## Scientists estimate nearly 80 percent of oil remains a threat

## David Walsh 18 August 2010

Reports from two groups of researchers are helping to expose the campaign organized by BP and the Obama administration to convince the public that the Deepwater Horizon disaster is effectively over and done with, and that most of the spilled oil has harmlessly disappeared.

In early August, the Obama administration's National Incident Command (NIC) released a report claiming 75 percent of the oil was "gone" and only 25 percent remained a threat. Jane Lubchenco of the National Oceanic and Atmospheric Administration (NOAA) asserted that at least half of the oil released was now "completely gone." On August 4, Barack Obama declared, "A report out today by our scientists shows that the vast majority of the spilled oil has been dispersed or removed from the water."

The US media made banner headlines out of these comments, officially bringing to a close any serious coverage of the BP-caused disaster. The notion that the effects of hundreds of millions of gallons of crude oil, vast amounts of methane gas and other toxins having poured into the ocean over a period of three months or more could simply disappear miraculously, thanks to the efforts of BP and "Mother Nature," was ludicrous. This is an ongoing—and crude—propaganda effort carried out on behalf of a multinational oil giant and corporate America more generally.

One of the studies out this week, organized by the Georgia Sea Grant, "strongly contradicts" reports suggesting that only 25 percent of the oil from the Deepwater Horizon spill remains.

The Georgia Sea Grant, housed at the University of Georgia in Athens, organized a number of oceanographic experts "to independently evaluate and interpret the [NIC's] conclusions." The group included Samantha Joye, Chuck Hopkinson and Ming-yi Sun of the Department of Marine Sciences, University of Georgia, and Jay Brandes and Richard Lee of the Skidaway Institute of Oceanography, located near Savannah, Georgia.

The Georgia study, released in a 5-page memo Tuesday, accepts the NIC claim that some 10 percent of the spilled oil

was either burned or skimmed. "Thus," writes the team, "90% of the oil that entered the Gulf of Mexico has not been recovered."

The NIC argued that the rest of the oil fell into four categories: dispersed as micro-droplets; dispersed as microdroplets with dispersant coating; dissolved (some of which has evaporated); and residual.

The Georgia Sea Grant study notes that the "news media's tendency to interpret 'dispersed' and 'dissolved' as 'gone' is wrong. Dispersed and dissolved forms can be highly toxic. Furthermore, sorting the oil into the four above states falls far short of assessing how much of it remains a potential threat to the system."

Scientific experts called upon by the Georgia team calculated that between 5 and 10 percent of the subsurface oil had degraded. The study adds: "However, it is important to realize that the degradation of crude oil by marine organisms mostly entails short-chain hydrocarbons—not the more toxic, polycyclic aromatic hydrocarbons (PAHs)... The most toxic components of crude oil are the least likely to be naturally degraded."

The study notes the NIC claim that 30 percent of the oil released, or 1.2 million barrels, had dissolved in the water and was therefore "in a form that could evaporate." The Georgia researchers point out that for oil to do that, "it must come in contact with the atmosphere. Without knowing how much of the oil is at various depths, it is difficult to estimate how much oil could have reached the surface in order to evaporate."

The study's experts estimate that 8-12 percent of the total amount of oil spilled into the Gulf has evaporated. However, adds the report, "oil evaporated into the atmosphere can also have environmental and health-related effects. Questions have been raised by the state's scientific community about the vulnerability of communities living downwind of the Gulf of Mexico, including the Atlanta metropolitan area. An atmospheric sampling program designed to measure concentrations of oil components in the air would help determine how much has evaporated as well as track its dispersion and movement throughout the region and. This study is critically needed."

And such a 'critically needed' study will most definitely not be undertaken, if BP and the federal government have anything to do with it.

After calculating the quantity of oil either skimmed and burned, evaporated or degraded, "we estimate that the oil remaining at or below the surface is between 70 and 79% or between 2.9 and 3.2 million barrels."

The study's authors observe as well they have not made any attempt to account for the oil washed into coastal wetlands. "This is a particularly difficult form to quantify, since much of it has settled in tidal creek and bay bottoms or has been buried in salt marsh and creek bottom sediments," the report explains.

Contradicting the sunny optimism of the NIC and the White House, the Georgia Sea Grant report concludes, "without knowledge of the dispersion and mixing rates in the surface and bottom waters surrounding the spill region, the evaporation rates at the surface and the oil decomposition and weathering rates, it is impossible to estimate how long it will take for oil to disappear from the Gulf."

According to a press release from the University of Georgia, Professor Joye further warned that neither the NIC nor the Sea Grant had accounted for hydrocarbon gases such as methane. "That's a gaping hole," Joye said, "because hydrocarbon gasses are a huge portion of what was ejected from the well."

The second study issued this week, conducted by researchers at the University of South Florida (USF) in Tampa, concludes that a vast amount of oil from the Deepwater Horizon may have settled to the bottom of the Gulf of Mexico further east than previously suspected.

The report made available to CNN suggests that dispersants "may have sent the oil to the ocean floor, where it has turned up at the bottom of an undersea canyon within 40 miles of the Florida Panhandle. Plankton and other organisms showed a 'strong toxic response'' to the crude oil.

John Paul, a marine microbiologist at USF, told CNN, "The dispersant is moving the oil down out of the surface and into the deeper waters, where it can affect phytoplankton and other marine life."

A portion of the millions of barrels of oil has spread to the DeSoto Canyon, a depression on the ocean floor east of the well. That canyon, notes CNN, makes up part of the spawning grounds for the Gulf of Mexico's commercial fish.

Paul of USF asserts that the oil could well up onto the continental shelf and resurface later. "Or it could be eaten by fish and other animals and accumulate in the food chain, [USF's David] Hollander said. 'It's in such small droplets that you can see it—you can filter it and see it,' he said. 'But if you look at it, it's transparent, and small larval fish see these droplets as food so they're ingesting pure oil.""

As CNN observes, "Critics warned the full effect of the dispersants on the food chain was not known and that their use in deep water effectively concealed the full extent of the spill." And Hollander, a chemical oceanographer, commented, "This whole concept of submerged oil and the application of dispersants in the subsurface and what are the impacts that it could have, have changed the paradigm of what an oil spill is from a 2-dimensional surface disaster to a 3-dimensional catastrophe."

Meanwhile, the state of Louisiana has lifted more restrictions on fishing in the Gulf of Mexico and the fall shrimping season began Monday. Shrimper Anthony Bourgeoif told CNN that he had made no money since the oil spill April 20, but he was concerned that oil might show up in his catch and he would be forced to dump it. "So why go out there and catch it if they're just going to be dumped, and I ain't going to make no money off it?" he asked.

According to Kindra Arnesen, of Louisiana's Coastal Heritage Society, fishermen in the Gulf are being forced by dock owners to sign waivers that would make them and not BP potentially liable for any contaminated seafood. Arnesen notes that if the Food and Drug Administration "has waved this magic wand and says that the Gulf is clean and that the seafood is safe, let's get some FDA mobile units on our docks and let's do some chemical testing."



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