

US EPA ARCHIVE DOCUMENT

**TESTIMONY OF  
LISA P. JACKSON  
ADMINISTRATOR  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**BEFORE THE  
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE,  
AND RELATED AGENCIES  
COMMITTEE ON APPROPRIATIONS  
UNITED STATES SENATE**

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Chairman Mikulski, Ranking Member Shelby and Members of the Subcommittee, thank you for the opportunity to testify on the role of the U.S. Environmental Protection Agency (EPA) in the Deepwater Horizon BP oil spill response. My testimony today will provide you with an overview of EPA's role and activities in the affected Gulf Coast region following the April 20, 2010 Deepwater Horizon mobile offshore drilling unit explosion and resulting oil spill as well as a summary of our primary environmental activities, including dispersant use, waste management, and beach cleanup. I also want to express my condolences to the families of those who lost their lives and those injured in the explosion and sinking of the Deepwater Horizon.

**EPA's Oil Spill Program**

EPA's Oil Spill Program focuses on activities to prevent, prepare for and respond to oil spills from a wide variety of facilities that handle, store, or use various types of oil. EPA regulates approximately 620,000 of these facilities, including oil production, bulk oil storage, and oil refinery facilities that store or use oil in above-ground and certain below-ground storage tanks. Additionally, EPA is the principal federal response agency for oil spills in the inland

zone, including inland waters. Such inland zone oil spills may come from, oil pipeline ruptures, tank spills, and other sources.

The National Contingency Plan (NCP) is the federal government's blueprint for responding to both oil spills and hazardous substance releases. Additionally, it provides the federal government with a framework for notification, communication, and responsibility for oil spill response. Under the NCP, the EPA or the USCG provide federal On-Scene Coordinators (FOSCs) for the inland and coastal zones, respectively, to direct or oversee responses to oil spills. The exact lines between the inland and coastal zones are determined by Regional Response Teams (RRTs) and established by Memoranda of Agreement (MOAs) between regional EPA and USCG offices.

Other federal agencies with related authorities and expertise may be called upon to support the FOSC. The NCP established the National Response Team (NRT), comprised of fifteen federal agencies, to assist responders by formulating policies, providing information, technical advice, and access to resources and equipment for preparedness and response to oil spills and hazardous substance releases. EPA serves as chair of the NRT and the USCG serves as vice-chair.

In addition to the NRT, there are thirteen RRTs, one for each of EPA's ten regional offices and one each for Alaska, the Caribbean, and the Pacific Basin. RRTs are co-chaired by each EPA Region and its USCG counterpart. The RRTs are also comprised of representatives from other federal agencies and state representation, and frequently assist the federal OSCs who lead spill response efforts. The RRTs help OSCs in their spill response decision making, and can help identify and mobilize specialized resources. For example, through the RRT, the FOSC can request and receive assistance on natural resource issues from the Department of the Interior

(DOI), the Department of Commerce, and the States, or borrow specialized equipment from the Department of Defense or other agencies. Involvement of the RRT in these response decisions and activities helps ensure efficient agency coordination while providing the FOSC with the assistance necessary to conduct successful spill response actions. Under the NCP, authority to use dispersants rests with the FOSC but requires concurrence of certain RRT members. For example, RRT representatives from EPA, DOI, the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), and the states with jurisdiction over the navigable waters under consideration may pre-authorize application of approved dispersant products so that the FOSC can authorize dispersant use without obtaining further concurrences.

### **EPA's Role in Spill Response**

USCG has been leading the response following the April 20, 2010 Deepwater Horizon mobile offshore drilling unit explosion and resulting oil spill. EPA is one of many agencies providing support to the USCG-led federal response. EPA's monitoring and sampling activities provide the USCG, states, and local governments with information about the potential impacts of the oil spill and response on the health of residents as well as aquatic life along the shoreline. EPA is collecting samples along the shoreline and beyond for chemicals related to oil and dispersants in the air, water and sediment, supporting and advising USCG efforts to clean the oil and waste from the shoreline, and closely monitoring the effects of dispersants in the subsurface environment.

The USCG, in consultation with EPA and the states, approved waste management plans outlining how recovered oil and waste generated as a result of the BP oil spill will be managed. The plans take into consideration review of applicable federal, state, and local regulations,

planning for waste characterization, and, BP's proposed locations for waste management activities in order to consider the suitability of specific sites and the impacts on the surrounding communities. Given the unprecedented aspects of the BP oil spill, these plans may be updated as necessary to minimize any unforeseen environmental and human health impacts. EPA will post any updates to the plan on its website.

In addition, USCG, in consultation with EPA, issued directives to BP on June 29, 2010, on how the company should manage recovered oil, contaminated materials and liquid and solid wastes recovered in cleanup operations from the BP oil spill in the affected Gulf states. The directives create enforceable requirements, implementation procedures and oversight plans related to BP's handling of waste materials by providing guidelines for community engagement activities and sets transparency requirements on information regarding the proper management of liquid and solid wastes, requiring BP to give EPA and state agencies access to facilities or any location where waste is temporarily or permanently stored. Access includes allowing the agencies to perform any activities necessary, such as assessments, sampling or inspections, and requiring BP to comply with all applicable federal, state and local laws and regulations and to ensure that all facilities where waste is located or placed have obtained all permits and approvals necessary under such laws and regulations. The directives complement the state's activities by providing further oversight and imposing more specific requirements. USCG and EPA, in consultation with the states, will hold BP accountable for the implementation of the approved waste management plans and ensure that the directives are followed in the Gulf Coast states.

EPA is also responsible for maintaining the NCP Product Schedule, which lists chemical and biological products available for federal OSCs to use in spill response and cleanup efforts. Due to the unique nature of each spill, and the potential range of impacts to natural resources,

FOSCs help determine which products, if any, should be used in a particular spill response. If the application of a product is pre-authorized by the RRT, then the FOSC may decide to use the product in a particular response. If the product application does not have pre-authorization from the RRT, then the FOSC must obtain concurrence from the EPA representative and the representatives of states with jurisdiction over the navigable waters under threat. In addition, the FOSC must consult with representatives of DOI and NOAA, as natural resource trustee agencies before authorizing incident-specific use of a dispersant.

### **Use of Dispersants**

Following the April 20, 2010 Deepwater Horizon mobile offshore drilling unit explosion and resulting oil spill, the USCG, in consultation with EPA, DOI, NOAA, and the State of Louisiana, granted BP authorization to use approved dispersant on oil on the surface of the water in an effort to mitigate the shoreline impacts of the oil on fisheries, nurseries, wetlands and other sensitive environments. Dispersants contain a mixture of chemicals, that, when applied directly to the spilled oil, can break down the oil into smaller drops that can sink below the water's surface. Dispersed oil forms a "plume" or "cloud" of oil droplets below the water surface, and mixes vertically and horizontally into the water column, and is ideally rapidly diluted. Bacteria and other microscopic organisms are then able to act more quickly than they otherwise would to degrade the oil within the droplets.

The application of dispersant is part of a broader environmental triage approach to minimize the known threat to the environment to the greatest extent possible. The spill management strategies, practices, and technologies currently being implemented include mechanical removal techniques (use of sorbents, booming and skimming operations), *in-situ*

burning, and lastly dispersants. There are environmental tradeoffs and uncertainties associated with the widespread use of large quantities of dispersants. We know dispersants are generally less toxic than the oils they break down. We know that surface use of dispersants decreases the environmental risks to shorelines and organisms at the surface and when used this way, dispersants break down over several days to weeks. In addition, the use of dispersants at the source of the leak represents a novel approach to addressing the significant environmental threat posed by the spill. Results to date indicate that subsea use of the dispersant is effective at reducing the amount of oil reaching the surface, and can do so by using less dispersant than is needed to disperse oil after it reaches the surface, and has resulted in significant reductions in the overall quantity of dispersants being used to minimize impacts in the deepsea.

On May 10, 2010, EPA and USCG issued a Directive requiring BP to implement a monitoring and assessment plan for both subsurface and surface applications of dispersants as part of the BP oil spill response. Additionally, on May 26, 2010, EPA and USCG directed BP to significantly decrease the overall volume of dispersant used and to cease use of dispersant on the surface of the water altogether unless conditions on the ground limited the use of other mechanical means. Since that directive, we have seen the total volume of dispersants used fall by 72% from their peak levels.

EPA has also established an extensive network to rigorously monitor the air, water, and sediments for the presence of dispersants and crude oil components that could have an impact on health or the environment. All monitoring information and data are posted on EPA's website at: <http://www.epa.gov/bpspill/>. In addition, for subsea monitoring, the toxicity data generated from this monitoring to date does not indicate significant effects on aquatic life. We are closely

watching the dissolved oxygen levels, which so far remain in the normal range. Moreover, decreased size of the oil droplets is a good indication that, so far, the dispersant is effective.

Because of the unprecedented volumes of dispersant being used in the United States and because much is unknown about the underwater use of dispersants, Addendum 2 to the May 10, 2010 directive requires BP to determine whether a less toxic, equally effective product is available. Normally the manufacturers conduct such tests independently; however, EPA began its own scientific testing of eight dispersant products on the National Contingency Plan Product Schedule. EPA required toxicity tests to standard test species, including a sensitive species of Gulf of Mexico invertebrate (mysid shrimp) and fish (silverside) which are common species in Gulf of Mexico estuarine habitats. The invertebrate and fish species tested are considered to be representative of the sensitivity of many species in the Gulf of Mexico, based on years of toxicity testing with other substances. Initial peer reviewed results from the first round of EPA's toxicity testing indicated that none of the eight dispersants tested, including the product currently in use in the Gulf, COREXIT 9500 A, displayed biologically significant endocrine disrupting activity. The results are posted on our website at <http://www.epa.gov/bpspill/dispersants-testing.html>.

While we await the final round of scientific testing, it appears that all the products that are currently registered have similar impacts on aquatic life. While this is important information to have, additional testing is needed to further inform the use of dispersants. The next phase of EPA's testing will assess the acute toxicity of multiple concentrations of Louisiana Sweet Crude Oil alone and combinations of Louisiana Sweet Crude Oil with each of the eight dispersants for two test species.



## Research and Development

Numerous questions have been raised on the effectiveness of dispersants, their inherent toxicity, the toxicity of dispersed oil, and how to deal with the shoreline and wetlands that are now being impacted as the spill moves to shore. Historically, EPA has had a modest oil spill research and development program. Events of the past several weeks associated with the Deepwater Horizon oil spill have made it evident that this modest investment must increase to address the uncertainties that have arisen. The Administration has requested supplemental funds for dispersant research associated with the Deepwater Horizon oil spill. If the funds are appropriated, EPA plans to engage institutions and other federal agencies, such as NOAA and DOI, who have the knowledge and expertise to assist the Agency. The \$2.0 million requested by the President will support research that will begin to provide a greater understanding of the short and long term implications to the environment and public health associated with the spill and the application, surface and undersea, of dispersants. We will also further our research efforts to include innovative and expansive approaches to spill remediation.

The President's request represents an important step forward to improve our understanding of the impacts and implications of the use of dispersants and exposure to the dispersed oil and the potential impact on the environment and human health. EPA intends to continue to pursue an aggressive research agenda over time which will address the mechanisms of environmental fate, effects, and transport of the application of dispersants on released crude oil. This will be conducted by both assessing the risks to human health from exposure to chemical dispersants and chemically-dispersed oil mixtures through direct and indirect exposure and increasing our understanding of chemical dispersants and dispersed oil, including its toxicity over a broad range of aquatic and terrestrial ecosystems and species. EPA will also collaborate

with NOAA and other federal agencies to study the environmental and human health impacts of dispersants and chemically-dispersed oil.

### **Summary and Conclusions**

EPA will continue to provide full support to the USCG and the Unified Command, and will continue to take a proactive and robust role in dispersant use as well as monitoring, identifying, and responding to potential public health and environmental concerns, including waste management and beach cleanup. EPA, in coordination with our federal, state, and local partners, is committed to protecting Gulf Coast communities from the adverse environmental effects of the Deepwater Horizon oil spill. As local Gulf Coast communities assess the impact of the Deepwater Horizon oil spill on their economies, EPA, in partnership with other federal, state, and local agencies, as well as other community stakeholders, will devote its efforts necessary to assist in the oil spill response. At this time I welcome any questions you may have.