



If anything good came out of the 1989 Exxon spill on Prince William Sound off Alaska, it was the painful lesson that effective emergency response takes practice. It also takes people—lots of people, says Jerry Spetz of Amoco Oil Company's Whiting, Ind., refinery, the site of a recent corporatewide drill that tested the efforts of hundreds.

"The biggest challenge is working together and keeping everyone informed," says Spetz, manager of Whiting's Oil Movement division and incident commander for the drill. The two-day exercise in early May summoned the U.S. Coast Guard; the Indiana Department of Environmental Management (IDEM); Region 5 of the U.S. Environmental Protection Agency (EPA); and the National Oceanic and Atmospheric Administration (NOAA); as well as the Whiting refinery's 65-member Emergency Response Organization; and Amoco Transport Company's A-Team, an emergency response management organization on call for all U.S.-based Amoco facilities. Amoco's 110-member A-Team comprises Amoco

Transport Company personnel and employees from across the corporation.

The simulation of a 3,000-barrel oil spill off the Indiana shores of Lake Michigan was the largest marine spill exercise ever staged by the Whiting refinery, says incident commander Gene Kelly, vice president of operations and services for Amoco Transport.

The response to the spill was very impressive, says U.S. Coast Guard Capt. Clay Fust, federal on-site coordinator and member of the drill's unified command team. The joint decision-making team comprised Coast Guard, Amoco, and IDEM officials. In an emergency, "we all have authority and responsibilities that must coexist." Amoco's willingness to work hand-in-hand with federal officials made everyone's efforts more effective, he says.

Refinery crews, the first to respond that day, were mobilized shortly after 6 a.m. with the sighting of a simulated oil slick off Whihala Beach in Whiting. The Amoco Emergency Response Team had deployed containment boom, and the first of 10 oil recovery and emergency support boats to the scene, supplied by contractors participating in the drill. Boat crews worked to surround the simulated spill with hundreds of feet of boom.



Bottom, far left: At the command post (from left), Amoco's Ken Harman, Dick Young, Artie Myers, and Bob Uetz study a map of Lake Michigan to pinpoint a simulated oil spill during a drill at the Whiting refinery (photo courtesy of Daily Southtown). Background: An oil recovery boat crew lays containment boom around the spill (photo courtesy of The Times). At left: Drill participants position themselves for cleanup along the shore of Lake Michigan. An employee of Amoco's subsidiary, Ecova Corporation, prepares a vacuum truck for oil recovery along the shoreline (photos courtesy of Meyer Productions).

Responders tracked the spill to its source, at the refinery's water treatment plant, where operations and maintenance crews were assigned to make emergency repairs.

Meanwhile, a Coast Guard helicopter hovered overhead, communicating with the recovery boat crews and the unified command post at refinery headquarters. In a nearby trailer, A-Team members simulated an image of the spill electronically on a computer screen, using variables such as wind speed and direction. The spill's path was calculated, based on those variables.

To make the drill as realistic as possible, the spill was simulated to respond to actual weather conditions of the day, says Whiting's Lou Weltzer, deputy incident commander for the drill. High winds and 5- to 7-foot waves forced recovery efforts ashore, where crews used land-based equipment for oil recovery.

Conducted in "real" time, the drill tested participants' ability to respond quickly to minute-by-minute developments, as well as sustain a high level of responsiveness over a long period of time, says Weltzer. "In a real situation, we're subject to the constraints of time and weather," he says. "So in our training, we learn to work with those forces, rather than against them."

By late morning on the first day, the computerized spill trajectory indicated movement to the southeast, toward the Indiana shoreline, with an approaching cold front. More than 400 Amoco and contractor responders were alerted for cleanup along the beach from Gary to Michigan City, Ind.

Within the first hour of the spill, Amoco's environmental inspectors and public affairs staff began circulating through the nearby communities of Whiting, Hammond, and East Chicago, Ind., simulating air sampling tests in the homes of residents to detect the presence of airborne emissions from the spill and determine any threat to health or safety.

"In a real emergency, this is the time to reassure our neighbors that their safety is our number one priority, and that we're doing all that we can to fix the problem," says Betsy Cartwright, the refinery's industrial hygienist. "We also want to keep them informed throughout the crisis with updated information as it's available."

Observing the drill activities from several watch points were: the Lake County Emergency Response Commission, the Lake County Fire Chiefs Association, the American Red Cross, LTV Steel Company and Inland Steel Company of East Chicago,

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Daleo, Marty Keaveney, Nels Mitchel, Cindy Matthews, Mike Newell, Sharon Schmitt, John Toporek, Honesto Maglaya, Julio Transfiguracion, Antoinette Mercier, Tim Smith, and Yolanda Guerrero.

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local emergency response personnel, several oil companies, and local and Chicago news reporters.

In a real emergency many of these observers would also be involved, says Spetz. "The more familiar they become now with the nature of our potential crises and the procedures we follow, the more prepared they'll be to work with us in the future."

By noon on day two, a simulated investigation into the cause of the spill had been completed. And response measures continued, as the exercise moved from the crisis mode to a "project phase," says Weltzer. "If this event had been real, it's likely response efforts would have gone on for three to four weeks, with a goal of remediating all beach areas by Memorial Day," he says.

Once the crisis is over, it's essential to review the team's performance, says Ed Roland, Amoco Corporation's executive director of crisis management. "After the drill, it's very important to review what happened—what went well, what didn't, and how we can improve upon our performance next time," he says.

To help in this process, Amoco has been developing emergency training materials, including videotapes and photo documentation of actual drills, such as the Whiting exercise in May.

Amoco's Environment, Health and Safety department is producing a video for use by all appropriate Amoco locations that describes requirements of the Oil Pollution Act of 1990 (OPA 90). The OPA 90 law, established after the Exxon spill, requires all oil industry facilities to develop and routinely exercise an emergency response plan.

The intent of the Whiting drill was to exercise Amoco's Whiting refinery and corporate spill response teams; to build teamwork among local, state, and federal agencies and Amoco through the unified command system; and to evaluate spill response technology and management systems.

The unified command system used during the drill, which brings several emergency response agencies together to make decisions in a crisis, is an outgrowth of the Incident Command System, developed by the U.S. Forest Service in the 1970s for coordination of firefighting efforts during major forest fires.

"The system worked very well," says Roland, who later met with drill participants to review their performance. Lessons learned from the experience include a need for better interface between the A-Team and the team in place at the emergency site, and more clearly defined roles within the incident command structure, he says. "We learned a lot from the drill. And that's the purpose of it. If we don't learn from our experience how to better respond the next time, we're basically wasting our time."

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capabilities." Amoco reps also keep their customers informed of changes in government mandates that will affect their business, said Haase.

The quality of Amoco's products and service depends a lot on the teamwork of its employees, said Asphalt Sales Engineer Ernie Staggers, who sells product out of Elkhorn, Wis. Barges deliver his clients' asphalt orders to Milwaukee from Amoco's Whiting, Ind.; refinery. But timely delivery by a limited number of barges requires a lot of coordination, he said. "There are just so many barges available at a time. You can't call them up like a cab."

That's where the teamwork between Staggers and Whiting's asphalt supply group comes into play. Ken Dozier, manager of product supply and distribution, Marine Coordinator Suzanne Companik, and Rail Coordinator Gary Johnson schedule production and shipping of asphalt from Whiting to 16 terminals, primarily in the Midwest.

"We send them our sales forecast for each month," said Staggers. For marine shipments, Companik calculates barge capacity, terminal inventory, and asphalt requirements, then coordinates deliveries. Johnson follows a similar procedure for rail shipments.

That system has workd well, said customer Dan Drew, of Portage, Wis., who joined Staggers at the symposium. As Amoco reps and customers mingled throughout, the event, their easy conversation made it sound like a family affair. And for some customers it was—like for Sheila Bauschelt, of Bigaine Vessel Fueling.

The family owned business, which supplies marine fuel to shipping fleets on the Great Lakes, has been buying distillates from Amoco's Whiting refinery for more than 30 years. In all that time, she said, "Amoco's been open to change, willing to sit down and talk about ways to improve service. From Amoco's sales reps to those who work on the dock, said Bauschelt, "I have the utmost regard for its people."

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The Circadian institute's research later became part of the BBC's exploratory documentary, produced for the network's science program, "Horizon." The film also is expected to air on Public Broadcasting Service's "Nova" in the United States.

This type of publicity is good for business, says Roman Plichta, planning coordinator of international business development—China. "Our efforts in areas such as human resources, customer service, and continuous improvement have established a reputation for us in the international arena," he says. "Further exposure by the media in these countries will help us gain the momentum we need to develop future partner-ships around the world."

Ed. note: Also see "International partnerships" on page 14 for news on Amoco's global activities.