

# Learning from the Exxon Valdez

By Colonel Ed Badolato, U. S. Marine Corps (Retired)

The largest tanker oil spill in U. S. history was not deemed possible, and was not prepared for. In learning to plan for worst-case scenarios, a look at what was lacking in Alaska provides useful insights.

The accident of the *Exxon Valdez* running aground on Bligh Reef caused America's largest oil spill; the subsequent losses and costs might make it one of the most expensive oil spills in history. After delving into the details, most would agree that there is enough blame for all concerned. Yet there remains a critical, haunting reminder of past contingency planning fiascos such as Desert One, the Union Carbide chemical plant in Bhopal, India, and the Beirut Marine barracks, where poor planning and fragmented responses led to similarly disastrous results. A review of the *Exxon Valdez* accident may provide some useful lessons.

*A Clear Definition:* Describe the type and level of emergencies for which the contingency program is designed. There must be an organizational and operational understanding of what the scope of the maximum credible contingency scenario should be. This must evolve into a consensus among key corporate management (federal, state, industry) decision makers about the magnitude of the response planning effort and the resources to be applied. Federal and state authorities, along with industry, must clearly understand each others' roles vis-à-vis the overall effort.

During the past ten years, various Alaska oil spill scenarios were examined from a very narrow perspective, which did not consider the actual *Exxon Valdez* worst-case scenario to be credible. The original contingency plans developed in the 1970s were made for the smaller 140,000-barrel tankers that were in use then. Reviews did not revise the possible spill size, even though million barrel tankers made the Valdez run in recent years. Unfortunately, and perhaps because there had been more than 6,000 tanker shipments without serious incident, industry and government managers considered spill scenarios only one-third the size of the *Exxon Valdez* accident to be unrealistic, and "not useful in long-term planning."

The important lesson here is that an event *can* occur that far exceeds the planning horizons of those individuals who create the response plan. An overall review of the situation prior to the accident (Captain Joseph Hazelwood's drinking problem, the reduction in tanker crew size, the increase in floating ice from the Columbia Glacier, the previous record of poor spill response tests and exercises) should have warranted some changes in contingency plans. But the real task for contingency planners is to determine how to ensure that the risk is accurately portrayed to decision makers who will shape future response efforts.

*An Emergency Management Plan:* This is the document that puts order into chaos and details the corporate policy, strategy, and plans for implementation of procedures to deal with the emergency. Each of the major players in the shipment of Alaskan oil had its own contingency plan. There were at least five plans to deal with the oil spill: the Alyeska (the pipeline company that runs oil the 800 miles from Prudhoe to Valdez and onto the ships) plan, the captain of the port's plan, national and regional contingency plans, the Alaska Regional Response Team plan, and the State of Alaska Contingency Plan and Response Program. In general, each of the plans ignored those of the other players.

In the future, every action must be taken to ensure that spills do not occur-but if they do, that we can quickly and effectively clean them up. The United States suffers about 7,000 oil spills each year, about 1,000 of them serious.

It is very difficult and tremendously expensive to maintain a rapid, effective nationwide cleanup capability for large-scale accidents. This may lead to a shift in strategy to rely more on cooperative preventative efforts such as those employed in the Shetland Islands, Singapore, and Latin America.

Although it may be premature to pass judgment on the critical factors of the *Exxon Valdez* incident that received heavy coverage in the press, they are worth considering from the standpoint of future crisis management. The salient factors include:

The 24-hour emergency response team

Availability of critical support facilities and equipment

Adequacy and delivery timing of oil-containment equipment and personnel

Use of chemical dispersants

Mobilization of community resources

Adequacy of communication

Maritime tracking radar

The port terminal town of Valdez has a population of 3,500, is fairly remote by transportation standards, and is not equipped with a highly developed contingency support infrastructure. No one really considered the requirements if, as happened, the town's population doubled practically overnight. The on-scene State of Alaska and Coast -Guard response organizations were in touch with their parent organizations in the state capital of Juneau, 500 air miles away, with daily teleconferencing. But the Juneau-based officials found this awkward and relocated to Valdez. With increasing numbers of senior officials superimposed on the situation, even the well-conceived and planned organizational roles began to get clouded and sometimes preempted. The communications and control problems that led to this situation might have been uncovered by earlier testing of the emergency plan.

*An Emergency Response Organization:* This generally involves an overall crisis manager, an integrated policy level management team, an on-site emergency director, and an on-site emergency response team. For oil spills, the National Response Center in Washington has a similar structure based around an intergovernmental National Response Team that oversees training and preparedness for oil spills, the staffing of regional response teams, and ensures that the federal on-scene coordinator receives advice, personnel, and equipment.

The sheer size of the Alaska oil spill caused the lead federal agency, the Department of Transportation, through the Coast Guard, to form an on-site steering committee in addition to the regional response team. The committee was composed of the federal on-scene coordinator, the Alaska Department of Environment Conservation (ADEC), and Exxon. The committee oversaw five areas: operations coordination, under the Coast Guard and Exxon; logistics and fiscal support, under Exxon; salvage, under Exxon; wildlife management, under ADEC; and planning (short-term cleanup and long-term environmental recovery), under ADEC.

There is an important role here for federal - state- industry cooperation. Sudden crisis causes ad hoc responses and a costly shakedown period to develop working relationships. Anyone who has ever been in a serious crisis understands that roles should be worked out through training exercises ahead of time. Teams must not be groups of individuals working at cross-purposes. In a chaotic situation, operational need, politics, and egos are difficult to balance; the Alaskan situation has been a prime example.

*Training:* The level of readiness of a crisis management team is crucial. Training must involve everyone, and provide a means to validate procedures and review policy. Training can be accomplished through new-hire indoctrination, on-the-job briefings, recall and notification exercises, table-top strategy seminars, games, communication exercises, command-post exercises, full-field operational exercises, and disaster simulations.

Emergency drills were held periodically by the principal organizations involved in the Alaska oil spill, but, according to State of Alaska reports, the industry exercises were not considered successful. Training was sometimes not realistic; drills were held in the Valdez harbor area and operational supervisors were not exercised. Equipment and emergency response groups were not adequately prepared for large-scale oil spills. When dealing with emergency preparedness for large-scale oil spill accidents, tough, skeptical, continuous testing is required.

*Emergency Operations:* Crisis management operations should be based on a plan, a chain of command, and the resources and mechanisms required coping with an emergency. To establish and maintain communications, to provide control, to coordinate media activity, and to focus outside liaison, most contingency plans rely on the availability of an emergency operations center facility with supporting infrastructure.

Planners for the Alaskan oil-spill response may have considered that they would be operating in a region with limited supporting infrastructure, but they did not take into account that they would be forced to deal with a serious spill out of the remote town of Valdez. Exxon began operations in a hotel. Additional microwave transmitters for the increased communications requirements had to be rapidly flown in. The State of Alaska personnel set up in the courthouse building; the Coast Guard had the best facilities, with its port headquarters and maritime safety office. This dispersal caused some of the principal officials and response-team members to spend considerable time moving from meeting site to meeting site. One center with adequate facilities for the major players would have been useful.

But lack of an emergency operations center was only part of the problem. With thousands flooding into a small fishing town, hotel rooms vanished and people slept on floors and in cars. The airport, which usually accommodated eight to ten flights a day, suddenly had to cope with 1,000 flights daily at the peak of the crisis. A Coast Guard cutter's air search radar assisted with the air-control overload. Because the C-130 Hercules was the largest aircraft that could be handled, all large cargoes had to be flown to Anchorage, then shipped six hours over the Thompson Pass, a mountain road plagued by avalanches and heavy snows. Surface transportation from Valdez to the Prince William Sound area took hours by boat, and in some cases stretched the response decision period from hours to days. Telephones, working space, and transportation all were major headaches.

*Risk Analysis and Damage Assessment:* All economic, environmental and political losses that may be incurred from an accident should be considered. The costs of returning Prince William Sound to its pristine state are difficult to quantify. The political losses—the impact on the Alaskan National Wildlife Refuge (ANWR) oil exploration and the damage to Exxon's corporate prestige—are also considerations.

Pre-incident damage assessment and situation analysis must look at three types of costs: direct, indirect, and repercussion. Direct costs of the *Exxon Valdez* incident involve loss of the market value of any oil that cannot be recovered, repairing or replacing the damaged tanker, and legal and cleanup costs. Indirect costs initially are incurred by parties other than the responsible oil company, but are eventually passed back to the oil company. They may include reimbursements for federal and state cleanup efforts, and local business losses such as those incurred by the fishing and tourist industries. Natural-resource damage awards can become a significant indirect cost because, under the federal Clean Water Act, the government can collect damages for replacing injured resources. Some early estimates of the natural-resource damages from the *Exxon Valdez* spill indicate that they might exceed the commercial losses.

In addition, there are political repercussions. There has been some criticism of industry's initial response to the spill—this means adverse publicity, which may lead to costly restrictions on future oil shipments from Valdez. There are already indications that the spill has made prospects more difficult for continental shelf oil exploration.

There are a number of reasons that a complete risk analysis is difficult to include as a routine part of a planning effort. Insurance will pay for at least some of the costs. Exxon claims that it has \$400 million in insurance coverage. The magnitude of indirect costs is difficult to quantify ahead of time, because these costs depend heavily on post incident litigation and negotiations. The responsible company may be able to share some of the expense with partners and consortiums (such as the Alyeska Pipeline Service Company).

*Public Information:* The guidelines for an effective public-affairs program during an emergency are as follows: provide accurate, essential, and timely information; have a single spokesman; combat the spread of rumors and adverse publicity; and provide a calming influence and build up confidence in those charged with handling the situation.

There are two key expectations of a corporation in the midst of a crisis. The company must demonstrate that it is competent and capable of dealing with the problems, and it must do well in the public's perception of how the crisis is being handled. Most media experts have been extremely critical of Exxon's public-affairs effort in managing the Alaska oil-spill crisis. Newspaper headlines such as "Public angry at slow action on oil spill" have tarnished Exxon's image; the company's corporate reaction has been a public apology by chairman and chief executive officer Lawrence G. Rawl on television and to Congress, and a full-page advertisement that cost \$1.8 million to run in 166 newspapers. Rawl learned an important lesson in public affairs when he told *Fortune*, "From a public relations standpoint, it probably would have been better had I gone up there. In hindsight [being more visible] would have helped. "

In addition, Exxon had too many people saying the wrong things. One executive told consumers that they would pay the cost of the cleanup in higher gas prices. Another bluntly said that as long as people in California continued to drive their Mercedes Benzes, they would have to put up with Alaska shipments. Other spokesmen, blaming cleanup delays on the Coast Guard and Alaska state officials, made comments that sounded like an effort to evade responsibility.

Public affairs is a critical aspect of crisis management. It takes teamwork, preparation, and an understanding of the time-tested guidelines for an effective program. Public affairs is not the area in which to be fumbling around in the midst of a crisis.

*Restoration to Normal Operations:* This is the final step in the contingency planning process. The restoration of normal operations after a large-scale oil spill is not an easy task. Various public-interest groups want to be assured that proper preventive and response measures are in place, and will look to the government to ensure that they are. There are regulatory issues to be resolved, such as maritime safety, pipeline safety, environmental impact, and federal-state jurisdiction. In industry, business cannot stop. Restoration to pre-incident operations may be difficult (but usually not impossible) to attain rapidly. Consideration must be given to the lasting impact of emergency conditions and to the institution of improvements.

There is also the need to determine who has the authority to end the crisis operations and declare the resumption of normal activities. This will be the critical individual or group who ensures that project regulations and stipulations have been met. We are currently watching various key players jockey for position on how and when to declare the *Exxon Valdez* emergency over.

*Conclusions:* Prevention of oil spills should be the first line of defense. Second, contingency preparedness and response planning must be improved. The necessary personnel, equipment, and procedures must be adequate and tested regularly. Technical options (chemical, mechanical, biological), the decision process during the crisis, and strategies to protect the environment must be understood prior to the emergency.

Colonel Badolato, a retired Marine colonel infantry officer, conducts nationwide energy emergency preparedness seminars. He served in Vietnam and was a member of CNO Strategic Studies Group. A graduate of Towson State University's (Maryland) Platoon Leader's course, he was commissioned in 1960 and served for 25 years. He then worked as Deputy Assistant Secretary of Energy for four years.

