

Managing EHS Risk in Uncertain Times

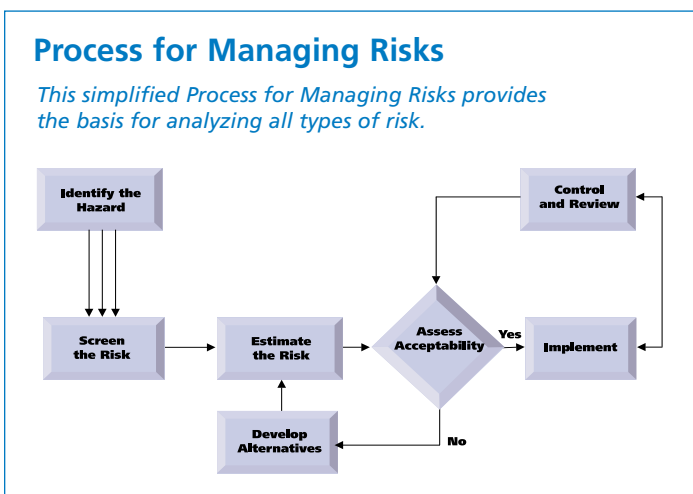
After the initial shock of 9/11, risk managers quickly asked themselves “Where do we go from here?” and “How do we get there?” Risk managers of companies handling hazardous materials have always faced the challenge of meeting regulatory requirements and industry guidelines.

At the same time, a rigorous competitive climate has driven many companies to restructure and downsize— including environmental, health, and safety (EHS) functions. For many businesses, these functions are being asked to solve the age-old dilemma of doing more with less.

Following 9/11, risk portfolios were updated to reflect the current climate. Related questions, such as, “How much investment is appropriate and how do you justify the potential need for additional funding?” rapidly arose.

The answers to such questions lie in the systematic process of using the risk-based approach.

Hazard Identification is the first step in capturing events that could compromise the process, the facility, or the area of interest. Useful methodologies for hazard identification and documentation include the Preliminary Hazard Analysis and the “What if?” method.



Consequence Analysis is important to estimate the magnitude of the event, e.g., thermal radiation, vapor dispersion, and associated impact on life safety, property damage, and/or business interruption.

Frequency Estimation characterizes the likelihood of the event or interrelated events. Fault tree analysis is a useful methodology for this purpose.

Risk Prioritization is based on the likelihood of occurrence and potential consequences, as illustrated in the Risk Analysis matrix to the right.

Risk Acceptability provides the foundation for decision making on implementing cost-beneficial mitigation measures and investments in emergency response and business continuity contingency planning.

Risk Management Procedures Post-9/11: A Case Study

One of the many organizations reexamining its risk management procedures in the wake of 9/11 was the Boston Fire Department.



The Department immediately revisited the risks associated with the transport of liquefied natural gas (LNG) through Boston Harbor and in contiguous areas where the impact of an event could affect the City of Boston. Relied on as a source of energy for the New England region, LNG has been transported through the port of Boston regularly since 1971.

As risk-related concerns were revisited, some events previously considered low probability/high consequence now

Perspectives

had a higher likelihood. One of the many actions taken by the Boston Fire Department was to focus on improvements to the risk management of LNG release/fire events. This was particularly important as the consequences of a fire event could impact densely populated areas of the city.

Risk Analysis

		CONSEQUENCE			
		Minor	Serious	Extensive	Catastrophic
LIKELIHOOD	High	C	B	A	A
	Moderate	C	B	B	A
	Low	D	C	B	B
	Very Low	D	D	C	C

The Boston Fire Department turned to ICF Consulting’s EHS Management practice (formerly ADL Global Environment and Risk—Americas) for assistance. ICF Consulting’s efforts included outreach to interested parties at all levels, as well as reviewing risk management plans and identifying any potential gaps or conflicts. More sophisticated Standard Operating Procedures also were developed, including a dynamic response plan based on a conceptual decision tree that incorporates “real time” consequence assessment when responding to a fire event. Such an approach sharpens the technical focus of the response operations, which in turn minimizes risk and increases cost-effectiveness. For example, an estimate of the anticipated thermal radiation from a pool fire event is of critical importance when making decisions on evacuation zones.

While risk management was critical to life safety, property protection, and businesses prior to the attacks, its importance cannot be overemphasized in today’s uncertain times.

For information on ICF Consulting’s safety and risk management capabilities, visit www.icfconsulting.com/EHS