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Operating Procedures Assessment and Review (OPAR) – Structured Approach for Reviewing the Operating Procedures

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Abstract Text:

Operating Procedures are an integral part of the facility Process Safety Management for managing risk and to ensure safe operations. Any facility generally establishes a frequency for reviewing the operating procedures (e.g., annually or whenever there is change in the process). However, it has been noticed that the review is done as a checkbox task. The Operating Procedures not reflecting the actual operations has been a common observation among many process safety gap assessment audits and route cause for many process safety accidents.

To ensure that the Operating Procedures are analyzed critically and qualitatively, a structured brainstorming approach called Operating Procedures Assessment and Review (OPAR) considering each aspect of Operating Procedure as a component or system has been conceptualized and is suggested in this paper. This idea has stemmed from the traditional guideword approach of Hazard and Operability (HAZOP) study. The brief methodology consists of following steps:

- Breaking the Operating procedure into smaller sections.
- Identifying the process equipment, instruments, process conditions, integral operating windows, alarms requiring operator intervention, alarm display in the DCS/PLC, samples to be taken etc.
- Collecting the historical data (E.g., previous incidents, alarms considered as credible safeguards in Process Hazard Analysis (PHAs), alarm history, operator inputs, interlock bypass details etc.).

- Facilitating a session using guidewords (E.g., Monitor, Operate, Acknowledge, Sampling, Alarms, Safety systems, Utilities etc.). The applicable process parameters are considered (E.g., flow, temperature, pressure, level etc.). The review items are generated as combinations of guidewords and process parameters (E.g., Monitor flow, Operate flow instruments etc.).
- To elaborate the accessibility and responsibility aspects, question words (E.g., Who, Where, and How) can be used.
- This review workshop shall be facilitated by person (not involved in drafting Operating Procedures) and carried out with participation of field operators, panel operators and engineers.
- Overall, this structured review would help in identifying the gaps (E.g., few valve numbers and configurations are not clear in the Operating Procedures; the specific operator action for a process alarm is not defined etc.), elaborate the safe operating limits (SOLs), consequences of deviations (CODs) and highlight the necessary steps to correct.

This methodology provides inputs for updating the Operating Procedures and assures that the Operating Procedures are accurate and reflect actual operations. It also ensures that the operators and engineers involved in this process are more cognizant about each critical action. The detailed OPAR methodology, guidewords, review template for reviewing the Operating Procedures will be presented (with examples) in this paper.

Session Selection:

Determining and Documenting SOLs and CODs

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