

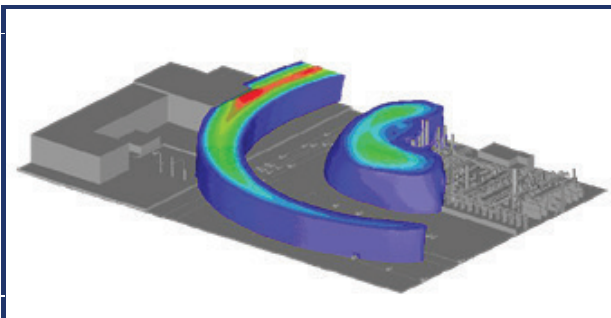
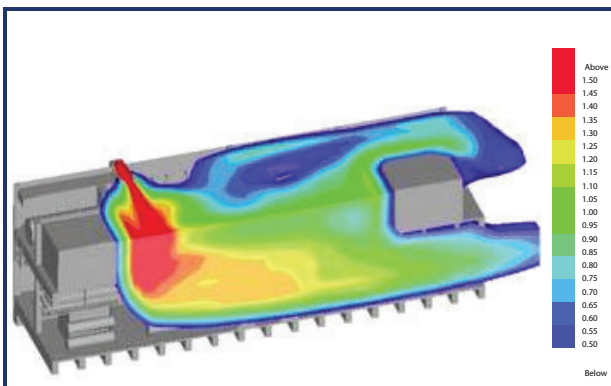
## Risk Assessments (QRAs)/ Facility Siting/ Physical Effects Modeling for Onshore Operations

### How well do you understand the risk exposure of your onshore facilities?

Understanding risk is the first step to managing it. United Safety has a comprehensive range of onshore Quantitative Risk Assessments (QRAs), Facility Siting, Building Risk Assessments, Dispersion Modeling and Explosion Modeling solutions that can help you identify risks as well as strategies to mitigate and manage them.

### How we can help

United Safety offers flexible solutions that work across midstream & downstream facilities, petrochemical facilities, wellpad sites, tank farms, pipelines and other onshore Oil and Gas assets. Depending on the need, services can be scaled up or down to include small, niche calculations or a full-scale risk analysis.



### QRAs are ideally used to:

- Quantify risk from either maximum credible worst case scenarios or full probabilistic analyses
- Identify key areas of risk reduction
- Evaluate effectiveness of safeguards (if modeled)
- Meet numerous standards such as API RP 753 & 752, OSHA's 29 CFR 1910, NFPA 59A (LNG), and PHMSA (US Pipelines)

### Facility Siting studies are an effective way of:

- Identifying a safe location for control rooms, construction trailers, living quarters, and other manned structures
- Developing passive fire protection and explosion ratings for at-risk structures

### Dispersion modeling enables:

- Effective Emergency Response Plan (ERP) creation
- Identification of evacuation routes
- Determination of boundaries for either ERPG1,2- and 3 (Emergency Response Planning Guideline) or EAZ (Emergency Awareness Zone) and EPZ (Emergency Planning)
- Hydrocarbon and H<sub>2</sub>S gas detector placements