



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

Notice No. 177

February 9, 1999

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### Casing Blowdown Accident and Fatality

While attempting to blow down casing pressure through a blowdown valve assembly, an operator was fatally struck by a rapidly rotating tubing extension on the assembly. Subsequent to the rotation and fatal blow, the entire assembly broke free from a fitting downstream of an open gate valve, thereby opening casing gas flow to the atmosphere. The casing pressure was approximately 1,400 psi.

The tubing extension, which was straight in previous uses on the assembly, was apparently intentionally bent for unknown reasons during the period between its last usage and its usage at the time of the accident. The operator who was fatally injured attached the bent tubing extension to the assembly immediately before the accident. The tubing extension was subjected to the casing pressure when an assembly ball valve, which was upstream of the tubing extension, was either intentionally or unintentionally opened by the operator. The tubing was bent in such a manner that the release of the gas through the extension produced a counterclockwise, i.e., unscrewing, moment that overcame the resistive forces of the thread connections, thus causing the extension to rotate rapidly and fatally strike the operator.

Therefore, from this information the following are recommended:

1. All manual blowdown operations be analyzed from a Job Safety Analysis perspective and that such analysis be incorporated as a required element of the operator's Safety Program.
2. Procedures be formulated for those manual blowdown operations that have been identified as containing elements of danger by the above analysis, and that those procedures be clearly referenced and made mandatory in the operator's Safety/Procedural Guideline Handbook.

Your attention is also directed to the fact that ball valves are considered fully opened/fully closed valves and are not intended to be used as throttling valves.

For details of the accident, see OCS Report MMS 99-0009. Copies of the report may be obtained from the MMS Public Information Office located at 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123 (1-800-200-GULF or local 504-736-2519).

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MMS Internet Homepage: <http://www.gomr.mms.gov>