



Risk Assessment Services for Litigation Support and Liability Valuation



A strategic approach to the valuation of environmental and human health liabilities is critical for successful litigation and prevention of financial liabilities. It can mean the difference between winning and losing millions of dollars.

ICF Consulting has extensive experience, from both the human health and environmental risk perspectives, in providing litigation support and liability valuation services. In addition to assessing the risks and potential costs of environmental impacts, we conduct human health risk assessments and liability valuations for consumer products, exposures to hazardous chemicals at historic hazardous waste sites, and for worker and community exposures at operating facilities.

Our Capabilities

ICF Consulting's staff of experienced toxicologists is available for litigation support in a wide range of specific chemical areas—from volatile organic compounds to metals and radionuclides. Our key areas of expertise include:

- Assessing potential environmental and occupational risks and liabilities associated with industrial facilities
- Analyzing potential liabilities at hazardous waste sites through dose reconstruction for potentially exposed populations
- Estimating health risks of consumer products
- Assessing potential product liabilities, including lawsuits and their ramifications
- Analyzing costs and benefits of, as well as various strategies for, reducing overall human health risks in new consumer products and operating industrial facilities

negotiations by executives and attorneys who may not be technical specialists.

Enabling companies to evaluate a full range of technical and financial options, our strategic approach to the valuation of environmental and human health liabilities is critical for successful litigation and prevention of financial liabilities; it can mean the difference between winning and losing millions of dollars.

The steps below outline ICF Consulting's general approach to liability valuation:



Step 1. Define the scope of study, including the time and potentially exposed habitats, communities, and worker populations, as well as potential exposure scenarios.

Step 2. Delineate the liabilities, by determining the amounts of materials emitted to the environment (air, surface water, sediments, soil) outside the facility, and evaluating the potential for environmental damage and impacts on community health. Also determine worker exposures by delineating the types and levels of exposures in-plant.

Step 3. Quantify the liabilities by developing costs and establishing probabilities for the occurrence of assumed scenarios.

Our Approach

ICF Consulting's approach to litigation support and liability valuation provides a consistent, rigorous methodology for estimating environmental damage, community health, and/or worker exposure liabilities.

This approach yields persuasive results and clear information for decision-making and

		Potential for Toxicity		
		Low	Medium	High
Potential for Contaminant Occurrence/Exposure	Low	Low Exposure and Low Toxicity Potential	Low Exposure and Moderate Toxicity Potential	Low Exposure and High Toxicity Potential
	Medium	Moderate Exposure and Low Toxicity Potential	Moderate Exposure and Moderate Toxicity Potential	Moderate Exposure and High Toxicity Potential
	High	High Exposure and Low Toxicity Potential	High Exposure and Moderate Toxicity Potential	High Exposure and High Toxicity Potential

Example of a Liability Ranking Scheme

Featured Solutions

Radiation Litigation Support. ICF Consulting reconstructed the radiological dose for a worker exposed to aerosols contaminated with radionuclides. The project implemented state-of-the-art statistical techniques (probabilistic modeling and 2D Monte-Carlo simulations) to study the effect of worker monitoring strategies on potential occupational exposures, as well as on worker cancer risks.

Toxic Tort Liability Evaluation. For a major international chemical company, ICF Consulting developed toxic tort liability scenarios (for potentially exposed communities, consumers, and workers), environmental liability scenarios, and cost estimates for five large chemical plants. We reviewed historic documents to reconstruct periods of exposure and the likely number of individuals exposed. Based on document review and interviews with plant environmental managers, we developed models that included various scenarios and probabilities for known and projected liabilities for each of the five plants. Based on these models, we developed cost estimates using weighted formulas for scenarios with differing probabilities. We conducted an in-depth literature review and analysis of applicable consumer and occupational toxic tort cases and natural resource damage assessment claims to estimate the potential costs associated with the modeled liabilities, resulting in a well-supported estimate of the client's future liabilities.

Historical Research for Insurance Litigation. ICF Consulting conducted an insurance litigation case involving a former manufactured gas plant site in Vermont. We coordinated historical research on the human and ecological toxicity of chemicals found in the manufactured gas process during the time the plant was operated (approximately 1900 to 1945), in addition to chemical processes, such as biodegradation in the environment.

Consumer Product Liability Evaluation. In anticipation of possible litigation, ICF Consulting assessed the risks associated with a gift/food product that had been manufactured incorrectly, allowing the possibility of exposure to highly concentrated styrene. We modeled risks for a variety of exposure scenarios, including child and adult exposures, both acute and chronic, for this retailer.

Evaluation of Risks for a Product Supply Chain. For a carbon dioxide provider, ICF Consulting evaluated the risks of carbon dioxide contamination by clarifying the potential types of contamination in the carbon dioxide supply chain; evaluating risks to consumers of food, pharmaceutical, and beverage products that use carbon dioxide, also evaluating the risks and liabilities to the company and recommending control measures. The ultimate goal was for the client to decide if investments in process improvements are cost-effective, based on the potential costs of future risks due to contamination incidents. Uptake of potential contaminants into carbonated beverages, cryogenically frozen foods, and medical gases were quantitatively estimated, using appropriate fate and transport models. To estimate the risks of acute and/or chronic human health effects, the human health risk assessment identified the likelihood of exposure and potential toxicity of estimated exposure levels.

Evaluation of Gasoline Exhaust Risks. For a Japanese auto manufacturers association, ICF Consulting prepared an in-depth analysis of benzene toxicity associated with the inhalation of small quantities of benzene in car exhaust as well as dermal contact at service stations. The analysis incorporated fate and transport modeling for potential exposure on a typical urban street and at a gas station.

Evaluation of Human Health and Ecological Risks of Mercury. For a Brazilian national oil company, ICF Consulting analyzed potential human health and ecological risks associated with the use of oil containing mercury. We summarized mercury fate and transport in the atmosphere, surface water, and sediments, and published a paper on mercury toxicity, focusing on the actual concentrations of mercury concentrations that could adversely impact health and the environment.

About ICF Consulting

ICF Consulting is a leading management, technology, and policy consulting firm. Drawing upon extensive industry knowledge, distinguished professionals, and innovative analytics, the firm develops solutions to complex homeland security and emergency management, community development, energy, environment, and transportation issues. ICF Consulting's approach to these issues is strengthened by its expertise in information technology, organizational improvement, program management, and communications. Since 1969, ICF Consulting has been serving major corporations, government at all levels, and multinational institutions. More than 1,000 employees serve these clients in the Americas, Europe, Asia Pacific, and Africa.

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