

Technical Announcement

MMS

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

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Effects of Subsea Processing on Deepwater Environments in the Gulf of Mexico

OCS Study MMS 2008-022

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Effects of Subsea Processing on Deepwater Environments in the Gulf of Mexico*.

Oil and gas exploration and development is extending into deeper water in the Gulf of Mexico. This report represents the compilation and synthesis of existing published and unpublished literature on the environmental effects of subsea operations on the deepwater environment.

Subsea processing technologies that are currently being implemented in deep water include multiphase pumps (Type 1) and partial separation with pumping (Type 2). Technologies being developed for future application include combinations of separators, scrubbers, and pumps that allow complete separation of production stream at the seabed (Type 3). The most advanced systems (Type 4) are likely to include multistage separation and fluid treatment with the production of export quality oil and gas.

The primary difference between surface and subsea technologies is the restricted ability to detect and respond to releases in the deepwater environment and the extreme temperatures and pressures on the seafloor. A key technological and environmental issue involved in the implementation of subsea separation is the handling and disposal of produced waters and sands. Other potential environmental hazards associated with the operation of subsea processing systems include the use of new treatment chemicals, exposure to large thermal gradients, induced electromagnetic fields, and low-level noise.

This report is available only in compact disc format from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$15.00, by referencing OCS Study MMS 2008-022. The report may be downloaded from the MMS website through the [Environmental Studies Program Information System \(ESPIS\)](#). You will be able to obtain this report also from the National Technical Information Service in the near future. Here are the addresses. You may also inspect copies at selected Federal Depository Libraries.

Minerals Management Service

U.S. Department of Commerce

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