

# **Are chemical dispersants doing more harm than good? Some scientists and the EPA disagree on the issue**

By Curt Chapman  
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FAIRHOPE, Ala. — The potential long-term impact of using chemical dispersants as part of BP's plan of attack against the oil spill in the Gulf of Mexico is not yet known, and that is causing concern for some.

One group fears every gallon used to fight the massive oil spill caused when British Petroleum's (BP) Deepwater Horizon offshore oil platform exploded last month could cause as much, if not more, harm to the environment and its inhabitants than the crude itself.

That's the word coming from a group of toxicology experts, led by Dr. William Sawyer, addressing the Gulf Oil Disaster Recovery Group, a group of lawyers claiming to protect the interests of those affected by the crisis. The group represents the United Fishermen's Association and the Louisiana Environmental Action Network (LEAN), among others.

National Academy of Sciences and National Research Council publications indicate there is insufficient baseline data to determine the environmental and ecologic fate of petroleum spills and their effects in the marine environment, according to Sawyer. The lack of adequate research makes decision-making related to major spill containment and remediation dicey at best, he stated in a press release.

"The dispersants used in the BP cleanup efforts, known as Corexit 9500 and Corexit EC9527A, are also known as deodorized kerosene," said Sawyer. "With respect to marine toxicity and potential human health risks, studies of kerosene exposures strongly indicate potential health risks to volunteers, workers, sea turtles, dolphins, breathing reptiles and all species which need to surface for air exchanges, as well as birds and all other mammals.

"Additionally, I have considered marine species which surface for atmospheric inhalation such as sea turtles, dolphins and other species which are especially vulnerable to aspiration toxicity of Corexit 9500 into the lung while surfacing."

Corexit is a family of oil dispersants sold by Nalco. Two of the dispersants, Corexit 9500A and Corexit EC9527A, are being used to help in cleanup efforts in the Gulf.

Company officials explained that Corexit 9500A is more effective on heavy and weathered oils (oils that have been released some time ago), and was specifically developed for that application. Corexit EC9527A, on the other hand, is reportedly the most widely approved and stockpiled dispersant in the world, is quite successful but does not work very well on weathered or heavy oils.

Others in that Nalcom product line include Corexit 7664, a surface washing agent, and Corexit 9580, known as a surface-washing agent specifically developed for direct application to shorelines.

Lisa P. Jackson, administrator of the Environmental Protection Agency (EPA) said Wednesday that the use of both Nalco products has been approved by the federal agency, and are therefore safe to use. She noted that while BP is fully authorized to use dispersants at the surface, it is only in the testing phase regarding the effectiveness of such chemicals at the source of the leak, some 5,000 feet below the surface.

“There are restrictions to protect the health of the Gulf Coast,” Jackson said. “The EPA is monitoring air quality, and BP is not authorized for the full-scale use of dispersants underwater at this time. We don’t want to replace one challenge with another.”

She went on to say that chemical dispersants are by no means a “magic bullet,” but the fuel giant “must take responsible actions to mitigate impact.”

Dr. Jane Lubchenco, the Undersecretary of Commerce for Oceans and Atmosphere at NOAA, said her agency has been using boats, satellites and airplanes since the beginning of the situation to not only keep tabs on the oil’s movement, but also the general safety of the methods being used to protect the coast.

Heavy use of surface and deep-water dispersants in the Gulf is an unprecedented release of toxins into the marine, marsh and beach environments, said Stuart Smith, lead counsel for Gulf Oil Disaster Recovery Group.

Smith claims Corexit 9500 is designed to breakup the slick at the water's surface, sending the oil into the water column, and from there to the bottom of the seabed where organisms such as shrimp, crabs and oysters live.

The light sweet crude at the surface does not sink to the sea bottom after dispersants are applied, Jackson countered. Instead, she said, it forms a cloud of oil droplets that Lubchenco said remain in the water column and degrade rapidly.

But Lubchenco acknowledged there are indeed unknowns in the process. She said, “Nothing we are doing will enable us to determine what habitat is affected (by the oil and chemical mixture), if they are. Many of them are at risk of being affected, but we don’t know what that will be.”

Lubchenco said research suggests the chemicals used in the dispersants are one-tenth to one one-hundredth less toxic than the oil.

The choice of what products are used is not only determined by safety and effectiveness, but is also based on logistics such as available stockpiles, and how rapidly they can be shipped where needed, Jackson said.

“There is a process of getting on the list (of approved dispersants) that requires toxicity testing by regulatory agencies,” she added. “This is not something that is done lightly.”

Asked what compounds are in the Corexit products, Jackson said the EPA was made aware of the chemical ingredients, but they are proprietary and cannot be revealed by the agency.

Closer to home, the half-dozen golf ball-size tarballs that washed ashore on Dauphin Island beaches last Saturday are believed to be from the Deepwater Horizon spill.

Louisiana State University’s Department of Environmental Sciences chemical assessment team analyzed the sample, stating, “Comparison of the major biomarker indices indicate the Dauphin Island floating mass is a high-probability match to the Mississippi Canyon 252 riser oil.” LSU is under contract to NOAA to provide this analysis.

The analysis on tarballs found from Gulf Shore to Perdido Key, Fla. this week is not yet complete, but scientists have said they appear to be similar in compositions. All the tarballs appear to have burned, suggesting they might be byproducts of the fire that consumed the platform before it sank beneath Gulf waters.

To counter negative publicity, and keep tourists coming, tourism representatives announced a \$1.5 million marketing campaign to assure visitors that Alabama’s beaches are clean and open for business despite the reports of isolated tar debris.

Lee Sentell, state tourism director, said two television spots promoting beaches and charter boat fishing will begin airing today on around 50 stations in the Southeast and Texas. The campaign includes an ad on the front page of the Atlanta Journal Constitution that ran Thursday.

“State and local agencies are closely monitoring environmental conditions and specific water quality monitoring is being performed at more than 20 public beaches.,” Sentell stated in a press release. “Visitors should visit [www.gulfshores.com](http://www.gulfshores.com) for updated information. The Alabama Department of Environmental Management continues to serve as the lead state agency and is coordinating efforts for a wide range of state agencies that are providing response efforts.”

Local tourism officials expect 30,000 visitors for the inaugural Hangout Beach Music Festival that began Friday at the south end of Alabama Highway 59.

Gulf Shores tourism director Herb Malone said, “Between room reservations for Memorial Day weekend and the music festival, we anticipate hotel bookings to be on par with last May.”

Tourism officials are also promoting other attractions on the coast such as Bellingrath Gardens, the Estuarium on Dauphin Island, The U.S.S. Alabama and the Gulf Coast

Exploreum in Mobile.

On this side of Mobile Bay, Fairhope city officials are maintaining regular contact with all oversight agencies at Unified Command in Mobile, the Baldwin County Emergency Management Agency and with local and state elected officials, according to Assistant Public Works Director Ken Eslava.

In his daily e-mail dispatch, Eslava wrote that oil boom placement efforts along the Eastern Shore will continue throughout the weekend, with “primary focus being placed on booming predetermined points which are part of the Federal Booming Strategic Plan. Booming in the Fairhope area will continue until all predetermined strategic points are complete.”

Booms were placed at numerous points south of the Pier Street boat launch, including the Grand Hotel, and were completed Thursday. Booming continues on the northern end of the Eastern Shore, according to Eslava, protecting marshland habitat in the area of the Lake Forest Yacht Club.

Significant booming efforts have been completed at river entrance points in order to protect the Mobile-Tensaw River Delta and its ecosystems, he added.

“The public is hereby advised that current booming operations are strictly proactive in nature, and are pre-staged preventative measures,” he stated. “Current trajectories by NOAA continue to reflect positively for our immediate area.”

NOAA's current trajectory map indicates a northwest movement of both the known oil sheen and the zone of uncertainty. On that path, it would take the oil away from southwest Alabama and toward the barrier islands and shorelines of western Mississippi and eastern Louisiana.

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