

# Government scientists confirm massive oil plumes

## BP issues denial

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On Tuesday scientists working for the National Oceanic and Atmospheric Administration (NOAA) confirmed the existence of massive underwater plumes of oil in the Gulf of Mexico, first identified by independent scientists three weeks ago. BP, which continues to control the cleanup and spill site, responded by once again denying the existence of the plumes.

The plumes, which could create enormous oxygen-depleted “dead zones” in the Gulf, likely have been caused by the depth of the spill coupled with the application of hundreds of thousands of gallons of chemical dispersant. The dispersed oil has not vanished, but has been broken up into clouds of particles called hydro-carbons grouped together in the plumes.

Unlike the spill on the surface, which is moved by winds, tides, currents and eddies, the underwater plumes appear to move in somewhat unpredictable ways. NOAA confirmed that one of the plumes has moved northeast about 42 miles from the spill site toward Alabama, reaching depths of 3,300 feet. University of South Florida scientists found a plume at a similar location at the end of May, which they estimated was 22 miles long and 100 feet thick. Other plumes have been identified, one about 142 miles southeast of the Deepwater Horizon site.

Scientists fear that the plumes may effectively suffocate large areas in the Gulf, including critical deep-sea coral reefs. As expected, the oil is under attack by microbes, which serve to decompose it. But in doing so the microbes also remove large amounts of oxygen from entire strata in the water column, potentially choking off organisms low on the food chain that cannot freely move away, from plankton to mussels, crabs, clams, oysters and small fish. With all higher forms of ocean life ultimately based on these lesser forms, the plumes could break the food chain at its most important links, devastating fish populations as

well as marine mammals such as dolphins and sperm whales.

There are also concerns over the effects of the chemical dispersant, Corexit, on marine life. Though less toxic than oil, in combination the two substances could form a highly toxic cocktail. Whereas a surface spill may drive many species away to safer waters, the massive plumes are not so dense and are mostly invisible. Marine life likely continues to move through them, consuming both poisoned organisms and water. Fish eggs and larva can be damaged by oil even at concentrations of one part per million.

Efforts to understand the plumes are hindered by BP’s refusal to release to scientists the chemical composition of the dispersants they are using, which are protected as “trade secrets.”

“I and many others are trying to get samples of the various dispersants that are being used,” said Samantha Joye, an oceanographer at the University of Georgia and one of the scientists who first identified the plumes, at a Tuesday news conference in Athens, Georgia. “I have been unable to secure any so far. And I know there are many other researchers that want to get samples of the various types of Corexit to do lab experiments with; so we are hopeful we will be able to get those dispersants, but right now we haven’t been able to secure any.”

NOAA Administrator Jane Lubchenco admitted the existence of the plumes after dismissing or downplaying them for weeks. Like BP, NOAA and the Obama administration have from the beginning sought to minimize the extent of the spill. It was a NOAA organized study that initially established the spill size at 5,000 barrels per day, an assertion endlessly repeated by BP and the US Coast Guard. The figure was sharply criticized by scientists because its method relied on a very limited

observation of only the spill on the surface, thus excluding the enormous amounts of oil under the surface.

Even in admitting the existence of the plumes, Lubchenco sought to downplay their significance, describing them as “very low concentrations of subsurface oil.”

Scientific evidence suggests that just the opposite is true. On Tuesday Joye revealed data suggesting that methane levels in the plume range from 100 times to 10,000 times the normal reading for Gulf waters.

“I’ve never seen concentrations of methane this high anywhere,” said Joye. “The whole water column has less oxygen than it normally does.”

BP continued to deny the existence of the plumes, without providing any evidence of its own. “We haven’t found any large concentrations of oil under the sea. To my knowledge, no one has,” BP Chief Operating Officer Doug Suttles declared in a patent lie. He then attempted to reduce the question to one of semantics. “It may be down to how you define what a plume is here,” Suttles offered. “But basically, what some people have asked is, are there large concentrations of oil under the sea? And those have not been found so far by us or anyone else that’s measuring this. The oil that has been found is in very minute quantities.”

This is only a slight retreat from the categorical denial of the plumes made by BP CEO Tony Hayward last week—again without offering any evidence. “The oil is on the surface,” Hayward said. “There aren’t any plumes.”

Coast Guard commander Thad Allen, who is heading up the federal response to the disaster, also rejected use of the term “plume.” “The term ‘plume’ has been used for quite awhile,” he complained. “I think what we are talking about are concentrations. ‘Cloud’ is a better term.” Allen has no scientific training.

Carl Safina, an ocean biologist with the Blue Water Institute, raised concerns over the toxicity of the oil and dispersant in the plumes. “BP doesn’t reveal the content of the dispersant, but we know it kills fish eggs and larvae depending on the dose,” Safina told the *World Socialist Web Site*. “In the worst case scenario, the Gulf communities are suffering a situation of the total end of fishing. I don’t see how the fish populations will be able to withstand what has happened. The basis of their livelihoods is being destroyed.”

“This is not a temporary issue,” Safina continued. “Those things don’t come back the day the oil stops. After the Exxon Valdez disaster in 1989, the herring never recovered. The killer whale population is still

reduced by half.”

The WSWs asked Safina what species, in particular, would suffer, beyond the fish populations.

“In the Gulf, the endangered Kemp’s ridley turtle is in trouble,” he said. “It’s taken Herculean efforts to bring their population up to more than 8,000. All these turtles have to breed in the Gulf. Blue-fin tuna in the Gulf of Mexico represent a separate population from those in the Mediterranean. It takes 12 years for them to mature. Losing one breeding season or more will be a total catastrophe for them.”

“The marine mammals like sperm whales and dolphins are in big trouble because they must emerge through layers of the water column and the surface in order to breathe,” Safina said. “You cannot breathe through that mass of oil.”

“The sea birds cannot make a living but by diving into the water for their food, so there really is no quick way to protect them,” Safina said. “It would almost be better if in the short term if we would remove their nests in the hope that they might move to nest elsewhere. May was a big month for migratory birds, with various terns and gannet who travel as far as New England and Newfoundland nesting in the area. Some of these birds will not come back because of the spill.”

Safina said that the damage cannot be easily remedied. “It can’t be cleaned up the way you might think,” he said. Referring to the use of dispersants, Safina offered an analogy. “You might as well try to extract an egg from an already baked cake.”

“One thing I can’t understand is why they are not doing more to corral it as it comes to the surface rather than attempting to disperse it in the water column,” he said. “The boom they are using is good for hemming in 100 gallons of oil that just spilled in a harbor, but it is useless in the Gulf.” Safina said that boom with fins going up and down with it would hold it in the water and more effectively prevent oil from passing over and under.



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