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www.acutech-consulting.com

www.acusafe.com

Consulting Services

Software Products

Training Services

The **AcuTech Consulting Group** is an international consulting company offering a full range of management and technical consulting, training services, and software products to assist companies with Chemical Process Security, Risk Management, and Process Safety Management. AcuTech offers a unique background in chemical process safety, design, operations, inherent safety, fire protection, and security that provide our clients with practical, cost-effective solutions for the new challenge of chemical security management.

Although our scope of services include regulatory compliance with federal, state and local requirements, AcuTech's abilities extend beyond these standards to enable us to deliver advanced services that meet the higher level of safety demanded by changing world circumstances.

- ☪ **Chemical Process Security & Security Vulnerability Analysis**
- ☪ **Risk Management Plans (RMP)**
- ☪ **Quantitative Risk Analysis (QRA)**
- ☪ **Emergency Planning and Response**
- ☪ **Process Hazards Analysis (PHA)**
- ☪ **Expert Witness Testimony**
- ☪ **Risk Communication/ Crisis Management**
- ☪ **Mechanical Integrity**
- ☪ **Fire Protection**
- ☪ **Process Safety Management (PSM)**
- ☪ **OSHA Voluntary Protection Program (VPP)**
- ☪ **Regulatory Compliance Planning**
- ☪ **Consequence Modeling**
- ☪ **Auditing**
- ☪ **Safety Instrumented Systems**
- ☪ **Human Factors Management Systems**
- ☪ **Human Error & Reliability Analysis**
- ☪ **Inherently Safer Systems**

Through our services, we help our clients to:

- protect employee and public health and safety,
- reduce the chance and impact of process accidents,
- communicate risk to the public,
- comply with government regulations,
- avoid adverse environmental impact,
- reduce liability exposure, and
- improve business performance

Industries Served

- Oil and Gas
- Petrochemical
- Petroleum Refining
- Chemical
- Pipelines & Platforms
- Agricultural
- Pharmaceutical
- Food processing
- Transportation
- General Manufacturing
- Mining
- Water/Wastewater
- Ammonia Refrigeration
- Engineering Companies
- Pulp and Paper
- Aerospace
- Biotech
- Semiconductor
- Paint and coatings



AcuTech's [AcuSafe](#) website is a free collection of useful technical papers, regulatory information, process safety and risk management tools, and links to related websites.

Free registration with AcuSafe allows complete access to this information as well as a monthly email newsletter.

AcuTech's highly qualified team offers in-depth knowledge of process safety regulations; detailed experience in conducting hazard analysis, risk assessments, and safety analysis; and experience in operations involving highly hazardous materials.

AcuTech works closely with clients to ensure the accuracy and technical content of any information used in developing reports or making recommendations. We can emphasize practical, cost-effective risk reduction measures due to our extensive experiences.

We are specialists at hazard analysis and risk assessment, and have considerable experience in assisting companies in understanding and controlling risks.

AcuTech's advantages include:

- In-depth familiarity and experience in complying with all aspects of OSHA's Process Safety Management (PSM), EPA Accidental Release Prevention (RMP), USCG Maritime Transportation Security Act, as well as state and local requirements which allows us to approach our client's challenges in a logical and efficient manner
- Nationally recognized expertise in chemical process security, process safety and risk management with specialization in the petroleum, chemical, and ammonia refrigeration industries and significant experience in assisting with security/PSM/RMP implementation for a variety of companies, both large and small
- Use of the latest available computer software for conducting process hazard analyses (quantitative and qualitative), preparing Risk Management Plans, consequence modeling, and implementing expert, real-time emergency response
- Comprehensive quality management program to ensure that accurate, high quality technical results are produced on schedule and under budget
- Members of our staff are recognized experts in their field and have previously worked for a variety of major chemical and petroleum companies, large engineering and construction companies, and federal, state, and local government
- Course instructors who offer their field experience in interactive workshops and real-world case studies

Partial Client List

PETROLEUM

AERA Energy
Alyeska Pipeline Service Company
Atlantic Richfield (ARCO)
Amoco
Aspropyros Refining
BHP Hawaii, Inc.
BP Oil Company
Caltex
Chevron
FINA Oil & Chemical Co.
Four Corners Pipeline Company
Gulf Canada Ltd.
Harken De Columbia
Hibernia Management & Development Co.
Home Oil Company
LG-Caltex
Mapco Petroleum
Mobil Oil Corporation
Murphy Oil USA Inc.
Oxy USA Inc.
PetroCanada
Pacific Refining
Pertamina
Petronas
P.T. Badak
P.T. Arun
Schlumberger Oilfield Services
Sun Refining & Marketing
Tosco Refining Company
Ultramar Diamond Shamrock Corp.
Union Texas Petroleum
Unocal Corporation
Western States Petroleum Association

CHEMICALS

Air Products and Chemicals, Inc.
Akzo Chemicals Inc.
Amerada Hess
Amoco Production Company
Clorox
CONDEA Vista
Dow Chemical USA
Dye Specialties
DynaChem, Inc.
Elf Atochem
FMC
Huntsman Chemical Company
ICI Americas
IMC Agrico
John Taylor Fertilizers
Matheson Gas Products
Mobil Chemical Company
Oxychem
Owens-Corning
Quantum Chemical Corporation
Pioneer Chlor-Alkali
Polaroid
Rhône-Poulenc-Rohrer Inc.
Stepan Company
The Thompson-Minwax Company
Titanium Metals Corp (TIMET)

AcuTech offers the following consulting services for the process industry. The scope of work on projects can range from review and comment to complete development depending on our clients needs.

Chemical Process Security Services

We conduct Security Vulnerability Analyses (SVAs); develop security plans for USCG and DOT regulations; provide 3rd party review and comment on SVAs and security plans; assist with selection of appropriate countermeasures; and train company staff on SVAs and security program development.

Process Hazard Analysis

We offer a full range of services from providing PHA facilitation (HAZOP, What-If, Checklist, FMEA), to developing PHA Procedures, to working with post-merger companies to standardize PHA approaches and risk ranking matrices.

OSHA Process Safety Management (PSM)

Both PSM and RMP require policies, procedures and management systems to effectively manage and minimize risk. We develop complete programs or individual program elements; assist with determining if PSM requirements apply and implementing programs if they do; and audit the effectiveness of programs for improvements. We have experience with California, New Jersey, Delaware and Nevada state programs.

EPA Risk Management Protection Programs (RMP)

We have extensive experience with the development of RMP programs & RMP elements (i.e. hazard assessment, emergency response program, prevention program); coordination with local, state or federal agencies to resolve outstanding issues; and development & submission of Risk Management Plan.

Emergency Planning and Response

We can improve existing programs through training & changes to plans and procedures; ensure that those programs incorporate EPA RMP emergency response; and consolidate emergency response programs documentation into a single plan (ICP)

Regulatory Compliance Planning

We assist companies in planning how to meet the myriad of regulations that may affect a facility in an efficient and cost-effective way.

Mechanical Integrity (MI)

We develop and implement the policies, practices, and procedures necessary for an effective MI program. We utilize reliability centered maintenance (RCM) and risk-based inspections (RBI) to provide an effective MI program.

Auditing

AcuTech has developed a proprietary based risk management system model, Continuous Safety Improvement (CSI), to use as a measure of compliance. Our audit approach is based on extensive experience with industry and regulators.

Thai Industrial Gases
Ultramar Diamond Shamrock (UDS)
Van Waters & Rogers
WCM Group Inc.
Wacker Silicones Corporation

PHARMACEUTICALS/BIOTECH

Bayer
Johnson & Johnson
Merck & Company, Inc.
Pfizer Corporation
Pharmacia & Upjohn

FOOD, BEVERAGE, & FOOD SERVICE

Baskin Robbins
Campbell's Food Company
Cerestar USA
Coldwater Seafood Company
ConAgra Broiler Company
Earthgrains
Fleur de Lait
Gold Bond/Good Humor Ice Cream
Haagen-Dazs
Hazlewood Farms
Hillshire Farm & Kahn's
Hilton Davis Company
Hunt-Wesson, Inc.
Jimmy Dean Foods
Kellogg's
Knouse Foods Cooperative, Inc.
Kraft Foods
Leprino Foods
Millard Refrigerated Services
Molson Breweries
Moyer Packing Company
Mrs. Smith's Frozen Foods
Nestlé
Pillsbury Company
Sara Lee Bakery
Stouffer Foods
Tropicana Products Inc.

LOCAL/CITY GOVERNMENT

Central Contra Costa Sanitary District
City of Chicago, IL
City of Sacramento, CA
East Bay (CA) Municipal Utility Dist.
City of Knoxville Utilities Board
Truckee Meadows, CA Water Facility

FEDERAL GOVERNMENT

Lawrence Livermore National Labs
U.S. Department of Labor (OSHA)
U.S. Environmental Protection Agency

TRADE ASSOCIATIONS

American Chemistry Council
American Petroleum Institute
Center for Chemical Process Safety
International Institute of Ammonia
Refrigeration (IIAR)
Northwest Food Processors Association
Western States Petroleum Association

☾ **Consequence Modeling**

Consequence modeling assesses how releases affect the surrounding community, workers, and property. We have performed consequence analyses for federal RMP, and state compliance programs in California and New Jersey.

☾ **Quantitative Risk Analysis (QRA)**

QRA is particularly effective in providing a frame of reference in decision – making of complex risk issues. AcuTech has used QRA extensively to assist management with difficult decisions.

☾ **Expert Witness Testimony**

AcuTech provides expert opinions and technical assistance on safety-related issues. We conduct accident investigations and provide expert witness testimony at depositions and during trial. Our experience and composure under trial conditions has impressed past clients.

☾ **Risk Communication/Crisis Management**

We assist companies to characterize risk results and develop strategies to explain to management and the public the levels of risk they are facing without creating fear or being evasive. We explain the fundamentals of risk communication, and show how to manage and succeed with the media.

☾ **Fire Protection**

We provide fire safety analysis with an understanding of process safety. We identify and evaluate fire hazards and recommend measures to reduce fire risk. We have designed, surveyed and tested engineered systems for fire control for chemical and petroleum process plants including firewater, foam, halon, and fire alarm systems.

☾ **OSHA Voluntary Protection Program (VPP)**

We help companies improve process safety programs and management systems to adhere to OSHA VPP.

☾ **Human Factors Management & Human Error & Reliability Analysis**

We develop and implement practical and comprehensive programs for reducing risk related to human factors in process safety. We conduct Human Error & Reliability Analyses to help companies identify the risk of human error. We have presented numerous papers on Human Factors and have also performed work under the Contra Costa County Industrial Safety Orders ordinance which requires specific human factors consideration.

☾ **Safety Instrumented Systems**

We assist companies with adherence to ANSI/ISA-S84.01-1996 (S84.01), Application of Safety Instrumented Systems for the Process Industries.

☾ **Inherently Safer Systems**

The goal of inherently safer systems is to reduce or eliminate risk. Four key inherently safer strategies include minimizing, substituting, moderating and simplifying. AcuTech has presented numerous papers and has also performed work under the Contra Costa County Industrial Safety Orders ordinance which requires inherently safer systems.

ALUMNI REMARKS

"Excellent course in HAZOP."

Cut A. Zaini,
Mobil Oil Indonesia Inc.

"Clear, Insightful, Experienced."

Luisito V. Poblete,
Total Petroleum Corp.

"Presentation was excellent."

Sven Thomas,
Siemens Power, Inc.

"Good interaction with participants, excellent examples of past experience."

Muhd Hasnul Ariffin,
TNB Generation Sdn Bhd

"Very knowledgeable on the subject matter."

Roberto C. Rubina,
First Gas Power Corp.

Course Topics

- ▶ **Chemical Security Vulnerability Assessment**
- ▶ **Best Practices in Process Safety Management**
- ▶ **Human Factors in Process Safety**
- ▶ **Mechanical Integrity Program Management**
- ▶ **Process Hazard Analysis for Team Leaders**
- ▶ **Process Hazard Analysis Revalidation & Advanced Topics**
- ▶ **Using PHA-Pro for PHA Studies**
- ▶ **Quantitative Risk Assessment**
- ▶ **other PSM, RMP, Security, Fire Protection topics**

AcuTech Training Institute (ATI) offers a wide variety of scheduled classes to meet the demands of our industry. AcuTech has conducted a series of highly successful training seminars on process safety management, hazard analysis, and quantitative risk assessment in numerous locations in the U.S., Canada, and Asia for leading petroleum, chemical, petrochemical, energy, and manufacturing company representatives.

We are dedicated to providing a high-value solution to your process risk management and training needs. Our expert instructors:

- Give you the skills and knowledge needed to manage process risks
- Help you comply with regulations
- Show you how to continuously improve the safety of your operations

We accomplish this by providing you a strong working knowledge and a clear presentation of safety management principles and regulatory requirements. Some of the benefits to attending ATI courses are:

- Receive training from experts who have taught hundreds of process safety and risk management professionals and who are noted for their training effectiveness
- Gain insight into expectations of regulators who also attend our courses; Federal regulatory agencies such as USEPA, OSHA, and state regulators in California, New Jersey, and Nevada have received their training from ATI
- Guest lecturers representing government agencies or industry are often featured
- Gain hands-on experience through interactive workshops
- Learn from real-world case studies as shared by our course instructors; their backgrounds in government and industry provide a practical and complete perspective to your training session

Custom On-Site Courses

AcuTech provides customized training for your facility. Standard courses can be modified with specific workshop examples related to your facility or customized to incorporate your facility risk ranking matrix. We can also custom design a course from any process safety, security or risk management topic to meet your needs. Benefits to onsite courses include:

- **Custom Focus for Enhanced Value.** Courses are designed to address unique requirements of your personnel, utilizing their time efficiently and your money effectively.
- **Limited travel expenses.** By bringing our experts to you, you realize significant savings in travel expenses and time lost.
- **Minimal impact to work schedules.** Your personnel are trained at your facility, minimizing their time offsite and the possible need to bring in additional shift coverage.

AcuTech represents several software product lines that greatly assist companies with risk management and process safety, and improve business performance.

PHA-Pro™

PHA-Pro, by Dyadem, is a state-of-the-art software for conducting. Templates for HAZOP, What If/Checklist, Preliminary Hazard Analysis, FMEA, LOPA and SIL are included. Optionally you can add an SVA template. This feature rich program can enable you to complete studies 50% faster than other methods.

SVA-Pro™

SVA-Pro is a comprehensive and innovative software tool for conducting a Security Vulnerability Analysis. It provides expert guidance for studying a full range of facilities to help companies identify critical assets and potential adversaries in order to eliminate threats and reduce vulnerability through improved countermeasures.

RiskSafe™

RiskSafe helps to improve workplace health and safety by identifying potentially hazardous practices through various qualitative workplace risk assessment methodologies including Job Safety Analysis (JSA) and Job Hazard Analysis (JHA).

SmartMOC™

SmartMOC fast tracks your MOC process by automating the administration of the process of change control. It enables you to evaluate, authorize and document changes before they are made, ensure proper implementation of the changes and proper closure after the changes are made.

PHAST

DNV's PHAST is used to assess situations which present potential hazards to life, property and the environment, and to quantify their severity. PHAST examines the progress of a potential incident from the initial release to far-field dispersion including modelling of pool spreading and evaporation, and flammable and toxic effects. The results from the analysis can be displayed in tabular & graphical form, so the extent of the impact can be seen, and the effect of the release on the population and environment assessed.

For more information and to obtain demonstrations or purchase copies, please contact us.

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