Cost-Based Analysis for Risk Reduction

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Abstract

Owner/Operators are inundated with recommendations generated from various hazard identification and risk assessment studies. While there are a plethora of qualified engineering firms, consultants, and in-house specialists that produce lists of executable action items, there is very little guidance provided to owners to aid in the prioritization and allocation of scarce resources to meet the performance requirements of the company’s process safety policy. The Occupational Safety and Health Administration (OSHA), through its Process Safety Management (PSM) standard (29 CFR 1910.119), has requirements regarding the tracking, closure, and documentation of recommendations from PHAs, PSSRs, incident investigations, MOCs, and compliance audits. However, the PSM standard is a performance-based standard; therefore, there is no specific language regarding prioritization and implementation of resolutions. The Center for Chemical Process Safety (CCPS) has published literature such as “Tools for Making Acute Risk Decisions with Chemical Process Safety Applications.” This document provides tools that aid in the application of a consistent and logically sound approach to ensure that appropriate resources are made available and effectively allocated to risk reduction activities. Yet this guidance falls short of providing a workable process to answer the question, “now that I have this long list of things that needs to be done, what do I do with it?”

This paper will present a practical approach for managing risks using a cost-based evaluation to allocate economic resources to a practical risk reduction program.

Keywords

Cost basis, process safety site assessment.