



Environmental Release Contingency Planning: Zurich Spill Preparedness Program Curbs Costs and Limits Liability in Transportation and at Fixed Facilities

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An environmental release resulting from a vehicle accident or a spill at a fixed facility – such as a warehouse or manufacturing facility – requiring emergency cleanup can set off a complicated and potentially expensive chain of events for the spill generator. Laws defining liability provide that a party involved in an activity is legally responsible for damages resulting from that activity. The key to protecting against damages associated with fuel spills and other releases is two-fold: understanding the potential liability associated with the company's activities and being adequately prepared to control costs and mitigate damages.

All applicable reporting and cleanup requirements must be strictly followed or the spill generator must face the consequences – which can be very costly. Truck accidents with spills of diesel fuel or hazmat require a prompt and efficient response to contain the costs and limit potential liability associated with these environmental releases. Even releases of large amounts of non-hazardous materials can result in significant damages and fines. Penalties for failure to comply with regulatory reporting requirements can be severe. The best way to protect against spill-related fines and third-party claims is to be prepared for spills before they happen. Creating a detailed contingency plan is the best first line of defense. It acts as a road map to direct the response to spills, whenever and wherever they may occur.

Zurich Canada has adopted a program developed to help customers deal with environmental releases swiftly and thoroughly to avoid trouble with the authorities. The program, called *Zurich Spill Reporting Online* or SROL, is designed to help Zurich customers facilitate spill reporting and avoid fines and other penalties associated with environmental releases which require emergency cleanup. Canadian regulations are very clear on spill planning requirements. Part 7 of the Transportation of Dangerous Goods Act of 1992 requires that before a person offers for transport or imports certain dangerous goods, the person must have an approved Emergency Response Assistance Plan (ERAP).

Part 8.1 covers reporting requirements, stating that in the event of an accidental release of dangerous goods from a means of containment, a person who has possession of the dangerous goods at the time of the accidental release must make an immediate report if the release meets

the quantity or emission levels stipulated in the regulations. A follow-up report must also be made in writing to the TDG Director General within 30 days of the release.

Zurich Offers Spill Reporting Online

SROL was developed by Zurich's Environmental Underwriting and Claims Departments. It leverages the resources of Spill Center®, a leading a spill-management specialist and environmental claims company based in Hudson, Massachusetts. The program helps expedite reporting of incidents and provides coordination of cleanup activities – from initial response through closure. Spill Center, with nearly 20 years experience assessing and managing environmental spills, offers expertise in environmental emergency response, investigation and remediation of accidental releases of hazmat and other regulated materials. Through Zurich's SROL program, spill generators are able to go online to provide details of a spill, which are sent to Spill Center and assigned to a claim officer for handling.

Registration in the Internet-based SROL program is offered at no charge to Zurich customers. Spill Center contingency associates are available to help prepare a spill emergency contingency plan. As mentioned, having a written plan in place is essential. When writing a contingency plan, all activities with which the company is involved having the potential to generate a spill should be considered. A detailed response for each type of spill should go into the plan. Since reporting requirements vary from locale to locale, the incident reporting regulations and whom to contact after a spill for every jurisdiction in which a carrier's trucks operate should be included in the contingency plan.

That is the key to avoiding fines for non-compliance with environmental reporting regulations – maintaining current information and contacts for every jurisdiction in which the equipment operates. The alternative is to use the services of experts, such as those at Spill Center through the Zurich SROL program who can provide that information whenever it is needed for locations throughout Canada and the U.S. and advise spill generators on how to avoid getting caught in the maze of environmental laws. Having experts in regulatory matters can be invaluable because the potential for multiple jurisdictions with separate reporting requirements exists in every environmental release.

Every person having control of a pollutant that is spilled and every person who causes or permits a spill must notify the ministry, the municipality, the owner of the pollutant or the person having control of the pollutant. For Canadian companies doing business in the U.S. the problem is the same. Canadian transporters having a spill in one of the five boroughs of New York City are required to file reports to county, state and federal authorities. In addition, the NYC Dept. of Environmental Protection requires a report. Failure to make the city report can result in a fine of USD \$25,000 a day, with each day being a separate violation.

The emergency spill contingency plan should lay out all the steps that the company will take in the event of an over-the-road or a facility release. It should also list all the hazardous materials, including cargo, fuel and other truck fluids, that would require an emergency response if spilled. Drivers should be familiar with the kind of information to report and how to properly fill out a Hazardous Materials Incident Report.

Drivers should always inform the regulatory authorities about the proximity to the spill of any waterway or storm sewer or drain. The plan should list the phone numbers of all regulatory agencies that may be involved, as well as any cleanup and disposal services that may be needed. Dry ditches should be considered the same as waterways, storm sewers or drains for purposes of reporting because subsequent rainfall can carry the pollutant to water.

By not having a contingency plan – or having a plan on the shelf simply to meet legal requirements but not on the ground, companies run the risk of suffering significant damages. The gap has been closed between what a company says it does and what it has to do in regards to environmental responsibility. When management is unsure of the environmental risks associated with the company's activities, an assessment from a third-party firm specializing in managing fuel and hazmat spills, compliance and regulatory reporting should be the first order of business.

No one gets in trouble by reporting an incident that does not require a report, but failure to report a spill of a reportable quantity can produce a substantial fine. Confusing the issue is the fact that the reportable quantity varies from one locale to the next and an amount below the limit in one province or state is reportable in another. For example, any amount of diesel fuel sufficient to cause a sheen on the surface of water is reportable in the U.S. while Canada requires reports when there is release of an amount that is abnormal in quality or quantity in light of all the circumstances of the discharge.

Generally, outside resources and experts should be a part of the company's spill emergency team. It is important to have someone knowledgeable on the team when it comes to spill mitigation and the legal consequences that can result from an environmental release. A transporter activity creates legal responsibility, as does a shipping activity or a construction activity. And it should be remembered that the spill generator's responsibility does not end once the contaminated soil and materials are hauled away. The company needs to make sure that it is dealing with reputable cleanup contractors. That is where the SROL program comes in. Zurich and Spill Center are able to monitor the scope of spill clean-up work in real time.

Importance of Documentation

Documentation is critical to avoid being drawn into a pre-existing contamination problem as a responsible party after a spill. Being able to document that a release was separate in time, separate in nature, and was the subject of a separate and complete response and remediation, will go a long way toward a successful defense. All actions taken after a spill should be logged so that the written record can be used to place the company in a legally defensible position.

A driver who thought he had done everything required of him after a routine diesel fuel spill of 30 gallons in New Jersey got a big surprise a few weeks later. A letter from the N.J. Dept. of Environmental Protection advised the private fleet to which he was leased that it was required to pay a USD \$75,000 fine for failure to comply with the state's environmental reporting requirement. The fleet had filed a full accident report with the state police, but they did not mention the spill reporting requirement. The fleet thought the situation was resolved after the

site was cleaned up and soil remediation work was completed. That was a costly mistake, since insurance does not cover failure-to-report fines, as it is not an insurance company's responsibility to report spills to authorities. The SROL program would have known about and handled that report.

Another failure-to-report violation cost a locomotive cleaning operator near St. Louis a total of USD \$500,000 in fines and a two-year probation. The company had been discharging waste oil and solvents from a poorly maintained oil-water separator into a ditch that ultimately flows into the Mississippi River. After realizing the problem, the company failed to report it, as required by law. In addition to the fines, the Illinois Environmental Protection Agency, which first discovered the discharges after an anonymous complaint, ordered the firm to pay USD \$26,000 in restitution.

Knowledge of Regulations

Spill Center maintains continuously updated listings of nearly 30,000 federal, state/provincial and local jurisdictions requiring incident reports after spills, which are available to Zurich customers registered in the SROL program. SROL also provides access to Spill Center's database of more than 3,000 qualified cleanup contractors throughout North America who are experienced and equipped to react to particular kinds of spills. Spill Center staff members, who include legal, technical and environmental specialists, can advise spill generators on proper procedures for handling and reporting environmental releases.

The SROL program is designed to help Zurich customers avoid fees and penalties for missing reporting deadlines and contain costs related to spills. Vital event information is collected once and, upon the customer's approval, provided to the appropriate authorities. Spill generators are provided with electronic data spill packages with complete documentation of spill incidents, reporting, site remediation and other actions taken to close them. Insurance brokers working with Zurich have welcomed the SROL system as a tool to provide improved service to customers.

Spill Center has developed proprietary environmental claims reporting, tracking and documentation systems, which are available to support the Zurich SROL program. This program is integral to Zurich's cost control strategies for environmental remediation of transportation-related spills. Since the launch of SROL, the program has saved more than 50 Zurich customers close to USD \$1 million in cleanup and other costs.

Expertise Leads to Savings

The SROL system saved one Zurich Canada customer hundreds of thousands of dollars when more than 4,000 gallons of methanol-based cleaning compound spilled into a creek after a tanker truck struck a bridge abutment. Initially, a regulatory authority representative ordered that the water in the creek and nearby pond be drained and scraped. This scope of work would have involved a large amount of equipment and personnel along with disposal of large quantities of soil and liquids, costing in the hundreds of thousands of dollars.

Once the incident was reported via the SROL System, a local environmental consultant was retained. He determined that the methanol compound which was released would evaporate and degrade within eight days, without leaving behind any residue. Based on this information, the provincial authority agreed to a less aggressive approach comprised of remediation of gross soil contamination and sampling of soil and surface water to confirm that the compound had degraded. Within two weeks of the incident, sample results confirmed that the contamination was below regulatory standards. Additionally, the onsite consultant reduced the project costs by having subcontractors bill Zurich's insured directly, reviewing contractor costs, and negotiating regulatory response costs. Total reduction in clean-up costs amounted to USD \$305,271.

In another incident, a collision between two tractor trailers resulted in 85 drums of hazardous waste catching on fire and discharging a large quantity of waste into the soil. Through Zurich's SROL System, a proactive discussion began immediately with the cleanup contractor. The contractor had classified the soil as hazardous waste that needed pretreatment prior to disposal through incineration. Zurich requested that the stockpile of contaminated soil be re-sampled to determine if the soil could be reclassified for disposal.

After additional disposal sampling was performed, the soil was reclassified as a hazardous waste that could be disposed of locally, meaning a lower disposal rate per ton. This disposal rate difference created a cost savings of USD \$388,035. On top of these savings, transportation was reduced from USD \$4,150 per load to USD \$2,367 per load because the soil could be taken to a closer facility. Finally, upon review of the cleanup contractor invoicing, it was discovered that the fuel surcharge was applied across the entire costs of the initial invoice. Additional negotiations reduced this amount as well. Total cost savings added up to USD \$453,509.

A transportation accident or emergency release that results in an environmental hazard is, for most businesses, an extraordinary occurrence. Yet every business needs to be prepared for such an event. Zurich's SROL program was designed to help spill generators deal with spill emergencies without expending their own resources to build and maintain a spill emergency response system. By assisting with emergency response – including reporting, response activation and documentation – SROL allows spill generators with in-house expertise to focus on their business. Once registered with Zurich's SROL system, customers can report a spill online or by telephone 24 hours a day, seven days a week.

SROL Assists Spill Generators

Spill Center helps SROL members control costs and limit liability after spills requiring emergency clean up in a variety of ways:

- **Customized Spill Contingency Plan with Alert Distribution** is tailored to each customer's needs and includes the online tools to allow each company to create a customized, internal alert distribution system. Each system includes detailed spill-handling and reporting instructions to facilitate the proper handling of spills, even at night, on weekends and on holidays, anywhere in North America.

- **Trained Compliance Associates** staff a Spill Hotline 24/7 to activate the customer's contingency plan in the event of a spill and take steps to initiate site cleanup and remediation. Spill Center's staff includes legal, technical and environmental specialists.
- **Find Responders Sooner** using Spill Center's Cleanup Contractor database with information on more than 3,000 pre-qualified environmental contractors throughout North America. Customers can find contractors they want, where and when they want. Contractor capabilities, equipment inventories and insurance coverages are also on file.
- **Avoid Fines and Penalties** for failure to make required incident reports within the mandatory reporting window. Spill Center maintains a database of current local, state/provincial and federal reporting requirements for jurisdictions throughout North America to determine which reports must be completed following spills and when. That means no more wading through screen after screen of regulations on government websites searching for information.
- **Save Time and Money** because fleet, safety and operations personnel can access and use the Internet-based system at any time from any location. Call-lists, contractors, reporting requirements, product information, forms and instructions – even electronic messaging – are available in one secure place for instant access.
- **Avoid problems** because Spill Center services are designed to enable subscribers to maintain a sound system of internal controls to manage hazmat materials and spill response processes. Thorough documentation of all reporting and remediation activities performed on behalf of customers is maintained to limit environmental liability and establish legal defense against any third-party claims that might arise from spills.
- **Proprietary Automated Systems** developed by Spill Center track incidents, produce standard and customized reports to identify conditions and trends and generate root-cause-analysis data for spill generators. The information can be used to improve safety.
- **Invoice Auditing Service** is available for expert review of charges from cleanup contractors, emergency responders and other service providers to ensure fair pricing (compared to accepted standards) and accuracy. Any inflated charges are negotiated down by Spill Center compliance associates.

Reimbursing Fire Departments

There is a growing concern that local ordinances authorizing fire departments and rescue services to seek reimbursement are becoming overly broad and unfair with few limits on the type of costs that can be charged. Spill generators – especially Canadian companies doing business in the U.S. – can end up with bills for thousands of dollars to reimburse these services – often needlessly. In one incident, 28 emergency personnel from two fire departments arrived on the scene after an accident involving a tractor-trailer resulted in a minor fuel spill. The trailer had jack-knifed in a collision with another vehicle not far from the terminal, rupturing the tractor's

fuel crossover line. By the driver's calculation of miles traveled since his last fill-up, no more than five or six gallons of fuel remained in the tank to leak out.

Most jurisdictions don't respond to spills that small, yet fire departments have a right by law to be compensated when called by police at accident scenes. Could the driver have done anything to lessen the combined USD \$14,346 in charges that the carrier later received from the two fire departments? If the fleet had been registered with the Zurich SROL Program, those charges could have been avoided. It is standard procedure for a Spill Center compliance associate to contact the local departments. In this incident, they would have been advised of the small quantity of fuel involved. They would have also been informed that the carrier's spill contingency plan had been activated to handle the spill. The fire department dispatchers would have understood that emergency response was not needed.

As another service for customers, Spill Center routinely screens invoices from emergency response agencies, looking for questionable line items and unreasonable or unauthorized charges on invoices. Some of the most common problems found on invoices for emergency services include:

Incomplete documentation. A USD \$1,200 charge for cleaning turnout gear is included on the invoice, but the fire department is unable to produce a paid bill from a cleaning or decontamination service. The department should be asked to produce receipts. If a spill generator is charged for 150 man hours, work logs showing time on/off or details of work performed should be provided.

Unreasonable scope of work. Multiple fire departments respond to a minor fuel spill and each one invoices the spill generator for emergency services. That is beyond the reasonable scope of response. Also common are charges for damaged Level A suits in incidents that do not call for the use of Level A. Details of the incident and the services rendered should be provided.

Unauthorized charges. Line items not directly arising from the loss are commonly included on invoices and may not be reimbursable, such as a labor charge with a pro-rated benefits cost or an administrative overhead charge. Cost of typing the report is normally not reimbursable.

Math errors. It is always a mistake to assume that the math is correct. Math errors on invoices constitute the third most common problem encountered by Spill Center associates. The numbers just do not add up.

No legal authority. Not all emergency responders are authorized to seek reimbursement. The spill generator should request a copy of the emergency services reimbursement ordinance or statute. Refusal to submit it usually means the department does not have authorization. Or they might be charging the spill generator under a mutual aid law that only entitles them to seek reimbursement from the municipality where the incident occurred. Bottom line, the spill generator does not have to pay.

Refusing to reimburse the fire department may not be in a company's best interest, however, especially if the company has a facility in that municipality. An alternative might be replacing damaged equipment or used materials and reimbursing costs directly associated with the loss. Companies should watch for any problem areas on the invoice and use them to negotiate down the amount.

Invoice Audit Following Spill

Invoice auditing service can save spill generators significantly. Without individual audits, carriers run the risk of not recognizing unreasonable charges. Close inspection of a cleanup contractor's invoice for work done after a diesel fuel spill on an icy road saved one bulk carrier more than USD \$1,700. A tank trailer jackknifed early one morning, hospitalizing the driver and spilling 40-50 gallons of diesel fuel from a ruptured saddle tank. None of the cargo, a toxic chemical, was released, but a transfer was needed. State police arrived at the scene and notified the carrier and a local cleanup contractor. The county emergency management agency was also on scene.

Upon learning of the accident, the carrier's safety director notified Spill Center to make required incident reports. A Spill Center compliance associate took down the details of the incident and determined which agencies needed to be contacted. The cleanup contractor at the scene was contacted by the compliance associate who went over requirements for the product transfer and site remediation. Normally, Spill Center provides a list of qualified local contractors to the subscriber to select from, but in this case, the police already had a contractor on the scene.

The site was excavated and the contaminated soil, which filled two roll-off containers, was ready to be taken to a disposal site. At that point, the compliance associate got a quote for the disposal from the contractor, and forwarded it to the carrier. Written reports were sent to the regulatory agencies, advising them that the remediation and disposal had been completed. All required reports, both by telephone and written, were filed on behalf of the carrier, avoiding fees and fines for non-compliance.

The carrier, a long-time Spill Center client, does not have many spills requiring emergency cleanup, but it typically uses Spill Center services two or three times a year. The carrier's trucks run throughout Canada, as well as into the U.S., traveling through hundreds of different jurisdictions requiring reports after spills. Keeping track of all those individual cities, counties, states, provinces and federal reporting regulations, would be a monumental task.

After the fuel-spill incident, the carrier forwarded the contractor's invoice to Spill Center to review. The auditing service evaluates all charges from contractors, emergency responders and other service providers to determine if they are reasonable and in order. At Spill Center, a compliance associate discussed several of the invoiced charges with the contractor, who offered to reduce the total amount by 2 percent. The contractor also reduced the hourly charge for the roll-off truck, as well as the charge for Level C personal-protection gear. In addition, charges for a chemical hose, photography and an administration fee, were deleted. The total savings came to more than USD \$1,700, and a credit memo was issued by the contractor.

Experienced in Spill Management

Spill Center clients include insurance and chemical companies, truck leasing and rental companies, and carriers, large and small. Large carriers with extensive in-house hazmat response capabilities use Spill Center as a 24/7 emergency resource to complement their own

safety personnel. That ensures releases are handled properly after normal business hours and on weekends and holidays.

The fleet safety director of a carrier based in Elmira, Ontario used Spill Reporting Online to speed up its response to spills. Like most fleet safety directors, he wears many hats, being involved with dangerous goods, transportation safety, regulatory issues, occupational safety requirements and a wide range of other things. As a result, he has a broad knowledge base from which to draw. But he admits that it is difficult to know every environmental regulation throughout Canada – let alone the U.S., where the carrier often operates. And he does not have the time or staff to find cleanup contractors in far-off locations to handle spills the way that SROL can. Consequently, the carrier relies on the Spill Center and SROL as a key resource.

Another long-time Spill Center client is one of the world's largest producers of industrial and specialty gases. With a Canadian distribution fleet of more than 1,000 power units which travel in all provinces, it also has a safety program second to none in the industry and a comprehensive emergency response program. But the company relies on Spill Center to coordinate responses to over-the-road incidents involving spills of diesel fuel and other regulated materials. The company's environmental manager relies on Spill Center to identify qualified consultants and spill cleanup contractors wherever a truck is involved in an incident on the road. He is confident that Spill Center associates are knowledgeable about who to deal with and what it should cost to handle spills anywhere in Canada.

Assistance During Product Recalls

SROL members can also take advantage of Spill Center's expertise with emergency product recall campaigns. Not long ago, Spill Center was involved in the most intense product recall the company has ever handled. Plastic pails of commercial dishwashing detergent, contaminated with hydrogen peroxide, started expanding and bursting, releasing the highly alkaline liquid. In the first four days of the recall campaign, the call center dispatched cleanup contractors to 480 locations around the U.S. to contain the potentially hazardous material. The manufacturer suspected that the detergent had been contaminated with hydrogen peroxide, which produced oxygen when combined with the alkaline detergent. The oxygen was causing the containers to swell and some to burst.

The bursting pails posed a hazard, since the detergent can cause injury if it comes in contact with skin or gets in the eyes. The manufacturer wanted to bring the contaminated product back home, so Spill Center was contacted to coordinate the recall effort. Over the next four days, Spill Center dispatched cleanup contractors to pack the containers in hazmat drums and palletize and placard the loads for transportation. The detergent had been distributed to customers throughout the country, including nursing homes, hospitals, restaurants and college facilities.

Once the company instructed its customers to contact Spill Center, the call center was answering about 60 calls an hour for the first six hours of the event. The manufacturer had done its due diligence by contacting several companies for advice on how to conduct the recall and how much to budget for it. They expected the recall to cost nearly USD \$1.5 million. But since

Spill Center had been called in early and could anticipate and plan the disposal, product handling, transportation and return process at the outset, the actual cost came in at USD \$879,000.

Spill Center communicated detailed information to every contractor about the material and packaging and issued handling instructions that stipulated the type of protective equipment that was required for safety. That kept contractors from bringing out the most expensive equipment when it wasn't needed. Spill Center was able to determine the loss locations, quantity of product at each, names of the personnel on the scene and what they needed. The call center, which worked around the clock, also identified the closest available cleanup contractor qualified to do the job of segregating corrosive detergent, over-packing it, properly labeling it, securing it to pallets and placarding the pallets for transportation.

Since the Spill Center database contains detailed information on contractor jurisdictions, the staff was able to coordinate responses by geographic location, giving some contractors multiple assignments. That eliminated mobilization and demobilization charges for the manufacturer. Spill Center also directed the contractors to retain common carriers to return the product once it had been secured for transportation rather than transporting it themselves. That resulted in more savings. Spill Center also managed the invoice submission process – organizing invoices by location, reviewing all costs, and placing the invoices in line for payment by the manufacturer.

Security for Hazmat Carriers

Spill Center offers heightened hazardous materials security for customers who need it, using a technology-based Emergency Response Management System or E2RMS. The system was developed by Spill Center to enhance response efforts in the event of a major hazmat spill or even a terrorist attack by providing improved communications and access to timely and actionable information.

E2RMS integrates wireless voice and data communications, vehicle-based telematics and satellite-tracking technology. It was successfully demonstrated during a U.S. Department of Transportation test program, producing timely and actionable intelligence and anytime access to highly specialized data. The system was designed to create a secure location for storage of data from various sources, including law enforcement, public safety, and the private sector, and to provide a standardized approach to sharing that data to improve communications and coordination capabilities.

E2RMS uses an automated, software-based rule engine and exception-based reporting to analyze transportation and critical infrastructure data to predict and automatically send alerts when a material in transportation poses a threat. Streaming data is compared with programmed values in data tables; matches indicate that an incident requiring an immediate response may be developing. Alerts can be sent as e-mail, fax, page, text or voice message from a 24/7 call center. A single event can deliver an unlimited number of customized messages to an unlimited number of contacts with a need to know. When an alert is delivered, it includes a description of

the event, vehicle location, and information on the material involved, driver, shipper and consignee.

The rule engine can be linked to specialized databases containing public, private and for-hire response resources and accessed through a proprietary data structure. Trucking industry partners can share information on vehicles, bills of lading and routing. The system is currently deployed to help the trucking industry and law enforcement track shipments. It is being used to provide route verification capabilities to confirm that trucks carrying hazmat are not off-route. Authorized transporters and shippers can call a toll-free number to determine if a particular vehicle is where it is supposed to be at any given time.

E2RMS is also being used to help law enforcement in the tracking and recovery of security-sensitive materials, providing a tool to help officers protect themselves and the public. The system provides fast access to environmental and hazmat response resources. Law enforcement agencies, for-hire carriers, and others with a need to know can use E2RMS technology to write event rules to analyze the transportation data patterns associated with increased risk.

E2RMS also allows for reevaluation of existing data in context with new data in order to provide constant updates. The automatic delivery of asset tracking data and alerts eliminates the need for personnel to constantly “watch a screen.” While these technologies are not new, the integration of them into a comprehensive system dedicated to the management of emergency response and remediation can benefit both industry and the public interest.

For more information on this or other services provided by Spill Center to customers and through Zurich’s Online Spill Reporting System, go online to www.spillcenter.com/zurich. Or call toll-free 888-SPILL HELP (888-774-5543). Learn how Spill Center and Zurich’s innovative SROL program can improve a company’s preparedness to handle environmental spill emergencies efficiently and cost-effectively.

About Tom Moses & Spill Center

Tom Moses is an environmental attorney, former U.S. EPA toxicologist and president of Spill Center, which he founded in 1990 as a 24/7 North America-wide resource for spill generators and responders. A leading environmental claims management and spill management company, Spill Center provides support services and incident management for clients and Zurich customers through the Zurich SROL system.

Mr. Moses is a member of the American Chemical Society, American Association for the Advancement of Science, and the Environmental Law Institute. He holds a certificate in Hazardous Materials Control and Emergency Response from the Georgia Institute of Technology.

His specialties include environmental and safety regulatory compliance, spill response management, and environmental claims resolution, negotiation and settlement. As an

environmental attorney for the insurance industry, he provided environmental claims and spill management, including managing facility response, containment and remediation, and negotiating with regulatory agencies. As a legal specialist for Standard Oil, he interpreted safety and environmental regulations and developed legally defensible compliance procedures.