



Mary Kay O'Connor Process Safety Center
2005 International Symposium
Beyond Regulatory Compliance, Making Safety Second Nature
October 25-26, 2005

An Alternative Methodology for Conducting a Comparative Risk Assessment Study During Concept Selection of Deepwater Oil/Gas Production Facilities

Gaurav Sharma, Granherne Inc.
Peter Fletcher (Independent Consultant)
9900 Westpark Drive
Houston, TX 77063-5138, USA
E-mail: gaurav.sharma@granherne.com
Tel: +1 713 260 8459
Mobile: +1 832 287 5554
Fax: +1 713 260 3334

Abstract

Hazard Identification (HAZID) is a structured risk assessment technique applied during different lifecycle stages of a project. The aim of conducting a HAZID is to discuss the events, consequences, controls, recovery measures, risk rankings and recommendations for various project hazards. HAZID is not aimed at proposing solutions for the problems, but rather to record the existing hazards. The recorded hazards serve as a guide for determining the health, safety and environment (HSE) issues to be resolved during the project. Some criteria for evaluating hazards include safety, asset, environment, reputation, society, etc. HAZID is a guideword driven brainstorming technique, which requires a properly constructed team.

Comparative HAZID is a type of risk assessment study carried out during the concept selection stage. The objective of such a HAZID is to identify hazards of each development option and subsequently screen the development options based on the identified risks. The scope of a comparative HAZID includes the entire project lifecycle from commissioning to decommissioning.

Typically, a comparative HAZID would include carrying out the HAZID for each individual development option, followed by a screening process based on experience and judgment. This paper proposes an innovative approach to carrying out a comparative risk assessment HAZID study and subsequently screening options during the concept selection stage. The methodology and merits of using such an alternative approach have been outlined in detail in this paper.