Good to Great: Review and Improve LOPA Programs

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ABSTRACT

Layer of Protection Analysis (LOPA) is a preferred simplified risk analysis tool within the process industries. The LOPA technique has undergone significant development in recent years through its seemingly ever-expanding use. The Center for Chemical Process Safety is publishing new LOPA guideline books on independent protection layers and initiating events, and on conditional modifiers and enabling conditions. With the large number of decisions based upon application of LOPA, as well as the resultant significant investments that may follow, LOPA programs take on an increasingly important role within process safety. Now may be an opportune time to review the totality of your LOPA program, and then improve it by taking advantage of recent advances, incorporating industry best practices, and at the same time avoiding common pitfalls. Guidance is provided on how to formally evaluate and improve LOPA programs – addressing overall policy, single-scenario risk tolerance guidelines, LOPA guidance documents and procedures, technical procedures, building company resources, training, implementation, quality assurance and expert/peer review, extensions to other advanced techniques, and integration with other aspects of process safety programs.

Keywords: Layer of Protection Analysis, LOPA, Program, Review, Improve, Best Practice