process equipment on an offshore production platform. The scope of the repair work for this pressure vessel included the use of a "cold-cut" saw to remove manageable pieces of a segment of bad piping extending from near the process system. When the "cold-cut" saw blade became dull before commencing the last cut, a decision was made to use a cutting torch to make the final piping cut. This procedure had not been addressed in the Job Safety Analysis (JSA), and no provisions had been made for the hot work to include the installation of a fire blanket over the vessel, or to render the contents of the vessel inert. Shortly thereafter, an explosion was heard and a small fire ensued.

MMS concluded that an air/hydrocarbon fuel mixture inside the vessel was ignited by sparks from the cutting torch, as a result of a small hydrocarbon vapor leak from around one of the vessel's hatch cover gaskets. MMS further concluded that the causes of the accident in part are the operator's failure to follow his Welding and Burning Safe Practices Plan and the regulatory requirements regarding hot work procedures.

The MMS recommends the following:

- Supervisors must provide adequate job preparation, instructions, and job planning prior to undertaking work. Hazards must be identified as work proceeds, and action plans taken to change the JSA as the job steps change.
- Crews **must follow approved** Welding and Burning Safe Practices Plans.
- Immovable equipment should be protected with flame-proofed covers, shielded with metal or fire-resistant guards or curtains, or have its flammable substances rendered inert.

—MMS—GOMR—
www.gomr.mms.gov

[Visit our Safety Information Website](#)