

## Chapter 5

# Simultaneous Operations

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### ABSTRACT

*Simultaneous operations can be defined as conducting independent operations in which the course of any operation may impact the safety of personnel, equipment, and environment of another operation. Operations are meant in terms of performing drilling, completion, work-over, and construction or production activities simultaneously, mainly at offshore facilities. In general, they have an impact on the installation safety procedures and contingency planning program. Thus, for the purpose of performing simultaneous operations, they must comply with organizational safety and technological requirements. They are to be coordinated through joint planning efforts by supervisors who plan and direct activities. Typical chain-of-command as well as simultaneous operations decision making process flow diagrams are presented in this chapter. Basic steps to be regarded are performing risk assessment, assess and control risks, monitor the simultaneous tasks and communicate the control measures. Communication is the key to performing these tasks safely.*

### INTRODUCTION

There's large scope of both onshore and particularly offshore activities in the oil and gas and other marine industries where one activity can strongly affect performing another covered

operation in a safe and risk acceptable manner. Simultaneous operations (SIMOPS) shall be thoroughly planned, analyzed and performed with the objective of limiting excessive risk imposed by multiple operations at the same time, comparing to the risk associated with

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the execution of these operations individually. These operations can range from something as common as a crew change with a crew boat, food, fuel, material provision etc., to a much larger scale involving multiple, heavy construction assets and personnel (Ross, 2007). In spite of the concept favoring opinion in the entering stage of project that “the avoided SIMOPS is the best SIMOPS“, it is obvious that all simultaneous operations cannot be avoided. Relevant procedures for the control of simultaneous or parallel operations shall be developed and validated or assessed prior to commencement of operations.

Deepwater Horizon disaster prompted all those involved in the exploration and production of offshore oil and gas to reassess the safety of their industry. *The National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling* (2011) made a series of recommendations, many of which have been implemented already. But, according to the Committee on Industry, Research and Energy of the European Parliament, the implications for Europe are less clear. Many of the recommendations for the U.S. regulatory regime reflect practices that have been applied and prevalent in parts of the E.U. for twenty years and more. One of the first recommendations in the National Commission’s report states: “The Department of the Interior should develop a proactive, risk-based performance approach specific to individual facilities, operations and environments, similar to the “safety-case“ approach in the North Sea“ (Report to the President, p.252). In the North Sea area mature industries are operating in mostly well-developed fields under the oversight of well established and evolving regulatory regimes. “The “safety case“ is a risk-based, site specific approach which requires operators to demonstrate to the relevant national health, safety and environmental authorities that all risks have been considered and con-

trols implemented. Any residual risks should correspond to the ALARP (As Low As Reasonably Practicable) principle. The relevant authority should approve the safety-case, as well as any subsequent changes to it, before any operations can commence“ (Draft report 2011/XXXX(INI)). In the U.S., Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) is a single agency where licensing, health and safety issues are consolidated.

The E.U. Commission on Safety of offshore oil and gas prospection, exploration and production activities formed the European Union Offshore Oil and Gas Authorities Group that shall be composed of Member States’ authorities responsible for the regulatory oversight of offshore oil and gas activities and related policy issues. Different EU regulations have been proposed and adopted, among others, Proposal for a regulatory initiative on safety of offshore oil and gas prospection, exploration and production activities. In the context of the Directive 1994/22/EC the competent authority is required to consider the technical and financial risks, and where appropriate, the previous record of responsibility of applicants seeking exclusive exploration and production licenses. There is the need to ensure that when examining the technical and financial capability of the licensee the competent authorities thoroughly examine also its capability for ensuring continued safe and effective operations under all foreseeable conditions. Just to emphasize two chapters in this Regulation where “Prevention of major hazards related to offshore oil and gas activities“ as well as “Preparation for and conduct of offshore oil and gas activities based on risk assessment“ are treated. The operator’s duty is to organize his activities around a best practice model, prepare a major hazards report and to submit this to the competent authority for assessment. In addition, the operator is to submit

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