

Location of Temporary Buildings at LNG Site Based on Quantitative Studies

Presenters

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Abstract

Temporary Buildings, installed on site during the construction phase, may not be removed until the commissioning, completion or beginning of normal operation. Once the hydrocarbons are introduced, these buildings have the potential to be exposed to process hazards (fire, explosion, toxicity, etc.) resulting in injury or fatality of the personnel inside the building. Providing safe location to these portable building is imperative and should be determined based on detailed hazard analysis, building siting study as per API 753.

Facility siting study is done to calculate the potential impact of blast overpressure, thermal radiation from jet fires, pool fires, and toxicity hazards and evaluate the safe distance to the temporary buildings. Simultaneous operations is also evaluated in order to optimize temporary building location and further risk management strategies are implemented such as mitigation measures based on the hazard impacts, like, adding gas detectors at the air intake of HVAC to shut down the power supply to the temporary buildings, public announcement system, evacuation drills etc. This paper will address the temporary building siting study and associated mitigation measures with the highlight of its application into the risk management, using a large LNG facility as an example.