National Incident Commander
Deepwater Horizon Response

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The Honorable Chairman Edward J. Markey
Subcommittee on Energy and Environment
2125 Rayburn House Office Building
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AUG 2 0 2010

Dear Chairman Markey:

I am providing a preliminary response to your July 30, 2010 letter inquiring about our reasoning in authorizing the use of dispersants during the Deepwater Horizon oil spill response.

As you are aware, no new oil from the Macondo 252 well has entered the Gulf since the capping of the well on July 15, 2010 and we have not used dispersants since July 19, 2010. With the well capped and the imminent completion of the "bottom kill" operation, we do not currently plan to apply dispersants again in this response. To best answer your questions about our previous use of dispersants, I will discuss the facts and considerations that the Federal On Scene Coordinator (FOSC) weighed in authorizing their use, both before and after issuing Addendum III to the Dispersant Monitoring and Assessment Directive ("Addendum III").

Protecting Shores from Oil is a Priority
From the beginning of the response, the Deepwater Horizon Unified Command placed the highest priority on the prevention of oil impacts to the ecological and economically sensitive Gulf Coast shoreline. Shrimp, fish and other species either live in or spend critical developmental periods of their lifecycles in the swamps and marshes. The preservation of these marshes is critical to both the ecological diversity of the Gulf of Mexico and the preservation of its fisheries. In addition, we placed a priority on minimizing impacts to the pristine beaches which are a major source of tourism revenue for these five states.

Dispersants are an Effective Back-up to Collection, Skimming and In-situ Burning
Dispersants were one of several tools for preventing oil from impacting the shore. The Unified Command used subsea collection, surface collection (skimming), in-situ burning and booming to prevent oil from reaching the shore. But the effectiveness of each collection method depends upon the weather, sea state and the condition of the oil to be collected. For example, oil which has been in the water for a significant period of time is not suitable for in-situ burning. Neither skimming nor in situ burning are effective when the sea state is particularly rough. The effectiveness of dispersants increases as sea states increase. When in-situ burning and skimming were ineffective or not practicable due to weather or sea state, dispersants were used as an adaptable management strategy during these periods. Because the oil flowed 24 hours a day, the FOSC assessed the daily conditions and determined the most effective response techniques and tools to deploy each day and the use of dispersants was considered as part of this assessment. All FOSC dispersant use decisions were made with the concurrence of or in consultation with the EPA, natural resource trustees from the Department of the Interior (DOI), Department of Commerce (DOC) and the State of Louisiana as required by 40 CFR 300.910 and the Regional Response Team VI guidelines.

Scientific consensus supports the effectiveness and appropriateness of chemical dispersants. By breaking the oil into tiny droplets, natural biological processes are better able to break down the oil. The 2005 National Research Council (NRC) report "Oil Spill Dispersants: Efficacy and Effects," concluded that the potential acute lethal toxicity of chemically dispersed oil is primarily associated with the dispersed oil and dissolved oil constituents following dispersion and not with the current generation of dispersants themselves.

Recent scientific studies by the EPA & FDA suggest that the use of dispersants on the oil is less harmful than the oil alone. On August 1, 2010, EPA announced that they had completed the second phase of dispersant testing to assess the acute toxicity of multiple concentrations of Louisiana Sweet Crude Oil alone, and combinations of this oil with each of the eight dispersants on the National Contingency Plan Product Schedule. The results indicated that the eight dispersants tested are similar to one another based on standard toxicity tests on sensitive aquatic organisms found in the Gulf. These results confirm that the dispersant used in response to the oil spill in the Gulf, Corexit 9500A, is generally no more or less toxic than the other available alternatives. In addition, the EPA found that oil alone was more toxic to mysid shrimp than the eight dispersants when tested alone. Previous EPA testing indicated that none of the eight dispersants (including Corexit 9500A) displayed biologically significant endocrine disrupting activity. Additionally, the FDA has determined that the chemical dispersants used to combat the Deepwater Horizon oil spill have a low potential for bioconcentration in seafood species. The decision to use dispersants was never undertaken lightly. In this case there was an environmental trade-off; the known harm of oil to the environmentally sensitive marsh habitat outweighed the potential harm that might be caused by the use of dispersants off shore in the marine benthic environment. Again these decisions were made in full consultation and concurrence with the EPA, DOC, and DOI.

Dispersants Were Only Used when Necessary

Even prior to Addendum III, dispersants were used only when considered necessary. Our decision to use dispersants was triggered by the need to control the amount of Volatile Organic Compounds (VOCs) at the well site for the safety of the workers drilling the relief well and to disperse oil when other recovery methods were insufficient or ineffective. The quantity of dispersant used was decided based upon known properties of oil and dispersant. Responders would estimate the quantity of oil they observed at a site and then estimate the amount of dispersant to use based upon an established formula of 1 gallon of dispersant for 20 gallons of oil. The FOSC would be briefed on this information and would approve or disapprove the applications as appropriate.

Our top operational priority has always been to ensure the safety and welfare of citizens and response personnel. As you are aware, VOCs pose both short and long-term health impacts to individuals exposed to them. For most spills, VOCs quickly disperse through natural processes. But in this spill, VOCs at the source control site were constantly refreshed by new oil flowing out of the well. VOC levels did not begin to dissipate until the cap was installed making elevated VOC levels a continuous problem as responders attempted to control the source of the spill. In order to ensure the safety of the response personnel, it was necessary to use dispersants at the site of the source of the oil.

When levels are too high to minimize the health risks to workers who are exposed to VOCs, workplace-safety regulations require that workers must wear personal protective equipment (PPE).

However, the use of masks and other PPE in the extreme high heat and humidity of the Gulf significantly increased the risk of heat related injuries to the more than 1,400 workers at the source control site. Because of the hazards from the VOCs, it was important to keep the concentration of VOCs low at the source site. The application of dispersants in the subsurface and by surface vessels at the site enabled safe source control operations by dramatically reducing the concentration of VOCs as detailed in pages 6-7 of enclosure (1).

Away from the source control site, aerial dispersants were used when other methods were not suitable or available for recovering the oil away from sensitive shoreline areas. Enclosures 2-7 are examples of the Dispersant Use Requests which provide specific examples of the factors which led to the selection of aerial dispersants for each application. In general, the factors that the FOSC considered in choosing to deploy aerial dispersants included the broad size of the spill (as much as 7,200 square miles), the geographical distribution of the various oil slicks, and the on-scene weather.

Source Control Vessel Dispersant Use was Authorized Separately from Aerial Dispersant Use.

Authorization to use "source control vessel" (SCV) dispersants was requested separately from authorization for aerial dispersants. SCVs deployed surface dispersants only at the well site and only for VOC control as discussed above. That activity is recorded separately from other surface dispersants used because the circumstances of dispersant application were different. Surface dispersant application by vessels at the well site was necessary because the high concentration of vessels and platforms made aerial application unsafe. The Responsible Party's June 16, 2010, letter regarding SCV dispersant use for the week of June 17-23rd (enclosure 8) requests permission to deploy up to 6,000 gallons per day at the well site, and states that the maximum amount used in the previous week was 3,360 gallons on June 12th. This authorization was a separate authorization to control VOCs and was independent of the authorization to deploy aerial dispersants in other parts of the response area as a response measure. The authorization to deploy aerial dispersants on those days is detailed in separate letters on June 10 (two letters), 12, 13, 14, and 15th. Table 1, below, summarizes authorized and actual use of source and aerial dispersants for the week of Jun 10-16, 2010.

Table 1

Date dispersant applied	SCV authorized (gal)	SCV Used (gal)	Aerial Authorized (gal)	Aerial Used (gal)
June 10	6,000	1,366	21,000*	4,506
June 11	6,000	0	15,300	14,305
June 12	6,000	3,360	7,000**	6,996
June 13	6,000	800	36,000	35,212
June 14	6,000	35	17,800***	10,703
June 15	6,000	160	23,000	2,608
June 16	6,000	213	27,700	13,380

*32,000 gallons requested
** 38,160 gallons requested
***38,880 gallons requested

Subsea Dispersant Varied in Response to Necessity
Your letter requested information regarding two occasions where the FOSC varied from established subsea dispersant application levels. On June 4, the placement of the Lower Marine Riser Package (LMRP) cap disrupted the regular subsea application of dispersants and resulted in the dispersant deployment wand being moved to a non-optimal position. In addition, there was an increased flow from the well head after the riser was cut and as a result, VOC emissions at the source increased to hazardous levels. To reduce VOCs, BP requested and was granted authorization to increase subsea dispersant application to 23,000 gallons for June 4, 2010, via letter dated June 4, 2010. (Enclosure 9)

Between 2100 and 2400 hours on June 18th, site safety monitors at the well site recorded an increase in VOCs. On June 19th, the FOSC authorized BP to increase subsea dispersant use to 15 gallons per minute which equates to 21,600 gallons over 24 hours. (Enclosure 10) On June 19th, 17,780 gallons of dispersant were applied and VOCs were reduced to safe working levels. Once VOCs were effectively controlled, subsea application was decreased to within the authorized level (<15,000 gallons/ day) on June 20th.

Addendum III significantly reduced the amount of Aerial Dispersants Used.
Once Addendum III was in place, the FOSC significantly reduced the amount of dispersants used. During this time, the average amount of total dispersants used in all applications (subsea, source and aerial) dropped 28%; from 26,358 gallons to 19,097 gallons on days where dispersants were deployed.

The most dramatic decrease was in aerial application. Prior to Addendum III, (between April 21st and May 26th), dispersants were used on 28 of 35 days (80%), with an average daily application of 24,386 gallons. Between May 27th and July 19th, dispersants were used on 33 of 54 days (61%), with an average daily application of 8,892 gallons, a 64% reduction in amount applied.

Although source application of dispersants was governed by the level of VOCs at the source and the protection of responders at the well site, Addendum III still resulted in a reduction in the total amount of dispersants applied. Following the issuance of Addendum III, the amount of dispersants used per application was reduced 55% (from a daily average of 5,046 gallons to 2,276 gallons).

In the period following Addendum III, the average daily amount of subsea dispersant applied did increase 12%, from 10,553 gallons to 12,041 gallons. But subsea dispersant is directly correlated with VOC levels at the well site, and these actions were taken for worker safety. The FOSC worked with BP to ensure that subsea dispersant levels were kept at the lowest level necessary.

Significant dispersant operations ended on 15 July 2010 with the capping of the well. The last dispersant application was 200 gallons on 19 July 2010.

We will provide additional information via separate correspondence no later than October 1, 2010. In the interim, we are happy to meet with your staff to answer any questions you may have.

Sincerely,

T. W. ALLEN
Admiral, U. S. Coast Guard (Ret.)
National Incident Commander

Enclosures: (1) Dispersant Usage Summary
(2) Dispersant Use Request and Authorization June 10, 2010
(3) Dispersant Use Request and Authorization June 11, 2010
(4) Dispersant Use Request and Authorization June 12, 2010
(5) Dispersant Use Request and Authorization June 13, 2010
(6) Dispersant Use Request and Authorization June 14, 2010
(7) Dispersant Use Request and Authorization June 15, 2010
(8) Weekly Source Control Surface Dispersant Plan (June 10 through 16, 2010)
(9) June 4, 2010 Source Control Special Dispersant Request and Approval
(10) June 19, 2010 Source Control Special Dispersant Request and Approval
(11) June 15, 2010 Aerial Dispersant Plan Request and Approval
(12) Daily Dispersant Use Data