Lessons Learned from Recent Incidents: Facility Siting, Atmospheric Venting, and Operator Information Systems

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ABSTRACT

Recent incidents have focused attention on a number of technical and management systems that need to be addressed by industry. A multiple layer of protection approach is essential for the prevention of incidents and/or reduction of consequences. Safety culture and operational discipline are the overall embracing factors that influence the safety performance of a facility. However, as recent events have indicated, there are a number of technical and engineering issues that must also be developed and implemented appropriately. Some of these issues that could lead to incidents with catastrophic consequences include facility siting and atmospheric relief venting. Impact of operator information systems on the prevention of releases of hazardous materials from their containment is also another significant factor that should be given appropriate attention.

This paper describes these three topics based on the findings from recent incidents and historical data. Engineering standards, regulatory requirements, and industry practices are discussed for facility siting, atmospheric relief venting, and operator information systems. Finally, a summary of gaps and needs in technology, standards, and practices is presented.