Regulatory Scheme Comparison

At the request of the Bureau of Safety and Environmental Enforcement (BSEE), OESI conducted an ‘Analysis of Equivalency of International Practices’. In recent years, there has been a significant amount of discussion concerning the differences between performance-based and the use of safety case regimes; and prescriptive regulation. Many of these discussions lack a comprehensive analysis of the actual guidelines and requirements in the various regulatory regimes and have not analyzed if there are any practical differences in the safety critical equipment and safety outcomes for exploration and production operations in the U.S., the North Sea, or Australia. To fill this gap, OESI performed a detailed comparison crosswalk between U.S. offshore requirements and those of safety case countries (United Kingdom and Norway) to identify similarities, gaps or inconsistencies.

This research included:

- The guidance or other recommendations provided by each regulatory agency during the plan or permitting review process.
- The content of industry standards that are contained in regulations or listed as guidance by the regulatory agency.
- SEMS, the DWOP process, alternative technology regulations, and permit conditions used in the U.S. regulatory regimes.
- An evaluation of the typical documents and requirements that are incorporated into the safety case documents that are submitted to the regulator.
- How operators in each jurisdiction define an acceptable level of risk.
- Standard industry practices and processes that are not required by regulators but are commonly used in each jurisdiction.
- The roles played by third party certifiers and reviewers.
Different regulatory models have developed over time in the United States, the United Kingdom and Norway based on the specific context and situations in each country. The regulatory regimes that developed in parallel to the growth of the oil industry were influenced by many factors including overall development of the oil industry; specific industry events and incidents in each country; and paradigm shifts in economic conditions. Other major factors were the individual characteristics of each country’s industry including inception and development, relative magnitude, age of the oil industry in a country, annual oil production, the number of operators working in a country over the life of the industry, the number of drilled wells, and the number of drilling and production platforms. Needless to say, catastrophic incidents in the oil industry were major drivers and shaped the regulatory climate, which consequently affected the regulations itself, risk perception, and risk tolerance.

Through both this study and related research, it was identified that the three regulatory schemes cover the spectrum of operations. While currently available data shows that no scheme outperforms the others, there is a continued requirement for the reporting, collecting, sharing and continued analysis of incident data to further define and monitor this conclusion.

After an exhaustive review of the current regulatory approaches in the United States, the United Kingdom and Norway, the OESI report submitted to BSEE in 2016 revealed that the U.S. regulatory scheme is a hybrid-approach that garners the best of both prescriptive and performance-based methods, with a strong favor towards the prescriptive-based approach for risk handling. This appears to be the appropriate risk model going forward for the U.S. Outer Continental Shelf.

Future areas of research can focus on estimating the levels of competency and correlating the level of competency in determining the success of different regulatory approaches.

Selected publications:


2. Jennifer Dagg, Peggy Holroyd, Nathan Lemphers, Randy Lucas, Benjamin Thibault, Comparing the Offshore Drilling Regulatory Regimes of the Canadian Arctic, the U.S., the U.K., Greenland and Norway, THE PEMBINA INSTITUTE (2011).