UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 0 5 2010

THE ADMINISTRATOR

The Honorable Edward J. Markey
Chairman
Subcommittee on Energy and Environment
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your June 24, 2010 letter requesting additional information from the U.S. Environmental Protection Agency (EPA) relating to the use of dispersants in the Gulf of Mexico following the April 20, 2010 Deepwater Horizon mobile offshore drilling unit explosion and resulting oil spill. Since these events, the Administration's efforts have focused on responding to the disaster and ensuring that the responsible parties stop the discharge, remove the oil, and pay for all costs and damages.

EPA recognizes and shares your concern regarding the use of large quantities of dispersants during operations to contain the spill. As you know, EPA is working closely with its federal partners to ensure vigorous oversight of dispersant use and that an aggressive dispersant monitoring plan is implemented by BP and that data are regularly and rigorously reviewed. EPA and United States Coast Guard (USCG) efforts have resulted in a 75 percent drop in dispersant use from its peak levels. I believe that as the flow of oil is reduced or stopped, we must severely curtail use of dispersants.

Enclosed are responses to your specific questions. Please be assured that the Agency is committed to continuing to provide full support to the USCG and the Unified Command (UC), and will continue to take a proactive and robust role in monitoring, identifying, and responding to potential public health and environmental concerns. If you have further questions or if we can be of further assistance, please don't hesitate to contact me, or your staff may contact Arvin Ganesan at (202) 564-4741.

Sincerely,

Lisa P. Jackson

Enclosure

Enclosure

1. As you know, both Corexit 9500 and 9527 were removed from the UK list of approved dispersants for near-shore use over a decade ago, because they failed to pass the required "Rocky Shore Test" since use of the Corexit products alone were more lethally toxic to a common sea snail than oil.

> **a. Has EPA explored the effect Corexit 9500, the dispersant currently being used in the Gulf of Mexico, may have on similar grazing organisms, such as sea slugs and squids that are present in the Gulf of Mexico? If, so which species did you evaluate and what were the results of these tests? If not, why not?**

Response: EPA has not yet explored the effect of Corexit E9500A on grazing organisms because the water monitoring data we have to date do not show that dispersant is persisting in the water column or settling to the sea floor where such organisms exist. EPA and the USCG do not allow dispersant application on shorelines or within three nautical miles of shore.

> **b. Has EPA evaluated the potential for dispersants mixed into underwater plumes to travel to areas of Florida that have shores that may be similar to a "rocky shore"? If so, has EPA determined what effect these chemicals may have on rocky shore organisms?**

Response: As noted previously, the water monitoring data we have to date does not show that dispersant is persisting in the water column. In addition, EPA and the USCG do not allow dispersant application on shorelines or within three nautical miles of shore. Consequently, organisms that exist in "rocky shore-like" environments would not be exposed.

It is important to clarify that the UK "Rocky Shore Test" does not measure organism lethality or toxicity per se. A dispersant may fail the "Rocky Shore Test" if test species (Common Limpet [*Patella vulgaris*]) experience a "loss of adhesion" due to the presence of surfactants in the product. Any limpets which detach during the test, whether alive or dead, are counted as dead. Consequently, it cannot be concluded from the test data that the Corexit products are more lethally toxic than the Kuwaiti Crude oil used in the test. EPA has already conducted laboratory tests to determine the lethal concentration of Corexit to two aquatic species. These results show that Corexit is practically non-toxic to one species and slightly toxic to the other. Corexit is less toxic than oil and we are in the process of determining the lethal concentration of the Louisiana Crude oil alone and the crude oil mixed with dispersant to two aquatic species to confirm.

2. What types of tests is EPA performing on dispersants other than Corexit to determine if there are any less toxic and more effective alternatives to aid in the mitigation efforts? Is EPA evaluating BP's claim that some other dispersant ingredients break down into chemicals that may have endocrine disrupting properties? Please provide all results of this evaluation.

Response: Following BP's response, and to ensure that decisions about ongoing dispersant use in the Gulf of Mexico are grounded in the best available science and data, EPA began its own scientific testing of eight dispersant products on the National Contingency Plan (NCP) Product Schedule. These dispersant products are: Dispersit SPC 1000, Nokomis 3-F4, Nokomis 3-AA, ZI-400, SAF-RON GOLD, Sea Brat #4, Corexit 9500A and JD-2000. 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. These species 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. These tests were designed to determine toxicity effects so that a relative comparison could be made. They were conducted over a range of concentrations, including those much greater than what aquatic life is expected to encounter in the Gulf.

On June 30, 2010, EPA released the results of initial screening tests to assess cytotoxicity (cell death), endocrine activity, and acute toxicity of eight available dispersants. *In vitro* assays were used to test the degree to which these eight dispersants are toxic to various types of mammalian cells. The results 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.

While the results showed that dispersant products alone (not mixed with oil) have roughly the same impact on aquatic life, JD-2000 and Corexit EC9500A were generally less toxic to silverside fish and JD-2000 and SAF-RON GOLD were least toxic to mysid shrimp. Two dispersants showed a weak signal in one of the four estrogen receptor (ER) assays, but integrating over all of the ER and androgen receptor (AR) results these data do not indicate that any of the eight dispersants display biologically significant endocrine activity via the androgen or estrogen signaling pathways. None of the dispersants triggered cell death at the concentrations of dispersants expected in the Gulf.

The results from the second phase of EPA's testing, released on August 2, 2010, demonstrate that for all eight dispersants tested on both test species, the dispersant alone was less toxic than the dispersant-oil mixture. Tests on oil alone had similar toxicity to mysid shrimp as the tests on dispersant-oil mixtures, with the exception of the mixture of Nokomis 3-AA and oil, which was found to be more toxic. Oil alone was found to be more toxic to mysid shrimp than the eight dispersants when tested alone (data for the silverside fish was inconclusive and are being re-tested with oil alone). The dispersant-oil mixtures can be generally categorized in the moderately toxic range. These externally peer reviewed results indicate that the eight dispersants, when tested alone and in combination with oil, are similar to one another. The results of this testing are posted on EPA's website: http://www.epa.gov/bpspill/reports/phase2dispersant-toxtest.pdf To date, for subsurface monitoring, we have not seen dissolved oxygen levels approach levels of concern to aquatic life and no excessive mortality in rotifers. This confirms that the dispersant used in response to the Gulf oil spill, Corexit 9500A, is generally no more or less toxic than the other available and tested alternatives.

3. As EPA moves forward, what type of revisions does it plan on making to the way in which dispersants are evaluated for addition to the National Contingency Plan (NCP) Product Schedule?

Response: Given the circumstances associated with the current spill, EPA will undertake a review and evaluation of existing laws and regulations regarding dispersants for potential revision. Issues to address include toxicity, efficacy, and other criteria associated with EPA's NCP Sub-part J regulation and the development of new tests and criteria.

4. In its May 26, 2010 directive[1] EPA and the U.S. Coast Guard instructed BP to eliminate surface application of dispersants, except in rare cases. While in the few days following the directive, the amount of surface application was reduced significantly, BP has not ceased surface application of dispersant. In fact for the last few days, more than 10,000 gallons of dispersants have been applied daily to the surface waters of the Gulf of Mexico. While this is a 50% reduction from the pre-directive daily average of approximately 20,000 gallons, the average daily volumes are certainly not zero.

> **a. The May 26, 2010 directive explicitly stated that if BP wanted to use surface dispersant it needed to make a request in writing to the Federal on Scene Coordinator for approval by the United States Coast Guard. Please provide me with copies of the BP requests to the United States Coast Guard, and any EPA feedback provided to the Coast Guard as these requests were considered.**
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> **b. The directive also instructed BP to use no more than 15,000 gallons per day of dispersant subsurface at the site of the well head. Since the directive was issued, BP has exceeded this daily maximum on four occasions (May 28, May 30, June 6, and June 20). Please provide me with copies of the BP requests to the United States Coast Guard, and any EPA feedback provided to the Coast Guard as these requests were considered.**

Response:

Since EPA and USCG issued this directive, dispersant use has fallen by 75% from its peak levels. BP's requests for dispersant use must include information indicating that all other methods of spill recovery and response, such as in situ burning and skimming, are being used to the maximum extent possible before relying on dispersants. EPA has provided input to USCG, the Federal On-Scene Coordinator (FOSC), to encourage the reduction of surface application of dispersants so that they are used only when other response methods are not feasible, and to require BP to demonstrate that the minimum of dispersant is used. USCG is the ultimate authority with respect to these variances. In addition, the National Incident Commander has worked very closely with the EPA Administrator to support careful monitoring and assessment of dispersants.

BP's requests to the United States Coast Guard are available at:
http://www.deepwaterhorizonresponse.com/go/doctype/2931/57851/

5. On May 20, 2010 the Department of Homeland Security (DHS) and EPA wrote a letter to BP CEO, Tony Hayward, urging that the company make publically available all information and data related to the Deepwater Horizon oil spill on a website to be updated by BP daily. BP responded to this request committing to make every effort to collect and upload relevant data to BP's website. At a hearing held by the Oversight and Investigations Subcommittee of the Energy and Commerce Committee on June 17, in response to one of my questions, Mr. Hayward testified that all data and information made by BP is "being published, as we make them, on a variety of web sites." It is my understanding that EPA is publishing only a portion of the data submitted by BP.

> **a. Has EPA confirmed that all the data submitted by BP is in fact being published? If so, where? If not, what steps will EPA take to ensure that BP is being transparent with all data and information relating to the Deepwater Horizon oil spill and related clean up efforts?**

Response: EPA has reviewed the data BP has published and has confirmed that the data posted on its website addresses the May 20, 2010 letter. BP has been posting environmental data on its publicly available website at www.BP.com by a variety of methods, including tablature and spatial methods. BP has also been providing its environmental data to EPA's analytical data management system. EPA and USCG will continue to insist that BP provide comprehensive information and will continue to ensure that BP is being transparent and forthcoming with environmental data and information relating to the Deepwater Horizon oil spill and related clean up efforts and will take appropriate steps when deficiencies are found.