

Appendix B — Photo-Documentation



The photos were taken in the “hot zone” where oil surfacing from the subsea wellhead combined with volatile organic compounds like BTEXs, oil mists from spraying of water on the burning rig or ocean surface, and oil aerosols (fine particulate matter), as shown in the lower left photo. This created a high risk of exposure to dangerous levels of dangerous compounds. The top photo clearly shows boats downwind of the smoke plume from the in situ burn. In situ burn team captains reported they were sometimes within 6 or 7 miles of the plumes. The right photo shows a Coast Guard member who is not wearing Personal Protective Equipment as he ignites an in situ burn on oil collected by the two boats towing the fire boom.

Photos on page 1: Taken by Carol Coe, *Los Angeles Times*, May 2010. Photos on pages 2-12 were compiled by Riki Ott and submitted as public comments on behalf of Ultimate Civics and a signatory coalition on the U.S. Environmental Protection Agency rulemaking on the National Oil and Hazardous Substances Pollution Contingency Plan, Subpart J, dispersant use. 22 Apr 2015. 40 CFR Parts 110 and 3002015, [Document ID No. EPA-HQ-OPA-2006-0090; FRL-9689-9- OSWER] RIN 2050-AE87.



Respirator statements

- Unified command is not providing respirators for beach clean-up teams or near-shore water operations.
- Air sampling offshore has shown no indications of volatile organic compounds (VOCs) or other contaminants that require respirators in those areas.
- If workers/crew members have any concerns we would rather use their services in another capacity.



On May 26, 2010, seven fishermen on in-situ burn teams for the BP *Deepwater Horizon* disaster were taken by Medevac life-flights from their fishing boats directly to West Jefferson Medical Center in Jefferson Parish, Louisiana. Burning oil concentrates toxic PAHs; first responders typically wear a full-face positive-pressure self-contained breathing apparatus and protective suit for fighting oil fires. BP did not provide respirators to in-situ burn teams, according to an affidavit filed by one of the fishermen; respirators were also not provided to near-shore or beach workers. According to one BP safety trainer, the trainers were told to tell workers, if they wanted to use respirators, their jobs would be terminated. Federal officials responsible for worker safety concluded the primary threat to workers was heat stress. Five years later, many of the former workers are still sick, some to the point of being disabled. ***Recommendation: Require a worker safety program responsive to evidence of harm, rather than standards-based enforcement, as workers get sick below the levels thought to be safe.***



Scientists found oil and oil-dispersant droplets aerosolized daily and became part of the Gulf hydrologic cycle. Gulf coast residents and media documented BP's oily sheen on the leading edges of their airplanes after flying over the Gulf, in puddles on door stoops after rain, on hotel beach furniture, and in outdoor swimming pools, shallow bayous, bays, and coastal seas. Beach workers taped their boot tops to their pants' legs to avoid contact with oil, while public advisories failed to communicate the true nature of the health risk.





Above: According to a July 2010 scientific consensus statement prepared by Dr. Susan Shaw with the Marine Environmental Research Institute, "The properties that facilitate the movement of dispersants through oil also make it easier for them to move through cell walls, skin barriers, and membranes that protect vital organs, underlying layers of skin, the surfaces of eyes, mouths, and other structures." Oil-dispersant combined fluoresce: Researcher Rip Kirby used black light to show that dispersant facilitated movement of oil across a skin barrier into a body and deep beneath the sand surface.



Louisiana



Battle Creek, MI



Louisiana



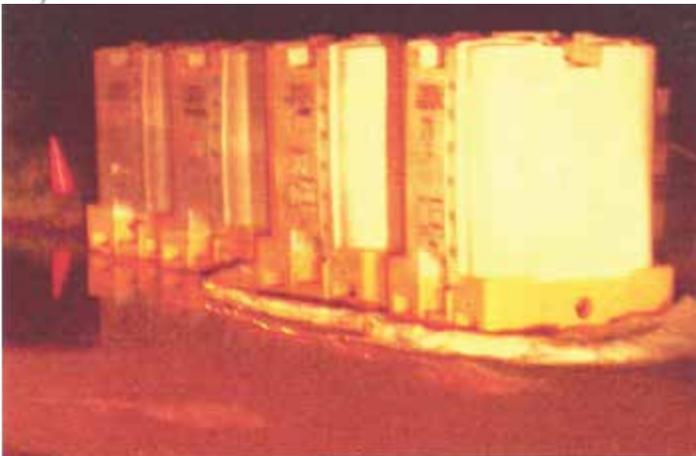
Alabama

Medical literature reviews identify characteristic symptoms of oil exposure, including breathing problems, skin rashes and lesions, blood disorders, central nervous system problems, and hair loss, such as found in people along the Gulf Coast after the BP *Deepwater Horizon* disaster and in Kalamazoo/Battle Creek, Michigan, after the Enbridge tar sands spill in 2010. Dispersants and other petrochemical-based solvents such as diluents used to thin tar sands oil target the same organs of the body as the oil. Children are especially vulnerable to oil and solvent exposure. **Recommendations: Use non-toxic products that do no more harm during oil spill response; Require a program to protect and educate the public about the health risks, early onset symptoms of toxic poisoning, and how to seek medical assistance.**

In August 2010, Lori Bosarge and other residents of Coden, Alabama, were told by officials that the oil was gone and dispersants were no longer being used. Bosarge drove to a nearby bayou to investigate a new decontamination staging area. When she left her car, she was exposed to Corexit 9527A, being used to spray down boats and carried by the sea breeze. Within two hours of exposure, her skin broke out in blisters, a severe rash, and a chemical burn. She nearly died and has been severely ill ever since.



Bayou LA BARGE, AL AUGUST 2010



AUGUST 2010 COREXIT 9527A BIG AL





Boat captain "RB" staged off Destin, Florida. On August 24, 2010, Capt. RB reported oily debris in the anchor chain when he weighed anchor 0.6 nautical miles east of the Perdido Pass sea buoy. He cleaned his boat deck without protective gear. Capt. RB died September 20, 2014, of cancer.

Recommendations: Prohibit dispersants and other products that act to sink oil; Require a worker safety program for spill contractors operated by a licensed professional program as part of preauthorization plans that does not put the spiller in charge of worker health.



Left: Container of Enviro Super Klean 97 and evidence of use found in Bayou Caddy marsh in Hancock County, Mississippi, on August 23, 2010. This product is not on the NCP Product Schedule of eligible products for use during oil spill response.

Recommendations: Use Products on the Schedule for their intended purpose; require updated screening tests and environmental monitoring tests to determine if product worked as intended for any product use on any size spill.

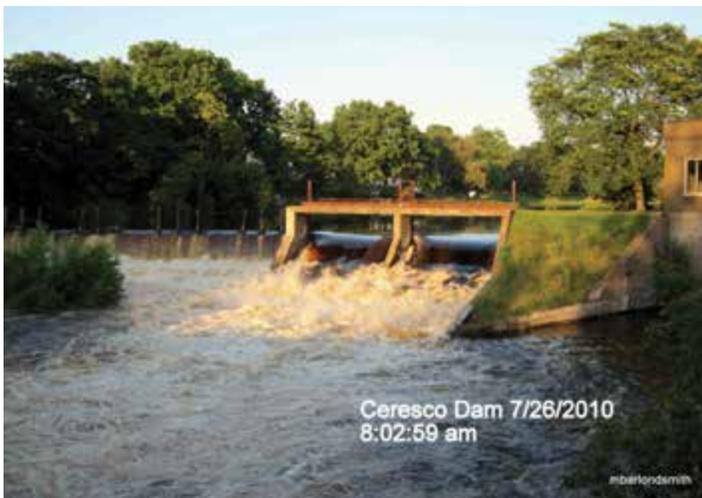


Oil and oily debris were disposed of in public landfills, especially in economically-disadvantaged communities. Landowners adjacent to landfills reported oily substances seeping from the landfill onto private property. Analytical chemical testing in Mobile, Alabama linked the leached substances to BP's oil spill, although the findings have been contested.

Recommendations: Require better risk communication to the public and health care professionals as part of contingency plans and preauthorization plans; For the purpose of the NCP, treat and dispose of recovered oil and oil-contaminated material as hazardous wastes and do not dispose in public landfills.



Top: Mac McKenzie found these shrimp mixed in with others at a local market in New Orleans in April 2012. Instead of acting to protect consumers, FDA lowered its cancer risk standard by allowing three and four times more toxic PAHs in Gulf shrimp and crabs, respectively, than allowed in West Coast seafood. Bottom: The high rate of dolphin deaths and strandings, such as these found along the Mississippi coast in summer 2010, occurred in areas that received heavy and prolonged oiling from the BP DWH disaster. It was not uncommon to find shrimp with no eyes and dolphin with no eyes or eye sockets throughout the oil-impacted region. **Recommendations: Update the definition of oil to reflect its toxic nature; Use only non-toxic products that do no more harm during oil spill response.**



Top: Exxon Valdez oil spill workers used high-pressure wash to dislodge oil from beaches and, in the process, aerosolized toxic polycyclic aromatic hydrocarbons (PAHs). Middle and left: Similarly, when tar sands oil flowed over the Ceresco Dam and down the Kalamazoo River in Michigan, PAHs were also aerosolized. Workers and people living near Ceresco Dam reported respiratory problems, headaches and other central nervous system problems, and more. Contract workers were not provided with respiratory protection and residents were not warned of health risks. However, government employees in Michigan were provided with respirators.



Tar sands oil spilled from ExxonMobil's ruptured Pegasus pipeline in Mayflower, Arkansas, flowed through neighborhoods, down streets, and into storm drains. Exxon is purchasing property in the entire Northwoods' neighborhood where homes have not been cleared for re-entry. Home furniture, clothes, carpet, wood, books, photo albums, and more, absorb and emit toxic PAHs.



Bakken crude oil and other oil produced by hydrologic fracturing activities is extremely volatile and concentrated in the Volatile Organic Compounds (VOCs) known to cause health problems in living organisms, including humans. This type of oil also dissolves toxic components to significant levels readily in water. The January 2015 Bakken oil spill into the Yellowstone River, impaired the water supply for the entire community of Glendive, Montana (popn.5,000). Cleanup stopped because there was no way to deal with oil under ice. Shipments of crude-by-rail are increasing exponentially in rail cars that are known to be unsafe for this type of oil.

derailments and rail car explosions from 2013 in Lac Megantic and to, most recently, those near Mount Carbon in West Virginia and near Galena in Illinois have collectively resulted in lives lost, homes and businesses destroyed, and evacuations. Yet there is no worst-case scenario planning for such events, especially in large urban areas. **Recommendations: Require worst-case scenario planning for spills in freshwater, including evacuation, housing, and alternative drinking water supplies; do not allow oil to be transported without a viable oil spill contingency plan.**