Commonly Encountered Problems in the Safety-Focused Design of Capital Projects

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Abstract

The design and construction of a new building is often a significant investment for capital projects. As a result, there are typically many competing design considerations, such as: land use, interconnectivity, access for operations personnel, building codes, personnel safety, cost, etc. To minimize the number of costly design iterations, it is vital that overall project goals for the building be firmly established, communicated, and implemented effectively. Unfortunately, many projects suffer from a misstep in one or more of these areas.

This paper details lessons learned from common building design complications encountered in the process industries, with a focus on personnel safety. The paper contains examples of common building design issues and suggests methods to avoid them. The paper discusses the safety-focused design requirements that are typically chosen for building projects as well as the potential impacts those requirements have on personnel safety and project cost.