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Assignment 2

Loss prevention and industrial law

QUESTION 1

Hazard and Operability Analysis (HAZOP) is a structured and systematic technique for system examination and risk management. In particular, HAZOP is often used as a technique for identifying potential hazards in a system and identifying operability problems likely to lead to nonconforming products. HAZOP is based on a theory that assumes risk events are caused by deviations from design or operating intentions. Identification of such deviations is facilitated by using sets of “guide words” as a systematic list of deviation perspectives. This approach is a unique feature of the HAZOP methodology that helps stimulate the imagination of team members when exploring potential deviations.

QUESTION 2

A hazard and operability study (HAZOP) is very important for identifying and evaluating problems that may represent risks to personnel or equipment within complex processes and operations. Multi-disciplinary teams are required to carry out a HAZOP, some of which may not have experience in the area before, or may need a guideline for best practice.
There are some ways to assess a process or workplace for hazards, and every approach has strengths and weaknesses. For example, the worker-focused Job Hazard Analysis (JHA) is especially effective for the protection of workers, because it considers each task that a worker must perform. The technique includes an in-depth examination of the method and engineering intention of the latest or existing facilities to assess the hazard potential of operation outside the planning intention or malfunction of individual items of kit and their consequential effects on the facility.
HAZOP is led by an experienced facilitator. For an oil & gas project, a specific team would require a person from Machines, Project Engineering, Process, Instruments, and Operations, and it’d require the involvement of process technologists, environmental specialists and company Health & Safety and Environment (HSE) staff for few parts of the work.
HAZOP studies provide a particular method to enhance plant safety by taking consideration of technical and organizational hazards, human error and external influences. In addition to determining which safety measures provide genuine benefits, HAZOP studies also can help identify the qualitative solutions for functional safety assets of process control. The results can be used to reduce the likelihood of costly and time-consuming malfunctions while increasing operational safety and availability.

QUESTION 3

