

Evaluation of process safety management implementation in an oil field services company

ABSTRACT

Serious injury and fatality incidents are frequently occurring in the oil and gas industry due to high risk operations. Process Safety Management (PSM) is a management system that is attentive to the prevention, preparedness, mitigation, response and restoration of energy release from process in a facility. Despite the fact that company A has a comprehensive PSM system in place, its pipeline services division suffered a fatality and a loss time injury incident in eight months gap for its global operation. The purpose of this study is to evaluate the knowledge of employees on PSM by conducting a survey and by auditing the implementation of PSM by division of pipeline services. Cause mapping was used to analyse the contributory causes of PSM implementation. The results of survey show that 50% of the questions were answered correctly by 59 respondents in knowledge session, low communication level and moderate implementation level of PSM. The findings of the audit conclude that PSM has been partially implemented in operation. The contributory causes of partially implemented PSM are due to no enforcement from headquarters, improperly rolled out and ineffective PSM programme training, no legal and client requirements on PSM in Malaysia, and high implementation costs. Improved implementation of PSM could reduce the rate of incidents in the future.

Keyword: Cause mapping; Oil and gas; Process safety management; PSM audit