



(Photo: National Oil Spill Commission)



(Photo: EcoRigs)

**DEADLY DISPERSANTS  
IN THE GULF:**

ARE PUBLIC HEALTH AND  
ENVIRONMENTAL TRAGEDIES  
THE NEW NORM FOR  
OIL SPILL CLEANUPS?



(Photo: Scott Porter)



(Photo: Shanna Devine)

A GAP WHISTLEBLOWER INVESTIGATION

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## **Executive Summary**

### **Deadly Dispersants in the Gulf: Are Public Health and Environmental Tragedies the New Norm for Oil Spill Cleanups?**

The 2010 Deepwater Horizon disaster was the largest U.S. oil spill, and second largest in world history. Even worse, evidence suggests that cleanup efforts were more destructive to human health and the environment than the spill itself. BP and the federal government intend for their joint response to be the precedent for a new cleanup standard operating procedure (SOP), centered on the widespread use of the chemical dispersant Corexit. When this product is mixed with oil, a deadly synergy occurs that poses greater threats than oil alone. The only so-called advantage of Corexit is the false impression that the oil disappears – in reality, the more toxic chemical mixture spreads throughout the environment, or settles on the seafloor.

An investigation by the Government Accountability Project (GAP) – the nation’s leading whistleblower protection and advocacy organization – details these nightmarish conclusions. GAP’s data and evidence comes from those citizens who experienced the cleanup’s effects firsthand. Taken together, these testimonies belie repeated corporate and government rhetoric that Corexit is no more dangerous than Dawn dishwashing soap.

#### **Report Genesis, Resources & Methodology**

Louisiana physician Dr. Michael Robichaux approached GAP in summer 2011, requesting assistance to document ravaging health effects appearing to be caused by the spill and the extensive application of Corexit and the spill. In response, from August 2011 to April 2013, GAP investigators interviewed 25 whistleblowers with firsthand accounts of Corexit’s devastating cost. Of these 25, four whistleblowers chose not to go on-the-record, and are not reflected in GAP’s statistical findings. Of the 21 whistleblowers whose accounts are documented in this report, 10 are cleanup workers, three are professionals (two doctors, one industry leader) who acted as conduits for multiple cleanup workers, two are divers contracted by the federal government, and six are from Gulf communities exposed to the cleanup. Of these 21, there were 14 men and seven women, with ages ranging from mid-30s to late-60s. Their statements recount episodes in Alabama, Florida, Louisiana and Mississippi. Sixteen whistleblowers reinforced their interviews with sworn affidavits made public in this report. While not scientific, these figures are conservative. Of those witnesses who acted as safe conduits for whistleblowers, each statement is reflected as one account for purposes of the data.

Together, these accounts produce a frighteningly consistent picture of health and ecological devastation that is starkly at odds with official BP and government statements. To produce this report, GAP worked closely with the nonprofit Louisiana Environmental Action Network (LEAN), which was instrumental in supporting this investigation. GAP also conducted extensive Freedom of

Information Act (FOIA) requests and off-the-record interviews with government officials who chose to remain anonymous about their whistleblowing disclosures. In addition, GAP repeatedly contacted BP to draw responses to significant findings, but GAP's questions were largely unanswered. Since March 2012, GAP and LEAN have been involved in a dialogue with the BP America Ombudsman Program on public and occupational health and safety concerns during the cleanup, and BP's handling of Corexit. So far there have been no tangible results beyond the discussions.

Each section in GAP's report summarizes, in order, the official position of BP, the federal government, and independent critics, concluding with relevant excerpts from whistleblower affidavits (which can be found in appendices in full). Whistleblowers have not only documented the immediate impacts of the BP spill, but warned of long-term damage. Through their living history and emerging science, the truth about the spill response's toxic legacy is beginning to surface as we reach the third anniversary of the Deepwater Horizon explosion.

## **Key Findings**

Key findings detailed in this report include:

### **I. Corexit's Devastating Effect on Human Health**

- **Witnesses in GAP's investigation reported, as a result of coming into contact with Corexit or being in areas near spray zones, severe negative health effects.** These include: abdominal pain; blood in urine; heart palpitations; hyper-allergic reactions to processed food and common household cleaning or petroleum based products; hypertension; inability to withstand exposure to sun; kidney damage; liver damage; migraines; multiple chemical sensitivity; neurological damage resulting in memory loss and in some cases IQ drop; rapid weight loss; respiratory system and nervous system damage; seizures; skin irritation, burning and lesions; sudden inability to move or speak for sustained periods; temporary paralysis; and vomiting episodes.
- **Interviewees are also extremely concerned about long-term health effects** from this type of chemical exposure, which may not have manifested yet, including reproductive damage (such as genetic mutations), endocrine disruption, and cancer.

### **II. BP's and the Federal Government's Inadequate Protection of Spill Workers**

- **Contrary to warnings in BP's own internal manual, BP and the government misrepresented known risks by asserting that Corexit was low in toxicity (routinely comparing it to Dawn dishwasher soap).** Nearly 47% of workers reported that their employers told them Corexit did not pose a health risk.

- BP and the federal government each identified heat stress as the greatest occupational safety hazard for cleanup workers, leaving them almost defenseless against chemical exposure. **All workers interviewed reported that they were provided minimal or no personal protective equipment on the job.**
- **Federally required worker resource manuals detailing Corexit health hazards were not delivered or were removed (according to an anonymous whistleblower) from BP worksites early in the cleanup, as health problems began.** After GAP and LEAN confronted BP, the company stated that manuals were removed as worksites shut down and after the cleanup operation was no longer using dispersants in the Gulf. But nearly 85% of interviewed cleanup workers reported that they were **never** informed of or aware of **any** available safety literature at the job site.
- Undermining the Occupational Safety and Health Administration’s highly-lauded safety training program for cleanup workers, **100% of workers interviewed reported that they either did not receive any training, or did not receive the federally required training.**
- **Demonstrated through GAP FOIA responses and whistleblower accounts, BP and the federal government acknowledged that allowing workers to wear respirators would not create a good public image, and that retaliation by BP on this issue was permissible.** Buttressing this, more than 46% reported that they were threatened with termination when they tried to wear respirators or additional safety equipment on the job. **The same percentage reported that they received early termination after raising safety concerns on the job.**
- A FOIA request found that government agency regulations **prohibited** diving during the spill due to health risks. **Yet, interviewed divers contracted by National Oceanic and Atmospheric Administration dove after assurances that it was safe, and additional protective equipment was unnecessary.**

### III. **BP’s and the Federal Government’s Insufficient Medical Monitoring Systems**

- BP and the federal government, through their own medical monitoring programs, each publicly denied that any significant chemical exposure to humans existed. **Of the workers GAP interviewed, 87% reported contact with Corexit while on the job, and of all respondents, 57% reported that they and/or someone in their family was exposed to Corexit outside of the cleanup zone.**

Further, **blood test results from our interviewees showed alarmingly high levels of chemical exposure that correlated with the experienced health effects.** Of GAP’s witnesses, more than 70% took a blood test to identify chemicals from Corexit and oil. Of those, 100% tested positive for high levels of such chemicals, which included known carcinogens.

- BP and government medical monitoring programs dismissed worker complaints that Corexit exposure resulted in hospitalization, and each repeatedly issued official statements to coastal communities (including vulnerable populations) that the environment was safe and the air was “normal.” **Eventually coined “BP Syndrome” or “Gulf Coast Syndrome,” all GAP witnesses experienced spill-related health problems.** Furthermore, 95% report that they continue to experience spill-related health problems as of April 2013, and more than 50% living in affected areas reported that their children and/or grandchildren’s health has deteriorated.
- BP, the government and Gulf hospitals regularly diagnosed health problems in workers and Gulf residents as mere heat stress or anecdotal individual symptoms. Further, the government mobile medical unit was housed in a private BP compound guarded by BP security, making it impossible for workers to anonymously seek medical assistance (many feared they would be retaliated against for reporting health problems). **Of GAP’s witnesses, nearly 86% were told by a medical professional that there was no relationship between their health problems and spill-related chemicals, or that the professional recognized the relationship but refused to document it. Over 42% of witnesses reported that they were scared to ask their physician about a relationship between their health and the spill.**
- To address the void in adequate medical care, LEAN and Dr. Robichaux implemented a treatment program tailored toward chemical exposure that helped to fill a medical void and provide a model for treatment programs throughout the Gulf. **Every one of the interviewees who underwent the Gulf Coast Detoxification Program reported that their health symptoms subsided or cleared after undergoing treatment.**

#### IV. Existing Threats to the Public Ignored

- The federal government’s failure to report on continuing Gulf public health threats has put tourists directly in harm’s way. **More than 60% of GAP witnesses reported that they found evidence of oil or oil debris after BP and the Coast Guard announced that cleanup operations were complete.**
- **BP and the federal government reported that Corexit was last used in July 2010. Seventy-one percent of GAP witnesses cited indications that Corexit was used after that time.**
- The government and BP’s misleading public relations campaign to lure tourists back to the Gulf was joined by media radio silence on the health crisis. **Nearly 70% of GAP witnesses reported that they primarily depend on social media to obtain and/or share unfiltered spill-related information.**

#### V. Corexit’s Impact on the Gulf Environment & Food Supply

- BP and the federal government repeatedly claimed to prominently employ **both dispersant and mechanical cleanup (capturing) methods** to contain the oil. **Of GAP’s cleanup worker**



**whistleblowers, nearly 77% were regularly given instructions to report the location of oil but not recover it.** When each of these workers returned to the same locations within 24 hours, the oil typically was completely gone from the surface.

- BP and the federal government contended that dispersants would mitigate the environmental impacts of the spill, **but the more toxic oil-Corexit mixture coated the Gulf seafloor and permeated the Gulf's rich ecological web.** GAP witnesses revealed underwater footage of an oiled seafloor equivalent to a marine Death Valley where aquatic life formerly flourished, and documented widespread damage to coral communities.
- Ignoring some industry requests to delay openings, the government re-opened Gulf fisheries within weeks of the well being capped. **The FDA grossly misrepresented its analysis for Gulf seafood safety, relying primarily on a literal smell-test to detect contaminated seafood.** It declined to test for Corexit chemicals, which could result in long-term health impacts undetected by government testing standards. **Of GAP's witnesses, 76% expressed concern over the quality of government seafood testing, and almost 60% reported seeing new seafood deformities firsthand. Nearly 80% of fishermen reported that their catch has decreased significantly since the spill.**

## VI. **Inadequate Compensation**

- BP's Gulf Coast Claims Fund (GCCF) denied all health claims during its 18 months of existence. Although a significant precedent, the subsequent medical class action suit excluded countless sick individuals; bypassed the worst health impacts resulting from dispersant and oil exposure (such as cancer or birth defects); offered grossly inadequate maximum awards compared to medical costs, and did not include medical treatment. **More than 60% of GAP interviewees reported that the GCCF and/or Deepwater Horizon class-action settlement made them an offer (most declined). Of those witnesses, 100% reported that compensation was nominal compared to their medical and economic damages incurred from the spill.**

## **Conclusions & Recommendations**

The BP spill was the worst environmental disaster in American history, but the government's consent of BP's Corexit use has caused long-term human and ecological tragedies that may be worse. As deepwater drilling expands off U.S. coasts, it is inevitable that other incidents will occur. Renewed reliance on Corexit is planned as the SOP for future oil spills. BP has declared it will continue to use the deadly dispersant as long as the government permits doing so. If this vision becomes reality, long-term destruction to our health and environment will expand exponentially.

GAP's report illustrates that both BP and the government must take corrective action to mitigate ongoing suffering and to prevent the future use of this toxic substance. Immediate measures should include:

- A federal ban on the use of Corexit, which is already banned in the United Kingdom (BP's home country) and Sweden.
- Congressional hearings on the link between the current public health crisis in the Gulf and Corexit exposure.
- The immediate reform of EPA dispersant policy, specifically requiring the agency to determine whether such products are safe for humans and the environment *prior* to granting approval under the National Contingency Plan (NCP).
- Establish effective medical treatment programs – by medical experts specializing in chemical exposure – for Gulf residents and workers.
- The federal government's funding of third-party, independent assessments of both the spill's health impact on Gulf residents and workers, and such treatment programs when established.

# 1. Introduction

The 2010 Deepwater Horizon oil spill released a reported 210 million gallons of crude oil into the Gulf of Mexico and used nearly two million gallons of the dispersant Corexit during the response.<sup>1</sup> By contrast, the 1989 Exxon Valdez oil spill released approximately 11 million gallons of crude oil and used less than 4,000 gallons of Corexit. The devastating impacts of Corexit on Exxon Valdez cleanup workers and the region's ecological system have been documented throughout the past two decades.<sup>2</sup> Surviving Exxon Valdez cleanup workers suffer from severe long-term health problems associated with chemical exposure, and dispersed oil continues to be found in the environment, which has prompted Alaskan tribal communities to ban the use of chemical dispersants.<sup>3</sup> The United Kingdom banned Corexit over a decade ago, and Sweden does not allow the use of any chemical dispersants in the event of an oil spill.<sup>4</sup>

Notwithstanding grave warnings from the Exxon Valdez disaster and independent studies, Corexit has remained an Environmental Protection Agency (EPA)-approved dispersant on the product schedule for the National Contingency Plan (NCP) – the federal government's blueprint for responding to oil spills and hazardous substance releases. The government and BP relied primarily on Corexit to make the oil disappear from public view, deliberately pursuing a strategy of achieving false public perception rather than focus on public health protection. The BP spill's Unified Command, comprised of 13 government agencies, BP and Transocean (owner of the Deepwater Horizon rig), was responsible for authorizing and coordinating all incident operations during the spill response.<sup>5</sup> Working under the direction of the Coast Guard as the Federal On-Scene Coordinator (FOSC), this union of entities coordinated the unprecedented use of Corexit.

In the summer of 2011, Louisiana physician Dr. Michael Robichaux approached GAP in the summer of 2011 and requested assistance on documentation of the deleterious health effects apparently caused by the extensive application of Corexit. Between August 2011 and April 2013, GAP investigators interviewed twenty five whistleblowers with firsthand accounts of Corexit's devastating cost throughout the Gulf coast (Gulf).<sup>6</sup> Sixteen whistleblowers reinforced their GAP interviews with sworn affidavits made public in this report. Each section in GAP's report summarizes the official position of BP, the government, and the independent critics, and concludes with relevant excerpts from the whistleblowers' affidavits.<sup>7</sup> The affidavits establish a reviewable record of the disaster's public health and safety impacts, from the perspective of workers' and residents' eyewitness accounts. They experienced a reality almost completely opposite from the official record provided by BP and the government. Whistleblowers not only have documented the immediate impacts of the BP spill, but warned of the long-term human health and environmental damage that society witnesses today. All affidavits are included in the report as appendices.

GAP's Gulf partner, the Louisiana Environmental Action Network (LEAN) – a statewide network of more than 100 member groups and 1700 individual members – was instrumental in the implementation of our investigation.<sup>8</sup> GAP received affidavits from cleanup workers, fishermen, divers, coastal residents, parents of sick children, seafood industry leaders, a marine biologist, a chemist, and a physician.<sup>9</sup> Some of the statements were provided anonymously at the request of the whistleblower to protect his or her identity. In addition to these accounts, GAP conducted extensive

Freedom of Information Act (FOIA) requests and off-the-record interviews with government officials to conduct its investigation.

GAP also repeatedly contacted BP, largely in vain, to get the company's side of the story. Since March 2012, GAP and LEAN have been involved in a dialogue with the BP America Ombudsman Program (BP Ombudsman) on public and occupational health and safety concerns during the cleanup, and BP's handling of Corexit. In July 2012, GAP, LEAN founder and director Marylee Orr, LEAN chemist and MacArthur Genius award recipient Dr. Wilma Subra, Louisiana physician Dr. Michael Robichaux (known as "Dr. Mike") and former principle chief of the United Houma Nation Brenda Dardar Robichaux attended a meeting at the BP headquarters in Houston to discuss our findings. It was coordinated by the BP Ombudsman, and chaired by BP vice president Luke Keller. A senior BP industrial hygienist who specializes in dispersants was supposed to be present. He did not attend the meeting, however, and an additional attorney for BP was in attendance. The stated purposes of the meeting were to:

- receive information from BP regarding use of Corexit during the BP spill, and potential future use;
- discuss the alleged removal of the "[Deepwater Horizon MC252, Vessels Captains Hazard Communication, Resource Manual](#)" (resource manual) from worksites;
- discuss the Material Safety Data Sheets (MSDS) for Corexit
- receive a high-level overview of the medical claims process agreed to in the Deepwater Horizon class-action settlement;
- provide our observations regarding health problems associated with Corexit use; and
- provide our concerns over the claims compensation process.<sup>10</sup>

Ignoring the agreed-upon agenda, BP failed to address the public health concerns raised herein, refused to discuss the resource manual's disappearance on grounds of open litigation, and made clear that it had no intention of changing its practices with Corexit as long as the government approves its use. Alarming, in the aftermath of the BP spill the government continues to endorse Corexit through the National Contingency Plan product schedule for dispersants, and BP continues to exploit the tragedy in the Gulf as an opportunity to promote Corexit. At the BP 2013 Annual General Meeting in London, BP Chief Executive Officer Bob Dudley made the following comments on Corexit use (captured by the Gulf coast based media project "28 Stones"):

I continue to be puzzled by something called Corexit, which was the dispersant put on the oil ... Everything to a degree has toxicity and the toxicity of Corexit is about the same as dish-soap, which is effectively what it is and how it works ... Corexit is a U.S. government recommended product and it is still used. And I absolutely believe ... the best thing that was to happen was to have dispersant put on oil rather than having huge black oil waves wash on to the beaches ... I have not seen a single study, of people who have studied it scientifically, deeply, that would look back and say dispersants should not of been used.<sup>11</sup>

On the third anniversary of the greatest environmental disaster in U.S. history, as deepwater drilling expands, the public remains more susceptible to chemical dispersants than ever before.<sup>12</sup> In

the wake of the Exxon Valdez disaster, Congress passed the Oil Pollution Act, which expanded the government's ability to respond to oil spills through a trust fund and created new requirements for contingency planning by government and industry.<sup>13</sup> What will be the legacy of the BP spill? We have yet to enact a single measure strengthening lax dispersant regulations. During an oversight hearing on Corexit use, Senator Mikulski asked: "Are dispersants the DDT or Agent Orange of the oil spill?"<sup>14</sup> Throughout recent history, medical and scientific experts have documented the devastating impacts of chemical exposure on human health and the environment. Those consequences are illustrated by Agent Orange Syndrome, Gulf War Syndrome, "Valdez Crud" – the term coined for widespread health problems by Exxon Valdez cleanup workers, and soaring respiratory problems and cancer rates by 9/11 First Responders.<sup>15</sup> The government's response to the BP spill is unique in that it partnered with a profit driven corporation to conceal the impact of the company's mess, giving birth to a new health epidemic. Within months of the disaster, workers and residents would coin the health impacts seen throughout the coast as the "BP syndrome."

### **Whistleblower Record**

"History is repeating itself. We witnessed the same government response to Agent Orange during the Vietnam war, and to the health problems of Exxon Valdez cleanup workers and 9/11 first responders: After the damage is done, the federal government comes back with programs to examine what went wrong. They were warned before the cleanup began: You are the head of this agency and I am telling you that if you don't change your approach to the cleanup, people are going to get hurt. However, the government continued to use Corexit and not provide the workers proper safety equipment." (Clint Guidry, 7-8)

"Gulf War Syndrome, and the government's response to this disorder, has proven to be painfully similar to the BP debacle. In both instances, evidence suggests that the illnesses are the result of the ingestion, inhalation or contact with various chemicals to which the soldiers and workers were exposed. The pattern of denial and the efforts to suppress information on 'Gulf War Syndrome' and 'BP Syndrome' also have been very similar." (Dr. Michael Robichaux, 6)

"Research shows dermal exposure symptoms correlate with the symptoms I documented: the VOCs got into our liver, kidney and fat cells. Further analysis shows that they can affect DNA replication, and potentially lead to cancer ten to fifteen years from now, as the evidence from the Exxon Valdez spill confirms." (Steve Kolian, 6)

"[M]y mom ... is the North American coordinator of the World Forum of Fish Harvesters and Fish Workers...She would educate me on the health effects that cleanup workers from Exxon Valdez experienced and everything that she shared I was actually experiencing at the time, such as skin rashes and respiratory problems." (Jorey Danos, 4)

"Riki Ott, a toxicologist who researched the health and environmental impact of the Exxon Valdez oil spill, predicted that the impact to seafood would be seen within three to five years. Within a year and a half we are already seeing huge declines in catch across the seafood industry." (Lorrie Williams, 2)

"Consider the immense impact of the spill on the ecosystem by looking at Valdez, Alaska, where the 1989 Exxon Valdez spill used a small fraction of the Corexit that we have used in the Gulf. You can't catch significant harvests of herring anymore in Prince William Sound; scientists believe that Corexit affected the reproductive cycle (they think it affects the cell wall of the eggs.) Corexit might

mutate the RNA or DNA. The effects are still unknown to the public and larger part of the scientific community.” (Scott Porter, 16-17)

“I think management endorsed a policy to deny the toxicity of Corexit, because they didn’t say anything to anybody about the associated risks. In fact, they purposely misled people. NOAA, EPA, FDA and NRDA knew that Corexit and oil was a very toxic combination. There are numerous publications on the subject and there is historical data from the Alaskan Valdez spill. Why they chose to adopt this policy is really confusing.” (Steve Kolian, 4)

## 2. Dispersant

*“Like any good magician, the oil industry has learned that if you can’t see something that was there, it must have ‘disappeared.’ ... Oil companies have also learned that, in the public mind, ‘out of sight equals out of mind’. Therefore, they have chosen crude oil dispersants as the primary tool for handling large, marine oil spills.” – Scott Porter, Diver, Marine Biologist*

Over the months and years following the disaster, BP and the government’s official position on Corexit would be corroded by living history and sound science. When the BP spill occurred, the common government/corporate official position was that Corexit was the best available tool to prevent off-shore oil from polluting Gulf shorelines. They proceeded to release a reported 1.8 million gallons of Corexit through aerial and vessel application, as well as novel application at the wellhead in effort to disperse the spewing oil at 5,000 feet below the ocean’s surface. Both BP and the government spokespeople told the public to rest assured about Corexit. The dispersant, they said, posed no threat to public health and safety; it was low in toxicity (at times comparing it with Dawn dishwasher soap) and contact with humans and wildlife would be minimal.<sup>16</sup> Neither BP nor the government authorities mentioned, however, that under lax dispersant regulations, the EPA depends solely on testing provided by the manufacturer and does not evaluate human health or environmental impacts of the product before approval. Corexit’s effectiveness cleaning the oil was unproven, subsurface application had never been studied, and the independent scientific consensus warned that the dispersant was dangerous. The conflicting perspectives saw eye to eye on at least one thing: Corexit use made the oil virtually invisible from the surface.

Of GAP’s witnesses, 77% of cleanup workers reported that they were regularly given instructions to report the location of oil but not mechanically clean it. When they returned to the same locations



**Photo by Shirley Tillman. Workers often reported seeing white foam after dispersant was used**

the following day, the oil typically was gone from the surface. More than 85% of cleanup workers reported that they had contact with Corexit while on the job, and 57% reported that they and/or someone in their family was exposed to chemicals from Corexit outside of the cleanup zone. Nearly 47% reported that they were told by their employer Corexit did not pose a health risk. More than 70% cited indications that Corexit continued to be used after July 2010 (when the Unified Command reported it stopped using Corexit).

### **BP Official Position**

Throughout the spill response, BP provided reassurances surrounding Corexit’s use. Press releases described it as a tool to “help break down the oil into smaller droplets that could be more easily dispersed through the seawater and then degraded by natural processes.”<sup>17</sup> From BP Director Bob Dudley while at the Chief Executives Club in Boston, to supervisors on the cleanup, BP

representatives repeatedly compared Corexit to Dawn dishwasher soap, invoking the image of a common household product that breaks up the oil and allows for much easier cleaning.<sup>18</sup> BP and the government framed dispersant use as a “trade-off of oil effects in the water versus at the shoreline.”<sup>19</sup> The company insisted that dispersing the oil offshore would prevent it from reaching wetlands and beaches, where the public would be exposed to chemicals in the oil.<sup>20</sup>

To ensure worker and public safety, BP reported that aerial application of Corexit was “limited to daylight hours, with the goal of keeping any surface spray two or more nautical miles away from any boats in the vessels of opportunity program.”<sup>21</sup> It further reassured that all dispersants were “applied more than three miles from the shoreline[.]”<sup>22</sup>

According to BP, an unprecedented 1.84 million gallons of Corexit were used in the response, with its last application on July 19, 2010 – days after the well was capped.<sup>23</sup> In the July 2012 meeting at the BP headquarters in Houston, BP Vice President Luke Keller informed our participants that BP will continue to consider Corexit as a viable option for oil spill responses, as long as it remains an approved dispersant on the National Contingency Plan.<sup>24</sup> In response to a query whether BP will do anything different with how it uses Corexit for the next oil spill, the answer was, “No.” Unless the government intervenes, this dispersant will be the unrestrained chemical of choice to make future oil spills apparently vanish. Americans will just have to learn to live with Corexit – a nightmarish price for invisibility.

### **Government Official Position**

According to EPA’s own data, Corexit is more toxic and less effective on Louisiana Sweet Crude – the type of oil released during the BP spill - than other NCP approved dispersants.<sup>25</sup> After protests by the environmental and public health community around the toxic nature of Corexit, the EPA issued a directive in May 2010 that required BP to use a less toxic dispersant.<sup>26</sup> By that point, BP had already been required to switch from Corexit 9527 to the slightly less toxic Corexit 9500.<sup>27</sup> When BP claimed it was unable to identify an alternative dispersant in sufficient quantities, EPA required BP to dramatically scale back the use of Corexit and limit it to novel subsurface application at the wellhead. However, BP was able to request exemptions from the FOSC for surface application, and aerial and vessel spraying continued throughout the BP spill, often through the use of military C-130 planes.<sup>28</sup>

Shortly before the well was capped, EPA reported that Corexit was comparable in toxicity to other dispersants, sending mixed signals to the public about its safety.<sup>29</sup> Even government workers sought clarification. In an internal memo at the Centers for Disease Control (CDC) an employee inquired, “In regards to the issue of using the Corexit dispersants, is it true that the UK and other countries have banned their use because of their toxicity and because other dispersants have been shown to be more effective and less toxic?”<sup>30</sup> Hugh Kauffman - the lone public EPA whistleblower on Corexit use – more bluntly asked, “I would be grateful ... if someone could explain why millions of lbs. of useless toxic dispersant is being dumped into the Gulf, to add to the toxic loading?”<sup>31</sup> Publicly, then-EPA Administrator Lisa Jackson shared, “I can honestly say I don’t think I’ve made a tougher decision than the one regarding use of chemical dispersant[.]”<sup>32</sup> And a 2011 Coast Guard



report found: “[T]he lack of current science regarding the fate and effect of dispersed oil and its toxicity hindered the ability of responders and agency officials to adequately address ... public concerns.”<sup>33</sup> Despite these uncertainties, two years after the BP spill, in April 2012 the EPA reaffirmed its earlier assessment that Corexit had roughly the same toxicity of other dispersants, and reported that “dispersant-oil mixtures were generally no more toxic to the aquatic test species than oil alone.”<sup>34</sup> Six months later, an independent study would find that Corexit mixed with oil from the BP spill is over *50 times more toxic* than the oil alone, casting doubt on the government’s position.<sup>35</sup>

### **Independent Position**

In 2005 the National Academy of Sciences (NAS) issued the last comprehensive report analyzing the use of dispersants in oil spill responses. The report, *Understanding Oil Spill Dispersants: Efficacy and Effects*, warned that “the current understanding of key processes and mechanisms is inadequate to confidently support a decision to apply dispersants.”<sup>36</sup> A 2012 study published in the international journal *Environmental Pollution* removed room for doubt around Corexit use, finding that synergistic interaction between oil and Corexit makes the combined effect *52 times more toxic* than oil alone. The study’s co-author warned, “This is a cautionary tale that we need to do the science before the emergency happens so we can make decisions that are fully informed ... In this case, the Corexit is simply there to make the oil disperse and go out of sight. But out of sight doesn’t mean it’s safe in regard to the food web.”<sup>37</sup>

While BP was receiving exemptions to use more Corexit, much of the scientific community was pleading with the government to stop its use altogether. During the response, a consensus statement by a broad range of scientists asserted:

Corexit dispersants, in combination with crude oil, pose grave health risks to marine life and human health, and threaten to deplete critical niches in the Gulf food web that may never recover ... The use of dispersants does not represent a science-based, quantifiable ‘tradeoff’ but rather amounts to a large-scale experiment on the Gulf of Mexico ecosystem that runs contrary to a precautionary approach, an experiment where the costs may ultimately outweigh the benefits.<sup>38</sup>

Concerns were widespread that the short-term political will to make the oil disappear through dispersion would take precedent over the long-term impacts of Corexit use. The consensus statement warned, “[O]nce oil is dispersed in deep water, it cannot be recovered. Oil, when combined with dispersants in the water column is more toxic to marine species than either oil or dispersant alone.”<sup>39</sup> The Natural Resources Defense Counsel (NRDC) reported that only eight percent of BP’s oil was removed or burned. The remainder of the oil was released into the environment as it “dispersed or dissolved into the water column, floated to the surface, was deposited on the coast, or sank to the bottom” of the seafloor.<sup>40</sup>

On the day the well was capped, government officials announced that 70 percent of the oil was gone.<sup>41</sup> The government was quickly required to withdraw the assertion that the oil was naturally degrading, however, after scientists discovered extensive underwater plumes throughout the Gulf that resulted from dispersant application.<sup>42</sup> Despite the unprecedented use of Corexit, oil still managed to plague Gulf wetlands and beaches. According to the National Oil Spill Commission, following the BP spill more than 650 miles of coastal habitats were oiled.<sup>43</sup>

Human health concerns were also well-founded. NAS reported that exposure to Corexit 9527 caused adverse health effects to some responders dating as far back as the 1980s, resulting in the creation of the slightly less toxic Corexit 9500.<sup>44</sup> Despite the known threats, Corexit 9527 was used throughout the Gulf early in the cleanup. The composition of both Corexits raised flags. Almost two months into the BP spill and after an unprecedented amount of Corexit was used, by public demand, its chemical composition was released –confirming fears that it was much *more* toxic than the public was led to believe, and sounding alarms throughout the Gulf (see: Health Impact).<sup>45</sup> During the response, workers and residents frequently reported coming into contact with Corexit through aerial and vessel spraying, diving or even near shore and inshore use of Corexit. In 2011 the Coast Guard released a report finding “the response organization was able to refute reports of people, boats, and homes being sprayed with dispersants.”<sup>46</sup> However, the public record – reinforced by internal Coast Guard incident reports – tells a very different story.

### **Whistleblower Record**

#### *a. Oil “Disappeared”*

“When they started spraying the Corexit we didn’t know what they were doing, because the dispersant planes would fly by at odd hours during the night or day, and we were not given information about the spraying. However, we quickly learned the days that they did and did not spray. The Incident Command Center provided coordinates for our vessel to go to ... We would be in miles of thick tar ball oil one day, and the next day they would slightly tweak our location. As we went to our new location, we would pass the location from the previous day and see and smell the dispersed oil ... This happened routinely.” (Jorey Danos, 3)

“From May 2010 through fall 2011, community members reported to me that they would go out and see a slick, that night hear the planes, and then the next day the slick was gone from the inshore and estuary areas.” (Dr. Wilma Subra, 14)

“[T]here was an oil slick three miles long and a half mile wide. We were told not to clean up any oil we reported, however ... I knew BP had the equipment - such as boom - but they were not putting it on the boats ... I raised noise, got other fisherman involved and threatened to contact media if they would not provide us the tools to properly contain and clean the oil ... The next morning I received permission to lay boom, but the oil was all gone ... All that could be seen were black bubbles and foam ... The evening before, they had contacted me and wanted a GPS number of each end of the slick.” (Sydney Schwartz, 2)

“I was sprayed off of Port Fourchon. That was the same day that the largest amount of oil entered Tartellon Bay ... and they were setting booms trying to contain it, but it wasn’t working. The next day, after they had sprayed, there was no more oil in Tartellon Bay.” (Anonymous #2, 4)

“We waited two days in between, and when we went back to our original location all of the oil we were cleaning was gone. Boats had come in and sprayed the dispersant and the oil sank. It got to where after they came and sprayed the oil it just sank, but you could go into shallow water around South Pass and when you spun the mud up you would see the oil sheen on top.” (Anonymous #1, 3)

“On more than one occasion my husband just begged to drop boom, but they wouldn’t let him. We could smell it - football fields long of oil sheen with clumps of the oil in it. The following day we would be sent to a different location. One day in late July when we went out oil and sheen was everywhere ... the Coast Guard directed us not to drop boom and instead sent us in the opposite direction of the oil. The following day Coast Guard Admiral Thad Allen stated that there was no more recoverable oil in the Gulf.” (Shirley Tillman, 5)

“Using Corexit in the Gulf made it more difficult to identify BP MC 252 oil. As a dispersant, Corexit breaks down very fast in the environment, and it is supposed to erase the oil signature by breaking down the ‘fingerprint’ of the oil. The fingerprint contains organic hydrocarbons that can be traced, and we have tools to help determine if the oil came from the Macondo well or a different spill.” (Scott Porter, 6)

*b. Contact with Corexit*

“Airplanes sprayed dispersant on our members on multiple occasions. After the first time it happened I reported it to OSHA ... and requested that they didn’t spray when our vessels were out there. The Coast Guard had to approve the sprays each time. BP said they were not spraying inshore; however, they would have the VoO workers report the locations where oil was found, send them to a different location, and then spray the locations that they identified. The planes would spray from a distance but the wind would carry it over top and hit the vessels directly.” (A.C. Cooper, 4)

“[O]n the VoO program, I was sprayed with Corexit four times ... The increased sightings of dispersed oil corresponded with our health symptoms. There was an ammonia-like odor that would take our breath away. The dispersant was sprayed heavily – like when you spray a water hose into the wind, it will mist and spray back on you ... [T]wice I saw C130’s that flew directly over us and then we entered a cloudy haze, even though it was a bright sunny day ... During those instances the dispersant directly hit me, including my face.” (Jorey Danos, 3-4)

“I’d been taking pictures of the wildlife and the water ... [T]hese boats were up wind from us; as we were going west the stuff they were spraying came back on us ... I never would have stood out there to take pictures had I known what I do now about the effects of Corexit ... I did not think it was a public health threat, because it has been approved for use. I went into the cabin after I sprayed and tried to wash my face and hands but it was already in my eyes, nose and probably lungs by then.” (Shirley Tillman, 6)

“On August 21, 2010 I was sprayed by the BP decontamination boat wash in Bayou La Batre. The wind came off the Gulf and the mist from the decontamination booth covered my face and arms. At the time I wasn’t too concerned and did not think it was dispersant, because we were told that the Corexit wasn’t being used as of July 2010. However, by that afternoon my face was red as if I had been sunburned.” (Lori Bosarge, 1)

“My boat got sprayed on May 26, 2010, the same day as the workers who were airlifted after they got sprayed with dispersants and got sick. Then two days after that they sprayed offshore and we got misted.” (Anonymous #1, 3)

"I got sprayed with Corexit twice. I was having a casual conversation, and all of a sudden we heard a plane. The Corexit is nasty stuff. It disintegrates so that you can't see it, but it's on the skin. When it is sprayed from an airplane it's sticky and hits you like pellets ..." (Anonymous #2, 4)

"They were spraying Corexit around the time we started diving ... NOAA told us later in August 2010 Corexit would not be sprayed in the areas where we were conducting our research because the well was capped ... However, we have a video of fresh Corexit in the water from August 21, 2010 and August 18, 2011" (Steve Kolian, 4)

"[O]n October 13, 2010 I was sitting in front of my house and I heard a horrible noise, then I realized it was C130s flying over us. I ran to my truck and I could see a fine mist hitting the windshield... An investigative journalist came to our home a few days after... [and] took samples from our pond...[and] from the beach at Pass Christian, Mississippi. The lab results of the samples came back positive for the chemicals found in Corexit." (Lorrie Williams, 5)

"My son was three in June 2010 when my relatives took him to Orange Beach for 5 days ... When the [large military] planes flew over the water they dispersed what my relatives believe was Corexit, since it was still being used heavily in the Gulf during that time. As it was being sprayed, the wind may have carried it into the pool that my son used. I found out later that chlorine acts as a binding agent for the compounds found in Corexit." (Anonymous #3, 1)

"I [attended] a meeting at the BP Unified Command Center on July 3, 2010 to discuss respiratory safety protection issues for VoO workers ... When I walked into the meeting, a Coast Guard representative dropped an Incident Report right in front of me that documented Corexit use close to VoO vessels in May 2010 ... On May 5, 2010 there were four different incidences where the planes sprayed inside of procedural distances. They were supposed to maintain a safe distance of one mile from any vessels or platforms and three miles from the source (well location), but according to the Incident Report, on two occasions a plane, reported as a 'Coast Guard' plane, passed directly over a platform while spraying dispersants." (Clint Guidry, 4-5)

### *c. Government and BP Positions*

"On May 26, 2010, Administrator Jackson responded that BP must reduce the amount of Corexit used by 75%. Subsurface application of the dispersant continued and BP did not have to justify its use under the terms of the directive. Surface application was supposed to be eliminated, but BP could justify its use due to weather or if it identified an oil slick. On a daily basis BP received exemptions to apply the dispersant by plane." (Dr. Wilma Subra, 14)

"During the time that BP was spraying from the blowout through mid August 2010, I kept getting a lot of calls from workers offshore reporting that they were being sprayed ... They reported respiratory problems and nausea. On an ongoing basis I would speak with EPA and share, 'I've received information that these workers on the offshore rigs are being sprayed.' They would look into it and come back and say, 'No they are not Wilma. We are not spraying where there are workers ...'" (Dr. Wilma Subra, 14)

"Their [government] cards read special agents, and they said they were here investigating the use of Corexit in inland water ... I asked them, 'Wouldn't it be easy for you all to get the records from the Corexit manufacturer Nalco for how many gallons BP has bought from them to use to spray down here...since they've admitted to spraying 1.8 million gallons?' They responded, 'Oh no, we can't do that, it's way too early in the investigation.'" (Shirley Tillman, 12-13)

“By law, dispersants cannot be applied closer than three miles to shore. But after the first month into the spill, BP started spraying inshore ... EPA stated that Corexit was not being applied inshore, but went on to explain that through state exemptions it could be sprayed in shore ... [B]ecause it is state waters, the company applying the dispersant does not have to report that they have sprayed dispersants... You can't find out who sprayed what, when, where, and yet I have all these people reporting that they have been sprayed.” (Dr. Wilma Subra, 14 - 15)

“I asked Captain Stanton with the Coast Guard, ‘Don’t you think the squalls forming over the Northern Gulf are going to pick up some of these chemicals, bring them inland and dump them on people?’ He replied, “Oh, no, we’re not spraying anywhere within 30 miles of land ...’ We know they sprayed closer than that. But it wouldn’t matter anyway ... because the rain clouds form over the northern Gulf outside of the Peninsula during the mid summer and into the fall; anything sprayed within 70 miles of the coast could be swept inland. We warned the [government and BP] representatives that we would be exposed to the pollutants from the spill, and they were less than unconcerned. At that meeting I was in tears, I feared for my kids.” (Kindra Arnesen, 6)

“By the time we left the [July 2012] meeting, BP asserted that unless ordered by the government, they would not consider discontinuing the use of Corexit as a dispersant in future oilfield spills. They also refused to commit immediately to informing the public when they use these dispersants in the future, but said they would consider action to stop blindsiding the public. Their position was that as long as Corexit was approved by U.S. regulations, they had the right to use the chemical in responding to an oil spill.” (Dr. Michael Robichaux, 15)

“We worked with the Parish to the point where they now notify all of the sensitive populations before they spray [for mosquitoes], so that they can chose to leave the area. Further, they put it in the newspaper, so the broader population can know when they are going to spray from the planes. It’s not dispersant but it’s very toxic ... The problem is worse with dispersant use, because there is no requirement that BP has to record where it sprayed, and there was frequent denial by BP that they were spraying inshore.” (Dr. Wilma Subra, 15)

“In Gonzales, LA there is a major holding facility where several kinds of Corexit are stored. I drove there in August 2011 and saw it stored. I couldn’t believe it; after all the damage that Corexit has caused, it is still being sold ... BP and the federal government’s whole philosophy has been ‘out of sight, out of mind’; that’s what the Corexit was for.” (Anonymous #2, 6)

#### *d. Is Corexit Safe?*

“The government and BP also have taken the stance that we do not need to be concerned about exposure to Corexit, because it has a 90 minute half life, which means that after 90 minutes half of the components evaporate and the other half of the concentration remains, making it less dangerous. That is not fully accurate in this case, because the compounds from the dispersant come in contact with the crude and get interconnected ... This is really a test case, since such a large amount of dispersant has not been used before in such quantities with the large amount of crude oil. When the remaining oil and dispersants are disrupted, the compounds rise to the surface. When divers went into plumes, they were exposed.” (Dr. Wilma Subra, 10)

“I have lived on the Louisiana coast for 67 years, and spent a considerable amount of time on Grand Isle and in the waterway now named Port Fourchon. The earliest offshore drilling for oil occurred off the coast of Louisiana. At that time, the oil companies couldn’t have cared less about spilling oil into the environment. Those of us who frequented the beach at Grand Isle came home with brown feet and stained swim suits due to the oil present on the beaches where we swam and fished. I do

not recall a single incidence in which anyone became ill as the result to exposure to either the oil or to the tar balls and tar 'rafts' that were present on the beaches. It is obvious that there is something different about this recent spill. BP insisted, even after the EPA requested an alternative, less toxic, dispersant than Corexit, that they could and should use this chemical to hide the oil that was pouring into the Gulf. It is beyond credible doubt that this decision was the new factor, and that Corexit is the prime suspect for the illnesses ruining the lives of so many neighbors and friends today. It is probably also responsible for the death of our dolphins, and the bizarre appearance of the crabs and shrimp that are harvested from the waters where these chemicals were used. BP's defiance in this situation is similar to its arrogance in ignoring safety guidelines that resulted in the original explosion of the Deepwater Horizon drilling rig." (Dr. Michael Robichaux, 14)

"In the fall of 2010 we had just come in from a day research cruise ... I saw Louisiana Governor Bobby Jindal getting on the helicopter ... He told me, 'We will get this area reopened for you.' I responded, 'If so, they can't be spraying Corexit' ... I am a supporter of the governor, but I couldn't even get a response from his office on whether or not Corexit was still being sprayed in Louisiana ... It was important because throughout this time NOAA said it was safe to dive, so I had continued to dive. However, my health was getting worse." (Scott Porter, 13-14)

"The oil sludge that they and other workers brought in on their boots became a problem and was dangerous ... Early on I asked a BP staff member how I could clean the dispersed oil sludge, and what was in it ... He said that the stuff on the floor that I was cleaning, which was a dispersed oil sludge ... was 'as safe as Dawn dishwashing detergent,' and I could mop it like I mopped any other floor; no special treatment was needed." (Jamie Griffin, 3)

"They started spraying the dispersant Corexit and it was hard to breathe and everyone was asking for respirators. Everyone was getting worried because the boats got sprayed and we were breathing the mist in all day long. In the end we still didn't know anything about the real dangers of the Corexit; they explained that Corexit was like Dawn dishwashing liquid." (Anonymous #1, 2)

"We knew that the BP spill was Louisiana Sweet Crude. We knew its major components, and that its toxicity level increased when mixed with Corexit. BP was spraying the more toxic Corexit 9527 and shortly into the spill they switched to a slightly less toxic 9500, which was still more toxic than alternative EPA approved dispersants. EPA and BP knew of the health impacts associated with it ... The issue was responding to an oil spill of this magnitude, with unprecedented quantities of Corexit, including novel subsurface application. Gulf coastal communities, and individuals who consume gulf seafood or recreate in the gulf, are the guinea pigs left to deal with the consequences and will be feeling the full effect in years to come." (Dr. Wilma Subra, 16)

### 3. Safety Ignored

*“They hired people from all over who didn’t know about the conditions and real safety hazards, but you did what you had to do; you had to take the job and deal with it because you didn’t have money to go home ... There was a safety culture of, ‘hush hush, it didn’t happen.’” – Anonymous Cleanup Worker*

A total of 47,000 workers were involved in the response to the BP spill, 42,000 of whom were employed by BP and its contractors. Operating under the Unified Command, the Occupational Safety and Health Administration (OSHA) was responsible to ensure that all workers were protected from hazards associated with the cleanup.<sup>47</sup> Workers categories included offshore, near shore (within three nautical miles), and shoreline or onshore (beach cleanup). The Vessels of Opportunity (VoO) Program, created to employ local boat operators during the response, extended to near shore and some offshore activities such as identifying oil, working with boom (a temporary floating barrier used to contain an oil spill) and skimming (using a machine to remove oil floating on the water).<sup>48</sup>

Placing public perception above public safety, BP and the government grossly understated threats associated with chemical exposure from the BP spill. Both falsely asserted that heat-related illness was the most serious cleanup hazard. Based on that premise, workers were prohibited from using respirators and initially offered minimal safety training that did not equip them for the highly toxic workplace. Corporate and government announcements repeatedly issued official statements to coastal communities (including vulnerable populations) that their environment was safe and the air was “normal.”<sup>49</sup> Meanwhile, EPA reports used to validate the respirator policy and put the public at ease about exposure to carcinogens were contradicted by muted government warnings and independent data. Raising additional safety questions, when GAP and LEAN confronted BP about the alleged removal of federally required resource manuals (detailing Corexit health problems) from VoO worksites, the company provided contradictory information surrounding the removal of the manuals.

Of GAP’s witnesses, 100% of workers interviewed reported that they either did not receive *any* training, or did not receive the federally required training. Again, 100% reported that they were provided minimal or no personal protective equipment. Nearly 85% reported that they were not aware of available safety literature on the job site.

#### **BP Official Position**

Following the BP spill, Bob Dudley, CEO of BP’s Gulf Coast Restoration Organization, asserted: “BP, in collaboration with the Unified Command, provided task specific training, supplied personal protective equipment and conducted extensive



Photo by NOAA. Worker spraying dispersant with minimal protective equipment

environmental and worker monitoring to protect the health of response workers involved in the cleanup.”<sup>50</sup> Throughout the BP spill, worker safety trainings and personal protective equipment (PPE) were tailored to address what BP deemed the greatest threat: “risks from working in the summer heat of the Gulf.”<sup>51</sup> BP created a matrix<sup>52</sup> that OSHA adopted on its website for PPE based on cleanup positions.<sup>53</sup> Suggested safety gear ranged from a sunhat/sunscreen, hardhat, goggles and gloves to various styles of suits and boots. When workers asked for respiratory protection, BP argued that it was not necessary, citing EPA air quality data, and at times threatened workers with termination if they wore their own respirator protection (see: Retaliation).<sup>54</sup> BP’s own data would undermine its position, when in June 2010 it found 2-Butoxyethanol – a chemical linked to health effects in Exxon Valdez workers and a key ingredient in Corexit 9527 – was detected in 20% of offshore workers at levels two times greater than worker safety standards set by the National Institute for Occupational Safety and Health (NIOSH) (see: Health Impact).<sup>55</sup> Despite alarming evidence of chemical exposure, the government maintained a loyal partnership with BP, downplaying the threat surrounding crude oil and Corexit in the Gulf.

### **Government Official Position**

According to OSHA’s Hazard Communications Standard, “Employees have both a need and a right to know the hazards and identities of the chemicals they are exposed to when working. They also need to know what protective measures are available to prevent adverse effects from occurring.”<sup>56</sup> Under government requirements, BP was required to provide each worksite with written hazard communication programs; labels and other forms of warning; Material Safety Data Sheets<sup>57</sup>; and employee information and training “prior to initial assignment to work with a hazardous chemical[.]”<sup>58</sup> OSHA records show that of the varying levels of Hazardous Waste Operations and Emergency Response (HAZWOPER) trainings, during the response over 30,000 onshore workers went through a post-emergency abbreviated four-hour training<sup>59</sup>; VoO workers were required to take eight hours of training; and supervisors were required to complete a 40-hour training.<sup>60</sup> OSHA Director David Michaels, in an effort to allay concerns from worker safety advocates, stated “[T]o assure only trained workers were hired for the response, OSHA pressed BP to implement a credentialing system to allow OSHA inspectors to easily verify that all workers had received the required training.”<sup>61</sup> That assertion would be flatly refuted by workers participating in GAP’s investigation.

Throughout the response, EPA assured workers and residents that air quality levels were normal and pollutants associated with petroleum products were found at low levels.<sup>62</sup> At the same time, the EPA advised sensitive populations to “stay indoors to limit your exposure, close windows and doors, and set your air conditioner to a recirculation mode.”<sup>63</sup> Amazingly, the OSHA policy intended to prevent these sensitive populations from working in hazardous workplaces was circumvented by forgoing respirator use on the cleanup. In its explanation as to why respirators were not used during the cleanup, OSHA explained “Some workers may fail to pass the medical evaluation” that is required for respirator use, especially “workers who suffer from respiratory or cardiac disease.”<sup>64</sup> Ruling out the option for voluntary respiratory use, OSHA argued: “[C]ertain respirators ... could put a strain on the heart and lungs of some workers and therefore were not generally



recommended for voluntary use. Furthermore ... the health risks from using respirators in the extreme heat exceeded the low risk of chemical inhalation.”<sup>65</sup> OSHA’s website contended that the oil away from the well was “weathered,” and the dangerous substances, such as benzene, evaporated, decreasing the risk of inhalation exposure.<sup>66</sup> It identified heat related illness as “the most serious threat to cleanup worker health.”<sup>67</sup>

While heat stress remained at the forefront of government warnings, other agencies offered a more cautionary perspective. NIEHS warned that synergistic effects of the various chemicals in worker breathing zones could “pose much greater challenges for establishing acceptable exposure criteria[.]”<sup>68</sup> An early worker training conducted by the NIEHS Worker Education and Training Program (WETP) listed different carcinogens that workers could encounter on the cleanup, cautioning: “Even if air sampling shows no detectable levels or very low levels of VOCs, there still may be health effects present”<sup>69</sup> Substantiating those warnings, an NIEHS report found that “lack of personal protective equipment [and] exposure to toxins” contributed to the impact of the BP spill on response workers.<sup>70</sup>

Despite uncertainties that haunt the Gulf to this day, FOSC lauded the BP/government partnership for dodging a public health crisis: “the efforts and commitment to ensure the safety of those who worked on the spill, and that of the public, is one of the single most notable accomplishments of the Deepwater Horizon response.”<sup>71</sup> The experiences of workers and residents from this investigation repeatedly demonstrate the exact opposite – a “safety last” track record.

### **Independent Position**

In May 2010, a U.S. District Court judge granted a temporary restraining order requiring BP to take responsibility for hazardous chemical exposure safety oversight for all commercial fishermen working on the cleanup in Louisiana.<sup>72</sup> The legally required safety oversight required BP to provide a written safety and health program, monitoring for airborne hazardous chemicals, identification of the hazardous chemical exposure risks specific to work areas, monitoring for airborne hazardous chemicals in work areas, and providing necessary personal protective equipment, among other actions.<sup>73</sup> Gulf fishermen largely comprised the VoO workforce, which was particularly vulnerable to chemical exposure through aerial dispersant spraying and toxic fumes from in-situ burns (surface burning of crude oil). However, BP would fail to uphold the court order to protect those workers on the frontlines of the cleanup.<sup>74</sup>

Independent air monitoring by LEAN found that chemical concentrations exceeded the physical health symptom concentrations by 100-120 times, and may have exceeded the highest annual average standard by 50 times, undercutting BP and government assertions that air quality levels were normal.<sup>75</sup> This caused great alarm among public health and worker rights advocates, since EPA air monitoring data was at the forefront of the decision not to use respirators. Concerns were exacerbated by reports that workers lacked even the most basic PPE, such as gloves and boots, and did not have access to adequate worker safety information.

Following the BP spill response, confidential whistleblowing disclosures alerted GAP that the resource manuals either were not delivered or were removed from VoO worksites early in the

cleanup, around the same time that workers began experiencing health symptoms detailed by the manual.<sup>76</sup> The resource manual provided risks for VoO workers from the crude oil and Corexit, and included the MSDSs for Corexit as required by OSHA regulations. In March 2012, GAP and LEAN sent a joint letter to the BP Ombudsman, to help resolve an apparent and palpable contradiction between BP safety reassurances to and restrictions on its employees, compared to the conclusions, warnings and mandatory precautions required by its own internal manual.<sup>77</sup>

In a confidential letter, BP confirmed the authenticity of the resource manual, explaining that it was removed as the VoO program came to a close and after the cleanup operation was no longer using dispersants in the Gulf. GAP subsequently surveyed nearly half a dozen VoO Captains, some of whom supervised multiple other captains, and none were aware of such a manual. In fact, several VoO captains surveyed stated they didn't receive *any* literature on workplace safety, and received minimal or no PPE. The BP Ombudsman scheduled the July 2010 meeting at BP headquarters, in part for BP to explain what happened. At the meeting, however, BP lawyers refused to discuss the resource manual's disappearance due to "open litigation" of medical claims.<sup>78</sup>

BP's contradictory actions raise serious questions whether the company tried to conceal the hazards of Corexit, as confirmed by the resource manual, from its own exposed workers. More broadly, it casts further doubts overall on BP's compliance with government workplace safety regulations.

At the time of this report's release, the BP Ombudsman is preparing to conduct a formal investigation into the full extent of BP's compliance with federal law requiring workplace safety information for VoO workers; allegations of retaliation against workers for wearing additional protective equipment; and unauthorized use of Corexit after July 2010. GAP and LEAN will monitor the investigation. The BP Ombudsman is only now beginning to schedule interviews with witnesses in 13 months since March 2011, when GAP first disclosed the resource manual and requested an investigation.

### **Whistleblower Record**

#### *a. Insufficient Training and Personal Protective Equipment*

"Throughout the oil spill cleanup, worker safety trainings were insufficient to protect the health of the workers. OSHA and BP reduced the 40 hour HAZMAT trainings to four hour trainings for most of the workers. Some workers did not receive any training ... They would come home at night very sick, but desperate and needing the work. Then they would go back out in the morning and get sick all over again with headaches, nausea, respiratory problems and skin rashes; these are just some of the symptoms associated with exposure to the crude oil and dispersant. Health problems got worse from there." (Dr. Wilma Subra, 3)

"On May 24, 2010 ... DHS invited me to attend a meeting in Galliano, Louisiana. They were soliciting our opinion on the cleanup. At that meeting I said that I wanted everyone to understand the danger that the cleanup workers were being put in. I read the statement and warnings from the briefing packet I created, which included dangers associated with Corexit ... I left 15 to 20 copies of my statement for everyone at the table, including Secretary of the Interior Ken Salazar, DHS Secretary Janet Napolitano, then-BP Chief Operating Officer Doug Suttles, Senator Landrieu, Senator Vitter,

Senator Barbara Murkowski, Senator Dick Durbin, then-Coast Guard Rear Admiral Mary Landry, Governor Jindal, Mayor Mitch Landrieu, Mayor David Carmadele, Representative Joe Cao, Coastal Parish Presidents and Councilmen. After the meeting Senator Durbin approached me and said, 'They needed to hear that.' I was trying to prevent them from killing people and making people sick, but they didn't heed my warnings ... Two days later on May 26, seven VoO workers were airlifted to the hospital." (Clint Guidry, 3-4)

"LEAN attorney Stuart Smith took BP to federal court in early May 2010, and the judge ruled that BP was not providing the cleanup workers with adequate protection and adequate training ... However, even after the court ruling to enforce worker safety ... BP did not comply with the regulations and allowed the workers to be made sick ... There are companies all along the Gulf coast that deal with oil spills all the time, and they know the safety measures that must be taken ... and yet BP was allowed to hire cleanup workers without proper training or protective gear, and put them in harm's way through direct contact with the crude [oil] and the crude [oil] mixed with the dispersants. No matter how 'emergency' it was, they knew how to protect those workers, and they didn't." (Dr. Wilma Subra, 3, 6)

"In mid May 2010 I asked workers from the in-situ team how they located the oil, and they explained, 'We look around and when your eyes start burning and you're coughing and your lungs hurt, you're in the thickest part of the oil and you can burn it.' That greatly concerned me, because at that point respirator protection won't be sufficient to protect them from the toxic fumes they are inhaling. However, I knew by speaking with workers and government officials that they weren't even provided respirators." (Clint Guidry, 2)

"I knew from all of the paperwork I had read that BP was supposed to supply the men with respirators, hazmat suits and other safety gear, since they were working on the oil spill. I was concerned that they were out there touching the chemicals with their bare hands, and I knew my husband didn't have sufficient safety gear. Before he began working, the only training that BP provided was a boom course. He learned how to set up boom and contain the oil. The only safety advice the training provided was that workers should drink a bottle of water every hour." (Betsey Miller, 1)

"Before we began work I took a three-hour shoreline basic cleanup course administered by the company Falk Alford in Houma, Louisiana. However, it was about beach cleanup and our objective through the VoO program was to clean up the oil offshore, before it hit the beach ... I was not offered any additional courses ... " (Jorey Danos, 1)

"The in-situ teams, which were the teams that burned the oil, also only received the four hour safety training before working in the most hazardous conditions of all of the workers ... I explained to Alan Allen, the BP technical advisor who ran the in-situ team, 'My training has taught me that when you burn dangerous chemicals, you form oxides that are even more dangerous than the chemical that you started out with; if you burn H<sub>2</sub>S gas, which is hydrogen sulfide, then the hydrogen burns off and you end up with sulfur dioxide, which can kill you. That applies to almost all dangerous chemicals.' Then I asked him, 'Do you have any data on what is in the smoke?' He replied that he did not. I asked him, 'Do you have any tests or a way to determine what is in the smoke?' He responded that they did not, but that it was not hazardous because they stay upwind of the burn ... I know through photos and firsthand accounts that the in-situ teams were often exposed to the smoke from the burns." (Clint Guidry, 2, 5)

"During the oil spill I had one of the first boats out there involved in the cleanup. At first I rode the boat around and looked for the oil ... Then I worked at a [decontamination] site to clean the

dispersed oil off of the boats that were used during the clean up. I didn't get training, until three weeks before my work was over. This was after we were spraying the boats down during decon and I had gotten sick." (Anonymous #1, 1)

"BP hired safety contractor PEC to put on a safety class, but we didn't take it until one month into the job. They were giving everyone the class in four hours ... I was supposed to take an eight hour class, but we finished it in five hours. I have been to a lot of safety training classes in my life and none of them were as uninformative as this class. Some people got up and left during the class, likely because they felt like it was a waste of time. The instructors repeated the same eight points for five hours, and then told us the test answers before we took the exam. During the class we were told the chemicals would be weathered by the time we went out on the water and therefore not dangerous. They didn't discuss PPE, just that the oil we would be dealing with was not hazardous. Later we realized it was a lie. Every day I wore tennis shoes and fishing pants shorts. Some of the shrimpers had shorts and tank tops on. At that point we didn't know how toxic the environment was." (Anonymous #2, 1)

"They never admitted that it was a hazardous environment, but they eventually put escape packs and air packs on the in-situ team boats. However, by the time they responded to our requests for respirators and escape packs, all of the controlled burns already had been completed. It was too late. The damage to the workers' health already had been done. BP sent them out there in the blind. These are fishermen who before the BP oil spill had never worked in those conditions a day in their life, and they were not informed about the dangers of the chemicals that they would be exposed to until after they were exposed. They were out there on top of the oil with basic hardhats and steel toed boots until July." (Clint Guidry, 6)

"Shortly after James stopped working on the VoO program, BP gave him the HAZMAT course. They did not offer it while he was working, but enough people were asking about workplace safety and finally the course was made available ... I took it with him so that I could read the questions. The reason I go to all of these different meetings with him is that some fishermen don't read or write very well and my husband is one of them, so he doesn't always understand the material they give out. After he took the course, he explained to me that he never would have accepted the job on the VoO program had he known about the health risks associated with chemical exposure from the beginning." (Betsey Miller, 3)

"I went head to head with several people on the issue of respiratory protection. I spoke with Dr. Robert Bourgeois of the Bourgeois Medical Clinic. He was hired by HHS to work on the oil spill response, and he was board certified in occupational medicine. However, when I spoke with him about the need for workers to have respirators, he argued against it because the workers would have to have a complete physical and shave in order to wear the respirators. Further, he thought that some workers would not be eligible to work on the job if they could not pass the physical. I responded, 'You're going to risk a man's life because you don't want him to have a physical or shave his beard?' I was shocked." (Clint Guidry, 5)

"I worked 60 days straight, every day for 12 hours a day ... We had morning briefings, where a safety guy would come. But all he talked about was drinking plenty of water and dehydrating ... When we went out in the boats, we had little to no safety gear. In the beginning they told us we had to wear hardhats, and you would move and the hardhat would fall off ... Nobody had respirators; I wouldn't know a respirator if I saw it. We had to wear our life preservers at all time." (Donald Tillman, 1-3)

“Each team has a designated safety representative, who supposedly watched over everything. We wore a Tyvek suit so we didn’t get the oil on our clothes or skin, and latex gloves or at times, thick blue gloves. The safety representative made sure that you wore safety glasses, kept a life jacket on all day, minor things like that. We’re fisherman; we don’t wear lifejackets all day unless we are in an area where we need them. What we needed were respirator ... On top of being out on the water while they were spraying dispersant, our fishermen were inhaling the toxins constantly.” (A.C. Cooper, 2, 4)

“The [safety] class was completed within four hours. I used to work in the oil field running the oil boats, and the class covered a lot of the same basic safety principles: Make sure you wear your life vests when you get close to the water. If the weather is bad don’t go out. They went into small detail about handling the oil, but not beyond telling us to wear gloves and make sure we have long sleeve shirts or pants. No respirators were discussed. They would caution us, ‘If you smell the oil, be aware that you may need to move or find fresh air.’” (Sydney Schwartz, 3).

“Workers had air monitors, but sometimes BP or even the government cut them off. One worker is on the board of the Louisiana Shrimp [Association], and he told me that the Coast Guard told him to turn off the air monitors because they were going off and malfunctioning. This happened several times. It was extremely dangerous for the workers not to have air monitors, because they were instructed to go out in the middle of the night and locate the fresh oil based on how much their eyes and noses would burn, and if they could smell the oil. How could they monitor how many toxins they were inhaling? ... The air monitors were supposed to measure the levels of chemicals in the air to ensure that they did not exceed permissible exposure limits.” (A.C. Cooper, 2-3)

“In May 2010, I worked with the VoO program as a deckhand ... I took two courses on maintaining the boom and setting the boom. The VoO program did not provide any safety training. We didn’t even have masks or a pair of gloves when we were out on the water...We asked my supervisor every day at Dauphin Island for safety equipment. We were only given boom and very few materials to work with. We wanted to pick the oil up, because those were our waters getting ruined. We need to make a living out there. The people in charge at the docks had an 18-wheeler with safety equipment but they told us it wasn’t for us, it was for people on the beach who were walking.” (Joseph George, 1-2)

“The beach crew did have to wear Tyvek suits, but that didn’t come until after the cleanup began and safety concerns were raised. All of a sudden minimal PPE was required for beach cleanup personnel, such as Tyvek suits and gloves. However, we did not receive PPE on the boat.” (Anonymous #2, 4)

“When we found out [our members] were being denied safety equipment, we spoke everywhere in the beginning to try and get them what they needed ... We wanted them to go to work to pay their bills and be financially stable, but yet five or ten years down the road these guys pass and we have kids and grandkids with no fathers and grandfathers. We were very worried about the safety equipment issue, but it never got resolved ... As far as addressing health issues and providing us with PPE, BP and the government wouldn’t touch it.” (A.C. Cooper, 1)

“On June 22, 2010 ... I had lunch with Dr. David Michaels, Director of OSHA. I told him about what was happening with the workers, and what the response was from BP and BP contractors. He said, ‘We have a problem, we have to do something about it,’ and I said ‘Yeah, I know we have a problem, and OSHA is supposed to be in charge’ ... [T]he main issue he pushed back on involved the use of respirators. He said, ‘If we make the workers wear respirators, then you, Wilma, will be causing them to have heat strokes.’ He framed it as if, by my advocating for their use of respirators, I’m

causing the workers harm. I responded that the fishers participating in the VoO program said it was much harder on them not to wear the respirator and to breathe the fumes.” (Dr. Wilma Subra, 4-5)

“From the very beginning we asked our supervisors for respirators, and they said they didn’t want us to wear them because they were unsafe and would result in heat stress.” (Anonymous #1, 2)

“Some of our members were working for BP contractor Danos & Curole in the burn area, which was located only a couple miles from the site of the Deepwater Horizon explosion. Their well being was a big concern for us, because when they were doing the burns they did not have any safety equipment, including respirators. Toward the end of the burns, a few vessels were given respirators. We found it strange that they weren’t properly equipped from the start, because OSHA’s policy is for workers to be protected ... As many times as we asked them for respirators, and we’re on record asking for respirators to give to our fishermen, not once has OSHA or the Coast Guard or the federal government pushed BP to do so.” (A.C. Cooper, 2, 4)

“I realized how pungent the Corexit was and wondered why I didn’t have a respirator or the right equipment. I asked a BP representative or contractor – I don’t recall which – and he told me that if I had one, all of the workers would want one, and it would look bad for BP if the news coverage caught footage of a bunch of workers with respirators ... BP wouldn’t provide PPE on its own until images showed up in the media of cleanup personnel without protective clothing. The latex gloves were so cheap that they would rip, and we would be touching the dispersed oil barehanded; it would get into my skin and burn ... Our rubber boots often didn’t fit so we couldn’t wear them ... When we did ask the BP representatives or contractors for better equipment, they would tell us there were going to get them, but they would never return with the equipment.” (Jorey Danos, 2)

“Throughout the cleanup my supervisors would often say ‘Oh, we’re not going to enforce that rule now, we have to get that mess cleaned up.’ They hired people from all over who didn’t know about the conditions and real safety hazards, but you did what you had to do; you had to take the job and deal with it because you didn’t have money to go home ... There was a safety culture of, ‘hush hush, it didn’t happen’ ... At Grand Isle, I befriended a BP safety representative. He has been all over the world, including Iraq, and was a high class safety guy. He would come to be so frustrated and say ‘Man, I don’t understand. They have protocol but they didn’t follow it.’” (Anonymous #2, 2-3)

“At one point for a month I was the captain for a safety boat with medical workers on board. I would bring the medical staff from the BP Command Center and take them to the sick workers. Worker safety incidents occurred multiple times per day throughout the cleanup ... However, when BP shut down the command post and facilities, we discovered that all the file cabinets in the safety trailer disappeared in Grand Isle. The BP safety representative couldn’t go back and get the [Job Safety Analyses] from medical incidents...” (Anonymous #2, 3)

“The MSDSs for Corexit list several of the health problems I am now having, and they still used ... it throughout the Gulf ... When I lived on the barge, for 24-hours a day I was exposed. I would be outside too, breathing in what they were burning, without a respirator or a Tyvek suit. I had an apron, a hairnet, a spatula and some rubber gloves, and they told me to go in the midst of this dangerous chemical environment. Yet they were willing to tell me that the dispersant mixed in with the oil I was cleaning was as safe as touching Dawn dishwashing soap? Then a year later I have health problems that I have never had before working on the barge ...” (Jamie Griffin, 10)

#### *b. Public Exposure*

“There were millions of gallons of oil spewing into the Gulf. Louisiana Sweet Crude is 40% by volume light ends, such as xylene, toluene and benzene. Along Venice they were spraying the more

toxic dispersant Corexit 9527A where VoO cleanup workers were working. It was only a matter of time before the workers and then public became sick. As part of an impromptu meeting to provide feedback from the shrimping industry to EPA and NOAA, I met with EPA Administrator Lisa Jackson in Venice on June 1, 2010. By that point, already 800,000 to 900,000 gallons of Corexit 9527A had been sprayed. I was sitting across the table from Ms. Jackson and I asked her, 'Why is it that when you have all of this going on and three air monitors from Venice, Louisiana, EPA's reports are not showing any high levels of chemicals?' Ms. Jackson responded, 'Well the levels were a little high, but we didn't want to create a public panic.' I responded, 'You are scaring the hell out of me.'" (Clint Guidry, 6)

"In late April 2010, before the crude made it to the Louisiana shore, which took nine days, the aerosol came on shore all the way across from Louisiana to Mississippi and Alabama to the Florida panhandle. The aerosol was dispersed crude oil. It came from the slick of the gulf and was dispersed into the air from the heavy winds of the high seas. It caused severe nausea, headaches and respiratory problems." (Dr. Wilma Subra, 3)

"When the oil landed on the Mississippi shores on July 1, 2010 BP and BP contractors started dumping the oil waste four miles north of the shop, at Pecan Grove Landfill ... It didn't matter which way the wind was blowing, because I would either get chemical exposure from the land grove or the beach." (John Gooding, 2)

"A lot of the chemicals from the spill became airborne, turned into condensation and precipitation. Consequently, children and people throughout the Gulf Coast are affected, in addition to those working directly on the cleanup." (Jorey Danos, 6)

"From May 2010 through August 2010 when I walked out my back door it smelled like I was putting my head in a used oil can; the oil smell was that pungent ... After residents started asking officials and the media questions about the safety of the spill, because everyone along the coast smelled petrochemicals, the local news station announced, 'If you have any respiratory problems or compromised health, you need to stay inside.'" (Lorrie Williams, 6)

"The first week of the spill, we weren't knowledgeable about what was going on and I still let my kids go outside to play. Then by the end of the second to third week I had read enough and started to get concerned. I put the bikes in the shed and drained the pool. When I found out chlorine was a binding agent with other chemical compounds, I decided it wasn't a good idea for the kids to swim. I basically locked them up in our mobile home. [PlaqueminesParish.gov](http://PlaqueminesParish.gov) would send out automatic emails for the air sampling. The emails said 'unusually sensitive people should refrain from exertion.' At the local town hall meetings officials told us to stay inside and turn our air conditioning on recirculation." (Kindra Arnesen, 6)

"There are compounds in the makeup of Corexit that resemble glycol. You can't empty a radiator of antifreeze into the street. Yet we are using Corexit, with contains a type of glycol, in unprecedented amounts in the Gulf, and the public doesn't know how much glycol or how much of the other highly toxic chemicals comprise Corexit." (Scott Porter, 10)

"Sometimes it gets really frustrating to think that [BP] had total control to stop this. I understand what happened. If what happened after the spill were an accident, I would be the first to say it happened, and it is God's will to take life as it comes. But they did know that these chemicals were unsafe and still allowed people to handle them and breathe them. BP can't use Corexit in its own country, but our government allowed BP to come into our country and harm so many of us." (Jamie Griffin, 15)

“There is no debate that VOCs go away quickly. However, the oil is still very prevalent in the environment. It’s not over. The main VOCs are xylene, ethyl benzene and hexane. They were known to be in the crude, to move on shore, and to be off-gassing from the crude as it floats on the surface of the Gulf and as it is in the wetlands and the beach. These are known suspected cancer causing agents that also cause acute respiratory problems and gastrointestinal problems and decrease lung function type issues.” (Dr. Wilma Subra, 10)

“[W]hen my family began getting sick, I didn’t think we had anything to fear as far as coming into contact with any type of BP chemicals. We hadn’t been to the beach, and we hadn’t eaten any seafood, so why would we have to worry about that kind of thing? Then my son’s health problems got worse, and test results came back that showed he had levels of volatile solvents in his system.” (Christina Tillman, 1)



## 4. Health Impact

*“What brought all of these individuals into the same pool was the fact that their symptoms were almost identical, and were different from anything that I had ever observed in my 40 plus years as a physician ... However, until people are educated about the symptoms associated with exposure to toxic waste from the spill, we cannot assume they will make the connection. I continue to witness this disconnect and these symptoms on a daily basis.” – Dr. Michael Robichaux, Physician*

The cleanup’s health impact may have been a greater disaster than the BP spill itself, creating an epidemic of chemical-related illnesses across the Gulf. The full impact remains a question mark. Nearly two million gallons of dispersed Corexit later, the environmental law firm Earthjustice reported that five of its ingredients are linked to cancer.<sup>79</sup> Material Safety Data Sheets for Corexit warned that the dispersant posed high and immediate human health hazards. BP’s own testing found that workers were exposed to a possible human carcinogen from the dispersant. BP and government medical monitoring programs, however, denied any significant chemical exposures, and dismissed *every* worker complaint that Corexit exposure resulted in hospitalization, or deserved compensation for its effects. Independent monitoring by LEAN validated concerns and educated the public on the real human impact of the disaster, as it identified the nightmarish list of symptoms that can result from chemical exposure. Eventually coined the “BP Syndrome” and at times “Gulf Coast Syndrome,” it often took months, and in some cases years, before workers and residents connected their sudden health problems with the BP spill.

Of GAP’s witnesses, Of GAP’s witnesses, more than 70% took a blood test to identify chemicals from Corexit and oil. Of those, 100% tested positive for high levels of such chemicals, which included known carcinogens. Ninety-five percent report that they continue to experience spill-related health problems as of April 2013, and more than 50% living in affected areas reported that their children and/or grandchildren’s health has deteriorated.

### **BP Official Position**

From the beginning of the disaster BP contended, “It is important to recognize that the risks to the health of people from the chemicals associated with both the crude oil from the leak and the dispersants used to cleanup the oil are very low.”<sup>80</sup> With the cooperation of the Unified Area Command, BP implemented a comprehensive industrial hygiene monitoring program to prove just that.<sup>81</sup> In the vast majority of cases, BP reported that there were “no significant exposure to airborne concentrations of benzene, total hydrocarbons or dispersant chemicals of interest,” and lauded the high degree of correlation between its monitoring results and that of government agencies.<sup>82</sup> Yet, two months into the disaster, BP test results found that 2-butoxyethanol was detected in more than 20% of offshore workers and 15% of near shore workers at levels two times greater than NIOSH worker safety standards.<sup>83</sup> It may not have been a dispersant chemical of interest by BPs standards, but it certainly is by health experts. According to the New Jersey Department of Health, 2-butoxyethanol is a possible human carcinogen.<sup>84</sup> Alarming, it makes up 30 to 60 percent of Corexit 9527, according to the CDC website.<sup>85</sup>

The MSDSs included in BP's resource manual – the subject of the BP Ombudsman's upcoming investigation for alleged absence from work sites – list the following symptoms of exposure for Corexit 9527A and/or Corexit 9500A: injury to red blood cells (hemolysis), kidney or the liver; irritate the upper respiratory tract; central nervous system effects; nausea; vomiting; anesthetic or narcotic effects; defat and dry the skin, leading to discomfort and dermatitis; chemical pneumonia if aspirated into lungs following ingestion. The potential human hazard is "High" for Corexit 9527, and there is an "Immediate (Acute) Health Hazard" for Corexit 9500.<sup>86</sup>

In the public sphere BP consistently dismissed chemical concerns, disregarding internal data and health warnings. In an interview on CNN, Tony Hayward attributed the illnesses of nine cleanup workers airlifted from their vessels in May 2010 to possible "food-poisoning," avoiding the workers claims that it was a result of the chemical dispersants being sprayed near their vessels.<sup>87</sup> By the conclusion of BP's Gulf Coast Claims Process, it denied all claims for illnesses related to toxic exposure by workers and the public (see: Inadequate Compensation).<sup>88</sup>

### **Government Official Position**

Akin to BP's worker monitoring program, OSHA reported that it "and other government agencies have developed a sampling plan and conducted extensive monitoring of worker exposure and have found no levels of toxic chemicals that are of concern."<sup>89</sup> Consistent with BP's dismissal of dispersant health threats, NIOSH concluded in a Human Health Evaluation prompted by the hospitalization of VoO workers: "Although all seven fishermen were hospitalized on the same day, we found that their symptoms could not be linked to the chemical dispersant that some of the fishermen had originally suspected."<sup>90</sup> The report instead associated their symptoms with "work-related factors" such as heat and fatigue.<sup>91</sup> However, the same symptoms – such as fatigue, headaches, dizziness and flu-like symptoms – are also signs of chemical exposure.<sup>92</sup> Despite government findings, workers and residents remained skeptical that their emerging health problems were not associated with chemicals from the BP spill.

In an attempt to assuage public skepticism, the CDC reported in July 2010 that the levels of some chemicals reported in EPA's data could cause temporary problems, such as eye, nose, or throat irritation, but they were not considered high enough to cause long-term harm. CDC added, "These effects should go away when levels go down or when you leave the area."<sup>93</sup> CDC stated that while dispersant exposure is unlikely, "*The health impact has not been studied [emphasis added]*"<sup>94</sup> – not accounting for warnings listed on the federally mandated MSDS for Corexit, such as kidney and liver damage.<sup>95</sup> In response to reports that residents and workers were getting their blood tested for Volatile Organic Compounds (VOCs) – chemicals found in the oil and dispersant – CDC released a fact sheet reassuring residents that "VOCs are very common" and the public can come in contact with them through pumping gas, cigarettes, pesticides, and scented candles.<sup>96</sup> It recommended against blood tests, arguing: "These chemicals only stay in the blood a short time therefore test results only reflect very recent exposures (within hours or days of testing)." The government's attempt to put the Gulf at ease seemed to backfire. Workers and residents found that their symptoms only subsided when they left the Gulf region and their blood tests continued to show alarmingly high levels of chemicals long after the BP spill was over, raising questions about the toxicity of the Gulf – questions shared internally by government employees.

In an internal memo, a CDC employee wrote “I’m a bit concerned about the somewhat cavalier approach to concerns about dispersants, especially considering the numerous (mostly anecdotal) reports of possible human health effects from the use of Corexit dispersants.”<sup>97</sup> A CDC senior environmental health specialist inquired within the agency: “Have any of you heard whether OSHA/NIOSH is looking at the MSDSs for these chemicals as well with an eye to human exposure concerns?”<sup>98</sup> Concerned about divers exposure to the toxins, an EPA Unit Diving Officer cautioned: “As everyone knows, diving in polluted water is just not something to take lightly ... Even if the diver doesn’t get sick immediately, in this case we’re looking at possible exposure to crude oil (oil and dispersants) – components of which could increase your lifetime cancer risk.”<sup>99</sup> These views, while not a part of the government official position, echoed concerns within the public health and scientific community.

### **Independent Position**

The human health impacts of Corexit were virtually absent from BP and the government’s public discourse, but they were at the forefront of discussions within Gulf communities. The communities along the Gulf had been exposed to oil spills for generations; however, something was very different this time. A strange cough was prevalent, coastal communities from Louisiana, Mississippi, Alabama and Florida were experiencing the same health symptoms, and workers were feeling nauseous within the first few days on the job. Especially-susceptible populations included children, elders, pregnant women, those with preexisting conditions, and individuals working or living under conditions that imposed health stresses.<sup>100</sup> Eventually coined “BP Syndrome” or “Gulf Coast Syndrome,” three years after the disaster individuals made sick from their exposure continue to experience severe health problems.<sup>101</sup>

LEAN filled the government void and quickly became an information hub for sick workers and residents.<sup>102</sup> The group created a fact sheet involving the human health impacts associated with the BP spill, provided workshops throughout the Gulf to educate communities about BP spill-related health risks, conducted health surveys, and raised money to conduct 100 blood tests with the assistance of Louisiana physician Dr. Michael Robichaux. LEAN educated residents that even if they didn’t work on the cleanup, routes of chemical exposure include: inhalation, ingestion, dermal (skin) contact, and eye contact. Individuals tested and surveyed ranged from cleanup workers and divers, to wives who washed their husbands’ soiled work clothes and children, to citizens who did nothing more than live in communities subjected to aerial spraying. The blood test results showed alarmingly high chemical levels that correlated with the health effects reported by workers and residents.<sup>103</sup> Based on results from its 2011 to 2012 health survey, LEAN concluded: “As a result of previous as well as ongoing exposure to the crude oil, community members have been made ill. The health impacts experienced by the coastal community members correspond to the health impacts associated with the chemical components of the BP crude and the dispersants.”<sup>104</sup>

According to Nalco, the manufacturer of Corexit, all of the ingredients in its dispersants “are safe and found in common household products.”<sup>105</sup> However, a report by Earthjustice found that, of the 57 ingredients in Corexit, five of the chemicals are associated with cancer; 33 are associated with

skin irritation from rashes to burns; 33 are linked to eye irritation; 11 are or are suspected of being potential respiratory toxins or irritants; and 10 are suspected kidney toxins.<sup>106</sup> The toxin 2-butoxyethanol, found in the blood samples taken from BP offshore and near shore workers, was linked to severe health problems with cleanup workers on the Exxon Valdez oil spill, including respiratory, nervous system, liver, kidney, and blood disorders.<sup>107</sup> Many of those workers suffered long-lasting neurological problems.<sup>108</sup>

According to LEAN, symptoms associated with exposure to Corexit and Louisiana Sweet Crude include: headaches; nausea; vomiting; diarrhea; abdominal pains; dizziness; confusion; loss of balance; chest pains and tightness; eye, nose, throat and lung irritation; decreased lung function; difficulty breathing; rapid breathing; asthma attacks; chemical pneumonia; allergic reactions; skin irritation, damage, and sensitization; hypertension; damage to liver, kidneys and respiratory system; central nervous system depression; neurological damage; neurotoxic effects; damage to red blood cells; blood disorders; blood cancer – leukemia; genetic damage and mutations; infertility; reproductive and developmental damage; immune system damage; cardiac arrhythmia; cardiovascular damage; gastrointestinal disturbance; endocrine disruption; hormone level disruption; immune system damage; nervous system damage; and increased severity of chronic obstructive pulmonary disease.<sup>109</sup>



Photo by EcoRigs. Diver with skin rash after diving into dispersed oil plumes



Photo by GAP witness. Leg rash after being exposed to Corexit.

In addition to those symptoms, witnesses in GAPs investigation reported: blood in urine, vomit and rectal bleeding; seizures; hyper-allergies to processed foods; violent vomiting episodes that last for hours and result in rapid weight loss; weakness and fatigue, at times leading to depression; migraines; abdominal pain attacks; skin Irritation, burning and lesions; inability to withstand exposure to sun; Multiple Chemical Sensitivity, resulting in new sensitivities to everyday household cleaning products (i.e. Windex, air fresheners) or petroleum based products (plastic water bottles); neurological damage resulting in memory loss and severe IQ drop; difficulty concentrating; sexual dysfunction and impotence; heart palpitations; and hypertension.

## **Whistleblower Record**

### *a. Health Symptoms*

“I ... developed two worksheets early in the oil spill cleanup process; a list of health impacts associated with Louisiana Sweet Crude ... and a list of health impacts associated with the Corexit dispersants. The combined short term health symptoms include acute respiratory problems, skin rashes, cardiovascular impacts, gastrointestinal impacts, and short term loss of memory. Long term impacts include cancer, decreased lung function, liver damage, and kidney damage.” (Dr. Wilma Subra, 7)

“[F]rom Florida, Alabama, Mississippi and Louisiana ... [w]hat brought all of these individuals into the same pool was the fact that their symptoms were almost identical, and were different from anything that I had ever observed in my 40 plus years as a physician...In a nutshell, common symptoms experienced by my patients include impotence both in young and older men, memory loss, headaches, extreme fatigue, irritability, abdominal cramps, seizures, and a trance like state that many patients and their family members have observed. These symptoms are quite common among workers and even some residents who live along the Gulf. However, until people are educated about the symptoms associated with exposure to toxic waste from the spill, we cannot assume they will make the connection. I continue to witness this disconnect and these symptoms on a daily basis.” (Dr. Michael Robichaux, 4, 6)

“I had it bad, but so did my supervisors. The stuff they had to put up with in this job they will never do again. Yeah, they made good money but they said it wasn't worth it. Recently I spoke with four people who worked for ES&H, which was one of BPs primary contractors for oil spill cleanup efforts. The four guys are now sick.” (Anonymous cleanup worker #2, 5)

“South Bay Community Alliance, a community group that I am a part of, held a small health fair for general care and to bring awareness to people the symptoms of chemical exposure from the dispersants and crude oil ... I went to the fair, because I wanted to reach out to people who had exposure from the spill and health problems, and were not aware about a possible connection ... I spoke with about 40 people. As soon as I would share a list of the symptoms I had, almost all of them would say they had similar problems or knew someone from the cleanup who had them.” (Lori Bosarge, 5)

“Within one month after my son returned from Orange Beach, he had lost 15 pounds or approximately one third of his body weight, which took him over a year to gain back ... In August 2010 my son had his first pain attack. I heard him scream from the bathroom and then a loud thud. I ran to the bathroom and he was passed out on the floor in a pool of urine. I looked in the toilet and saw a kidney stone that he had passed ... Later, his pain attacks started happening two to three times a week. He said it felt like someone was stabbing him on his right side where his kidney is.” (Anonymous #3, 1-2)

“Noah, Bubba, my older son Dustin and I were noticeably sick by July 2010. However, until August 2010 we didn't realize that our health effects could be attributed to exposure to the chemicals in Corexit. I wanted to know why we were suddenly developing the similar health problems. I began researching the health symptoms associated with the chemicals from the oil and dispersant and they mirrored what we have experienced ... I have learned that one of the symptoms from Corexit exposure is brain fog, when the short term memory is affected ... After the oil spill [Noah and I] both

had difficulty remembering things. I call it 'Corexit Brain.' We would get disoriented and our brains would go into a fog like state. Sometimes I still experience this. Bubba developed sinus infections and a bad cough, big white scabs all over his arms as well as boils behind his ear, but he does not have health insurance. The boils start out as bumps, and when you pinch them puss comes out ... Noah and I both have asthma but it got worse after the Deepwater Horizon explosion. By the second week of May 2010 we had to go on additional breathing support, and the doctor has doubled Noah's asthma medication ... During the spill we were both doing breathing treatments every four hours ... Since this began, we have been on antibiotics and steroids back and forth and I believe it compromised our immune systems." (Lorrie Williams, 5-7)

"[A good friend of mine] has Crohn's disease but it was dormant for 20 years before the spill. Then, after the spill took place it became real bad; he had chronic bloody diarrhea for over 45 days. He would get skin rashes, and he had to use a nebulizer to breathe properly." (John Gooding, 8)

"For the first time in my diving career I had a burning sensation that felt like chemical pneumonia in my chest. After each dive I began having chest colds, a burning throat, migraine headaches and itchy skin rashes. A lot of it has continued to this day ... After each dive my chest would feel worse. At that point it took five to six days to get rid of the burning in my throat, but I stayed sluggish and lethargic and also had migraines." (Scott Porter, 12-13)

"I just found out my liver is partially damaged due to exposure to oil and I suffer from chronic dermatitis on my face. My face is the only part of my body that was exposed while I was diving." (Steve Kolian, 6)

"Prior to the exposure we didn't have any eye problems; my husband and I both always have been healthy people. Now his whole eye is messed up, completely irritated and red ... I used to have migraines. These weren't like migraines; they were just horrible headaches where you hurt bad and get nauseated ... I have thrown up more in the last year than I probably have in the last 20 years ... [Y]ou're just completely drained for no reason at all. You wake up more tired than when you went to sleep." (Shirley Tillman, 9)

"Some of our guys within the association got very sick and still have big issues to this date, especially our men who were sprayed with the dispersants. Health problems include rashes and boils on their skin, severe headaches, dizziness, stomach pain and nausea." (A.C. Cooper, 3-4)

"Several patients also had a unique neurological disorder that one victim coined, 'Stuck Stupid.' This 'condition' consisted of the patient being cognizant of his or her surroundings, but unable to move or to speak. My first encounter with this phenomenon was in the summer of 2011, when a patient described sitting on his porch while facing his truck. The truck door was open and the motor was running. He could not walk, talk or otherwise move. He described this episode as lasting for about two hours. His memory of the entire event was quite vivid. He later experienced similar problems in different settings." (Dr. Michael Robichaux, 4)

"When I was working on the VoO program my mentality was, 'I have a family. I need to take care of the kids. Don't worry about the health effects ... ' However, when I was sick I had a list of problems that ultimately inhibited me from taking care of my family ... After I got sprayed by the Corexit, within 24 hours I had boils on my neck. They looked like a cluster of zits, but when I squeezed them blood and black puss would come to the surface ... I lost over 45 pounds in three months. In September, 2011 I weighed 185 pounds and it steadily declined to 139 pounds within three months. I couldn't gain back weight for 10 months ... Around September, 2010 I felt like something was neurologically off track, but I didn't realize what it was. I was cognizant of my surroundings,

and could feel, hear and touch, but I was lost -- what I call 'stuck stupid.' I lived with abdominal pain for months, and I couldn't figure out why. It felt like someone had stabbed me in my side and poured alcohol over it, and the pains were sporadic. I lived with paranoia; my kids' bus stop is 15 feet from the front door, and I wouldn't let them go to the bus stop until I could see the bus ... I had difficulty sleeping and often only slept two hours a night. When I exerted myself even slightly or sweat, my skin would flare up and would get red bumps all over my body. I couldn't be in the sun or even mow the lawn for more than a few minutes without dropping to my knees. To this day I am still experiencing the skin problems and I feel easily fatigued from minimal exertion." (Jorey Danos, 4)

"On April 26, 2010 I was working on my shop in Pass Christian. It is about six miles from the coast. I was working 26 feet off the ground on a ladder, and I got a whiff of the chemicals from the oil spill ... My whole body started shaking from the smell, and my eyes began to hurt. My throat swelled up and I could barely breathe. I did a few jobs since then in an effort to accomplish something, but my health problems escalated until it got to the point where I would pass out in the shop when I was around chemicals ... I don't know when [the seizures] are going to occur. Sometimes when I have seizures I turn blue because I am not getting oxygen. It concerns my wife and me, because she works during the day and I am often alone ... I have probably had over a hundred seizures since February 2011 ... I had never had any seizures in my life until the oil spill took place ... The less energy I exert the better I feel. This has completely affected my lifestyle and sense of purpose. I used to work 10 to 15 hours a day on historic restoration projects, and now I spend most of the day sitting." (John Gooding, 1, 7)

"In addition to this gentleman's seizure disorder, he also has developed multiple chemical sensitivities (MCS), a condition in which a large number of chemicals can cause exaggerated and severe symptoms in response to their exposure. This disorder is well recognized in individuals who have experienced contact with toxic chemicals. People with MCS are often hypersensitive to household cleaning products and many other materials that contain even small amounts of aromatic chemicals. Additionally, these patients often have adverse reactions to products they commonly used prior to their toxic exposure, such as scented soaps or common household cleaning products like Windex." (Dr. Michael Robichaux, 5)

"[My husband] is sensitive to common scents, such as hairspray or perfumes. He can't use certain deodorants now, and toothpaste irritates his mouth. He cannot use dishes from the dishwasher because the smell of Cascade upsets his system. He can't be around diesel fuel, and when he touches oil his hands break out in hives and rashes." (Betsey Miller, 4)

"Before the spill my health was generally fine ... Since I was sprayed in August 2010 I have developed sensitivity to regular smells, like our Lysol house cleaners. I have used Dial soap since I was a baby, and I can't use it now. It causes my throat to close up like an asthma attack." (Lori Bosarge, 2)

"Right around the time I got sick on the barge in June 2010 is when I started noticing my memory loss ... It gradually progressed into severe problems ... In December 2010 I left my house with no pants on; I was going to work with a shirt, drawers, and no pants, until I got half way down the road in my car and realized. I laugh because it is funny, but it's not funny. I have lived in Houma for six years. In the summer of 2011 I went to Houma and got lost, for four and a half hours. I couldn't remember why I went to Houma, or where I was ... I went to school for music, and part-time I taught singing and piano until the oil spill happened, from age 22 to 32. Now I can't remember how to play the piano. I sit at the piano and I cry, because I know that I should know how to play it but I can't remember." (Jamie Griffin, 9)

"I can't remember everything; my short-term memory is gone now. Sometimes I leave home without a wallet. I have a notebook that I record everything in and I have to go back and review it, as if I'm studying for school. That is the only way that I am able to keep track of my life. Life has changed so much." (Anonymous #2, 6)

"Our friend stated that she had been quite ill, and doctors at a local charity hospital thought that she had leukemia. Her husband is a fisherman who worked the VoO program ... It was immediately apparent that she had been washing her husband's work clothing and was exposed to toxic chemicals through this route...Interestingly, while he had worked for 95 days with his boat, his location had little oil present ... However, he explained that he saw planes releasing dispersant throughout the time that he worked on the VoO program ..." (Dr. Michael Robichaux, 5)

"In the beginning it was hot, but I thought it would be a regular job. Then they started spraying and there was a mist that we were breathing in and I started feeling off; we all had breathing problems immediately ... I had a shortness of breath. I could tell I had to take a break, and that's not me; I never take breaks ..." (Anonymous #1, 3)

"The BP medics told me it had to be heat related ... My wife got scared because I was losing weight; I lost 15 pounds in three weeks ... My breathing has been messed up since I started working on the cleanup ... I play with my dogs 15 to 20 minutes and I can't breathe. Now I can't smoke a whole cigarette; I smoke half and start to feel it choking me ... I can't eat fried food ... I never saw any of this coming, because prior to working on the cleanup I was in good health. I could run 100 yards of football field all day long. I had been working since I was 12 years old." (Anonymous #1, 4)

"Before I saw Dr. Mike for treatment, I had consumed almost nothing for two weeks. I went from 320 to 280 lbs, and eventually I lost 70 pounds. I couldn't hold down food, I puked vile ... In late 2011 at Walmart I saw the foreman who first showed me the decon process. He had lost a lot of weight and was pale. I told him about my situation, and he said he has been really sick too but never thought that there could be a connection to his work conditions." (Jamie Griffin, 2, 9)

"When I washed his clothes or we were intimate, I would break out in hives as big as a finger. I would start itching real bad ... This happened even after he would get out of the shower. We would scrub the vinegar all over him to break the smell because he smelled like rotten egg ... That lasted about six months, even after he stopped working." (Betsey Miller, 2)

"I woke up one morning in November 2010 and my eye was swollen shut from puss. I stayed almost blind from one eye for almost a year ... I went to the retinal specialist in December 2010, who said there was good news and bad news. The good is that there was no damage to the eye itself. The bad is that because I couldn't see out of it, it means it's neurological." (Jamie Griffin, 7-8)

"He couldn't stop vomiting for 12 hours straight. The first time he got up, got to work, got half way out on the water to find the oil and told his crew that he felt like he was about ready to fall out. He called his team leader and said, 'This isn't safe, I'm going back in for my sake as well as my men's sake' ... He explained to the HAZMAT instructor that he was experiencing most of the health symptoms on the list provided for chemical exposure symptoms, including burning eyes, a runny nose, skin tingling, ears that would leak liquid, violent vomiting and rectal bleeding ... [T]he instructor told him that he needed to see a detox specialist because he believed that James had been chemically poisoned." (Betsey Miller, 3-4)

"Since the oil spill, we also get calls from scores of sick residents that mirror the health problems reported by workers. Based on my experience with cancer alley, this was not surprising, and I am



concerned about future cancer rates among gulf residents who have been impacted by the spill. The more vulnerable populations in any toxic environment are the elderly and the children.” (Dr. Wilma Subra, 8)

“My daughter had a baby, Avereigh, on June 7, 2010. Before I realized how dangerous the air was and that young people with compromised immune systems shouldn’t be outside, we would take her on the porch with us every morning. Since Avereigh was born, she has been to the pediatrician at least two to three times a month. She has hand-foot-and-mouth disease, a respiratory condition known as croup, upper respiratory infections and sinus infections, ear and eye infections, and yeast infections in her mouth and private parts.” (Lorrie Williams, 6)

“When I was working, my wife and kids were in Grand Isle for two to three months. I was told the beaches were fine and clean. However, I am afraid that my kids were exposed to Corexit when they swam in the ocean and pools ... My health problems are worse than my family’s, but everyone has been affected. We all had urinary track problems. My wife and I have severe abdomen pains ... If I’m overheated, I will suffer ... I am blessed to have two very intelligent little girls. But every day my little girl says, ‘Daddy, my belly hurts, daddy my booty hurts.’ It breaks my heart ... My four year old ... has stomach problems and doesn’t want to eat. She runs a high fever at random times. But what do we do? No one knows what to do when we’ve never dealt with this before.” (Anonymous #2, 5)

“I put the website [[www.truthoutonbpillnesses.com](http://www.truthoutonbpillnesses.com)] together because if there were someone who had gone to the website and had a sick child, they could catch the symptoms early. At first my son was not experiencing life threatening illnesses ... The symptoms were more subtle, such as cold and sinus symptoms, low energy and loss of appetite that progressed into more severe symptoms later ... It was one month before my son’s second birthday ... Recently he was diagnosed with asthma ... They did a CT scan of his sinuses, and the doctors said that it actually looked like the CT scan of an adult male with severe chronic sinus problems; that he had never seen a CT scan like that on a two year old in his life.” (Christina Tillman, 2, 5)

“When [the national director of [The Children’s Health Fund] went to Boothville Elementary in Plaquemines Parish and they opened the medical closet, it was full of nebulizers ... Where’s the red flag? What is causing that many breathing problems with that number of kids? That is abnormal. At Boothville Elementary we have sick kids all over the place who are suffering from upper respiratory infections, severe asthma, skin infections, blisters in between their fingers and arms and on their legs and their feet. Some kids have blisters all around their mouths and their noses. These kids were perfectly fine before the spill and the spraying of Corexit began.” (Kindra Arnesen, 7)

“A lot of workers did not even have a day to vent or off gas the volatiles from their bodies. They should have been educated that ethylbenzene and other organic compounds are small molecules that get into bloodstreams and mimic hormones. When they get in the bloodstream they can block Estrogen or Testosterone from getting into a receptor site. In effect, the body starts to age faster.” (Scott Porter, 15)

“Before all of this, he was as healthy as a horse, as strong as could be, hardly ever ever went to the doctor ... It’s hard, because he’s deteriorating in front of me. He looks like he has aged ten years, and I have been married to this man for six years.” (Betsey Miller, 7)

“In November 2010, I began writing a paper on our health problems ... I had previously asked Marylee Orr ... if I could reference [LEAN] to assist divers that may be suffering from the same symptoms. After she read the paper, she asked if she could put it on her website. It focused on our

symptoms and exposure. I provided a link to the videos of what we saw when diving, and explained 'If you think you were in this, you better get your blood tested.'" (Steve Kolian, 6)

"In response to a letter I wrote the CDC about health problems associated with the spill, the CDC wrote back on June 15, 2011 that there are no trends in illness identified by the multiple surveillance systems used, and that there have been no approved dispersant applications since the summer of 2010. These assertions need to be supported with facts." (Dr. Michael Robichaux, 14)

*b. Is the Gulf Toxic?*

"Based on our findings for approximately 100 surveys, in addition to approximately 800 interviews, individuals reported being ill often, on an ongoing basis, everyday and daily ... The routes of exposure identified by all of the individuals surveyed consisted of contaminated air, contaminated water, contaminated wetlands and beaches and contaminated tissue." (Dr. Wilma Subra, 9)

"We went up North Mississippi in the summer of 2011, and this stuff cleared up. We came home and the health problems immediately returned. Three weeks later we went to Arkansas for a week, and all the congestion and stuff went away. We come home, and two days later it was back. This pattern continues." (Donald Tillman, 10)

"[My sick granddaughter, Avereigh, and her parents] moved to St. Augustine, Florida for two months and her infections cleared. They returned in March 2012 and Avereigh's problems have returned. When they were in Florida, [we] visited them for six days, and during that time we all felt better. We had our life force back. Then when we returned to the Gulf our health symptoms began to repeat themselves." (Lorrie Williams, 6)

"On February 15, 2011 I went to Atlanta, Georgia to see my grandchildren. I was gone for ten days, and during that time I did not experience health problems. I came home on February 25 ... When I woke up the following morning I had a severe cough with bloody mucus balls larger than the size of a quarter. I was wheezing and could barely talk. I started to run a fever as well." (Lori Bosarge, 3)

"Within a week of leaving Venice, my mom was fine. Every time I took [my daughter] out of Venice her skin would clear up. Then when I brought her back, she would break out in a rash again." (Kindra Arnesen, 5-6)

"I won't let my son go back to the Gulf beaches ... It has been over two years since his trip to Orange Beach, and he still has chronic coughing and a constant runny nose. When we put him on antibiotics the symptoms subside, but then when he completes the antibiotic his problems return like clockwork. He can't stay on antibiotics his whole life. We made several attempts to try and move to get away from the general toxicity of Louisiana; we just don't have the money to leave. My son left in the summer of 2011 for Phoenix, San Diego and Houston for almost one month with my parents. He seemed to be doing better when he returned." (Anonymous #3, 5)

"Everyone who goes to my house on the beach in the bay then has problems with their eyes or sinus. I took Al Jazeera reporters to the bay, and they got sick. They told me they felt irritation in their eyes and sinuses, flu-like symptoms. It is toxic down there ..." (John Gooding, 3)

"Noah stopped going to the beach in July 2010, after he woke up one morning and his nose was gushing with blood. He won't go outside anymore; he says when he does, it makes him sick. It is a horrible way for a kid to live, but we live on a corner so the side road is a direct shot to Lake Mars. There is nothing to obstruct the chemical smell." (Lorri Williams, 6)

"I haven't been to the beach in awhile, because every time you go down there, for the next two or three days it's like you pay for it with bad headaches, nausea or respiratory problems. But I decided in early August 2011 that I was going to go down there to Pass Christian Harbor and take more pictures. And then the very next morning I woke up and a vessel in my eye burst again for the third time." (Shirley Tillman, 10)

"We have stopped even walking on the beach because it tends to exacerbate our symptoms. However, in March 2012 we took a journalist to the beach. Immediately after going out there, Bubba was sick for three days, I got sores in my mouth and my throat was sore. It used to be that if you had a head cold and went to the beach, the salt water would clear up your sinuses. Now it doesn't do that, it has the opposite effect." (Lorrie Williams, 7)

"How does a three-year-old get that much toxicity in his blood when he lives 150 miles from the coast, except for one time when he was on the coast for five days? None of these symptoms were present prior to his trip to Orange Beach ... Just before Thanksgiving of 2010 Marylee sent us to Dr. Mike Robichaux who was drawing blood. We drove about 150 miles south just to get a blood test because he's the only doctor willing to draw blood for the test ... I got the results back January 2, 2011 and at the time my son had the second highest level of toxicity in his blood of anyone who had been tested by LEAN except for one diver at the scene of the Deepwater Horizon." (Anonymous #3, 3)

#### *a. Chemicals in the Blood*

"LEAN and I, working with Dr. Michael Robichaux, have taken excess of 100 whole blood samples on workers and residents who have reported health problems in the aftermath of the spill. The blood samples have analyzed for VOCs, the compounds found in the crude oil and dispersant. The results demonstrate an increase in the blood concentrations of those chemicals as a result of being exposed to the crude and dispersants ... When levels exceed the 95<sup>th</sup> percentile, it exceeds the level that the general population range is, so it clearly shows that exposure occurred." (Dr. Wilma Subra, 8)

"As I observed these patterns in my patients I was also able to see a positive correlation between their symptoms and blood test results that I had been obtaining through the generosity of LEAN. At this point my feelings went from being skeptical to being extremely alarmed, and I began seeing these patients in a somewhat different light. I learned what questions to ask so that I might obtain information that they wouldn't necessarily associate with their illnesses." (Dr. Michael Robichaux, 4)

"When you look at the overall data from the blood testing, the highest concentrations were in current workers, and former workers who could not have had current exposure; they are in excess of the 95<sup>th</sup> percentile. The divers are just below that; they actually went out and dove through the slick when it was in the gulf, and in the marshy areas. The populations living and recreating along the coast are still in excess of the 95<sup>th</sup> percentile, because there is still ongoing exposure through their environment." (Dr. Wilma Subra, 8)

"Even though it is expensive, the easiest approach was to test for the VOCs. Critics of this test, such as the CDC, argue that the volatiles disappear quickly. If that is the case, there is real cause for alarm. The crude supposedly stopped flowing in the middle of July 2010, but exposure is continuing to this day. *Either they don't disappear, or the oil is still contaminating the region ...* Because we are testing for VOCs, the government agencies are going to be constantly pushing back on us and saying bad things about our data based on the aforementioned reasons. Yet they're not coming in and

taking over. Traditionally I help get testing off the ground in affected communities, and then the CDC and state department of health services get involved to help implement the response on a larger scale. That was not the cases in the aftermath of the BP oil spill.” (Dr. Wilma Subra, 9 - 11)

“[Certain VOCs] are known suspected cancer causing agents ... For those who are living a normal life but not cleanup workers, the two ways that you can be most exposed to VOCs are from filling your car with gas and smoking. However, that exposure is much smaller than what we were finding in the blood tests. In fact, we have five and six year old children who had high levels of VOCs in their blood, and they don’t go out and fill their car with gas, or smoke.” (Dr. Wilma Subra, 10)

“In January 2011 I had a VOC blood test performed to identify chemicals from the oil and Corexit. The test results found concentrations in my blood one to three times higher than the 95th percentile for ethyl benzene ... My dive partners, who never wore dry suits, also took the VOC blood test in January 2011. Their blood levels turned out higher than mine. There are chemicals in the water and now we are finding the same chemicals in our bloodstreams in novel levels.” (Scott Porter, 14)

“We tried to get the medical labs interested in doing analysis of the blood for the PAH, since it is a major component of the crude oil. To this day we have been unable to find a lab willing to provide the analysis, although PAHs are known and suspected cancer causing agents, and these are the components that last a long time in the environment ... The PAHs that form the dispersant and crude oil will be present for decades.” (Dr. Wilma Subra, 11)

“My blood was tested January 21, 2011 and levels were extremely high. The [VOCs] entered through our skin when we dove ... The test screens for the lighter organic compounds, such as benzene, toluene, ethylbenzene and a few others. Research shows dermal exposure symptoms correlate with the symptoms I documented: the VOCs got into our liver, kidney and fat cells.” (Steve Kolian, 6)

“In January 2011 my husband and I got Volatile Solvent Profiles. By then it was several months after we had been working on the cleanup, however, the test still found traces of chemicals in our body. Were we continuing to be exposed somehow? ... We didn’t become mad about how the spill has been handled and our health problems, until our two year old grandson’s blood test came back positive for four chemicals found in the oil and Corexit: hexane, 2-methylpentane, 3-methylpentane and isooctane. His exposure surprised us, because since the spill he did not go to the beach or eat any seafood. However, when he began getting sick in September 2010 his life force left him ... We felt like ‘Damn you BP,’ because we knew by then that BP had done this to our grandson ... our mentality shifted to, ‘We’ll do whatever is needed to raise awareness around the public health impact from the oil spill.’”(Shirley Tillman, 10)

“The week after I returned from the hospital, in mid-August 2011 I got a call from the Blue Cross Blue Shield representative ... [S]he asked me, ‘Have you always had allergies and rashes?’ I told her no, and gave her the history of my exposure, and told her that the Metamatrix Test found I was positive for compounds present in the oil spill. She said that she saw the test in my charts, and then she read ‘Benzene, it is consistent with the problem.’ I said, ‘Would you repeat that please?’ She said, ‘I read Benzene is consistent with the problem, but I can’t give any more information. That is all it says.’ I was so shocked that there was actually something in my charts mentioning Benzene ...” (Lori Bosarge, 8)

“Dr. Mike had not made that connection when I was first seeing him. However, he began finding high levels of chemicals from the oil and dispersant in people’s blood, and they were having the

same health problems. I went back to Dr. Mike, and he reminded me I was constantly exposed to the oil and dispersant chemicals when working on the barge. At first I said no, even though I touched their clothes and mopped the floors. I kept telling him that at age 32 I'm just getting old, until I saw my blood test results ... Out of the 10 chemicals they tested me for, I was positive for seven ... When I looked up how they affect health it looked like reading my medical records. Almost all of the health symptoms associated with exposure to the chemicals in my blood test has happened to me. Most prominent, with toluene, it listed blindness, seizures, nausea, vomiting, skin rashes and neurological problems." (Jamie Griffin, 9-10)

"I did research on the four chemicals that were found in my son's body and also found in the crude oil and dispersant, Corexit ... Dr. Soto said that it is possible when my son first started getting sick he would have had much higher levels. Dr. Soto added that the short term symptoms that my son was already having were consistent with the results, such as the flu systems, sinus and respiratory problems ... [and] expressed that there could be long term effects and problems. I was already distraught and trying to digest that my son did have positive levels of these chemicals in his blood ... Dr. Soto's main concern now is my son's immune system, seeing what's been depleted ... I feel like basically now we're just sitting ducks" (Christina Tillman, 2, 5, 8)

"We love Dr. Mike, because he's the only one who is willing to help ... Dr. Mike drew James' blood for a volatile solvent profile test ... [H]e tested high positive for six of the compounds that comprise the oil and dispersant ... Dr. Mike explained that we needed to find a specialist to read the test results, because it was not his field of expertise. We sent his test results to a doctor who specializes in chemical exposure. She explained that James is so poisoned that it could take him several years before some of the symptoms even subside. She explained that he vomits everyday because when he sweats he releases the chemicals from the fatty tissues, and it is more than his body can process at one time." (Betsey Miller, 5)

"We asked Biloxi Regional Hospital to run the volatile solvent profile test as well. They took his blood and had to send it to the Metamatrix Lab; however, the hospital lost his results. James' doctor called and told us that out of his 35 years in practice, this was the first time that his test results had been lost." (Betsey Miller, 6)

"I called LEAN on February 1, 2011 and I had my blood tested two days later on February 3, 2011. LEAN paid for the test and [Dr. Mike] drew the blood. Dr. Mike is one of the few physicians to my knowledge who was willing to draw blood for the test. He is the nicest man; he opened his doors an hour early so my friend and I could meet him. He took us to the hospital to have our blood drawn ... I was shocked by how easy it was. Prior to that experience, I often called doctors who would put me off for three months before I could see them. That is what the power of LEAN is doing for us here in Mississippi. Now LEAN and Dr. Mike are providing a detoxification program for people impacted from the spill. I don't have any faith in the doctors around here, but I do have faith in Dr. Mike." (John Gooding, 6)

"During an informal lunch I met with a representative from a government agency with oversight responsibilities pertaining to the oil spill health response. I showed her my son's blood work, and her eyes welled up; she said that he will likely have cancer in 20 to 25 years. She explained, 'We can't see the harm being done by these chemicals because they get into the blood and change the DNA on a molecular level' ... Based on the position of government officials at a meeting later that day, I don't think she was supposed to share that with me; but it was her immediate reaction after seeing my son's test results ... Everyone in our group had health concerns, and at the [final] meeting we went around the room sharing them ... We left with more confusion around the health problems

we are facing than when we entered, because the government representatives rejected the notion that our health problems could be associated with the spill.” (Anonymous #3, 4)

## 5. Seeking Medical Help

*“It’s been really hard to get an accurate diagnosis or treatment, because none of the local doctors will even admit there is a problem ... There’s one friend of mine who happens to be a doctor, and he’s very well aware of what’s going on but is afraid to take a hard stand on it.”* – Shirley Tillman, Mississippi Resident, Cleanup Worker

The health impact from combined exposure to Corexit and oil was unprecedented in the Gulf, and the medical industry’s response has proved woefully inadequate to meet the needs of those sickened by the disaster. BP, the government and hospitals across the Gulf exacerbated the dearth of relevant medical expertise, by diagnosing the health problems as mere heat stress or anecdotal individual symptoms. While heat stress was certainly a contributing factor to many workers’ health problems, it did not explain chronic unrelated symptoms, or the identical health problems with residents living in communities along the Gulf. Unable to get straight answers, workers and coastal communities were left feeling helpless, confused and scared about their impaired health or that of their loved ones. LEAN and a brave Louisiana physician have tried to fill the vacuum left by the official disaster response and hospitals, through a treatment program tailored toward chemical exposure, in effect providing a model for treatment programs throughout the Gulf.

Of GAP’s witnesses, nearly 86% were told by a medical professional that there was no relationship between their health problems and spill-related chemicals, or that the professional recognized the relationship but refused to document it. Over 42% of witnesses reported that they were scared to ask their physician about a relationship between their health and the spill. More than 70% reported that they did not have medical insurance, or that it would not cover their BP spill-related expenses. Everyone who underwent the Gulf Coast Detoxification Program reported that symptoms subsided or cleared after undergoing treatment.

### **BP Official Position**

BP continued to highlight its government partnership in ensuring worker health and safety. According to a company press release, “We worked closely with contract providers, local parishes counties, and the U.S. Department of Health and Human Services to develop the means to respond to medical and health needs of response workers.” This was done through a network that purportedly provided emergency medical services, and risk-based exposure control programs with an emphasis on heat stress management.<sup>110</sup> BP also took credit for extending medical services to “individuals in the affected communities who sought help with complaints related to the disaster’s impacts.”<sup>111</sup>

BP set up a private medical service that cleanup workers were *required* to use when they fell ill on the job, before they could go to a public hospital or see their regular physician.<sup>112</sup> Coined “BP Emergency Medical Services” (BP EMS), clinics were only equipped to provide basic first aid.<sup>113</sup> Medical staff working under BP’s oversight reported being extremely frustrated by their inability to provide workers adequate care. One nurse, after being told by BP that she could only provide aspirin and band aids to a sick individual, reported her frustration that the company “service” actually was blocking victims from getting needed medical care. “BP is running its own Emergency

Medical Service and...the sickest people are being taken there and avoiding the parish emergency center.”<sup>114</sup> This would prove to be a problem throughout the BP spill, as even government medical units were housed within BP’s compounds.

### **Government Official Position**

One month into the BP spill response, HHS Secretary Kathleen Sebelius sent a letter to BP asserting, “We are all aware of the potentially serious health consequences of the Deepwater oil spill,” and called for appropriate clinical services for those sickened by exposure to chemicals from the oil or dispersant, heat, or other work related causes.<sup>115</sup> Her letter closed, “I am committed to ensuring this effort is conducted responsibly, compassionately, and with absolute scientific integrity. I am asking BP to pay for it.”<sup>116</sup> Shortly thereafter, HHS opened a government mobile medical unit in Venice, Louisiana, one of the coastal parishes closest to the disaster. The purpose of the medical unit, according to HHS, was to “provide additional basic medical care for responders and residents of coastal communities affected by the oil spill[,]” working in partnership with the local medical community.<sup>117</sup> The government mobile unit was housed in a private BP compound guarded by BP security, making it impossible for workers to anonymously seek medical assistance, as some workers sought due to fears that they would be retaliated against for reporting health problems. This fear was exacerbated by BP health waivers that workers were required to sign early in the response.<sup>118</sup>

Worker medical logs kept throughout the response recorded individual symptoms, such as ear, nose, throat and respiratory complaints. The NIOSH Health Hazard Evaluation associated “nonspecific signs”, such as dizziness and headaches, as “early signs of heat-related disorders,” declining to acknowledge that those symptoms were also early signs of chemical exposure, as were the other specific symptoms recorded in the logs, including flu-like symptoms.<sup>119</sup> According to the HHE, about 70% of the infirmary visits it examined by sick workers resulted in on-site evaluation by emergency medical technicians and treatment with over-the-counter medications.<sup>120</sup> It added that “[m]edical support staff was available at many sites where workers were required to wear PPE. This staff played an important role in monitoring possible health effects and providing on-site medical assessments with referral for higher levels of care as needed.”<sup>121</sup> According to GAP witnesses, however, referrals were rare, and workers had to break ranks or wait to see a physician outside of BP EMS before receiving additional medical care.

The government’s assertion that no trends in illnesses were identified was undercut by state hospital records.<sup>122</sup> The Louisiana Department of Health and Hospitals reported that from April to September 25, 2010, Louisiana received 415 reports of health complaints “believed to be related to exposure to pollutants from the oil spill,” 329 which involved workers, 86 which involved the general public, and 18 which resulted in hospitalizations.<sup>123</sup> A doctor at a Louisiana hospital – who treated several of the patients for what he referred to as “a pattern of symptoms” such as respiratory problems, headaches and nausea – concluded that this mass sickness may have been caused by the noxious fumes from the dispersant and oil during the controlled burns.<sup>124</sup> His perspective was the exception within the medical community, however, which raises concerns over the number of misdiagnosed or unreported chemical exposure cases. With BP and the government’s unwillingness to identify chemical exposure as a possible contributing factor to BP spill-related



health symptoms, sick individuals failed to receive the appropriate immediate medical care, much less be prepared for health problems that could manifest years later, such as cancer.

Instead of educating Gulf clinicians on the most severe health hazards associated with the BP spill, the government launched a counter-campaign to neutralize community efforts to sound the alarm. When CDC got word about the growing use of blood tests to identify chemicals from the oil and Corexit, the agency created a fact sheet for clinicians stating that it did not recommend the use of VOC blood tests either to “determine exposure or guide delivery of clinical care.” It explained that, due to the very short “half-lives” of these compounds, they tend to leave the body within hours to days and are very difficult to identify through laboratory tests.<sup>125</sup> The clinician Fact Sheet concluded: “No treatment to ‘remove’ the VOC chemicals is recommended[.]”<sup>126</sup>

### **Independent Position**

BP and government methods to limit medical treatment to basic primary care left sick workers and residents desperate for professionals who would at minimum recognize the severity of their health problems, and at best help them to get better. According to LEAN’s health survey, a total of 48 percent of the individuals interviewed had access to health care, while 35 percent had medical insurance. Of the total individuals participating in the survey, 20 percent were unemployed as a result of the BP spill, thus (likely) lacking medical insurance.<sup>127</sup> Insurance or no insurance, the overwhelming majority of witnesses participating in GAP’s investigation reported that BP EMS and hospitals completely failed to address their BP spill-related health problems.

LEAN again filled the void, this time through access to medical treatment for chemical exposure. While hospitals across the Gulf were turning a blind eye to the health problems associated with the BP spill, Dr. Michael Robichaux, an ear nose and throat doctor with a private practice based out of Raceland, Louisiana, was seeing patients *pro bono* around the clock. After drawing blood from sick workers and residents in 2011 at the request of LEAN, he quickly saw the patterns between their health problems, their descriptions of exposure to oil and/or dispersant, and the chemicals found in their blood. While the mention of BP made other physicians close their doors on sick individuals, Dr. Robichaux went on a crusade to try and get his patients properly treated. After tireless appeals to the state and federal government to take action in the midst of what had become the Gulf’s greatest public health crisis, LEAN and Dr. Robichaux teamed up to take matters into their own hands, through the creation of the Gulf Coast Detoxification Project (GCDP).<sup>128</sup>

The GCDP, run out of Dr. Robichaux’s home, was modeled after a popular detoxification program used for sick 9/11 first responders. It employed basic exercise, saunas, a fresh produce diet and Vitamin B to help expel chemicals from the body. Akin to the blood tests, LEAN raised money with the support of Jim Woodworth, head of a successful 9/11 first responders detoxification program, in order to offer the treatment at no cost. LEAN also secured a respite house for patients, allowing sick individuals outside of Louisiana to undergo the treatment. The GCDP shut down in the fall of 2012, after having exhausted its funding to treat over 50 patients with remarkable results. Patients reported that their chronic symptoms, such as skin rashes, headaches and short-term memory loss largely had subsided since undergoing treatment, allowing them (in the short-term) to be functional again. Unfortunately, the long-term impacts of chemical exposure are still unfolding.

## **Whistleblower Record**

### *a. Medical Response by BP, Government and Hospitals*

“BP had a release form for health effects related to the spill. It essentially stated that if we got sick BP had personnel at headquarters to get us evaluated. If they didn’t find anything wrong then we would be on our own to seek medical attention.” (Jorey Danos, 2)

“I owe \$40,000 for the three times I have been in the hospital and I don’t know how to pay it. In December 2010 I didn’t leave the house because we didn’t know if what I had was contagious. Every time I go to the hospital they test me for the flu; I don’t have the flu. I took more antibiotics than I have in my whole life.” (Anonymous #2, 5)

“When someone fell ill they could not go directly to the hospital; they had to first go through a private medical response center located in a tent ... It was obvious that they were checking workers for symptoms of chemical exposure, but we were regularly diagnosed with seasickness or dehydration ... Most of the guys have worked on boats since we were young; we weren’t buying into the false diagnoses.” (Anonymous #2, 2-3)

“It was advertised as an independent US government mobile medical unit where workers and residents could access freely and anonymously. However, that was not the case. When I went to Venice to survey the medical unit, it was located at a BP compound ... It took me 30 minutes to get in. I had to indicate who I was and where I was going, waded through Louisiana state police, Plaquemines Parish police and BP security. Then two BP representatives escorted me to the US government mobile medical unit ... The doctor was a fine gentleman, but he would not know what chemical exposure looked like if it jumped up and hit him in his face. He admitted to me that he was only a ‘General Practitioner’. The on-site medical response was run by Acadian, a private company hired by BP. Acadian screened the whole process and took your contact information. If a cleanup worker got off a VoO boat and wanted to obtain support through this HHS medical unit, he would first have to report to Acadian and I believe he would have had a very difficult time remaining anonymous. Further, based on the clear lack of medical expertise for chemical exposure, this medical clinic could only band-aid the reported health problems.” (Clint Guidry, 6-7)

“I went to the Bethel Free Health Clinic, located in Biloxi, MS. While I was in the waiting room a staff member from the clinic came in and announced that the clinic had received a check from BP for \$15,000. She proceeded to show us a giant sized check. The clinic is receiving money from NIEHS as well, in order to treat people who are sick from the spill. When I saw the doctor at the clinic he wanted me to take anti-depressant pills ... I never went back to the clinic, because it felt like a scam.” (John Gooding, 5)

“The cover up surrounding health problems extends to hospitals. West Jefferson Hospital didn’t provide documentation to show that seven workers airlifted from the vessels stayed overnight at the hospital and were chemically exposed from the oil or dispersants. Instead, West Jefferson Hospital documented it as heat stress, existing medical conditions and exposure to de-tox solutions. I stood in the hospital room with one of the men who had been airlifted. He asked the doctor what was wrong, and she looked at him and said ‘chemical exposure.’ However, it didn’t show up in any of his medical records.” (Clint Guidry, 4)

“It’s been really hard to get an accurate diagnosis or treatment, because none of the local doctors will even admit there is a problem. So we have not been able to consult with a doctor candidly about the prospect of our illnesses being connected to the chemicals from the oil spill ... There’s one

friend of mine who happens to be a doctor, and he's very well aware of what's going on but is afraid to take a hard stand on it." (Shirley Tillman, 10)

"More than anything at that time I wanted to have peace of mind and to know from the [VOC] blood test and other medical tests if his health problems were or weren't related to toxic exposure. I have had so many doctors dismiss this possibility without offering any basis ... Our insurance would not cover this type of blood test, because - 1) it wasn't ordered from his regular doctor; and 2) they didn't see it as a need. Our insurance didn't cover his other bills when we were in the hospital. We probably paid \$4,000 to \$7,000 out of pocket - or continue to pay, because we don't make a lot of money. We're being sent to collections now for the medical bills, but that is the least of my worries." (Anonymous #3, 3)

"When I've inquired about the possibility of these sudden health problems being related to my work on the VoO program, doctors have not made any connection to the oil spill. They treat each symptom independently, but the problems tend to persist." (Sydney Schwartz, 4)

"I know people in this area that have had these health problems, too, and the hospitals have not been responsive to discussing a possible connection to toxic exposure from the spill. Folks would tell me that the doctor would tell them they have an upper respiratory problem, give them antibiotics and steroids and send them home. I had heard this time and time again by people on the coast." (Lori Bosarge, 3)

"In September 2010 I had to go to a charity hospital in Houma, Louisiana. They told me that I had bronchitis and a chemical cough or cold, but they were not able to help me treat any of the symptoms. I was diagnosed with bipolar disease, schizophrenia, chronic bronchitis, and when I took a CT scan I was told I had gastrointestinal problems. However, all of the tests for these diagnoses came back negative." (Jorey Danos, 5)

"Shortly after I went to the ER, in June 2010 the medic on the job site, Katie, told me I ate too many pickles and had digested too much potassium. I am guessing Katie worked for BP, because she was located at the front of the barge where BP staff was stationed. I quit eating pickles, but my muscle spasms didn't stop" (Jamie Griffin, 6)

"When I first got sick, before I knew the cause of my problems, I called and asked to see Dr. Hutchinson at Lady of the Sea, in the fall of 2010. I asked if they were taking new patients. She said yes and took my personal information. Then she asked me what the reason for the visit was and I said, I'm not positive but I think it could be related to my time on the BP job." She said to wait, put me on hold for about two minutes, then came back and said "We are not taking new patients" and she hung up." (Jamie Griffin, 8)

"I saw the [Internal Disease] doctor for a follow-up appointment ... She told me ... 'There hasn't been enough medical research for the Corexit.' Whatever the problem is, I felt validated to a degree. I have been reaching out to the medical field to help the people that I knew were sick, before I was sick, and that was the first time that I heard a medical professional even say Corexit." (Lori Bosarge, 7)

"My family recommended a doctor they have been treated by during the past 20 years ... He tested me for petrochemicals and identified a correlation between my health problems and chemical exposure from the spill ... [H] wrote a letter on my behalf that states, 'It is my professional opinion that Mrs. Bosarge's health problems began when the chemicals were used during the oil disaster. They caused her to have an allergic reaction and variety of health problems since she was continually exposed to these agents.'" (Lori Bosarge, 8)

“I was particularly concerned with the plight of a three year old child. In June 2010 he and his family went on vacation to Orange Beach, Alabama. He had been swimming in an outside pool that was beachside, while workers were cleaning oil soaked booms on the beach. When he returned home he became violently ill, and was rushed to a hospital in Baton Rouge. The doctors at first believed that he was suffering from a severe urinary tract infection, and they even performed surgery on this three year old when they suspected he had kidney stones. After a week or so in the hospital, his father asked the doctors if they would draw blood to see if his trip to Orange Beach might not have exposed him to chemical compounds resulting in his illness. They flatly refused to do so, and abruptly discharged him without a final conclusive diagnosis.” (Dr. Michael Robichaux, 3-4)

“After the incident I took my son to a local clinic to see a pediatric urologist ... I explained to the urologist, ‘Maybe we should do a blood test for VOCs’ He rejected my suggestion immediately and wanted to know why I brought it up. I told him the same thing I told the other hospital: my son had been on the beach where Corexit was being sprayed, and I wanted to see if there were any chemicals in his blood that could help explain why he was suddenly having these severe health problems. The urologist reacted as if my suggestion was crazy and proceeded to tell me that my son needed to be tested for Attention Deficit Hyperactivity Disorder. He made that evaluation after only meeting my son for less than one minute.” (Anonymous #3, 2)

“[W]e shared with him the Volatile Solvent Profile test and the results from it. When I did that, things came to a standstill. The doctor said, ‘I have to tell you that these test results and what you are sharing is a conflict of interest. I cannot discuss any of this with you.’ Then he asked us if we have a lawyer. I told him that we didn’t, and he said that ‘this is a conflict of interest and anything that I tell you I would not be able to testify in a court of law.’ He proceeded to share that he already had a lawyer ‘handling these issues’ ... And I’m sitting there thinking, wait, I am here to tell you about my son being sick, I wasn’t aware that we needed to talk about conflicts of interest and lawyers, this is getting away from the subject.” (Christina Tillman, 6).

“I have worked with doctors for three years, and I have never witnessed the treatment that we endured while we tried to better understand my son’s health problems. It felt like pulling teeth to get any kind of feedback whatsoever from our doctors. Every doctor completely shut down when we brought up a blood test our son had taken that showed chemicals in his body that were associated with the oil spill. We need to find doctors who are familiar with these chemicals and how to respond to them” (Christina Tillman, 1)

“My husband’s doctor had a frank and candid conversation with him at one point, and explained that he couldn’t write anything on paper to identify the cause of James’ illnesses, because legally he couldn’t prove that BP made him sick with the dispersants that they used on the oil spill. He explained, however, that something very similar happened to him 30 years ago when he was a medic in the Vietnam War. He was sprayed with Agent Orange and he and several of the men he was caring for had similar symptoms, including respiratory problems and skin rashes. He explained that James and others were sprayed with a chemical that – like with Agent Orange – the government authorized and there is no process to address it.” (Betsey Miller, 6)

“The man who dived in to release the rope when it got stuck on our boat is not as sick as my husband, but he has several similar symptoms - the vomiting, the headaches. Like most fishermen, he doesn’t have insurance so he doesn’t go to the hospital. When you walk in they want money right off the bat if you don’t have insurance. How do you explain to hospital staff why you are there, about the working conditions with BP? They look at you like you’re crazy ... I don’t know if the hospitals don’t know what to look for, if they don’t know the right protocol, or know where to begin

to address this type of chemical exposure. But I know something has to be done. If not, I won't have my husband much longer." (Betsey Miller, 6)

*b. Gulf Coast Detoxification Program*

"As an individual who has been a physician for over 40 years, I haven't seen miracles very often. However, the detoxification program has provided health improvements that have been truly amazing. Some of our more affluent patients, those with insurance and other resources, have described seeing ten or more physicians in their quest to obtain relief from their illnesses. The time and money spent in these quests have been as impressive as the predictable failures of their treatments. Few physicians, myself included, understand the mechanisms of toxic exposure and the manner in which we become ill from these disorders. Even more alien to our conventional thinking is the manner in which people with toxic disorders are treated. Few, if any, groups have seen and treated as many individuals as we have at our modest detoxification clinic in Raceland." (Dr. Michael Robichaux, 9)

"I was one of the first people to go through the detox program. It was my last resort; conventional medicine had failed me. My routine during the program was very basic and natural. My diet included all fresh vegetables. I took Niacin, a type of B vitamin, used the treadmill for 20 to 30 minutes, got in a 180 degree sauna and sweat out the toxins. Old folks always say 'If you have a fever you have to sweat it out.' BP was the fever and I sweated it out." (Jorey Danos, 5)

"By the second week [of the detox program] I began to realize that I may have to live with residual effects from the damage already done, such as my skin rashes, but my attitude was changing. I was beginning to sleep and relax, my paranoia was decreasing and my earlier symptoms, including abdominal pains and seizures, were subsiding. I was gaining my weight back, and by the third week I was feeling noticeably better. I was eating healthy and could sleep again and do a lot of things I couldn't since the job. I could do some yard work again. I was getting better ... The detox program has a different phenomenon for each person ... It taught me how to focus on what is in my control, through the way I eat and exercise, while expelling as many of the toxins from my body as possible. If it is natural, it puts a sense of well being back in the body compared to where it was during the spill ..." (Jorey Danos, 5-6)

"On the successful side has been the observation that memory loss, headaches, irritability and fatigue experienced by a large percentage of our patients have improved amazingly. Having been a physician since 1971, I never have had a patient tell me that my treatment made them 'Happy.' Yet, one of the most common descriptions of well-being that our patients have expressed to us is that by the time they complete their treatment they are genuinely happy. Speaking to family members has confirmed great improvement in irritability, memory, energy levels and overall disposition." (Dr. Michael Robichaux, 8-9)

"One of our most amazing experiences involved a patient with multiple sclerosis, who was exposed to the toxins through her job supervising the feeding of hundreds of workers assigned to clean contaminated boats. When she first began the program, she could barely walk into the detox facility ... However, when she finished the program she was on the treadmill and walking fast for over 35 minutes. Her recovery was nothing short of amazing." (Dr. Michael Robichaux, 9)

"[T]here are those individuals who, although much improved, still suffer with significant problems from long term medical damages that are difficult to treat and equally difficult to understand. Additionally, many of our patients have had to return to contaminated environments, and are

experiencing problems in those settings. One female boat captain can no longer work on her boat, and her husband and fishing partner must now run their vessel alone.” (Dr. Michael Robichaux, 8)

## 6. Ecological Impact

*“As an environmental scientist, I look at the way the government and BP are handling, describing and discussing the spill ... [T]he government did not account for the increased toxicity of the combined oil and Corexit.”* – Scott Porter, Diver, Marine Biologist

Throughout the BP spill, the company and government justified dispersant use by stating it would reduce the disaster’s overall environmental impact.<sup>129</sup> Their hypothesis, however, was based on the pretense that crude oil mixed with Corexit was no more toxic than oil alone. That condition would be conclusively rebutted two years after the disaster, once the more toxic mixture had already coated the Gulf seafloor and permeated the Gulf’s rich ecological web and food chain. Empirical evidence has shown far greater damage than the government predicted at the time of the BP spill, when it authorized unprecedented dispersant use. Coral, which are sensitive to environmental changes and play a central role in the Gulf ecosystem, are experiencing widespread damage and unprecedented mortality in the wake of the event. BP and the government have poured millions of dollars into research to assess the impacts of its environmental experiment on the Gulf. Meanwhile, Gulf fishermen, divers and coastal residents continue to witness the devastation on a daily basis. Corexit not only disrupted an entire ecosystem, but a way of life for coastal communities that recreate in the Gulf and survive on seafood for commercial and subsistence fishing.

Of GAP’s witnesses, an eye-opening 76% expressed concern over the quality of government seafood testing, and almost 60% reported seeing new seafood *deformities* firsthand. Nearly 80% of fishermen reported that their catch has decreased significantly since the spill.

### **BP Official Position**

“Dispersants are used to minimize the environmental impact of an oil spill,” according to a BP fact sheet on Corexit use.<sup>130</sup> One month into the disaster, BP announced that it would launch a \$500 million, 10-year “open research program” to study the event’s impact and response efforts on the Gulf marine and shoreline environment.<sup>131</sup> Then-BP chief executive Tony Hayward remarked, “There is an urgent need to ensure that the scientific community has access to the samples and the raw data it needs to begin this work.”<sup>132</sup>

According to BP, the research would examine key questions about the dispersant impact on the environment, such as: What are the impacts of the oil, the dispersed oil, and the dispersant on the biota of the seabed, the water column, the surface, and the shoreline? What is the impact of dispersant on the oil? Does it help or hinder biodegradation?<sup>133</sup> These were all significant questions that should have been addressed prior to the Unified Command’s use of Corexit.

In response to public concerns around contaminated seafood, BP acknowledged: “Potential effects on humans theoretically could occur ... through consumption of seafood that is tainted with oil and dispersants.” It added, however, “measures are being taken to ensure that human health impacts are minimized.” BP explained that “taste, odor and chemical risk thresholds” were being applied to determine whether seafood is safe – a statement that would quickly be undercut by cursory government testing methods.<sup>134</sup> In response to warnings on the manufacturer’s Material Safety

Data Sheet for Corexit about potential bioaccumulation, BP responded that “the known components of this dispersant are not expected to have a significant bioaccumulation risk, particularly given the rate at which dispersants are being applied in the Gulf.”<sup>135</sup> This offered little reassurance, since an unprecedented amount of Corexit was being used – and through novel subsurface application – in the BP spill response. To date, BP’s website states that “Gulf seafood is among the most rigorously-tested sources of seafood on the market today,”<sup>136</sup> citing government testing as it heavily promoted Gulf seafood during the 2012 Winter Olympics.<sup>137</sup>

### **Government Official Position**

Throughout the BP spill the EPA maintained that it had the authority to stop the use of Corexit if it found that the environmental impact outweighed the benefits. This applied to the novel subsurface application of Corexit as well, which the EPA website still asserts, as of April 2013, “has had no significant ecological impact.”<sup>138</sup> The government argued that Corexit use was necessary to protect wildlife, fragile wetlands and Gulf shorelines from the oil. The National Oceanic Atmospheric Administration (NOAA), while recognizing that coral reefs could be harmed by dispersed oil, explained that “dispersant used in the vicinity of coral reefs is usually restricted to areas where dispersed oil is unlikely to contact coral.”<sup>139</sup> Addressing the future impact of Corexit on Gulf organisms, Administrator Jackson stated: “The long-term effects on aquatic life are largely unknown and we must ensure that the dispersants that are used are as nontoxic as possible.”<sup>140</sup> Subsequent findings that the combination of Corexit and crude oil is more than 50 times more toxic than the oil alone poses new questions about long-term effects on aquatic life, while shedding light on the documented short-term impact.<sup>141</sup> Furthermore, a GAO study on dispersant use concluded that more research is needed to quantify the rate at which the chemicals biodegrade in the environment, and cautioned that “little is known about the application and effects of dispersants applied subsurface.”<sup>142</sup> Despite clear unknowns, the government remains resolute about the environmental benefits of Corexit, as well as the safety of Gulf seafood.

More than one month before the well was capped, with oil still spewing into the Gulf, President Obama posed for photos while eating Gulf seafood.<sup>143</sup> Later that day the President announced a “comprehensive, coordinated and multi-agency initiative to ensure that seafood from the Gulf of Mexico is safe to eat.”<sup>144</sup> A week after the well was capped, NOAA began reopening Gulf waters for fishing, and state fisheries were required to follow its lead. Then-NOAA administrator Jane Lubchenco announced, “NOAA is working to protect public safety while minimizing harm to the fishing industry. We are confident that seafood caught in this area is, and will continue to be, free from contamination.”<sup>145</sup> The Food and Drug Administration (FDA) commissioner Dr. Margaret A. Hamburg added, “[T]he testing that has been done as part of the agreed upon protocols has not indicated any level of concern.”<sup>146</sup>

The criteria for NOAA to open an area for fishing first required “visible oil to be gone for two weeks,” and then samples would undergo sensory testing, or a “smell test” to inspect Gulf seafood.<sup>147</sup> Senator Barbara Mikulski (D-MD), after learning that the government was not chemically testing Gulf seafood for dispersant, retorted: “if you disperse the oil but we’ve replaced it



with another substance that has toxicity levels that impact that seafood, that's something that we all need to be concerned about."<sup>148</sup>

While agency heads announced their confidence in Gulf seafood, government scientists were joining the senator in sounding the alarm – only their warnings didn't make it into the public domain. CDC staff declined to sign-off on EPA assertions that dispersants did not bioaccumulate, explaining: "Since we (CDC) were not privy to any information to substantiate [that the dispersants used to date do not bioaccumulate], we cannot concur with this statement."<sup>149</sup> FDA standards for seafood testing – based on a healthy 176 pound individual consuming approximately four shrimp a week – prompted concerns by an EPA staffer that the FDA underestimated the risks for Gulf residents and frequent seafood consumers: "I am not sure these data capture the population we would be concerned about ... [D]o we have language about the resulting level of protection for the higher consumer in the Gulf?"<sup>150</sup> Despite more conservative estimates that were considered valid by the government, it continued to use the lower, outdated criteria for the seafood risk assessment while avidly promoting consumption.<sup>151</sup>

The government continues to actively promote Gulf seafood, and is working in partnership with the Louisiana Seafood Promotion and Marketing Board to purchase Gulf seafood for the U.S. military.<sup>152</sup> The Board, which received \$30 million from BP and millions more from the government to promote Gulf seafood consumption, is hoping to expand its reach throughout the public domain, "whether it's the military or prison systems or school systems."<sup>153</sup> Conversely, just months before the government rolled out its plan to purchase Gulf seafood with taxpayer dollars, Senator Mikulski was warning that Gulf seafood safety is a nationwide concern: "The impact of this oil spill is not only in the Gulf states. And the consequences of safety issues – like safety of the seafood and the food goes far and wide." An example of this would be the senator's own state's reliance on the Gulf to supplement popular Maryland Blue Crabs.<sup>154</sup> Underscoring the importance of the region to the rest of the country, over 70 percent of the nation's shrimp catch, and 60 percent of its oysters are from the Gulf.<sup>155</sup>

### **Independent Position**

Over the past several years, the scientific and environmental community has substantiated the Senator's warnings with sound science and analyses absent from government protocol. More telling, the empirical ecological impact of the disaster could not be reversed by BP propaganda and government reports. Nearly three years after the explosion, it is increasingly clear that BP's reassurances are flunking the reality test. While BP's open research program promises answers on dispersant use within the next decade, independent science already has found unprecedented damage to our nation's most precious ecosystem. The most prevalent impacts, largely foreshadowed by GAP witnesses, include: record deaths of deep sea coral<sup>156</sup>; increased bacteria in Gulf waters<sup>157</sup>; an alarming increase of oil-based chemicals on the Gulf seafloor; tarballs on gulf beaches with contamination levels in excess of the carcinogenic exposure limit<sup>158</sup>; high mortality rates for dolphins, whales and turtles<sup>159</sup>; wetland erosion at historic rates and a permanent loss of salt area marshes<sup>160</sup>; a dramatic impact - including massive die-offs - on microscopic life, which are the base of the food chain<sup>161</sup>; disturbing numbers of mutated seafood, ranging from eyeless shrimp



Photo by GAP witness. Alabama catfish with lesion

to fish with lesions <sup>162</sup>; and sharp declines in seafood catch, by as much as 80 percent in some regions.<sup>163</sup> Furthermore, research has found that Corexit use has actually made it more difficult for the oil to biodegrade, by inhibiting the microbial degradation of hydrocarbons in the crude oil.<sup>164</sup>

In effect, chemical concentrations remain above levels considered carcinogenic by government standards.<sup>165</sup> By dispersing the oil, rather than allowing it to remain concentrated through floating surface oil slicks, chemicals can contaminate a much greater volume of

water – harming more marine life.<sup>166</sup> Experts warn that the degradation of the base of the food chain, resulting from Corexit use, will cause larger problems in the long run for wildlife such as birds that were supposed to be spared through the dispersing of oil.<sup>167</sup>

While NOAA was eager to reopen waters for fishing, seafood industry leaders were advocating for more prudent measures in effort to ensure the integrity and longevity of their product. The Louisiana Shrimp Association, concerned about the impact of Corexit on the fishing industry and the health of fishermen working on the cleanup, adamantly challenged the use of Corexit during the disaster.<sup>168</sup> Unable to halt its use, they then cautioned against opening waters for fishing within the first year of the Macondo well being capped so that the catch would have time to recover and repopulate. The government insisted on proceeding without delay, causing alarm within the fishing, environmental and public health communities.

Corexit caused the dispersed oil to enter the water column or settle on the seafloor, where crustaceans or “bottom feeders” live, possibly explaining the dramatic drop in shrimp, oysters and crabs.<sup>169</sup> In regions that were not heavily impacted by the BP spill, their catch has not been impacted to the degree of areas hit hardest by the oil. Further, there is hope that annual crops such as shrimp, which spawn each year and live only about that long, will be able to recover in the years to come (a primary reason the Louisiana Shrimp Association wanted to delay openings during the first year). However, in areas where seafood catch remain low, fishermen can’t afford to wait years for a recovery. According to a survey conducted by LEAN, fisher families reported losing \$80,000 to \$530,000 as a result of the BP spill, and fishermen who were surveyed estimate 60 to 70 percent loss in the quantity of seafood harvested in the next 10 years.<sup>170</sup>



Photo by EcoRigs. Dispersed oil “mucus like” strands

The same study that found oil mixed with Corexit to be over 50 times more toxic than the oil alone cautioned that the mixture will likely have a large impact on the planktonic food web.<sup>171</sup> Mere years out of the BP spill, we are already witnessing these impacts. Corexit decreased the size of the oil droplets, making the highly toxic oil-dispersant mixture more “bio-available” to small organisms.<sup>172</sup> A study by University of South Florida (USF) released in April 2013 revealed that the underwater plumes from the BP spill resulted in a “massive die-off” of tiny foraminifera, microscopic life that form the basis of the marine food chain.<sup>173</sup> Additional research has found that dispersants may have killed plankton – small organisms that live in the water column – while increasing bacteria in Gulf waters.<sup>174</sup> Meanwhile, zooplankton have accumulated polycyclic aromatic hydrocarbons (PAH) derived from the BP spill, and have entered into the marine food chain.<sup>175</sup> That finding is particularly alarming given that PAHs are known carcinogens and developmental toxicants.

LEAN, having detected PAH levels during its monitoring of the environment and seafood in Louisiana coastal estuaries and wetlands,<sup>176</sup> is working in partnership with the University of Texas Medical Branch at Galveston to examine the extent and impact of Gulf seafood contamination, with an eye on human health.<sup>177</sup> According to LEAN, the results will be presented in a fashion that allows community partners to make informed decisions on a) where to collect seafood that they will feed their families, and b) how frequently to provide the seafood for consumption by their families without resulting in increased risk.<sup>178</sup>

The additional research is urgently needed, after a 2011 study by NRDC found that the FDA grossly misrepresented its analysis for Gulf seafood safety, which could result in long-term health impacts undetected by government testing standards.<sup>179</sup> Refuting FDA Deputy Commissioner for Foods Michael Taylor’s claim that “Gulf seafood is safe to eat, and it is safe to eat for everyone,”<sup>180</sup> NRDC found that FDA’s flawed assumptions and outdated risk assessment methods failed to identify risks for pregnant women and children, and allowed up to 10,000 times too much contamination in Gulf seafood according to NRDC’s standard, which was designed to be protective of vulnerable populations. Miriam Rotkin-Ellman, co-author of the report, cautioned, “We must not wait for people to get sick or cancer rates to rise, we need FDA to act now to protect the food supply.”<sup>181</sup>

The impact of the BP spill on coral should be given careful consideration, since those organisms play a unique role in the Gulf ecosystem. Deep-sea coral provide habitat for many other life forms, including fish and invertebrate communities.<sup>182</sup> Further, corals, comprised of hundreds of individual animals known as polyps, are sensitive to environmental changes and help to assess the full impact of the disaster. Like other marine life, coral often prey on microscopic organisms found in the water column such as the contaminated zooplankton. Surveys conducted by the nonprofit organization EcoRigs found that of 125 coral colonies collected in June 2011 off the coast of Grand Isle, Louisiana, 60 percent showed visible signs of polyp mortality. Two months later, 70 percent of coral colonies collected from the same location showed visible signs of polyp mortality.<sup>183</sup>

Findings published in the Proceedings of the National Academy of Science reported that the BP spill and its underwater plumes were responsible for the widespread damage and slow death of a deep-sea coral community, based on devastated deep-sea coral collected in late 2010 six miles from the

Macondo well.<sup>184</sup> The report concluded: “Our findings underscore the unprecedented nature of the spill in terms of its magnitude, release at depth, and impact to deep ecosystems.”<sup>185</sup> In 2011, video footage by divers from EcoRigs revealed that the rich biodiversity and white sands that once defined the Florida Panhandle were replaced by deserted waters and a dark seafloor. Those observations were supported by the USF study, which, in addition to the die-off, found sediment on the Gulf seafloor a mile deep that had *300 times* the normal amount of oil-based particles.<sup>186</sup> The EcoRigs’ divers warned that future storms would wash the sedentary oil onto the shores for the unknown future – a predication that came true during Hurricane Isaac in September 2012 (see: Oil Not Gone).<sup>187</sup>

Whether through the food chain or a toxic environment, public exposure to the chemicals found in Corexit and the crude could continue for decades. Experts argue that the Gulf would have been better preserved had the response employed traditional mechanical cleanup methods such as oil



Photo by EcoRigs. Diver taking sample of Florida Panhandle seafloor (Jul. 2011)

booming and skimming, while allowing natural bioremediation projects and Mother Nature to work.<sup>188</sup> However, by treating chemicals with chemicals that exponentially increase the overall toxicity, the Unified Command has magnified the largest environmental tragedy in U.S. history. Environmental and public health groups, including LEAN and the Louisiana Shrimp Association, have filed a lawsuit against the EPA under the Clean Water Act for its use of Corexit during the BP spill, in an effort to force the agency to develop more robust standards for future dispersant use.<sup>189</sup> A

press release by the groups states: “The [National Contingency] Plan governs responses to discharges of oil and hazardous substances. But the use of toxic dispersants in response to the Gulf oil disaster was implemented without prior understanding of the effect on the Gulf of Mexico marine ecosystems and human health,” and caution that the EPA has yet to create a new rule to ensure that dispersants are used safely in a future disaster.<sup>190</sup>

## **Whistleblower Record**

### *a. Environmental Damage*

“The spill happened in the worst place, because east of the river is where most of the oil came inshore and damaged some of the most pristine reefs. Then it happened in deep water where oil and dispersed oil [are] virtually impossible to recapture and could potentially destroy living creatures from 5,000 feet down and up ... When the spill occurred, these offshore reefs were the first organisms to come in contact with the dispersed oil. Fish can swim away, coral reefs can’t...The first reefs to be affected were the corals and oysters on the platforms scattered across the continental slope and shelf ... Ultimately the dispersed oil made its way into the inshore oyster reefs in the coastal zones ... My greatest critique with how the federal government has responded to the spill is that agencies are not examining the reefs in the locations that were first and worst hit by the

dispersed oil.” (Scott Porter, 3-4)

“The most startling observation throughout my Gulf dives in the aftermath of the blowout is the toll of the spill on coral. I observed what appeared to be greater than 70 percent mortality in the offshore barnacle reefs in Louisiana, down to at least 20 feet below sea level.” (Scott Porter, 17)

“Six scientists, including myself and EcoRigs staff ... submitted a report ... [which] concludes that the levels of contaminants in water, seafood, biota, and sediments are all higher than previously announced levels by NOAA and other federal agencies and universities.” (Steve Kolian, 7-8)

“We went back to the same area four and six weeks later with Discovery Channel Canada and the plume was over 30 feet thick. At that point my outlook had changed from ‘this is something we can handle,’ to ‘we actually have an environmental disaster of unprecedented magnitude.’ The plume had magnified itself to three times the amount of oil, and it was thicker, more viscous ... We still experienced dispersed oil plumes as large as 40 feet deep and an algae plume. The algae plume was so thick that it blocked out most of the light in the shadow of the platform at the depth of 60 feet. It was so dark that underneath the rig at high noon I could not read my SCUBA gauges at 60 feet. Normally it would be clear blue and light enough to read a book.” (Scott Porter, 10, 13)

“One of the community’s main concerns has been the protection of our estuaries. A lot of people don’t understand how important the estuary is. Estuaries are the kidney of the United States; it is where all the pollutants go through, and your estuaries clean all of that out before it goes into the Gulf or whatever body of water the estuary borders ... It’s important for the whole gulf because a lot of juvenile fish come into the estuary to mature ... [I]n mid-May the oil was projected to hit the west side of the peninsula so several fishermen and I went out there. Within a 35-mile span, which is the distance of the coast line between Venice and Grand Isle, there was not one response boat or piece of boom ... They had a month to prepare before the oil was projected to hit one of the largest estuaries in southeast Louisiana, and they did nothing other than place 150 feet of sandbags.” (Kindra Arnesen, 11-12)

“Before the spill, the water was typically cobalt blue and some of the most pristine reefs were located there. When we dove, we could see all kinds of living organisms, such as sea turtles, manta rays, angelfish and sharks. After the spill the water became pastel green or brown, like a tan tint color ... The contrast is shocking. By August 2010 I was noticing an absence of damsels, blennies, and gobies near the surface during our Louisiana dives.” (Scott Porter, 3)

“A week after the oil hit, only 200 feet of donated boom was deployed over two miles of beach. For a week in August 2010 the beach was lined with thousands of baby dead crabs that looked like they had been soaked in bleach...In 2011 we reported a total of three dead sea turtles and a dead dolphin; Bubba has been crabbing his whole life and he has only seen dead sea turtles once or twice, before the spill. In August we found a dead sea turtle at Lake Mars for the first time.” (Lorrie Williams, 1-2)

“In April 2011 I documented 39 dead turtles, and from January through April 2011 I documented 57 dead turtles ... In the spring of 2011 I found a dead armadillo on Long Beach. In May 2011 I found a dead raccoon in two to three inches of water, muskrats, possums and one wild pig in Hancock County. In September 2011 after tropical Storm Lee there were places on Pass Christian beach where I couldn’t walk within 10 feet without witnessing a dead bird. I heard from friends that it was that way everywhere along the coast. Maybe we would see an occasional dead bird before storm, but after the storm the tide washed up their bodies and they lined the beach ... What was peculiar is that all these animals lived in the marshes. It was unusual to see these dead out there. I

am concerned that the spill has also affected the wildlife that lives around the bayous in the marshes.” (Shirley Tillman, 13)

“When the oil spill occurred, most of the local Gulf scientists were employed by universities and had limited scientific freedom, because their findings needed to be approved by their institutions. At EcoRigs we wanted to study reef samples, sponges, oysters, barnacles, but NOAA did not express interest ... In October 2010 we conducted [a remotely operated vehicle] examination of the rig legs on the Grand Isle blocks’ platforms. That location was supposed to be clear and clean. Rather than dive, I snorkeled to study the barnacle reef populations that live at the first five meters of water depth and found an extremely high rate of mortality in the barnacles and reduced populations of blennies and cowfish[,] which are sensitive to environmental changes over 80 miles to the southwest of the Deepwater Horizon site.” (Scott Porter, 5, 13)

“When controlled burns take place, TPHs and volatile compounds become airborne in large quantities and therefore are dispersed into the atmosphere. There is little doubt that burning fresh crude oil at the surface releases toxic compounds into the environment, but TPHs and PAHs become even more dangerous when you put dispersants on them.” (Scott Porter, 6).

“EcoRigs later analyzed surface water samples from some of our NRDA dives for PAHs and biomarkers specific to the MC 252 blowout crude oil. Concentrations of PAHs were found to be up to a thousand times greater than the EPA water quality benchmarks for human exposure.” (Steve Kolian, 5)

“Other EcoRigs divers and I went diving in the Florida Panhandle in July 2011, to collect samples for the Surfrider Foundation. That area is known as the Emerald Coast, for its crystal clear water. When we went diving, however, the water had a brownish white haze that resembled what we saw in offshore Louisiana at 30 feet below sea level. When we dug into the sand in the Florida Panhandle we found anomalous material that resembled tar patties and oil ... I have never witnessed anything like that since I began diving in the Emerald Coast 20 years ago. The seafloor is typically white sand.” (Scott Porter, 17)

“In the areas where the seafloor [in the Florida Panhandle] was covered with the tarlike substance, we noticed much less sea life. There were hardly any sand dollars or crabs and only some fish, whereas we would normally see an abundance of organisms. It was desolate, and reminded me of noticeable drop in sea life during our 2010 and 2011 Louisiana dives.” (Scott Porter, 17)

“There are still tar balls and mats and strings washing on shore every single day all along Louisiana, Mississippi, Alabama and the panhandle in Florida. Grand Isle, Louisiana gets bowling ball size tar bars, and is still full of oiled birds that are dead and dying. If you open a tar bar that washed on shore, the volatiles are still being released.” (Dr. Wilma Subra, 10)

#### *b. Seafood Safety*

“[T]he federal government was meeting with seafood industry leaders to tell us that that all of the areas that they opened were safe for commercial fishing. They told us that they tested the seafood before they reopened the fisheries. I am not a scientist; however, common sense will tell you that the federal government’s seafood safety studies were flawed. The government was depending on a smell test, but I know from years of experience that you can’t smell what is inside the shrimp. In addition, the FDA based it’s testing on a 175 pound person eating four shrimp. What about a 120 pound woman or a kid eating shrimp and other seafood? In the Gulf, we don’t eat just a few shrimp, we eat pounds of it. At that meeting we said, ‘Why put us as the industry leaders on the spot like

this? Why don't you take the additional precautions that we are advocating and only open areas that we know are clean, after samples have been properly tested?" (A.C. Cooper, 8)

"NOAA and the FDA relied on sensory testing – or a sniff test – to support its position that gulf seafood is safe for consumption. As an oyster biologist and forensic scientist, I know that a sniff test means you don't want to find any contamination ... Even people trained to smell for these chemicals cannot detect them at low levels. The aromatics may evaporate and dissipate rather quickly in air, but when ingested they tend to get stored in fatty tissues and biologically accumulate ... NOAA seemed to only be sampling the organisms that were healthiest and still living, and even those could have unsafe contamination levels that would pass the government's primary testing method." (Scott Porter, 7-8)

"The FDA developed criteria for specific PAHs in shrimp, crab and oysters. Their findings were based a 175 pound person. They ignored the vulnerable populations – the young, the elderly, the people on chemotherapy and HIV patients. They also based their conclusions on an average consumption rate of the United States, of four shrimp for one meal a week. No one along the coast only eats four shrimp. And they don't eat one meal a week of it; they eat it on a very frequent basis." (Dr. Wilma Subra, 12-13)

"FDA and local and state wildlife and fisheries use that data to establish when they can reopen a fishing ground, and they work with the state agency to determine what kind of buffer zone from the marsh; how much of the water should be closed versus the rest of the lake estuaries open. In fall 2010 I was standing in this very oily marsh, and there was a shrimp boat right offshore trawling for shrimp. The shrimper didn't know what the buffer zone was; he was right up against shore ... To this day, if you talk to the fishermen they will talk to you about bringing up trawls and nets and cages full of oil. But they don't want to speak about it publicly, because the rest of the community is going to be screaming at them and saying that 'you are destroying our livelihood' by raising concerns about the safety of Gulf seafood." (Dr. Wilma Subra, 13)

"In late July of 2010, after the well had been capped and they were trying to wind down the cleanup, we started finding oil daily on the bottom of the bays and sanctuaries ... That is when we realized it was sitting on our seafloor. I brought it to BP and the Coast Guard, because they wanted to move on and go to the next stage of the cleanup. How do you move on when you haven't even finished cleaning? I invited NBC, MSNBC, ABC, BP representative Fred Lamont, and the commander of the Coast Guard down here, and I showed them where it was at. Within about three weeks after I pointed out the oil, in August Wildlife and Fisheries opened that same area for fishing. I was deeply concerned about that ... If there are 100 boats shrimping and one boat goes into an area that is dirty, brings potentially tainted catch to the seafood dock and runs it through the conveyor that we all use, it could contaminate the whole conveyor and affect the clean catch from the other 99 boats." (A.C. Cooper, 7)

"[W]e have stopped crabbing due to concerns with the chemical contamination of the crabs resulting from the oil spill, as well as the dramatic decline in the catch. Our catch fell by more than 50 percent from 2009 to 2011 ..." (Lorrie Williams, 1)

"Through EPA conference calls that I participated in on an ongoing basis, I knew that early in the spill [NOAA] took a few samples for Corexit. Shortly thereafter to my knowledge they dropped it. After the well was plugged they stated that the final Corexit application was July 19, and treated the testing of Corexit as a nonissue. They didn't establish criteria for the dispersants, only for PAHs in specific seafood..." (Dr. Wilma Subra, 12-13)

“I have a crabbing license for our crabbing boat and we sell to processors. Some of the crabs would have black thick stuff on them. When they reopened crabbing we pulled a few crabs and brought them home. We wanted to know what the conditions of the crabs were. Our attorney told us to open them, see what is inside and video tape it. When we did, we smelled petroleum and there were hundreds tiny pink two headed creatures eating crab lungs from inside of the crab’s body out. Since then we have opened several oiled crabs with parasites. We never saw parasites in our crabs before the spill ...” (Lorrie Williams, 3)

“In the Gulf crabbing industry, about 75 % of the catch is shipped to the East Coast and West Coast ... We sell the Blue ‘Jimmy’ Crabs to Maryland and they are sold as Maryland Blue Crabs ... This raises serious questions as to whether contaminated Gulf crabs are currently being shipped to the East Coast and other parts of the country.” (Lorrie Williams, 1-2)

“During the 2011 season offshore fishers were catching amberjack, king mackerel, and mangrove snapper with holes in the walls of the stomach, and black sludge in their stomach that appeared to be leaking into the meat. We’re catching fish with lesions and growths that looked almost like a miniature brain. One of the fish looked like the growth was from his eye to his nose. We’re catching shrimp with no eyes, and crabs that have black all inside of them.” (Kindra Arnesen, 3)

“When crabbing was re-opened in 2010 we would not crab, because we had too many food safety questions. Mississippi Governor Barber was adamant that everything was fine, and a public panic was not necessary ... On September 10, 2010 during a public meeting for fishermen, I asked [the director of the Department of Marine Resources] about the prospect of our catch being chemically contaminated from the dispersant Corexit. He explained that they were not testing for dispersants in the seafood. This greatly concerns me, because people are still pulling out crabs with orange brown substances. It is normal for crabs to have mud on them, but this is something different. When I was crabbing I could scrape this substance off the shell. When I tried with a hot knife it scraped off like wax.” (Lorrie Williams, 3-4)

“What is really disgusting is that the government is pushing the Gulf seafood onto our soldiers all across the country at the military commissaries. I saw it on the news as part of a public campaign to feed Gulf seafood to these soldiers and their families.” (John Gooding, 8)

“My local supermarket has fresh seafood catch. During my most recent trip in February, 2012 the shrimp sold in the market had no eyes. I have seen photos of shrimp with no eyes since the spill, but not in person. I know what to look for on shrimp; their eyes grow on their sides. However, these shrimp didn’t even have the eye sockets. The red snappers for sale had black fungus looking spots and lesions all over their scales, right here in Thibodaux. Before the spill I used to catch red snapper; it should be a solid pink color ... I have never seen anything like that before.” (Jorey Danos, 7)

“Before the oil made it to the shores, I went fishing three times under the Bay Bridge. It was supposedly still safe according to government officials to be in the water during that time. During one of the trips I caught a big red fish and I grilled it. It was a healthy looking fish – no mutations or lesions. I ate it and went to sleep. When I woke up I was in a pool of blood from rectal bleeding. After that experience I decided I would not eat any more fish. I also told a good friend of mine that he needed to stop eating shrimp and seafood ... After he got real sick he also became concerned that the seafood was not safe, because when he ate it he observed that his Crohn’s disease would get worse. It’s difficult to know what is and isn’t safe, but after my body responded adversely to the fish, I cannot take any more risks.” (John Gooding, 8)



“[A] lot of the coastal community populations depend on fishing both for a livelihood and to feed their families. You have the Vietnamese, the Native Americans and the African Americans along the coastal areas. Before they had the ability to feed their families based on what they harvested. Now suddenly they don’t. A lot of the organisms have been depleted and contaminated as a result of the spill. In a lot of cases these people are hungry, because they can’t eat the seafood or they don’t want to poison their family by eating it, and they have no other source of food. Fishermen have shared these concerns with me directly. (Dr. Wilma Subra, 8)

“I know personally [crabs] have tested for oil because where I work there is someone that works for a local lab. She told me that the little blue crabs who have hatched in their hatchery had oil in them. She told me, ‘I ain’t eating that stuff.’ We live off of that. My freezer used to stay stocked. Now it’s like, ‘No, don’t bring that stuff to me.’ I’m scared of it; I don’t want to feed it to my kids or my grandchildren. Still, it is a lot of these fishermen’s staple to feed their families.” (Betsey Miller, 8)

“On top of the FDA’s flawed assumptions, BP is giving huge monies to the seafood industry in each state to promote seafood. The federal government is a cheerleader for this false advertising. NOAA Administrator Dr. Jane Lubchenco stood at a press conference on September 15, 2010 in Kenner with all of the seafood bigwigs standing up behind her, and she said, over and over and over again, ‘The seafood is not contaminated, the seafood is not contaminated, the seafood is not contaminated’ ... After that event, I sent Dr. Lubchenco a message that stated ‘The seafood is contaminated with PAHs, and according to the FDA’s calculations it is below the acceptable level you have established; your own data shows that 40% to 60% of the oysters are contaminated and the shrimp are contaminated.’ Shortly thereafter NOAA changed its message to ‘The seafood is contaminated but it is below the levels we have established as unsafe.’ However, Dr. Lubchenco’s first message was the message that BP and the seafood industry wanted to hear, and that was the message delivered in a public forum, and that continued to be repeated for the world. She knew better.” (Dr. Wilma Subra, 13)

“After we received some of the results back from our samples, in August 2011 during a meeting with the GCCF I tried discussing our findings. The first thing that then-GCCF Administrator Kenneth Feinberg said was, ‘How do you know it was Macondo oil?’ When we showed Feinberg videos of the underwater clouds of dispersed oil he responded that NOAA was not reporting those results to him. He asked a group of seafood lawyers in the meeting why the state would spend \$250 million dollars on its seafood program if the seafood was not safe?” (Scott Porter, 7)

“Even before the well was plugged, President Obama came to Grand Isle – an area heavily impacted by the spill - on June 4 and ate the seafood. The state and federal government were announcing ‘Gulf seafood is open for business.’ During that time I was saying, ‘Keep it closed for a year, don’t even sell anything. We only have one shot at doing this. If we mess it up then we’ve messed up a whole industry.’ We wanted them to keep it closed for 2011, pay the fisherman for their losses from that year, and then assess the situation. They could find where the oil was heavily impacted, keep that area closed and go forward with reopened commercial fishing for the rest of it. I was worried that the food chain would be devastated.” (A.C. Cooper, 7)

“The community is struggling at this point to even survive ... I’m so mad, because if the government handled the cleanup properly and responsibly ... the threat to our markets would probably be history. I spoke hard and loud about this. We begged them to move forward cautiously and responsibly. We mainly focused our energy at the state level, because the industry has a good rapport with Government Bobby Jindal. In 2009 the Governor created the Louisiana Shrimp Task Force. Its role is to study and monitor the shrimp industry and to make recommendations to state agencies that will benefit the industry, the state and the citizens. Wildlife and Fisheries has to

approve reopening of the fisheries within three miles of the shoreline, and NOAA had control over the federal waters. Unfortunately, Wildlife and Fisheries was taking NOAA's lead on fishery openings, and we felt they opened the fisheries too early." (A.C. Cooper, 6-7)

"Contrary to the federal government's approach to quickly open the fisheries, we wanted to let all of the fish and seafood escape before the oil hit and the dispersant was sprayed, so that they would have a better survival rate. When the areas were secure, they would come back to repopulate. University studies are showing that certain plankton, microscopic plant and animal life, are being adversely affected by the oil and dispersants. This is disturbing, because plankton is an important part of the food chain. We know there will be problems with repopulation in the years to come. Louisiana Shrimp is just one group that's trying to do what's right for all of our fishermen. When we do that, we're protecting the community and also the public." (A.C. Cooper, 7)

"Honestly, we don't let our grandson go in the water, and even though my husband is an excellent fisherman, we don't eat the seafood right now. Would you eat it? No. Because when you see the animals out there that you're catching, that aren't growing, and they smell funny, something's wrong. I wish BP and our Marine Resources Department down here would listen to our fishermen, because this is our fishermen's backyard. They know these waters in and out ... Everything is off this year, everything is off. The fish and shrimp are not growing, there are less and less of them and I don't even know if we will have a crop next year. My husband is really adamant that he doesn't think there is going to be anything next year to catch, and he says he definitely wouldn't eat it then either because no one can tell us what the long-term effect is going to be. He is already dealing with severe health problems and we don't know what his life is going to bring." (Betsey Miller, 7)

"Several of the oyster, water and coral samples that we collected matched the Macondo fingerprint, BP MC 252 oil. Oysters are big water filters, so whatever they pick up can remain in their shells and skeletons. In September 2011, I collected oysters 30 to 40 miles north of MP 311, or approximately 80 miles north of the Macondo well. We sent the tissue in for the testing and it came back high in TPH ... Of public concern is the fact that NOAA allowed BP to choose where the samples would be taken from and then allowed BP to hire a laboratory on a contractual agreement to test the samples. Throughout the oil spill, VoO captains would take scientists to collect samples for BP. Several of the VoO captains informed me and other scientists that BP instructed them away from the oil to take the samples, and in turn they rarely encountered fresh oil. Captains told us that this happened frequently from Louisiana through Mississippi." (Scott Porter, 7-8)

"We have done a large amount of testing of the seafood. The minute we get our results, within three to four hours that information is available to the community through the LEAN website and provided to the federal and state agencies. The PAHs that we are finding in the seafood actually match the fingerprint of the BP crude, so it's clearly from the BP spill ... [F]our universities received these community involvement grants, one of which was University of Texas Medical Branch in Galveston (UTMB). They have developed the analytical method, similar to the Metamatrix blood test, used to look for the PAHs in the blood and the urine of the people that they're going to be covering in their study; the people who live in the coastal areas and consume seafood from the coastal areas. We are going to be assisting UTMB and sampling the seafood to be analyzed for the PAHs. We're going to be able to test for the PAHs in what they eat, and in their body and in their blood and their urine. These are going to be the PAHs that gulf coastal residents are bioaccumulating." (Dr. Wilma Subra, 12)

"A UV light is like a metal detector for potential hydrocarbon contamination ... [T]he light can be used to identify hydrocarbons from the oil and dispersant that have washed up onto the beaches, have attached to reef corals, or are in seafood ... [M]any of the oyster shells are glowing pastel

yellow, orange and tannish brown. They are the same colors that I am seeing in the fresh tarballs that continue to surface in fisherman's nets ... As an environmental biologist, I have to address the potential of seafood contamination from the nation's largest oil spill in history. As an oyster biologist, I am telling people not to eat the oysters." (Scott Porter, 16)

"As industry leaders, we were looking out for the best interest of everyone, including ourselves, and we could not afford to take risks when it came to the integrity of our product. I sell and eat the seafood, and I didn't want to risk getting anyone sick at any point because we were subject to lower government standards. As industry leaders, we are very careful that our catch is from clean locations. Unlike government officials and politicians, the long term health of our industry guides our actions." (A.C. Cooper, 8)

## 7. Retaliation

*“[W]hen a BP representative came up on the speedboat and asked if we need anything, I again explained my concerns about breathing in the Corexit and asked him for a respirator ... He explained ‘If you wear a respirator, it is bringing attention to yourself because no one else is wearing respirators, and you can get fired for that.’” – Jorey Danos, Cleanup Worker*

The culture of silence behind the Deepwater Horizon explosion suppressed free speech and threatened worker health throughout the BP spill response. On paper, BP takes immense pride in a safety culture that encourages employees to speak up when they have concerns. However, workers who wanted to keep their jobs knew that their own health, and that of the public, would have to take a backseat to a paycheck. Workers trying to protect themselves through respirators or additional safety equipment frequently faced threats of termination, while the government defended BP’s actions through an OSHA policy based on questionable air quality data. Again placing public perception before health and safety, BP and the government acknowledged that allowing workers to wear respirators would look bad in the public’s eye. However, images from the cleanup were rare. As journalists, community leaders and activists tried to document the impact of the BP spill, they also became targets of retaliation.

Of GAP witnesses, more than 46% reported that they were threatened with termination when they tried to wear respirators or additional safety equipment on the job. The same percentage reported that they received early termination after raising safety concerns on the job. More than 50 % reported unusual phone and/or computer malfunctions when they engaged in BP spill-related communications.

### **BP Official Position**

BP’s Code of Conduct encourages workers to speak up and ask questions if they fear for their safety or that of their peers: “All of us at BP, without exception, are duty bound to follow and uphold our Code of Conduct – and we must all remember that failure to do so can put BP and ourselves at risk.”<sup>191</sup> According to the company’s stated policy, it is vital that workers who are ever concerned that the Code is being violated “speak up and ask a question or share your concern straightaway.”<sup>192</sup> On paper, BP is almost sanctimonious about its anti-retaliation policy, stating: “Our zero tolerance policy on retaliation goes hand in hand with our belief that speaking up is always the right thing to do. If you voice a concern or report misconduct in good faith – or take part in an investigation of an ethics and compliance matter – you are following our Code. Under no circumstances will BP tolerate retaliation against you.”<sup>193</sup>

The Code’s broad free speech mandate does not mention a significant, invisible exception – communications with the public. Belying the company’s encouragement for employees to “speak up” when a concern arises, early in the response cleanup workers were required to sign contracts with BP stating that they would not speak to the media.<sup>194</sup> In an effort to suppress any information that would alert the public to the impact of the disaster, BP set up private security forces around affected shorelines, beaches and BP compounds to keep out the media and organizations that were documenting the BP spill.<sup>195</sup> After critique by news media that BP security was blocking public

knowledge about the worst environmental disaster in history while gagging workers, BP chief operating officer Doug Suttles sent a letter to news outlets, stating that BP “fully supports and defends all individuals’ rights to share their personal thoughts and experiences with journalists if they so choose.”<sup>196</sup>

In March 2012, GAP and LEAN reported to the BP Ombudsman that workers were threatened with termination and other forms of retaliation when they attempted to wear additional PPE during the cleanup, including respirators.<sup>197</sup> BP responded that it was unaware of any instances where workers were threatened with retaliation if they chose to use PPE. During the release of this report, the BP Ombudsman is preparing to conduct an investigation into the alleged misconduct.

### **Government Official Position**

While BP was denying retaliation against workers who tried to protect themselves on the job, the government was excusing its conduct. In response to concerns from the American Lung Association over an alert it received from LEAN, “*BP Tells Fisherman Working on the Spill that they will be Fired for Wearing a Respirator*”<sup>198</sup>, an internal dialogue ensued between EPA and OSHA over the alert. Surprisingly, however, the government’s focus was on justifying the threats, rather than holding the company accountable.

The director of EPA’s National Response Team remarked: “When we bring this article to the attention of OSHA, it should be pointed out that the headline doesn’t match the story. Headline states ‘fired for wearing’, article states ‘fired for wearing respirators not provided by BP’ which is correct for them to do since they are responsible for the safety of the crews.”<sup>199</sup> The government, sticking to its position that heat stress was a greater threat to workers than chemical exposure, argued that it was “correct” for BP to terminate workers who tried to wear respirators. After consulting OSHA, the director of EPA’s National Planning Preparedness Division weighed in, this time with concern over the public perception of respirator use: “OSHA says that there is really no air data that demonstrates the need so BP is not providing respirators. The question would be that if the workers had their own respirators that they are already fit tested for, could they wear them. However BP is concerned about the perception of any workers wearing respirators would depict when there is no documented threat.”<sup>200</sup> The government dialogue did not consider whether BP was right about no threat, whether there were safer ways than respirators to protect workers, whether workers could sign insurance waivers, or generally that there was any valid issue when workers inhaled chemicals from Corexit or the crude oil.

Meanwhile, government officials and local police worked with BP to prevent a public record, often joining BP private security as they patrolled beaches and areas impacted by the BP spill.<sup>201</sup> Coast Guard officials went so far as to threaten a *CBS News* team with arrest when they tried to take footage of an oil covered beach in Louisiana, explaining that the Coast Guard was acting under BP’s authority. The *CBS News* team reported that one official told them after threatening arrest: “This is BP’s rules, not ours”.<sup>202</sup> In Admiral Thad Allen’s first press conference as the National Incident Commander, he stated: “BP is the responsible party, but [as] the federal on-scene coordinator, I, now as the national incident commander, am the accountable party.”<sup>203</sup> Blurred lines between BP and the government’s roles left workers without a safe outlet to report health and safety concerns.

Media and residents were confused about what to do, or where to turn, when they had threatening encounters related to the BP spill.

### **Independent Position**

After LEAN learned that workers were being threatened with termination for wearing the additional PPE that it distributed, the organization sent out an alert – the same one that got the government’s attention – admonishing BP for its actions: “It is only prudent that these fishermen be provided respiratory protection and encouraged to use it. Instead, they have not only NOT been provided respiratory protection, they have been threatened with being fired for using their own respiratory protection.”<sup>204</sup> Workers confided in LEAN and GAP that they were afraid to come forward about the lack of PPE on the job, as well as the health problems that they were experiencing, out of fear that they would be fired if they spoke up. During its coverage of the BP spill, Time magazine observed, “Workers also may fail to come forward out of fear of losing their job – they’ve already shown reluctance to talk to the press for the same reason.”<sup>205</sup> The chilling effect of gag orders was heightened by direct threats that workers received on the job, or retaliation witnessed against coworkers who blew the whistle.

Throughout GAP’s investigation, workers explained that while concerned about their own well-being during the cleanup, it was not an option to put their health before their job. Workers who reported health problems or protested safety conditions were put on BP’s “rotation”<sup>206</sup> system, and never called back for work. When workers tried to obtain respirators for themselves or their crews, they were told directly or more disingenuously warned that doing so would result in their termination. The reasons echoed the internal EPA dialogue: it would send the wrong message to the public, and there was no documented threat to justify respirator use.<sup>207</sup> Even when the government recommended it for workers on in-situ burn teams due to the increased likelihood of chemical exposure, workers reported being denied respirator use by their employers – BP contractors.<sup>208</sup>

Regardless of rationale or circumstance, workers felt they had to swallow hard or risk being replaced. Due to closed fisheries and the moratorium, there were few sources of income and jobs on the cleanup were competitive. With unenforceable workplace rights and families to feed, workers felt they could not afford to “speak up” – the invitation in BP’s Code of Conduct. Only then, they didn’t know the severity of their exposure or that it could also be reaching their families and neighbors, resulting in long-term health problems that posed more dire consequences than being jobless.

BP’s actions have long belied its zero-tolerance policy for retaliation. Weeks before the Deepwater Horizon oil rig exploded, according to *The New York Times*, a confidential survey of workers on the rig showed that “many of them were concerned about safety practices and feared reprisals if they reported mistakes or other problems.”<sup>209</sup> About half of the workers surveyed feared that they would be retaliated against for reporting actions that could lead to a “risky” situation.<sup>210</sup> On another front, press accounts indicated an employee from BP’s Gulf Coast Restoration Organization, tasked with developing plans to clean up the oil, disclosed that BP ordered him to falsify data about the remaining locations that needed to be cleaned, in an effort to “more quickly transition to a new plan for cleanup and oversight that would be beneficial to BP stock prices.”<sup>211</sup> After he blew the whistle,

the employee reported that BP used scare tactics in effort to silence him, such as telling him that he was being watched. Within months of going public, he was fired.<sup>212</sup>

Reports of retaliation and fear tactics have extended beyond the workplace.<sup>213</sup> Both whistleblowers and activists vocal about impacts from the BP spill have reported: death-threats;<sup>214</sup> being tailgated by police cars or unmarked vehicles; being escorted by BP private security or local police off of open public beaches after taking photos of oiled shorelines and dead wildlife; having their homes broken into without attempted property theft; having phone calls suddenly drop or a hearing a clicking noise during phone calls that involve the BP spill; having computers malfunction and email boxes emptied; being placed under surveillance by the government;<sup>215</sup> being escorted out of a public fairness hearing for the Deepwater Horizon class action settlement, based on unsubstantiated allegations of “live streaming”;<sup>216</sup> and being subjected to harassment by “trolls” on the BP America Facebook page, including threats of physical violence and discriminatory remarks.<sup>217</sup>

Tireless Gulf organizer and freelance journalist Cherri Foytlin – who walked from New Orleans to DC to raise awareness around health and environmental problems emerging from the spill – captured the efforts to silence whistleblowers after she was escorted out of the Deepwater Horizon Fairness Hearing without justification: “I’m a citizen, I’m a journalist, I was sick [from BP’s oil and dispersants]. I had a right to be in that courtroom. They target people who speak up and tell the truth. It’s supposed to make you scared, but it ought to make you mad.”<sup>218</sup>

### **Whistleblower Record**

#### *a. Workplace Chilling Effect*

“Workers shared with me that they were concerned if they raised concerns about their exposure, they would lose their jobs. In turn, they didn’t ask questions.” (A.C. Cooper, 3)

“BP and BP contractors were not providing workers with respirators, or allowing them to wear additional safety equipment on their own accord. The workers would go out, and Marylee instantly ordered protective gear ... However, workers told us they were not allowed to use them ... [W]e were informed on several occasions by workers that BP officials would threaten, ‘You’re fired if you wear the respirators’ ... The wives started speaking out and the workers were told if their wives don’t shut up, then they were going to be fired. This was shared with me repeatedly along the coast. LEAN did convey the information to state and federal government agencies. The agencies listened to the information, but did not provide responses.” (Dr. Wilma Subra, 4)

“Initially, LEAN – the oldest and largest environmental group in the state of Louisiana –purchased boots, gloves, Tyvek suits and respirators to be worn by individuals working the spill. Amazingly, BP company policy resulted in the boat owners and workers being threatened with loss of their jobs should they wear respirators while working for the company. Even BP employees working the oil spill site were denied the usage of these protective devices. This was shared with me on several occasions by my patients.” (Dr. Michael Robichaux, 3)

“I had a two-hour conversation with the Coast Guard Deputy Safety Officer. I asked him about the use of respirators for workers ... I asked him about OSHA’s right to wear voluntary respirators. He said, ‘Without the air sampling exceeding the limits, the workers still fell under BPs rules. As long as

BP says they can't wear respirators, then they don't have a job if they wear respirators.'" (Kindra Arnesen, 14-15)

"During my early efforts, the workers on the in-situ team were threatened with termination if they wore respirators. In May I bought respirators for a crew leader of an in-situ team and his crew in Venice. Several workers informed me that when they brought the respirators on the job sites, they were threatened with termination by their supervisors if they tried to wear them. The safety man on the job site told them, 'If you don't see me wearing a respirator then you don't need to put one on.' The safety man worked for Tiger Safety, a BP contractor based out of Houma LA. Shortly after that incident, he was one of the seven men who got sick on the VoO program and had to be airlifted to a hospital...The in-situ team informed me that after the safety man got sick on the job, BP fired him along with the whole company." (Clint Guidry, 3)

"[A] month and a half into the job, in June 2010 when a BP representative came up on the speedboat and asked if we need anything, I again explained my concerns about breathing in the Corexit and asked him for a respirator. He started laughing and said, 'What do you need it for, that stuff isn't bad; we breathe it in all day and it isn't doing anything to us.' He explained 'If you wear a respirator, it is bringing attention to yourself because no one else is wearing respirators, and you can get fired for that.' (Jorey Danos, 2)

"When I was fighting for better working conditions, I wanted all of us to go on strike until we were given respirators. Some were willing to, but the majority said no because they could not take the risk of being fired. All of the fishing areas were closed, they had nowhere to work and they needed the job to support their families. They knew that if they spoke out or stopped working until provided safety equipment, BP would just replace them because they had so many VoO applications. They were between a rock and a hard place." (A.C. Cooper, 4)

"I was always told by my supervisors that if we didn't do X, Y and Z, they would fire the boats. It was shrimp season, but everything was shut down so we needed the work. We were told, 'If you can't go here, we don't need the boat.' At times they wanted us to go past the three-mile line. However, I know those waters and we had to have certain equipment and a certain boat to withstand the conditions out there. I didn't have those things so I didn't go; I didn't want to put my crew or myself at risk. That is when we would be denied work." (Anonymous #1, 3)

"In hindsight, I realize that BP paid us to keep our mouths shut about any health problems. If we could make \$3,000 every ten days, should we pay attention to the health effects or risk termination by asking for additional PPE? People around here don't make that kind of money." (Jorey Danos, 1)

"During James' second week on the job, when he began feeling the health symptoms more severely, he asked the safety inspector with BP contractor Danos and Curole about the equipment they were entitled to at the dock before they went out on the water, and it was like 'hush hush.' He told James that if he ruffled feathers, his contract with the VoO program would likely be terminated. Throughout his time on the job, his supervisors made it clear that if you pushed for better conditions, you could lose your job. The jobs were scarce and competitive. Of course no fishermen wanted to lose their jobs." (Betsey Miller, 1)

"During James' second and third week on the job, these boats sprayed dispersant less than 100 yards from him. He explained to me that he would have to move his boat on certain days when the wind was blowing in his direction and the dispersant fumes were too strong to withstand. What concerned him most is that he saw these boats spray dispersant inside the sound on the beaches, as close as one mile from the shoreline. He reported this to the safety inspector at his work site and



explained that he wanted to videotape them spraying so that BP could be held accountable for spraying so close to the shoreline. However, the safety director told James that he risked getting in trouble if he videotaped it.” (Betsey Miller, 2)

“If any of the workers claimed they were sick, their employers would send them to a first aid station, or if they were severely ill they would send them to a hospital. However, after they became really sick and couldn’t work anymore, they would be laid off. When they were still employed they would call us discreetly at night to report their health problems, but then they really started to speak out when they realized there no longer was anything to lose since they had been fired for being victims. They were too sick to work, and had no medical or disability benefits.” (Dr. Wilma Subra, 7)

“Mr. Craig had held a morning meeting, and said that if anyone who worked on the oil spill felt that they needed to see a doctor, they first have to see the [company] doctor or else they will be terminated. He also said that if anyone went into litigation with BP, they would lose their jobs. Then he asked if anyone felt they needed medical attention, and no one said anything because of course they were scared ...” (Jamie Griffin, 11)

“When I went to the BP Incident Command Center in August 2010 to drop off more samples, I asked one of our NOAA contacts if they found any oil in the last samples. He said that the samples came back negative for oil. I pressed him on it further, and asked if they found any hydrocarbons or contamination in the samples. He replied that they did not find anything; the samples came back clean. I explained to him that was surprising, because we had sent samples from the same diving trip to [Arkansas State University] and they found contamination. He responded, ‘Oh, you’re having them analyzed by a second source?’ Shortly thereafter, NOAA didn’t want to work with us.” (Scott Porter, 11)

#### *b. Strange Encounters*

“Mississippi announced on July 2, 2010 that all beaches were open to the public ... I went to Rock Jetty at Lake Mars to take pictures of oil. It was a thick nasty orange and brown rainbow colored oil. Everything it touched it killed. I have been walking this beach for 20 years and I have never seen anything like it. I was approached by BP and Coast Guard officials. The BP representative approached me and asked what I was doing. I told her I was documenting the oil spill and she asked, ‘Are you finding anything?’ I said, ‘Yes, there is oil all over the place.’ She left to speak to a Jackson County worker in a truck. Within minutes an officer with the Jackson County Sheriff’s Department told me that it was closed and I couldn’t be there. It always seemed like when I took photos either the Mississippi Department of Environmental Quality, the Coast Guard, BP or the sheriff’s department showed up.” (Lorrie Williams, 8-9)

“In July 2010 my husband and I ... drove down to the BP command cleanup center in Bayou La Batre. A Bayou La Batre police officer pulled out behind us. It was odd, because I had never seen the police leave the command post. The police officer followed us real close for four to five miles, and I thought he was going to pull us over. He eventually turned around.” (Lori Bosarge, 8)

“If someone gets on the [BP America] Facebook page and says ‘I am sick from the spill,’ a handful of people attack that person. They have made comments that the people who claim they are sick or who take the Volatile Solvent Profile blood test are trying to make money off of the spill. I have a friend with a young son who has fallen sick since the spill. He got on the BPA Facebook page and wrote that he and other people are sick, and he was attacked. One attacker looked at his profile, identified his friends and family and sent them nasty messages. Based on other people I have

compared experiences with, anyone who takes a stand against BPA Facebook page is attacked.” (Shirley Tillman, 14)

“At one point the BPA Facebook page was promoting Gulf seafood. I made a comment that I choose not to eat it. One of the trolls replied that the FDA has tested the seafood and found that it is safe for consumption. I responded that the last time I saw that FDA had only tested for 16 out of 60 compounds, and I choose not to eat the seafood. The next day I was blocked form the BPA Facebook page ... When I was removed from the page, all of my posts were deleted as well.” (Shirley Tillman, 14)

“From December 2011 through March 2012, my phone started to make a clicking noise. Then the call would hang up when I would discuss specifics about BP, about 20 percent of the time ...” (Lori Bosarge, 9)

## 8. Ongoing Threat Versus The Marathon Public Relations Blitz

*“Every time I check, there is still oil on the beaches and in the estuary systems and in the wetlands and the marshes. People go to the beaches and swim in the gulf, and report to me that they still come up stained with a brownish tan color that they believe is oil.”* - Dr. Wilma Subra, Chemist, MacArthur Genius Award Recipient

The government opened Gulf beaches and fisheries within weeks of BP’s Macondo well being capped. Rather than dealing with the damage, it joined BP in a massive, misleading public relations campaign to lure tourists back to the Gulf. At first, advertisements featuring pristine white beaches and fresh seafood, designed to attract tourists, contrasted sharply with news reports and films of oil spewing into the Gulf for a consecutive 87 days. Eventually, however, relentless propaganda overwhelmed our memory. Mainstream media provided virtually no coverage of health problems emerging from the BP spill. The government’s failure to report on the ongoing threats in the Gulf, paired with media’s continued radio silence on the health crisis in the Gulf, has put tourists directly in harm’s way – especially children and other at-risk populations most sensitive to chemical exposure. Meanwhile, residents already stricken by severe illness after the BP spill are getting sicker from continued exposure to a toxic environment. Dormant oil continues to be unearthed in the aftermath of storms and hurricanes. However, images of the ongoing damage are quickly drowned out by a public relations strategy that serves as a smokescreen for the growing health crisis.



Photo by Scott Porter. Oil on public Louisiana beach after Hurricane Isaac (September 2012)

Of GAPs witnesses, 62% reported that they found evidence of oil or oil debris after BP and the Coast Guard announced that clean up operations were complete. Sixty-seven percent reported that they primarily depend on social media to obtain and/or share spill-related information.

### **BP Official Position**

After the disaster, BP launched a multimillion dollar ad campaign that saturated the nation’s television, radio and social media with Gulf tourism ads. The ads, highlighting 2011 as “the best tourism season in years” for the Gulf and reaching more than 50 percent of the U.S.

population, featured families on pristine white beaches and eating fresh seafood.<sup>219</sup> BP representative Iris Cross exclaimed: “I’m glad to

report that all beaches and waters are open for everyone to enjoy!”<sup>220</sup> Mike Utsler, head of BP’s Gulf Restoration Organization, boasted: “We are pleased to be able to expand the reach of these ads to the entire country and by doing so hopefully encourage even more people to vacation along the Gulf.”<sup>221</sup> The ads pose questions ranging from “What’s the best part about a Gulf Coast vacation? Is it the great outdoors of Mississippi? The fresh seafood in Louisiana? The pristine beaches of

Florida? Maybe it's the beauty of Alabama." BP has produced a series of video vignettes, providing Gulf residents "an opportunity to share their personal story about what makes living on the Gulf Coast so special for them." The videos are then promoted on the BP America Facebook page.<sup>222</sup>

Government studies are currently assessing the long-term health and ecological impact of the BP spill.<sup>223</sup> However, once the well was capped and after months of the nation watching closely as oil spewed into the Gulf, BP didn't wait for scientific support. The company immediately launched an unrestrained campaign with an undisguised goal: restore public confidence.

### **Government Official Position**

The government is also invested in public perception of the Gulf Coast, which generates nearly \$20 billion in tourism annually.<sup>224</sup> Visits by government officials to the Gulf were frequent in the months during and after the BP spill to generate positive media coverage and sound bites to accompany BP messaging. In August 2010 during President Obama's fifth visit to the Gulf since the well exploded, and one month after it was capped, he announced: "Now, as a result of the massive cleanup operation that has already taken place, a recent report by our top scientists found that the majority of oil has now evaporated or dispersed, or it's been burned, skimmed, or recovered from the wellhead."<sup>225</sup> The president continued, "[A]s a result of the cleanup effort, beaches all along the Gulf Coast are clean and safe and open for business."<sup>226</sup> Later that day, in an act of reassurance, the White House released a photo of the President and his daughter Sasha swimming off the coast of Florida.<sup>227</sup> Contrary to public perception, independent reports later revealed that the photo was not taken in the Gulf of Mexico, but rather an inner bay.<sup>228</sup> Through photo-ops of elected officials eating Gulf seafood and swimming in "Gulf" waters, the government joined BP's public relations campaign to replace images of oil gushing into the ocean and dead sea life with cobalt blue waters and family fun.

In November 2011 the Coast Guard announced the Shoreline Cleanup Completion Plan, an agreement to wind down the BP spill cleanup effort, after declaring that nearly 90 percent of the Gulf coast was clean.<sup>229</sup> The plan relieves BP of responsibility for cleaning up oil on Gulf Coast shores unless Coast Guard officials can prove it is BP Macondo oil.<sup>230</sup> All government officials and Gulf states agreed to the plan, with the exception of Louisiana, which raised concerns that BP would not be held accountable for the continued oiling of marshes and beaches, or long-term monitoring of the BP spill's impact.<sup>231</sup> The government contended that the plan would allow BP to transition into restoration efforts, and it took effect irrespective of Louisiana's protests.<sup>232</sup>

In July 2012 the President signed into law the Resources and Ecosystem Sustainability, Tourism, Opportunities Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act). The act established the Gulf Coast Ecosystem Restoration Council (Council), which is chaired by the Secretary of Commerce and comprised of Gulf state governors and agency heads from the U.S. Departments of Interior, Commerce, Agriculture, Homeland Security, the Army and the EPA. The RESTORE Act designates 80 percent of BP spill-related penalties under the Clean Water Act to the Gulf region for ecological and economic recovery efforts.<sup>233</sup> According to the Council, the penalties will likely be used to "generate investments in economic development, tourism promotion, and

science-based natural resource restoration” in the Gulf.<sup>234</sup> Those priorities do not include the ongoing public health threats facing the Gulf.

### **Independent Position**

Less than a year after the government transitioned from “clean up” to “restoration,” Hurricane Isaac swept across the Gulf, unearthing large amounts of dormant BP oil resting on the seafloor. Days before the hurricane hit, LEAN released an alert, cautioning the public: “The BP Crude Oil contains residual levels of toxic Polynuclear Aromatic Hydrocarbons. Pathways of exposure to humans consist of absorption through skin contact, ingestion and inhalation of the toxic chemicals.”<sup>235</sup> The oil, arriving in tar mats (thick mixtures of heavy hydrocarbons) as large as 30 feet by 30 feet and tarballs small enough to get wedged between a child’s toes, tested positive for BP Macondo oil, forcing re-closures of public beaches and fisheries.<sup>236</sup> More startling, the amount of oiled material that washed up on Louisiana shorelines in the aftermath of Hurricane Isaac – about 565,000 pounds - was greater than the amount of oil collected during the previous eight months.<sup>237</sup> Louisiana Coastal Protection and Restoration Authority chair Garret Graves testified before the U.S. Senate: “Some of the areas that experienced extensive re-oiling during the hurricane are the same areas that BP was pushing to remove from active cleanup operations just prior to the storm.” This statement is consistent with warnings by a whistleblower from BP’s Gulf Coast Restoration Organization that the company was trying to wipe its hands clean of the BP spill and shut down cleanup operations prematurely.<sup>238</sup>

The onslaught of oil did not surprise monitoring groups and concerned citizens. In 2012, LEAN members from Coden, Alabama identified what resembled dispersed oil foam washing up on their shorelines. Samples tested by LEAN came back nearly identical to the chemical fingerprint of BP oil, prompting concerns around fresh oil surfacing in the Gulf.<sup>239</sup> In 2011 and 2012, the nonprofit organization On Wings of Care, which is dedicated to the protection and preservation of wildlife, wild habitat, and natural ecosystem, documented extensive subsurface plumes and some oil surface sheen around the Macondo well.<sup>240</sup> Fresh oil slicks around the well, as late as December 2012, stirred fears by Gulf residents and Congress that the impact of the BP spill has been compounded by fresh oil coming from the site of the blowout.<sup>241</sup> In a letter to BP CEO Robert Dudley, Representatives Edward Markey (D-MA) and Henry Waxman (D-CA) wrote, “This recent report of a new oil slick from the Deepwater Horizon’s riser raises questions about BP’s efforts to stem the long-term impacts of the 2010 oil spill.”<sup>242</sup>

Even in the wake of mounting evidence that oil and dispersed oil continue to plague the Gulf, BP ads flood the nation while the growing health crisis remains unreported in mainstream media. This paradox does not surprise Gulf residents, who have observed a dearth of media coverage around the human cost of the disaster from its beginning. With the exception of a handful of publications and online news outlets that have provided consistent coverage,<sup>243</sup> the human health impact has been “one of the most under-reported aspects of the ongoing tragedy in the Gulf,” reported Antonia Juhasz, author of Black Tide: the Devastating Impact of the Gulf Oil Spill.<sup>244</sup> Gulf activist and musician Drew Landry, at the BP 2013 Annual General Meeting, commented, “[W]hat happened from there on was not really a cleanup effort, it was a PR campaign designed to limit liability ... The

human health issues have been completely ignored by our government and by people within BP.”<sup>245</sup> The havoc that the BP spill wreaked throughout the Gulf remains a distant memory, at most, to the rest of the nation. NRDC media associate Rocky Kistner – one of the few reporters to provide hard-hitting coverage from the frontlines of the disaster – reflected on the spill’s two-year anniversary: “As the second memorial to the country’s greatest oil disaster comes and goes, the stories of thousands of lives still struggling in these once-thriving Gulf fishing communities will fade even further from media attention.”<sup>246</sup>

Frustrated by the lack of urgency to denial by government officials and hospitals, residents and community organizations created their own support networks to cope with their health impacts and educate the public about the growing health crisis in the Gulf, employing Facebook groups<sup>247</sup>, online videos<sup>248</sup> and personal blogs.<sup>249</sup> Their individual efforts are bound together by the shared experience of encountering BP spill-related health and environmental problems, while serving as resources for the greater public. Their grassroots media reports continue to disclose ongoing medical impact felt most severely by cleanup workers and coastal communities who were initially hit by the onslaught of oil and dispersant chemicals, and who continue to be exposed on a daily basis through contaminated air, water and seafood. However, they also include repeated warnings from public health experts and scientists that Gulf tourists are susceptible to contamination as they swim Gulf waters and enjoy Gulf seafood.

Dispersed oil has settled into shallow water, contaminating shells and possibly beachgoers, according to a study by The Surfrider Foundation – a non-profit organization dedicated to the protection and enjoyment of oceans, waves and beaches.<sup>250</sup> Through ultraviolet light, dispersed oil chemicals can be seen in Gulf waters as far as Florida’s panhandle, a premiere tourist destination.<sup>251</sup> A study published in November 2012 found that Corexit caused chemicals from crude oil to penetrate beaches more deeply while expanding the lifespan of PAHs in the marine environment.<sup>252</sup> While BP ads inquired “what your favorite Gulf beach is,” geologist James Kirby posed a more relevant question for tourists: “[W]ould you let your kid play in the shallow water and absorb toxic tar product? Wouldn’t you rather have a sign that told you the beach was hazardous in certain spots?”<sup>253</sup>

Belying BP’s ads of Gulf fisherman rejoicing over the rebound of their fisheries, record low catches are leaving fourth generation fishers unemployed as fisheries struggle to survive.<sup>254</sup> Referring to the BP ads as propaganda, Louisiana Shrimp Association President Clint Guidry cautioned: “When you have a lot of money, you can pretty much get any point across. It’s kind of like indoctrination.”<sup>255</sup>

Corexit’s camouflage of ongoing oil in the Gulf has been matched by a corporate-government public relations campaign to camouflage its ongoing consequences. Both have invested heavily in an advertising blitz for false appearances. All is *not* well. Speculation over the BP spill’s long-term impact is being replaced with empirical research and continued human suffering. The public has a right to know the real cost and threats from Corexit and other dispersants that put forth the illusion that the oil disappeared. For this to occur, the government must shift its primary goal from maintaining appearances to protecting public health. While BP’s bottom line may be profit, the

words of Franklin Delano Roosevelt remind that *“the state’s paramount concern should be the health of its people.”*<sup>256</sup>

### **Whistleblower Record**

#### *a. Oil Not Gone*

“In February, 2012 I received a phone call from a neighbor ... She had identified a foam like substance washing up on the shore at Bayou La Batre. After the oil spill, BP set up a boat decontamination site at Bayou La Batre, which is also where Corexit containers were stationed during the spill. On February 27, 2012 I went down to the location that my neighbor told me about, and took pictures. The city of Bayou La Batre was digging up around the boat launch, most likely to get it ready for beach traffic that we get during spring break. As they dug, a thick looking foam was oozing out of the sand ... Marylee Orr, Director of the LEAN, called me and asked me if I would be willing to take samples. I agreed to, and she put me on the phone with a chemist, Dr. Wilma Subra, to make sure that I collected the samples correctly. I went back to the location and collected foam, water and sediment samples ... The test results from the samples were almost identical to test results for BP fingerprinted oil from March 2011.” (Lori Bosarge, 9)

“[O]n June 23, 2012 ... while we were out there [in the Gulf] collecting tar logs, I saw this same foam substance and a C 130 plane fly over us. I also witnessed this foam in the mouth of the bay when I took two people from Washington state to Cat Island on July 11, 2012. During that trip, I collected a 5 gallon bucket of tar logs ... After Hurricane Isaac on September 6, 2012 I walked along the beach and I found thick rubbery tar logs and what looked like oil sheen. I could see what looked like Corexit foam flowing through the water. There was a heavy smell from the dead animal carcasses; I saw dead birds and nutria on the beach. My symptoms got worse immediately after that. I had a seizure that night, and I was incapacitated for a few days. Since then, the tumor in my mouth has started hurting real bad. The pain in my throat is extremely painful; similar to having strep throat, it feels raw ... What concerns me most is that since Hurricane Isaac a lot of people I know have become sick with symptoms characteristic of strep throat or the flu.” (John Gooding, 4, 11)

“Every time I check, there is still oil on the beaches and in the estuary systems and in the wetlands and the marshes. People go to the beaches and swim in the gulf, and report to me that they still come up stained with a brownish tan color that they believe is oil.” (Dr. Wilma Subra, 10)

“Anyone who recreates, fishes, is in the marsh and hunts or traps in the gulf, is still coming in contact with the crude on an ongoing basis. I did Mobile Bay sampling in July 2011, and the whole time we were out the fishermen on the various radios were calling in about the oil. The water there was like 85 and 88 degrees, so there was constantly oil coming up and making a sheen. There were constantly mats and tar balls and oil washing in to the barrier islands. But fishermen were really concerned about that sheen, because anything they harvested and picked up through it became contaminated with the oil. It’s still very prevalent.” (Dr. Wilma Subra, 10)

“In August 2011 there were several reports of oil slicks from the Macondo well. Regardless of the source, we knew there was a lot of fresh oil. On August 18, 2011 a captain took me to collect samples from Ship Island, Mississippi, 103 miles north of the Macondo well. We saw stretches of fresh oil. I also saw what looked like dispersed oil ... Pilot Bonny [Schumaker] with On Wings of Care is conducting flyovers and documenting large fresh oil plumes close to the Macondo well ...” (Steve Kolian, 7)

“In addition to the resistance surrounding medical problems resulting from the spill, we still have oil washing up. To this day, there is oil out by Cat Island, Ship Island and Hound Island. In Bay St. Louis you can go on one of the bridges right now. When the tide is running in and out you can still see the oil slick. Where are the people who are supposed to be protecting us from all of this?” (Donald Tillman, 14)

“Before I experienced it firsthand, I would have never believed that you could pollute the northern Gulf so much that it would be dangerous for me to swim in it ... I am concerned because we are still seeing dispersed oil at the surface of the northern Gulf on a consistent basis ... After Hurricane Isaac came through, I went with Steve Kolian and another individual to Louisiana’s southernmost port, Port Fourchon. When we first got out there I didn’t see any large tarballs in sight. However, as we walked to the northern end of the beach the sand got darker ... I could see sheen and a dark red precipitate settling out of the water running off of it, which resembled the tar patties we encountered during the spill ... New data shows that the latest oil washing up on the Gulf shorelines is in fact BP MC 252 oil.” (Scott Porter, 16-17)

*b. Media Blackout*

“I spoke with about 40 people. As soon as I would share a list of the symptoms I had, almost all of them would say they had similar problems or knew someone from the cleanup who had them. The scope of associated health problems is not well known, because the media and local government are not discussing it.” (Lori Bosarge, 5)

“Nearly two years after the oil spill we don’t hear anything in the media about the health effects. Why isn’t the current public health crisis along the Gulf on Channel 4, AC 360 or Fox News? You have to go to the internet to learn what is taking place. I have to go on YouTube to see Gulf activist Cherri Foytlin, who walked from New Orleans to DC to make a point about the health of the Gulf. Kindra Arnesen has been vocal about the health problems since the dispersant spraying began in her community in Venice. Why do they have to go to Facebook and YouTube to get their stories out? Why isn’t Channel 4 interviewing them and airing this coverage during the soap operas when every grandparent in the bayou is watching?” (Jorey Danos, 6)

“My best friend’s six-year-old went to the beach in Biloxi in 2010. The commercials said, ‘The beach is fine, you all come down.’ Four days after they left the beach her daughter slowly broke out in blisters all over from her knees to the ends of her toes, between her fingers and the mid-section on her arms ... She still has scars all over and broke out in blisters all over her face.” (Kindra Arnesen, 6-7)

“The first time that I met with [Coast Guard] Lieutenant Commander Eiland, I went to the morning meeting and they were showing me all of these maps on the wall. Then this young Coast Guard member walked in, threw his hands up in the air and shouted ‘Ponies and Balloons, Ponies and Balloons’ ... I did not understand what he meant by Ponies and Balloons, until I witnessed the staged response for President Obama’s flyover the following day ... [W]hen I flew there was response everywhere; boats everywhere, boom everywhere, people everywhere. I later found out that I flew at 10:00 am that morning, and President Obama flew at 2:00 pm that afternoon ... The day before President Obama and I flew, there was no response ... [T]he more I saw, the less likely I was to be an ‘appeased community member.’ ... Everything that I saw when I was out there was ponies and balloons, a big show for the politicians. It was a show for the media as well; BP set up a spot at the end of South Pass, Louisiana to take the media. A lot of the pictures look the same because they were all staging areas that BP would fly media over and take them to.” (Kindra Arnesen, 13-14)



“Despite our thorough coverage of the impact from the spill ... the large news broadcasters did not provide EcoRigs credit for the footage that we provided. Further, mainstream news media would not report on the questions we raised about dispersants. In my interviews, news stations consistently edited the portions of the interview where I mentioned dispersant or Corexit. I believe it is because they did not want to tell the whole story, which was a disservice to their viewers.”  
(Scott Porter, 15-16)

## 9. Inadequate Compensation

*“Most of our members right now who are sick are in litigation ... They aren’t going to sufficiently pay our medical bills to demonstrate that they were responsible for the actions they took, just as they didn’t give us respirators to demonstrate that our working environment was unsafe.” - A.C. Cooper, Vice President, Louisiana Shrimp Association*

BP’s compensation process to make individuals “whole again” was as disingenuous as its free speech policy and Gulf tourism campaigns. The Gulf Coast Claims Fund (GCCF), mandated under the Oil Pollution Act to compensate individuals and businesses impacted by the BP spill, denied all health claims during its 18 months of existence. Sick residents, many of whom are fishermen and had lost their source of income, found themselves accepting a nominal one-time GCCF check that cost them their right to later sue BP. When the Deepwater Horizon class action was negotiated, an unprecedented medical compensation program was included in the final settlement. Although the settlement was a significant precedent that underscores the human health impacts of the BP spill, countless of sick individuals have found themselves ineligible under the settlement, due to their prior dealing with the GCCF or as a result of the settlement’s narrow terms. Further, the settlement does not account for the most serious health impacts resulting from dispersant and oil exposure, such as cancer or birth defects, and the maximum award is not proportionate to cost of medical care. The settlement also fails to provide treatment for those rendered ill by the BP spill.

Of GAPs witnesses, more than 60% of GAP interviewees reported that the GCCF and/or Deepwater Horizon class-action settlement made them an offer. Of those witnesses, 100% reported that compensation was nominal compared to their medical and economic damages incurred from the spill.

### **BP Official Position**

In June 2010, BP created a \$20 billion Deepwater Horizon Oil Spill Trust, designed “to provide a faster and more fair way to pay damage claims for individuals and businesses harmed by the Gulf Oil Spill,” as required under the Oil Spill Pollution Act.<sup>257</sup> The escrow fund, established during a meeting between President Obama and BP, would be used for individual compensation, natural resource damages, and state and local response costs, and was not a cap on BP liabilities.<sup>258</sup> President Obama appointed Kenneth Feinberg, previous administrator of the U.S. government Agent Orange Settlement Fund and September 11<sup>th</sup> Victim Compensation Fund, to administer the \$20 billion fund.<sup>259</sup> In August 2010, BP created an “independent” Gulf Coast Claims Facility to process individual and business claims, overseen by Mr. Feinberg.<sup>260</sup> Claimants who received a “Quick Pay” or final payment from the GCCF were required to sign a release that waived their right to sue BP.<sup>261</sup> Having paid approximately \$6.2 billion in claims, the GCCF closed in June 2012, giving way to the Deepwater Horizon Court Supervised Settlement Program.<sup>262</sup>

In March 2012, BP and the Plaintiffs Steering Committee (PSC)<sup>263</sup> agreed to the largest class action settlement in the history of U.S. oil spill cases. The class action, overseen by U.S. District Judge Carl Barbier, included a medical benefits dimension that is unprecedented in the history of oil spill cases. The settlement does not have a cap, but BP projects that it will pay approximately \$7.8

billion.<sup>264</sup> In a BP statement, following the Court's final approval of the settlement, the company stated: "BP is pleased that the Court has granted approval to the PSC settlement resolving the substantial majority of legitimate medical claims stemming from the Deepwater Horizon accident."<sup>265</sup> BP continued: "[T]oday's decision by the Court represents yet another critical step forward for BP in meeting its commitment to economic and environmental restoration efforts in the Gulf and in eliminating legal risk facing the company."<sup>266</sup>

During our July 2012 meeting at BP Headquarters in Houston, BP was very clear that while the settlement includes medical claims, BP disputes the position that health problems are a result of exposure to oil and dispersants.<sup>267</sup>

### **Government Official Position**

Following Mr. Feinberg's appointment to administer the \$20 billion escrow fund, President Obama announced, "I'm confident he will assure that claims are administered as quickly, as fairly and as transparently as possible."<sup>268</sup> In spite of the President's confidence, in response to claimants' complaints about the initial BP's claims process overseen by Mr. Feinberg, and in anticipation of the GCCF, the House Judiciary Committee held a hearing with Mr. Feinberg as the sole witness.<sup>269</sup>

During the hearing, Representative Jerry Nadler (D-NY) asked probing questions pertaining to Corexit use; covering issues that BP and the government had been mum about throughout the affair, and that sick Gulf residents want answers to. Drawing stark parallels between the false safety assurances surrounding Corexit to those about Ground Zero after 9/11, the New York congressman identified the dangers of misleading the public:

We now know that some of the information, such as the purported safety of the dispersants being used, was demonstrably false. It's deja vu all over again. A decade ago – or less than a decade ago – EPA Administrator Christine Todd Whitman falsely assured the public that the air near Ground Zero was safe. We are still paying the price for that deception. Some people are paying with their lives.<sup>270</sup>

Having witnessed his constituents, 9/11 first responders, suffer from the impact of toxic exposure, Nadler inquired how Mr. Feinberg and the GCCF would handle medical claims, specifically those related to dispersant exposure:

Will injuries caused by dispersants be covered by the compensation fund? ... [G]iven that the long-term effect of the oil spill and use of dispersants could be at least a 10- or 20-year event, what provisions will be made for claimants who may, for example, seek compensation for economic loss but whose medical conditions resulting from exposure may not become manifest for five or 10 or 20 years?<sup>271</sup>

Representative Nadler zeroed in on a component of the GCCF that would leave thousands of claimants strong-armed – the requirement to waive their right to sue later, in exchange for initial damages through the GCCF: "I do not want to see the taxpayers on the hook or this damage, and I do not want to see people with serious but not-yet-evident injuries have their rights and legitimate claims nullified in the future."<sup>272</sup>

Mr. Feinberg, in response to concerns about medical claims being processed, stated that “I do believe that the final protocol that I will administer will cover physical injury claims.”<sup>273</sup> However, exception for injury claims by workers on the Deepwater Horizon rig, the GCCF failed to process *any* claims for medical compensation.<sup>274</sup> In April 2012, a Justice Department audit found that the GCCF made “significant errors” and owed an additional \$64 million to approximately 7,300 claimants who received less than their entitlement.<sup>275</sup> The Justice Department announced:

While there’s no question that the independent GCCF labored under extremely challenging circumstances to get a huge number of payments processed successfully, the fact that this audit has resulted in tens of millions of dollars being made available to claimants who were wrongfully denied or shortchanged underscores the importance of the audit.<sup>276</sup>

Unfortunately, the audit also skipped the unprocessed claims filed with the GCCF for medical compensation.<sup>277</sup>

### **Independent Position**

Public health activists and community organizations were livid that the GCCF, by employing an unprecedented requirement of medical proof for BP illnesses, failed to account for the human costs of the BP spill. A report by the public interest law firm Advocates for Environmental Human Rights found that Mr. Feinberg’s requirement of the difficult standard, “medical proof of causation,” broke from his past practices:

Feinberg did not require medical proof that a claimant’s illness or disability was caused by being exposed to toxic air pollution resulting from the September 11, 2001 terrorist attacks or the toxic chemicals in Agent Orange sprayed during the Vietnam War. These disaster fund programs paid claimants based on a showing that they were in the vicinity where harmful chemicals were present and had a medically diagnosed illness or disability.<sup>278</sup>

The report concluded that the significantly higher burden of proof standard for illness claims by people exposed to toxic chemicals during from the BP spill “effectively denies all damage claims for illnesses associated with exposure to the toxic BP crude oil and/or toxic chemical dispersants that were applied to the oil spill.”<sup>279</sup>

Sick workers and residents, unable to meet the GCCF medical burden of proof and already economically devastated from the BP spill’s impact, frequently succumbed to the GCCF quick pay or final payment option.<sup>280</sup> The nonprofit Operations People for Peace documented how GCCF failed in particular to address the needs of historically underserved populations left in poor health and without income or a food supply as a result of the BP spill.<sup>281</sup> Ultimately 95,000 claimants accepted the quick payments of \$5,000, and 45,000 claimants accepted payments that averaged \$15,000.<sup>282</sup> However, as witnesses would share repeatedly during GAP’s investigation, the payments barely dented their already accumulated medical bills and cost them the opportunity to bring a future lawsuit against BP for medical damages. Adding insult to injury, a ruling by U.S. District Judge Barbier found that, contrary to assertions by BP and the administration, Mr. Feinberg was not

independent of BP, because he is acting for and on behalf of BP in fulfilling its requirement as the responsible party under the Oil Pollution Act.<sup>283</sup> That determination raised questions about the overriding agenda of the GCCF, which intercepted potentially tens of thousands of lawsuits against BP in the Deepwater Horizon class action settlement or individual lawsuits.

The class-action settlement should be given credit for its inclusion of medical claims. However, the terms of this significant precedent may prevent it from helping those most impacted by the BP spill. During the July 2012 meeting at BP headquarters, company lawyers and a physician provided a presentation of the medical claim process, highlighting the settlements “universe of benefits.” However, after rigorous questioning it became clear that the settlements “universe of benefits” is prohibitively narrow in application. At the meeting with BP, our participants pointed out that individuals sickened by the Deepwater Horizon are desperately in need of medical experts and treatment. After vigorous questioning, BP confirmed that neither is provided by the settlement<sup>284</sup>

The Gulf is home to 21 million people. Yet, only the 110,000 residents that live within one-half of a one mile distance of the coast, or live in marsh areas, qualify under the medical settlement.<sup>285</sup> Of the estimated 140,000 qualifying cleanup workers, 90,000 are covered under the medical settlement.<sup>286</sup> The settlement includes a short list of specific health conditions ranging from certain eye, skin, respiratory, neurophysiological and gastrointestinal conditions. However, it does not account for the most severe health problems resulting from oil and dispersant exposure, including cancer, neurological disorders and birth defects, among others.<sup>287</sup> The settlement’s Gulf Region Outreach Program provides primary care services for Gulf residents; however, similar to the BP EMS that sick workers were required to use, it does not provide treatment for sick individuals or medical experts in chemical exposure.

The medical portion of the settlement offers *up to* \$60,700 for eligible parties, which is contingent on medical documentation and the extent of their illnesses.<sup>288</sup> For plaintiffs who receive an award, even the maximum payment is woefully inadequate to cover current and future medical bills, and individuals who accept the settlement are unable to sue BP for punitive damages later. If terminal cancer or another deadly illness struck them later, their heirs would also be ineligible to sue BP at a later time.<sup>289</sup> In turn, eligible parties who opted out of the settlement and ineligible parties have been left to pursue individual litigation that likely will result in years of expensive litigation, if they can afford that option. Meanwhile, individuals already sick from the disaster are praying that the latent illnesses of which Representative Nadler warned will not be their fates.

## **Whistleblower Record**

### *a. Gulf Coast Claims Fund*

“I first met Kenneth Feinberg on August 23, 2010 at a public meeting about the GCCF. I explained my existing lung disease and how it was exacerbated by the odor from the oil spill. He told me that I had a legitimate claim, along with people who have asthma or breathing problems. He said that I just needed to prove it through doctor’s verification ... My wife encouraged me to go to the hospital that night, because my insurance was going to run out. I went to Gulfport Hospital at 8:00 pm, and I saw a doctor at 1:00 am ... He only looked once at my throat very briefly and said he couldn’t see anything that was wrong ... [B]efore leaving I asked for a note saying I had an existing lung disease.

I further explained that my throat has been raw since I went fishing on June 13, and I believe it is related to the BP oil spill. He responded that he would not write a note or get dragged into a BP lawsuit.” (John Gooding, 5, 6, 10)

“Regarding James’ health problems, we had to file a separate form for something like physical injury or plausible death, and the GCCF sent back another counteroffer of \$25,000 for the medical bills. I was like, are you all crazy? We had over \$200,000 dollars worth of medical bills. More recently, under the class action suit, James was offered a \$60,000 medical settlement. We had to decline it, because we have over \$360,000 in medical bills now. It’s not about being out there to make a dollar. If we could, we would give every penny we have back to BP to have this man’s health back. The money isn’t anything if I don’t have him. I don’t know where to go, where to turn.” (Betsey Miller, 5)

“I again saw Mr. Feinberg at a public meeting on January 10, 2011. There were about 300 people in the audience. Feinberg said that the GCCF had only received approximately 480 health claims by January 10, 2011. At that meeting I read him a note about how his process excludes the poor, sick and handicapped. I asked why the GCCF provides an attorney, but not a doctor. I explained that the government had neglected the damages caused by the BP syndrome ... [A] lot of people started standing up and saying they were having the same problems filing a medical claim with the GCCF. I met a lot of other sick people, and we started getting together and organizing ... All I have anymore is time and I’m glad to share it. Time well spent if you’re holding the government accountable.” (John Gooding, 10)

“I used to make on average \$650 day; my hourly rate was \$65.00 an hour and I worked on average 10 hour days. Now it is not possible for me to do that work due to my health. I don’t make any money. Before my wife lost her job this year, she was making minimum wage and didn’t have any benefits. They sent my wife and me a check for \$11,000 and a final settlement offer for \$25,000 if we would accept it. However, if we settled then I would waive my rights to take future legal action against BP. I went around and around with the GCCF trying to explain that their calculations were incorrect, but their offer did not change. I made in five months what they want to pay me for 24 months. We finally reached the point where it was necessary to cash out the \$11,000 check ... We did not accept the final settlement check, but I was still denied disability. I would rather get my health back and return to work than take BP or government money.” (John Gooding, 10)

#### *b. Deepwater Horizon Class Action Settlement*

“Every time you come to a dead end or stop-sign on responsible cleanup practices and can’t figure out what was going on, it likely involved efforts to protect BP’s liability. That includes not protecting the now-sick workers by denying them respiratory protection during the cleanup. Had BP let it be recorded that there were unsafe chemical levels on the Gulf Coast or any one of these job sites that required respiratory protection, they would have had to face in court respiratory illness claims from Key West, Florida to Brownsville, Texas. Exxon got away with compensating workers for medical claims 20 years ago during the Exxon Valdez spill, and now BP is trying to skirt its responsibility to adequately compensate sick workers and residents.” (Clint Guidry, 8)

“[M]y understanding of the settlement between BP and the PSC is that it leaves many deserving victims of this tragedy without any legal remedy or financial compensation for illnesses I know they are experiencing ... The first problem involves the Zones designated to recognize non-workers who were exposed to noxious materials and became ill ... To qualify as a non-worker entitled to compensation, two major zones of residence were established. The first zone, ‘Zone A,’ was defined as ‘certain beachfront areas in Louisiana, Mississippi, Alabama, and the Florida Panhandle within at least 1/2 mile of the water.’ Out of the estimated 105,000 people who qualified under this

designation, only 1,600 were from Louisiana, or approximately 1.6% of the qualified population ... Zone B's parameters are unclearly defined as 'certain wetlands within at least 1 mile of the water.'" (Dr. Michael Robichaux, 10- 11)

"The next question that begs an answer is how does an individual qualify for the benefits included in the medical settlement? With reference to the 'Chronic Conditions' category the claimant must submit – 'A declaration under penalty of perjury setting forth the condition and the location and time of exposure; *AND* medical records supporting the claim and ongoing care for the asserted condition' (emphasis added). Since a large portion of the people adversely affected by the oil spill have no medical insurance, they also have few, if any, medical records to qualify in this area." (Dr. Michael Robichaux, 12)

"The second travesty in the settlement involves the definition of chronic illnesses associated with relevant chemical exposure. The list of chronic systems that qualify for this more significant designation concerns me because, while there is some overlap, it is not representative of the symptoms that I have repeatedly observed with my patients impacted by the spill ... [W]ith the exception of skin disorders, [they are] not among the major problems experienced by the more than 100 patients that I saw during the course of our treatment program. Nor were these problems frequent in the 100 or so other patients who I questioned following the oil spill." (Dr. Michael Robichaux, 12)

"[T]his designation does provide some major benefits to BP. By avoiding recognition of the actual long-term consequences of these toxic exposures and by minimizing the significance of the illnesses actually being experienced, BP gets to avoid taking responsibility for the far more significant symptoms that truly exist in a chronic setting, such as memory loss, fatigue and severe headaches. In other words, if the actual long-term symptoms were included in this category, BP would have to acknowledge that these problems actually existed. Understandably they were unwilling to do so. Additionally, these chronic symptoms would certainly qualify for more compensation to the victims of this crisis." (Dr. Michael Robichaux, 12 -13)

"The last aspect of the medical settlement with which I take issue is the provision for the 'Gulf Coast Region Health Outreach Program.' Over \$100 million dollars is being put aside for research and clinics, supposedly to study and treat the general population of the Gulf States. However, to my knowledge, not a nickel of that money is designated to either study or treat the people who were rendered ill by exposure to the gumbo of chemicals resulting from the spill. Workers and residents impacted by the spill require health clinics that specialize in chemical exposure. However, the outreach program focuses on primary care, which is a fine service for the general population but does not address the victims of this spill." (Dr. Michael Robichaux, 13)

"Most of our members right now who are sick are in litigation. BP didn't want to step up and admit wrongdoing, so it has become a legal battle. If BP starts paying their doctor bills then they're admitting guilt. They aren't going to sufficiently pay our medical bills to demonstrate that they were responsible for the actions they took, just as they didn't give us respirators to demonstrate that our working environment was unsafe. Our members who got sprayed are still paying for their medical bills." (A.C. Cooper, 8)

## 10. Recommendations

*“Five to ten years down the road these studies may determine that the federal government and BP put workers and the public in harm’s way through inadequate PPE and the use of Corexit. That is too late and unacceptable; we need people treated as well.”* – Clint Guidry, President, Louisiana Shrimp Association

### i. Provide Medical Treatment

The greatest priority must be medical treatment for individuals sickened by the BP spill. The government has launched the largest oil spill health study in history. Known as the Gulf Long-term Follow-up (GuLF) STUDY, over a 10-year period it will assess the short-term and long-term health impact of the BP spill on cleanup workers.<sup>290</sup> While the research is certainly valuable, due to the absence of medical care it does not address the current health crisis unfolding in the Gulf. As the nation witnessed through the delayed treatment for 9/11 first responders that only came after their rising health toll, those impacted by their toxic environments cannot afford to wait a decade to receive medical treatment.<sup>291</sup> This could be accomplished through legislation, similar to the 9/11 Health and Compensation Act, that mandates medical monitoring and treatment for those rendered ill by the BP spill.<sup>292</sup>

### ii. Fill the Research Gap

Independent studies must also be conducted, in addition to the government’s GuLF STUDY, to assess the Deepwater Horizon’s health impact and document effective treatment programs. Its findings should inform BP spill medical treatment programs and future oil spill response plans. Those most familiar with the impact of the BP spill should be consulted in any measures taken to remedy the health crisis, along with medical experts such as toxicologists, who are trained in chemical exposure. To date, no organization or physician has been more involved in educating the public on the health problems associated with the BP spill and treating individuals with BP spill-related illnesses as LEAN and Dr. Michael Robichaux.

### iii. Ban Chemical Dispersants

The government must take measures to prevent this health crisis from recurring by banning chemical dispersants, in particular Corexit. The more fundamental reform is to control and prevent future damage until the research on dispersants is in. Representatives Nadler and Tim Bishop (D-NY) introduced the Ban Toxic Dispersants Act of 2011, which would require a temporary moratorium on the use of dispersants until rulemaking and a study to ensure their safety is complete.<sup>293</sup>

Toxicologist Riki Ott, who documented the impact of Corexit use during the Exxon Valdez spill through her book Sound Truth and Corporate Myth, is spearheading a campaign calling for coastal municipalities to ban dispersants within their jurisdictions.<sup>294</sup>

### iv. Reform Dispersant Policy

For starters, the government must reform dispersant policy so that we are not faced with the same



public health dilemma during the next oil spill. Administrator Jackson, in a Senate hearing on dispersant use, conceded: “As we emerge from this response, I believe we need to revisit the contingency plans and the product schedules that preauthorize dispersant use.”<sup>295</sup> The former administrator concluded: “We need more information on all dispersants, and that is not only a B.P. problem.”<sup>296</sup> It is not only reckless but unethical to continue allowing the use of dispersants without knowing the harm that their use can result in.

The EPA relies solely on the manufacturer’s testing, and does not independently assess human health and environmental impacts of the dispersant before it is approved. Dated dispersant policy makes the public vulnerable to industry standards that would be unacceptable in other contexts. The FDA is required to independently test pharmaceutical drugs before approving them for commerce, and the United States Department of Agriculture (USDA) does not take a slaughterhouse owner’s word that meat is free of contamination. However, there is no requirement for independent data or government testing in the case of dispersants.

It has taken an oil spill of epic proportion, and the health and livelihoods of a whole coast, for this topic to even enter the public debate on dispersant use. Disclosure is a necessary first step. Concluding the hearing on dispersant use, Senator Lautenberg stated “[I]t’s very obvious ... that the law ought to be changed to give the public the right to know about health and environmental effects of chemicals in the dispersants.”<sup>297</sup> He proceeded to introduce the Safe Dispersants Act, which would require more robust testing, approval, and disclosure of the health and environmental effects of dispersants used under the National Contingency Plan.<sup>298</sup>

In response to dispersant legislation introduced in the 111<sup>th</sup> Congress, Administrator Jackson recognized the need for reform and the current legal constraints that the EPA is operating under: “I also believe the law would give us critical transparency and openness protections that right now EPA cannot provide by law.”<sup>299</sup> Legislation, while desperately needed, takes time to pass. In the interim, the EPA can demonstrate its commitment to dispersant reform through agency policy.

v. Hold Congressional Hearings and Investigations on Public Health Impact of Corexit

Congress has a responsibility to expand the public record surrounding health impacts associated with dispersant use. It can begin by holding hearings to investigate the link between the growing public health crisis throughout the Gulf and Corexit use.<sup>300</sup> There are a litany of categories to cover, ranging from the health impact on susceptible populations such as children, to the toll that the Deepwater Horizon has taken on its first responders – from cleanup workers to the coastal residents whose health symptoms persist and are getting worse.

This report should also serve as a beachhead for congressional investigations into the health problems resulting from chemical exposure linked to the BP spill. Chairman Daryl Issa (R-CA) of the House Oversight and Government Reform Committee released a 2011 investigative report on the BP spill that highlighted Dr. Robichaux’s early findings of health symptoms associated with the event, such as seizures and severe stomach pains. It is time for Congress to tap into the accumulated wealth of knowledge by Dr. Robichaux, Dr. Subra and other experts who are familiar with the Gulf’s health problems since the BP spill, which are likely to continue for generations to come.

vi. Implement Public Notification Policy for Dispersant Use

If dispersants continue to be used, the public has a right to know when and where through public notice and warnings. Many residents and workers believe that dispersant use continues today. As long as it remains a legal option for industry, those fears are warranted. There is currently no requirement for the government or oil companies to notify the public when a dispersant is used. During the meeting at BP headquarters, BP stated that they will continue to use Corexit provided the government's authorization to do so. However, BP Vice President Keller stated that BP would consider a public notification policy that GAP and LEAN have proposed. To date, the company has not tangibly followed through on this step despite numerous requests to the BP Ombudsman for progress reports. Adopting such a policy would support BP's claims that it is not currently using Corexit on the BP spill.

vii. Enfranchise the Public

In March 2012, NOAA and the Coastal Response Research Center released the Dispersant Use Initiative, a document intended to guide planning and decision making in future oil spills based on observations and science from the BP spill. Among other findings, it stated that key needs include "establishing factual information synthesis (e.g., dispersant components, understanding effects, worker safety), establishing hazard identification and exposure scenarios, understanding risk to workers and public safety, and communicating the risk successfully, and understanding the trade offs of using dispersants with respect to human health."<sup>301</sup>

Whistleblowers should be the pioneer witnesses providing a foundation for this effort. Throughout GAP's investigation they provided clear warnings and practical solutions that could have greatly reduced the disaster's health and environmental impact. They began by warning not to treat chemicals with chemicals, a premise that was ignored. It is not too late to employ recommendations such as those below to prevent a tragic rerun of Deepwater Horizon when the next oil spill occurs.

**Whistleblower Record**

"If something like this ever happens again, the responsible party and the government need to involve the industry leaders and make sure that we are active partners in the response plan. They still have plans with boats, boom and equipment ready. If they include us in the planning process ahead of time, I feel we would be able to respond to a future spill much more effectively. However, if they try to exclude us again, we will have a repeat of the turmoil that took place during the BP oil spill." (A.C. Cooper, 8-9)

"We are a coastal parish and we have marsh and tons of mosquitoes, so mosquito control sprays by truck. When it gets really bad a federal plane comes in to spray. We worked with the Parish to the point where they now notify all of the sensitive populations before they spray, so that they can chose to leave the area. Further, they put it in the newspaper, so the broader population can know when they are going to spray from the planes. It's not dispersant but it's very toxic. Until this is implemented at the federal level, it is only a partial solution ... The problem is worse with dispersant use, because there is no requirement that BP has to record where it sprayed ..." (Dr. Wilma Subra, 15)

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“During our lunch, the main issue [OSHA director David Michaels] pushed back on involved the use of respirators ... I have organized a lot of emergency response activities, and I know that if the wearing of a respirator induces heat stress then alternatively you put the body in a cool air system suit. This way the workers do not get overheated, and they do not breathe in the dangerous chemicals that are in their workplace environment.” (Dr. Wilma Subra, 5-6)

“Five to ten years down the road these studies may determine that the federal government and BP put workers and the public in harm’s way through inadequate PPE and the use of Corexit. That is too late and unacceptable; we need people treated as well. What about the sick people currently, and those who already have died? I am concerned that the people who are the sickest will be given an unreasonable burden in trying to prove the connection between their health problems and their chemical exposure. This is a longstanding problem in the petrochemical industry. The doctors do not readily diagnose chemical exposure and in turn they tend to diagnose the individual symptoms. It is a common practice in oil producing states. We need trained medical physicians down here that are willing to diagnose and treat chemical exposure.” (Clint Guidry, 8)

“I want to get my son properly examined and treated, and have his medical bills paid for. Just from the research I’ve done on the toxins in his blood, I’m sure that they’ve settled in his pancreas or his liver. What are going to be the repercussions 10 to 20 years down the road? Is he going to get cancer?” (Anonymous #3, 3)

“Unfortunately the impact on the community from cancer alley has not been sufficiently tracked, and it is important that the same mistake is not made with those impacted by the oil spill ... [M]ost of the impacted communities are comprised of poor and minority populations, with a lack of access to health care...[A] lot of these people can’t even go to the doctor because they don’t have money for the gas to get to the doctor ... I sat in on the conference calls that were developing the scope of the NIEHS Gulf Study to examine the health of people who helped clean up the oil spill ... I responded to their proposal, ‘You were going to ask people what health symptoms they had but you weren’t then going to say, ‘we’ll get you to the doctor and get you medical care.’ I said, ‘It’s completely inappropriate to ask them what their health symptoms are, but then to not get them medical care.’” (Dr. Wilma Subra, 6, 7, 11, 12)

“In September 2011, Dr. Kaye Kilburn, an 80 year old physician and scientist, came to Golden Meadow, Louisiana and conducted studies on 14 people who had a history of exposure to BP’s toxins. Dr. Kilburn is a distinguished physician and scientist, and since 1982 he has investigated chemicals and the human brain. He has published over 250 scientific papers and three books. When he left to return to his home in California, he said, ‘Mike, I have been doing this my entire professional career, and this is the greatest public health crisis I’ve encountered in my lifetime.’ Since that time Dr. Kilburn, LEAN chemist Dr. Wilma Subra, and I have been attempting to obtain funds to perform objective studies on the victims of the spill and to document the success of various treatment endeavors...There is an enormous need for us to be able to use this tragedy to obtain information on the cause and treatment of the health problems we have been observing.” (Dr. Michael Robichaux, 13)

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<sup>1</sup> United States Coast Guard, On Scene Coordinator Report Deepwater Horizon Oil Spill (2011), *available at* [http://www.uscg.mil/foia/docs/dwh/fosc\\_dwh\\_report.pdf](http://www.uscg.mil/foia/docs/dwh/fosc_dwh_report.pdf).

<sup>2</sup> For example, Dr. Riki Ott, in her book Sound Truth and Corporate Myth\$: The Legacy of the Exxon Valdez Oil Spill, systematically investigates the impacts of Corexit use on the Exxon Valdez oil spill.; Riki Ott, Sound Truth and Corporate Myth\$: The Legacy of the Exxon Valdez Oil Spill (Dragonfly Sisters Press 2005).

<sup>3</sup> *Id.*

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<sup>4</sup> Marine Management Organisation, Oil Spill Treatment Products Approved for Use in the United Kingdom, [http://www.marinemanagement.org.uk/protecting/pollution/documents/approval\\_approved\\_products.pdf](http://www.marinemanagement.org.uk/protecting/pollution/documents/approval_approved_products.pdf) (last visited Apr. 14, 2013); Bonn Agreement, Counter Pollution Manual (Bonn Agreement, 2012) (1999), available at [http://www.bonnagreement.org/eng/html/counter-pollution\\_manual/chapter23\\_dispersants.htm](http://www.bonnagreement.org/eng/html/counter-pollution_manual/chapter23_dispersants.htm).

<sup>5</sup> U.S. Fish and Wildlife Service, FWS National Contingency Plan, [http://www.fws.gov/contaminants/FWS\\_OSCP\\_05/fwscontingency/8-ICManagementStructure-05.htm](http://www.fws.gov/contaminants/FWS_OSCP_05/fwscontingency/8-ICManagementStructure-05.htm) (last visited Apr. 14, 2013).

<sup>6</sup> This report does not cover the full range of BPs alleged misconduct or ongoing public conflicts. To illustrate, it does not cover the Justice Department's prosecution to date. However, with remaining questions around how much oil was actually released during the BP spill, and Clean Water Act fines ranging from \$1,100 for each barrel of oil spilled to \$4,300 (if BP is found to be grossly negligent), the costs of unaccounted for oil could fall on taxpayers.; Michael Muskal, *UC Expert Questions BP Management's Role in Gulf Oil Spill*, Los Angeles Times, Feb. 26, 2013, <http://articles.latimes.com/2013/feb/26/nation/la-na-nn-expert-questions-bp-managements-role-in-gulf-oil-spill-20130226>.

<sup>7</sup> For clarification, we have omitted citations from the original affidavits within the report. Acronyms are frequently used for terms included in the glossary.

<sup>8</sup> Louisiana Environmental Action Network Home Page, <http://leanweb.org/> (last visited Apr. 14, 2013).

<sup>9</sup> A small portion of statements were provided as non legal statements, due to conflicting circumstances by the witnesses.

<sup>10</sup> BP Meeting Agenda, July 10, 2012 (on file with Government Accountability Project)

<sup>11</sup> <http://www.youtube.com/watch?v=t6rvkMie22s>

<sup>12</sup> Clifford Krauss, John Broder, *Deepwater Oil Drilling Picks Up Again as BP Disaster Fade*, N.Y. Times, Mar. 4, 2012, <http://www.nytimes.com/2012/03/05/business/deepwater-oil-drilling-accelerates-as-bp-disaster-fades.html?pagewanted=all&r=0>.

<sup>13</sup> U.S. Environmental Protection Agency, Oil Pollution Act Overview (2011), <http://www.epa.gov/osweroe1/content/lawsregs/opaover.htm>.

<sup>14</sup> Press Release, U.S. Senator Barbara A. Mikulski, Mikulski Chairs Hearing on Environmental Effects of Dispersants Used in Gulf Oil Spill Cleanup (Jul. 15, 2010), <http://www.mikulski.senate.gov/media/record.cfm?id=326554>.

<sup>15</sup> James Nachtwey, *The Agent Orange Syndrome*, Vanity Fair, Jul. 24, 2006, [http://www.vanityfair.com/politics/features/2006/08/nachtwey\\_photoessay200608#/intro](http://www.vanityfair.com/politics/features/2006/08/nachtwey_photoessay200608#/intro).; University of Virginia Health System, Gulf War Syndrome, [http://web.archive.org/web/20081011144938/http://www.healthsystem.virginia.edu/UVAHealth/adult\\_environment/gulf.cfm](http://web.archive.org/web/20081011144938/http://www.healthsystem.virginia.edu/UVAHealth/adult_environment/gulf.cfm) (last visited Apr. 14, 2013).; Susan Q. Stranahan, *The Valdez Crud*, Mother Jones, Mar. 1, 2003, available at <http://www.motherjones.com/politics/2003/03/valdez-crud>.; Shari Roan, *Health Problems Linger in 9/11 First Responders*, TakePart, Sept. 11, 2012, <http://www.takepart.com/article/2012/09/11/health-problems-linger-9/11-first-responders>.

<sup>16</sup> Kate Sheppard & David Corn, *Hey EPA: How Are Those Dispersant Tests Going?*, Mother Jones, Jun. 23, 2010, <http://www.motherjones.com/environment/2010/06/epa-bp-toxic-oil-dispersant>.

<sup>17</sup> BP p.l.c, Gulf of Mexico Restoration: Offshore, <http://www.bp.com/sectiongenericarticle800.do?categoryId=9036585&contentId=7067606> (last visited Apr. 14, 2013).

<sup>18</sup> BP p.l.c, Bob Dudley at the Chief Executives' Club of Boston, <http://www.bp.com/genericarticle.do?categoryId=98&contentId=7061937> (last visited Apr. 14, 2013).

<sup>19</sup> U.S Department of Commerce, National Oceanic and Atmospheric Administration, Coral Reefs and Oil Spills, [http://coralreef.noaa.gov/aboutcrp/news/featuredstories/may10/oilspill\\_coral/welcome.html](http://coralreef.noaa.gov/aboutcrp/news/featuredstories/may10/oilspill_coral/welcome.html) (last visited Apr. 14, 2013).

<sup>20</sup>BP, Dispersant Background and Frequently Asked Questions (Jun. 19, 2010), available at [http://www.bp.com/liveassets/bp\\_internet/globalbp/globalbp\\_uk\\_english/incident\\_response/STAGING/local\\_assets/downloads\\_pdfs/Dispersant\\_background\\_and\\_FAQs.pdf](http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/incident_response/STAGING/local_assets/downloads_pdfs/Dispersant_background_and_FAQs.pdf).

<sup>21</sup>*Id.*

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- <sup>22</sup> BP p.l.c, Offshore, <http://www.bp.com/sectiongenericarticle800.do?categoryId=9036585&contentId=7067606> (last visited Apr. 14, 2013).
- <sup>23</sup> *Id.*
- <sup>24</sup> U.S. Environmental Protection Agency, Alphabetical List of NCP Product Schedule Products with Links to Technical Product Summaries, [http://www.epa.gov/osweroe1/content/ncp/product\\_schedule.htm](http://www.epa.gov/osweroe1/content/ncp/product_schedule.htm) (last visited Apr. 14, 2013).
- <sup>25</sup> U.S. Environmental Protection Agency, National Contingency Plan Product Schedule Toxicity and Effectiveness Summaries, [http://www.epa.gov/emergencies/content/ncp/tox\\_tables.htm](http://www.epa.gov/emergencies/content/ncp/tox_tables.htm) (last visited Apr. 15, 2013).; Paul Quinlan, *Less Toxic Dispersants Lose out in BP Oil Spill Cleanup*, N.Y. Times, May 13, 2010, <http://www.nytimes.com/2010/05/13/business/energy-environment/13greenwire-less-toxic-dispersants-lose-out-in-bp-oil-spil-81183.html?scp=5&sq=Corexit%20BP%20Oil%20Spill&st=cse&r=0>.
- <sup>26</sup> Directive from EPA to BP on Using Less Toxic and More Effective Dispersants (May 20, 2010), *available at* <http://www.epa.gov/bpspill/dispersants/directive-addendum2.pdf>.
- <sup>27</sup> David Biello, *Is Using Dispersants on the BP Gulf Oil Spill Fighting Pollution with Pollution?*, Scientific American, Jun. 18, 2010, <http://www.scientificamerican.com/article.cfm?id=is-using-dispersants-fighting-pollution-with-pollution>.
- <sup>28</sup> Directive from EPA and the Coast Guard on Reducing the Use of Dispersants to BP (May 26, 2010), *available at* <http://www.epa.gov/bpspill/dispersants/directive-addendum3.pdf>.; “We are going to continue to use those two DOD C130s and we will fly and deliver dispersants whenever we have the weather to do it. We have a significant stockpile of dispersants and we’ve gone back to the supply chain to make sure they are ramping up. They were not producing any and we we’re relying on stock at the start of this, but going back to the supply chain through British Petroleum, they’ve increased their production to 70,000 gallons a day.”; Pursuant to FOIA Request # HQ-FOI-00645, HQ-FOI-00646, and HQ-FOI-00647, E-mail from Joint Information Center to Steve Mason, Region 6, U.S. Environmental Protection Agency, Subject: Transcript from press briefing on ongoing response to oil spill (May 1, 2010, 19:25:21 CST) (on file with Government Accountability Project).
- <sup>29</sup> U.S. Environmental Protection Agency, National Contingency Plan Product Schedule toxicity and Effectiveness Summaries, [http://www.epa.gov/emergencies/content/ncp/tox\\_tables.htm](http://www.epa.gov/emergencies/content/ncp/tox_tables.htm) (last visited Apr. 15, 2013).; Paul Quinlan, *Less Toxic Dispersants Lose out in BP Oil Spill Cleanup*, N.Y. Times, May 13, 2010, <http://www.nytimes.com/2010/05/13/business/energy-environment/13greenwire-less-toxic-dispersants-lose-out-in-bp-oil-spil-81183.html?scp=5&sq=Corexit%20BP%20Oil%20Spill&st=cse&r=0>.
- <sup>30</sup> Pursuant to FOIA Request # 12-00369, Memorandum from team member at Centers for Disease Control, Agency for Toxic Substances and Disease Control, to Carol Selman, Centers for Disease Control, National Center for Environmental Health, Subject: Comments on NOAA/FDA Protocol (Jun. 2, 2010) (on file with Government Accountability Project).
- <sup>31</sup> Jonathan Capehart, *Gulf Oil Spill and Use of Dispersants*, The Washington Post, Jun. 3, 2010, [http://voices.washingtonpost.com/postpartisan/2010/06/gulf\\_oil\\_spill\\_and\\_the\\_use\\_of.html](http://voices.washingtonpost.com/postpartisan/2010/06/gulf_oil_spill_and_the_use_of.html).
- <sup>32</sup> Statement by EPA Administrator Lisa P. Jackson from Press Conference on Dispersant Use in the Gulf of Mexico with U.S. Coast Guard Rear Admiral Landry (May 24, 2010), *available at* <http://www.epa.gov/bpspill/dispersants/transcript-may24.pdf>.
- <sup>33</sup> U.S. Coast Guard, Deepwater Horizon Oil Spill Incident Specific Preparedness Review Final Report 43 (2011), *available at* <http://www.uscg.mil/foia/docs/dwh/bpdwh.pdf>.
- <sup>34</sup> *The BP Oil Spill: Responsive Science Supports Emergency Response*, Science Matters Newsletter (U.S. EPA, Washington, D.C.), Apr. 2012, *available at* <http://www.epa.gov/sciencematters/april2012/spill.htm>.
- <sup>35</sup> Roberto Rico-Martinez et al., *Synergistic Toxicity of Macondo Crude Oil and Dispersant Corexit 9500A to the Brachionus Plicatilis Species Complex (Rotifera)*, Environmental Pollution, Feb. 2013, at 5, *available at* <http://www.sciencedirect.com/science/article/pii/S0269749112004344>.; Julia Whitty, *Chemical Dispersant Made BP Oilspill 52 Times More Toxic*, Mother Jones, Dec. 4, 2012, <http://www.motherjones.com/blue-marble/2012/12/chemical-dispersant-made-bps-gulf-oilspill-52-times-more-toxic>.
- <sup>36</sup> Committee on Understanding Oil Spill Dispersants: Efficacy and Effects, National Research Council, Oil Spill Dispersants: Efficacy and Effects 23 (The National Academies Press, 2005).
- <sup>37</sup> Douglas Main, *Dispersant Makes Oil 52 Times More Toxic*, LiveScience, Nov. 30, 2012, <http://www.livescience.com/25159-oil-dispersant-increases-toxicity.html>.

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- <sup>38</sup>Dr. Susan D. Shaw, Marine Environmental Research Institute, Consensus Statement: Scientists Oppose the Use of Dispersant Chemicals in the Gulf of Mexico (Jul. 16, 2010), *available at* <http://www.meriresearch.org/Portals/0/Documents/CONSENSUS%20STATEMENT%20ON%20DISPERSANTS%20IN%20THE%20GULF%20updated%20July%202017.pdf>.
- <sup>39</sup>*Id.*
- <sup>40</sup>Natural Resources Defense Council, Disaster in the Gulf, <http://www.nrdc.org/energy/gulfspill/belowsurface.asp> (last visited Apr. 15, 2013).
- <sup>41</sup>Seth Borenstein, *Looking for the Oil? NOAA Says It's Mostly Gone*, Associated Press, Aug. 4, 2010, *available at* <http://phys.org/news200145684.html>.
- <sup>42</sup>Christine Dell'Amore, *Giant Underwater Plume Confirmed—Gulf Oil Not Degrading*, National Geographic News, Aug. 19, 2010, <http://news.nationalgeographic.com/news/2010/08/100819-gulf-oil-spill-bp-underwater-plume-science-environment/>.
- <sup>43</sup>National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Oiled Shoreline, <http://www.oilspillcommission.gov/media/restoration/ecological-toll-oiled-shoreline.html> (last visited Apr. 15, 2013).
- <sup>44</sup>Committee on Understanding Oil Spill Dispersants: Efficacy and Effects, National Research Council, *Oil Spill Dispersants: Efficacy and Effects 56* (The National Academies Press, 2005).
- <sup>45</sup>Elanor Schor, *Ingredients of Controversial Dispersants Used on Gulf Spill Are Secrets No More*, N.Y. Times, Jun. 9, 2010, <http://www.nytimes.com/gwire/2010/06/09/09greenwire-ingredients-of-controversial-dispersants-used-42891.html>.
- <sup>46</sup>U.S. Coast Guard, Deepwater Horizon Oil Spill Incident Specific Preparedness Review Final Report 43 (2011), *available at* <http://www.uscg.mil/foia/docs/dwh/bpdwh.pdf>.
- <sup>47</sup>OSHA's participation in the Unified Command allowed it to operate beyond its normal jurisdiction which extends only three miles offshore.; Sasha Chaukin, *OSHA Director: Offshore Cleanup Workers Will Get More Training*, ProPublica, Jun. 21, 2010, <http://www.propublica.org/article/osha-director-offshore-cleanup-workers-will-get-more-training>.
- <sup>48</sup>National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Vessels of Opportunity, <http://www.oilspillcommission.gov/media/response/response-actions-vessels-of-opportunity.html> (last visited Apr. 15, 2013).
- <sup>49</sup>U.S. Environmental Protection Agency, Odors from the BP Oil Spill, <http://www.epa.gov/bpspill/odor.html>, (last visited Apr. 15, 2013).
- <sup>50</sup>Press Release, B.P. p.l.c, BP Provides \$10 Million to Support Study of Health Issues to Gulf Oil Spill, (Sept. 7, 2010), <http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7064912>.
- <sup>51</sup>BP p.l.c., BP Took Steps to Safeguard the Health and Safety of Thousands of Individuals Involved in the Deepwater Horizon Response, <http://www.bp.com/IntermediateSearchAction.do?url=http%3A%2F%2Fwww.bp.com%2Fsectiongenericarticle800.do%3FcategoryId%3D9048926%26contentId%3D7082616&kw=worker+safety&currentPage=1&scope=BP&resultNumber=3&type=search&Host=http://www.bp.com&homeId=1> (last visited Apr. 15, 2013).
- <sup>52</sup>BP, On-Shore PPE Matrix for Gulf Operations (Aug. 14, 2010), *available at* <http://www.osha.gov/oilspills/gulf-operations-ppe-matrix.pdf>.
- <sup>53</sup>Occupational Safety and Health Administration, Deepwater Horizon Oil Spill: OSHA's Role in the Response (2011), *available at* [http://www.osha.gov/oilspills/dwh\\_osa\\_response\\_0511a.pdf](http://www.osha.gov/oilspills/dwh_osa_response_0511a.pdf).
- <sup>54</sup>Louisiana Environmental Action Network, BP Tells Fishermen Working in the Oil Spill That They Will be Fired for Wearing a Respirator (Jun. 1, 2010), [http://leanweb.org/index2.php?option=com\\_content&task=emailform&id=145&itemid=50](http://leanweb.org/index2.php?option=com_content&task=emailform&id=145&itemid=50).
- <sup>55</sup>Elana Schor, *New BP Data Show 20% of Offshore Responders Exposed to Chemical that Sickened Valdez Workers*, N.Y. Times, Jul. 9, 2010, <http://www.nytimes.com/gwire/2010/07/09/09greenwire-new-bp-data-show-20-of-gulf-spill-responders-e-82494.html>.
- <sup>56</sup>Occupational Safety and Health Administration, Hazard Communication Guidelines for Compliance <http://www.osha.gov/Publications/osha3111.html>, (last visited Apr. 15, 2013).
- <sup>57</sup>OSHA emphasizes that workers must have direct access to the MSDSs.; *Id.*
- <sup>58</sup>*Id.*

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- <sup>59</sup> During the Exxon Valdez oil spill, OSHA's standard 24-hour HAZWOPER training was replaced by a four-hour training for post-emergency cleanup workers. Despite widespread critique that the abridged training is outdated and inadequate, it was widely adopted during the BP oil spill cleanup.
- <sup>60</sup> Letter from David Michaels, PhD, MPH, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, to Eula Bingham, PhD, Professor, Department of Environmental Health University of Cincinnati (Asst. Secretary of Labor for OSHA, 1977-1981) (Dec. 1, 2011) (on file with Government Accountability Project).
- <sup>61</sup> *Id.*
- <sup>62</sup> U.S. Environmental Protection Agency, Odors from the BP Oil Spill, <http://www.epa.gov/bpspill/odor.html>, (last visited Apr. 15, 2013).
- <sup>63</sup> U.S. Environmental Protection Agency & Centers for Disease Control, Government Response to the BP Oil Spill: Odors from the BP spill, Jun. 2010, *available at* <http://www.epa.gov/bpspill/reports/odorfactsheet.pdf>.
- <sup>64</sup> Occupational Safety and Health Administration, Frequently Asked Questions on Health Hazards and Protections (Jul. 2, 2010), *available at* <http://www.osha.gov/oilspills/interim-guidance-qa.html>.
- <sup>65</sup> One exception to the respirator policy involved the in-situ burnings (burning of the oil). According to OSHA, respirator access was recommended for workers in close vicinity to the burns, and air quality was monitored to ensure worker safety.; Occupational Safety and Health Administration, Deepwater Horizon Oil Spill: OSHA's Role in the Response 9-10 (2011), *available at* [http://www.osha.gov/oilspills/dwh\\_osh\\_response\\_0511a.pdf](http://www.osha.gov/oilspills/dwh_osh_response_0511a.pdf).
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- <sup>67</sup> *Id.*
- <sup>68</sup> The National Response Team, *Guidance for Managing Worker Fatigue During Disaster Operations* 50 (Apr. 2009), *available at* [http://www.nrt.org/production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/SA-1049TADFinal/\\$File/TADfinal.pdf?OpenElement](http://www.nrt.org/production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/SA-1049TADFinal/$File/TADfinal.pdf?OpenElement).
- <sup>69</sup> PowerPoint: Worker Education and Training Program, National Institute of Health, U.S. Department of Health and Human Services, *NIEHS Oil Spill Response Training Tool: Oil Spill Cleanup Initiative, Safety and Health Awareness for Oil Spill Cleanup Workers* (May 2010), v2 (on file with Government Accountability Project).
- <sup>70</sup> National Institute of Environmental Health and Sciences, Worker Education and Training Program, Improving Safety and Health Training for Disaster Cleanup Workers: Lessons Learned from the 2010 Deepwater Horizon Oil Spill 22 (Feb. 2012), *available at* <http://tools.niehs.nih.gov/wetp/newsbriefs/index.cfm?issue=Feb12/nb24Feb12>.
- <sup>71</sup> Letter from David Michaels, PhD, MPH, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, to Eula Bingham, PhD, Professor, Department of Environmental Health University of Cincinnati (Asst. Secretary of Labor for OSHA, 1977-1981) (Dec. 1, 2011) (on file with Government Accountability Project).
- <sup>72</sup> Louisiana Environmental Action Network, Fishermen Win Another Round (May 10, 2010), <http://leanweb.org/our-work/water/bp-oil-spill/fishermen-win-another-round>.
- <sup>73</sup> *Id.*
- <sup>74</sup> Gina Solomon, BP Coughs Up Another Drop of Air Quality Data: Not Reassuring, Switchboard/Natural Resources Defense Council Staff Blog (Jun. 10, 2010), [http://switchboard.nrdc.org/blogs/gsolomon/bp\\_releases\\_another\\_drop\\_of\\_ai.html](http://switchboard.nrdc.org/blogs/gsolomon/bp_releases_another_drop_of_ai.html)
- <sup>75</sup> Independent air monitoring by the LEAN found that Hydrogen Sulfide concentrations exceeded the Physical Reaction Symptoms concentrations by a factor of 100 to 120 times. VOC concentrations may have exceeded the Louisiana Ambient Air Standards for specific VOCs and may have exceeded the highest concentration of Annual Average Standard by as much 50 times.; Louisiana Environmental Action Network, Evaluation of EPA Air Monitoring (May 10, 2010), [leanweb.org/our-work/air/evaluation-of-epa-air-monitoring](http://leanweb.org/our-work/air/evaluation-of-epa-air-monitoring).
- <sup>76</sup> Government Accountability Project, BP Ombudsman Correspondence, [www.whistleblower.org/action-center/know-your-rights-campaign/the-gulf-coast/bp-resource-manual](http://www.whistleblower.org/action-center/know-your-rights-campaign/the-gulf-coast/bp-resource-manual) (last visited Apr. 15, 2013).
- <sup>77</sup> Letter from Tom Devine, Legal Director, Government Accountability Project, and Marylee Orr, Executive Director, Louisiana Environmental Action Network, to Judge Stanley Sporkin, Ombudsman, BP America Ombudsman Program (Mar. 2, 2012), *available at* <http://www.whistleblower.org/storage/documents/GAPLEANletter.pdf>

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## Glossary

**Acute effects:** Effects having a sudden onset and lasting a short time

**Acute hazard:** A hazard that can have either an immediate or delayed effect (with short-term or prolonged consequences) due to a single exposure to an accident or a release of acutely toxic materials

**Aromatics:** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics include benzene, toluene, and xylene

**Bioaccumulation:** A general term describing a process by which chemicals are taken up by aquatic organisms from water directly or through consumption of food containing the chemicals

**Biomarker:** In general a substance used as an indicator of a biological state

**BOEMRE:** The Bureau of Ocean Energy Management, Regulation and Enforcement

**Boom:** A temporary floating barrier used to control the spread of oil to reduce the possibility of polluting shorelines and other resources, as well as to concentrate oil in thicker surface layers, making recovery easier

**C-130:** A four-engine military transport aircraft, used to spray dispersants during the BP spill response

**CDC:** Centers for Disease Control

**Chronic:** Involving a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years

**Contingency plan:** A document that describes a set of procedures and guidelines for containing and cleaning up oil spills

**Crude oil:** A fossil fuel that comprises organic compounds built up from hydrogen and carbon atoms

**Decontamination:** Also known as “decon”, to make safe by eliminating poisonous or otherwise harmful substances, such as noxious chemicals

**Detoxification:** Also known as “detox”, the physiological or medicinal removal of toxic substances from the human body

**Dispersant:** Chemicals that are used to break down spilled oil into small droplets

**DHS:** U.S. Department of Homeland Security

**EPA:** U.S. Environmental Protection Agency

**FDA:** U.S. Food and Drug Administration

Federal-On-Scene Coordinator (FOSC): Coordinates all federal containment, removal, and disposal efforts and resources during an oil or hazmat incident

GAO: Government Accountability Office

HAZMAT: An abbreviation for hazardous materials

HAZWOPER: Hazardous Waste Operations and Emergency Response

HHS: U.S. Department of Health and Human Service

Hydrocarbons: A large class of organic compounds containing only carbon and hydrogen

In-situ burning: the ignition and controlled combustion of oil

Louisiana Sweet Crude: The type of oil released during the BP spill

Macondo well: The BP-owned well that oil flowed from during the spill, located 41 miles off the Louisiana coast

Material Safety Data Sheet (MSDS): An important component of product stewardship and occupational safety and health, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner

Metamatrix test: See "Volatile solvent profile"

National Contingency Plan: The federal government's blueprint for responding to both oil spills and hazardous substance releases

National Oil Spill Commission: A bipartisan presidential commission, established by Executive Order 13543 to examine the root causes of the Deepwater Horizon explosion and develop options to guard against, and mitigate the impact of, future oil spills associated with offshore drilling

National Institute of Environmental Health and Sciences (NIEHS): A research institute housed under the National Institute of Health, HHS

National Institute for Occupational Safety and Health (NIOSH). Housed under the CDC, it is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.

NOAA: National Oceanic Atmospheric Administration

Natural Resources Damage Assessment (NRDA). Housed under NOAA, it is a legal process to determine the type and amount of restoration needed to compensate the public for harm to natural resources and their human uses that occur as a result of an oil spill incident or a hazardous substance release

**Oil plumes:** Underwater globules of oil that do not float to the surface of the ocean. The heavy use of chemical dispersants, which breaks up surface oil, is said to have contributed to the formation of these plumes

**Oil Pollution Act (OPA):** A law designed to prevent oil spills, ensure cleanup if they happen, and restore natural resources injured by these spills

**OSHA:** Occupational Safety and Health Administration

**Polycyclic aromatic hydrocarbons (PAH):** A family of chemical substances that are found in many types of oil, and include known carcinogens

**Personal protective equipment (PPE):** Equipment worn to minimize exposure to a variety of hazards

**Plaintiffs' Steering Committee (PCS):** A court-appointed group of attorneys representing private claimants in the Deepwater Horizon class action settlement

**Sediment:** Loose particles of sand, clay, silt, and other substances that settle at the bottom of a water body

**Sheen:** A very thin layer of oil floating on the water surface

**Skimmer:** A machine used to remove oil floating on the water

**Slick:** The common term used to describe a film of oil on the water surface, which is thicker than sheen

**Tar balls:** Dense, black sticky spheres of hydrocarbons; formed from weathered oil

**Tar mats:** a dark brown to black, thick, semisolid to viscous mixture of heavy hydrocarbons

**Total petroleum hydrocarbons (TPH):** A term used for any mixture of hydrocarbons that are found in crude oil, such as hexane, benzene, toluene and xylenes

**Toxicity:** The inherent potential or capacity of a material to cause adverse effects in a living organism

**Tyvek suit:** A suit used to protect people from chemical hazards and contamination

**Unified Command:** The BP spill command structure, which integrates BP and federal agencies to respond to the spill

**Volatile organic compounds (VOCs):** Include a variety of chemicals that evaporate quickly and can cause nerve damage and behavioral abnormalities in mammals when inhaled

**Volatile solvent profile:** A blood test used to help identify a patient's prolonged exposure to the most commonly found volatile solvents that have been shown to cause serious health problems

Vessels of Opportunity (VoO) Program: Created to employ local boat operators during the cleanup, it extended to near shore and offshore activities such as identifying oil, working with boom and skimming.

Water column: A conceptual column of water from surface to bottom sediments

Worker Education and Training Program (WETP). Housed under NIEHS, the program encourages innovation for training difficult-to-reach populations by addressing issues such as literacy, appropriate adult education techniques, training quality improvement, and other areas un-addressed directly by the private sector.

