



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

Notice No. 009

August 1, 1974

OCS Operations Safety Alert

Series of Accidents

During the past few weeks there has been a series of accidents on platforms in the Gulf of Mexico OCS involving various operations. These accidents have resulted in fires, pollution, serious injuries to personnel, and major damage to platforms and equipment. This Alert is issued to bring to the attention of all operators that improved planning and safety control procedures on operations offshore can result in reduction of these undesirable incidents. The accidents are summarized as follows:

1. An operator had completed a sand washing job in the tubing string of a producible well using one-inch pipe with water as the circulating fluid. The well would not flow due to the hydrostatic column in the well and the operator was utilizing gas pressure from an adjacent gas well to displace diesel fuel down the kill string and up the producing string in order to kick the well off. The connection between the wells was made using a 10,000 psi test flexible hose. The connection at the adjacent well blew off and the escaping gas ignited, resulting in injuries to five men, three of whom have serious burns. Platform damage was minimal, but the snubbing unit was badly damaged. Another contributor to the fire was some needle valves with neoprene seals which started leaking when the seals burned out. The operator has stated that, in the future, steel piping rather than flexible hoses will be used for this and similar type operations.
2. An operator was utilizing a liquid level safety shut-in device routinely to shut in producing wells on an unmanned platform when oil storage tanks became full. The liquid level shut-in device failed resulting in 130 barrels of crude oil being spilled into the Gulf. The purpose of a liquid level safety shut-in device for well control is for its use as a redundant or secondary safety measure and not as the primary shut-down control.
3. An operator was using a derrick barge to load workover rig equipment onto a platform. The control linkage on the steam control valve vibrated loose while the derrick barge crane was lifting the mud pumps. An attempt was made to actuate the automatic shut-off valve on the main steam line, but the valve failed to close. Personnel tried to close a manual valve on the main steam line, but the valve was stuck and could not be closed. The high boom switch also failed to actuate the automatic shut-off valve. The derrick boom continued to rise and after moving past the full vertical position, it collapsed onto the platform. The well manifold was struck by the traveling block when it dropped and fire erupted immediately in this area. The platform was shut in by a manual remote switch located on an exit stairway. The fire was extinguished in 45 minutes using water and chemicals. The platform and facilities suffered major damage. The discovery of non-functioning equipment and the subsequent remedial actions are the main elements of a preventive maintenance program which, it appears, was not being conducted on the derrick barge equipment.
4. An operator had two glycol circulating pumps connected in parallel in such a manner that in the event one pump became inoperative, the other pump would automatically be placed into service. This occurred when the No. 1 pump became inoperative and the No. 2 pump automatically switched on. The No. 1 pump was removed from the system for replacement. The No. 2 pump later became inoperative and the automatic valve shifted to supply gas to operate the No. 1 pump. When the automatic valve shifted, high pressure gas was discharged through the line left open by the removal of the No. 1 pump. This gas stream ignited and the fire caused major damage to some of the platform facilities before it was extinguished. This accident could have been avoided if the operator had plugged the gas supply line to the No. 1 glycol pump when it was removed.

These accidents listed above emphasize the need for advance analysis of the potential adverse effects of operations to be conducted, improved safety control procedures, and better training of personnel involved in offshore operations.

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