



AcuTech Advantages

- Strong knowledge and experience with LNG with project work that includes both guidance documents and in-depth risk assessments
- Market Leader for Independent Risk Assessments (IRA) for LNG Deepwater Ports (DWP)
- Expertise with Waterway Suitability Assessments (WSA)
- Extensive Quantitative Risk Assessment (QRA) experience
- Extensive Security Vulnerability Assessment (SVA) experience
- Extensive guidance and management systems experience

Overview of Liquefied Natural Gas (LNG) Services

AcuTech offers process safety, security, and emergency management services that provide our clients with practical, cost effective solutions for their operational risks. Acutech has an in-depth knowledge, spanning numerous industries, that allows us to support the private sector, government agencies, and other organizations in the identification, analysis and management of complex safety, security and risk issues.

AcuTech has considerable experience conducting analyses, assessments and investigations to determine causes of incidents and help companies develop, improve and implement safety and security management systems. Our consultants are experienced in helping clients understand and mitigate their risks through use of quantitative risk assessment (QRA), hazard identification, consequence and impact analysis, frequency analysis, security vulnerability assessment (SVA), risk integration, risk communication, and recommendation development.

AcuTech assists clients to assess and manage LNG risks including: threat identification, hazard analysis, vulnerability assessment, and recommendation development. Our LNG services include:

- Waterway Suitability Assessments (WSA)
- Independent Risk Assessments (IRA) for Deepwater LNG Ports (DWP)
- Emergency Response Planning
- Drills and Exercises
- Security Vulnerability Assessments
- Assessment methodology development
- Guidance and management systems development
- Process Safety Management

AcuTech also has considerable experience in developing and conducting SVAs. We co-authored the American Institute of Chemical Engineers (AIChE), Center for Chemical Process Safety (CCPS), *Guidelines for Analyzing & Managing the Security Vulnerabilities of Fixed Chemical Sites*. We developed the American Petroleum (API) and National Petrochemicals and Refiners Association (NPRA) *Security Vulnerability Assessment Methodology*. We also served as the LNG, Petroleum & Chemical industry sector coordinator for the Risk Analysis & Management for Critical Asset Protection project for the US Department of Homeland Security.

SERVICES:

- Guidance and management systems development
- Risk Assessments
- Waterway Suitability Assessments (WSA)
- Independent Risk Assessments for Deepwater LNG Ports (DWP)
- Security Vulnerability Assessments
- Emergency Response Planning
- Drills & Exercises
- Process Safety Management

Please contact us at
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Key LNG Projects

- **Waterway Suitability Assessments:** AcuTech conducted waterway suitability assessments for several sites including ones in Long Beach, CA and Savannah, GA. The studies required approval of the local USCG Captain of the Port in regard to our qualifications, skills and subject matter expertise. One of the studies included a security risk assessment. One study involved modeling the potential consequences of larger LNG ships resulting in revised zones of concern for thermal radiation and flammable vapor dispersion in completing the WSA.
- **Risk Assessments for LNG Terminals and Deepwater Ports:** These projects are worked under contract from energy clients for awards determined via the USCG processes and have included presentations at public meetings and analysis of risk mitigation strategies. Projects include:
 - Compass Port (Alabama)
 - Neptune & Northeast Gateway (Massachusetts)
 - Clearwater Port (California)
 - OceanWay Secure Energy (California)
 - Port Dolphin (Florida)
 - Calypso (Florida)
- **LNG Import Terminal Emergency Response Plan:** AcuTech led the development of emergency response plans, including evacuation plans, and coordinated procedures with local law enforcement and federal agencies. Projects to date include:
 - Fall River, MA
 - Point Fortin, Trinidad, West Indies
- **DHS RAMCAP LNG (Risk Assessment Methodology for Critical Asset Protection):** AcuTech developed security vulnerability assessment method for LNG facilities as LNG sector leader in this project.
- **National Association of State Fire Marshalls (NASFM):** AcuTech developed the guidance document, "*Fire Service Guidance for Participating in LNG Terminal Evaluation, Siting, and Operations.*" AcuTech also supported development of NASFM educational materials and a structure for how emergency responders can be better informed about the safety, transportation, storage, and processing of LNG.
- **Center for LNG Study:** AcuTech completed a major study for the Center for LNG on Societal Risk Comparisons. The scope of the study included LNG liquefaction and export worldwide, LNG marine transportation worldwide, LNG import terminals and regasification facilities worldwide, and LNG peak shaving facilities in the US.