



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

Notice No. 003

January 3, 1973

OCS Operations Safety Alert
Flash Fire -- Glycol Gas Dehydrator Unit

A flash fire occurred recently in the production facilities of a gas production platform in OCS waters. The fuel source for the fire was gas and condensate which was released when a crack developed in the threads of the glycol return line at the contact tower. Released gas and condensate then blew onto the uninsulated glycol reboiler stack and ignited.

The thread crack resulted from metal fatigue which was probably caused by pump or other vibrations being transmitted through the piping to the point of connection on the contact tower. After having been subjected to these vibration stresses for a period of time, the piping failed at its weakest point--the thread.

The below listed recommendations, which resulted from the investigation, could help prevent this type accident where similar conditions exist. The applicability of this safety alert notice to other OCS installations should be determined by the operator after a thorough review of his particular installations.

1. Design piping such that pump induced vibrations and other vibrations are damped out at the source and not transmitted through the piping system.
2. Perform periodic maintenance inspections of piping systems and identify and eliminate piping vibrations which will cause this type failure.
3. Insulate or use double wall exhaust stacks on all hot surfaces which are a potential ignition source, especially in areas of possible release of produced hydrocarbons or other flammable liquids.

[signed] Robert F. Evans

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