

PUBLIC MEETING
OCEAN SPRINGS, Mississippi
August 28, 2010

A public meeting was held in Ocean Springs on August 28, 2010, with members of the public and representatives from the Mississippi Department of Environmental Quality, the Mississippi Department of Marine Resources, the National Oceanic and Atmospheric Administration, and BP. The meeting was moderated by Mike Mangum of the Jackson County Board of Supervisors and Ocean Springs Mayor Connie Moran. Following are the written questions submitted by the audience and the responses of the panel. Some of the questions have been edited and the answers augmented after the meeting to clarify the information, to ensure its accuracy, and for grammatical content.

1. Did people have health affects from eating the seafood from Exxon Valdez oil spill. What preventative measures are we taking? People's lives are at risk! *Question edited for content accuracy*

Based on the thousands of tissue samples that have been analyzed after this spill, and reports from those of us who have been eating the seafood since our waters were reopened, we do not expect health effects from eating Gulf seafood. Due to the oil spill Gulfcoast seafood is the most scrutinized seafood in the United States and all testing shows the seafood to be safe.

NOAA and FDA have taken extraordinary preventative measures so that commercial and recreational fisheries resources are not harvested and/or enter interstate commerce. The preventative actions are being conducted in a three phase approach by disallowing harvesting in water areas of concern; conducting surveillance and both testing sensorically and chemical analysis for PAHs of fishery resources outside the closed areas, and by collecting and also analyzing dockside samples. The NOAA Fisheries Seafood Inspection Laboratory had received 3,450 specimens which were processed into 4,018 samples. The specimens were collected from base line areas which were not oiled and buffer boundaries five nautical miles from our fishery closure areas and from other are scheduled for reopening or harvesting. Fishery samples in the oiled areas where not sampled since such samples would have been violative of the Food, Drug and Cosmetic At, as amended since under the Food, Drug, and Cosmetic Act they "...may be injurious to health...". Nevertheless none of the samples tested were above FDA's Level of Concern for PAHs. The samples ranged from 100 to 1,000 times less than the FDA's level of concern for PAHs.

2. Alaska's herring fishing crashed after the Exxon Valdez remains impacted now. What species are at risk here and what is being done to anticipate and respond to problems?
Question edited for content accuracy

What happened with the oil spill from the Exxon Valdez in the Prince William Sound in Alaska and what happened in the Gulf of Mexico with the Deepwater Horizon leak are two very different set of circumstances. In Prince William Sound there was a single

release 10.8 million gallons of heavy crude into waters that are significantly colder than the Gulf of Mexico. With the Deep Water Horizon incident there was a continuous release of an estimated 180 million gallons of light sweet crude in 5000 feet of water over a period of 87 days. Also, the water temperature in the Gulf of Mexico is much higher. Fortunately, for Mississippi the Deep Water Horizon leak was approximately 120 miles from our shores. Oysters are a concern in state waters. We are currently conducting in-depth evaluations of these resources. We are fortunate to have a long term fisheries assessment and monitoring data base. This database includes shrimp trawl, gillnet, oyster dredge and beam plankton trawl samples which are used to monitor population changes over time. In conjunction with states, academic institutions and Federal agencies, NOAA has initiated the National Resource Damage Assessment process which will determine any damage to the ecosystem, and flora and fauna therein, for damage and restoration purposes.

3. Is there (home tests) home kits? Why not take preventative measures?

There are some test strips and test kits available for testing for hydrocarbons and PAHs (polycyclic aromatic hydrocarbons) in water and soil. We are not aware of similar kits for tissue. Sensory testing is a reliable means of detecting oil contamination. If the seafood smells or tastes of oil, do not eat it. The seafood testing being undertaken by DMR and MDEQ is a preventative measure. We are continuing to test all types of seafood to ensure that it remains safe. The number of inspections at the processors, wholesale and retail level have been increased and all show the seafood to be safe.

4. Did you read my papers I gave you yesterday? Would like an answer. What is being done about the underwater plumes?

Bacteria and other microorganisms are breaking down the plume of dispersed oil (concentrations reported to be 4 to 10 ppm) in the deep open waters of the Gulf.

Mr. Garrett:

- a. Dispersants “break down rapidly.” Define rapidly.
- b. What are remaining compounds after breakdown? Any concerns?
- c. Said that current science says bioconcentration is not likely. Sounds equivocal. Is there doubt? Further research in progress? FDA is conducting tests on fish and shellfish to further evaluate this. What are possible concerns?

Fishery resources differ in their chemical retention times for compounds such as dispersants and PAHs. For example, fish excrete dispersants quickly (it is sometimes difficult to find them at all). Shrimp, crabs, and oysters retain such compounds longer than finfish. NOAA, FDA, and EPA have ongoing research for better methods to analyze for dispersants.

State and federal officials continue to investigate reports of underwater plumes. While there is scientific consensus that there is some oil still remaining in the water column out near the well site in the 1000 meter range it is not expected to migrate inland.

There has been significant efforts to sample the water column and bottom within the Mississippi Sound with no confirmed subsurface oil or oil in the sediments within the Sound.

5. NOAA, again who is responsible for the seafood product?
6. Does 533 ppm of Total Petroleum Hydrocarbons sound like algae to you experts? (An average of two readings from absorbent pads collected of Pass Christian last week. Ed Cake)
We have found absorbent pads that have never been in the water to contain an average of 2000+ ppm petroleum hydrocarbons. As we have looked into it, we have found that the pads in use are actually made from petroleum products and never intended for analysis. This explains the high blank value. Any result lower than the blank value indicates the material on the pad is not oil and should be interpreted as a negative result.
7. Where are the results of the “subsurface oil surveillance and monitoring program in Near Shore waters “being published? They will be published on the MDEQ website: www.deq.state.ms.us. They will also be published by Unified Incident Command since this was a joint exercise.

8. Your reason for not testing for dispersant?

We have done testing for dispersant constituents in association with our sentinel sampling and some complaints—so far all have been non-detect. EPA has done more and BP’s contractors have done even more. To my knowledge, only 1 or 2 detects for constituent, propylene glycol...1 near Grand Isle, LA.

The sensoric tests performed on the samples, by NOAA experts, would have picked up any aromatic compound, including dispersants.

9. Regarding data on DEQ site: All testing except in island passes seems to look only at surface water—0.5 feet. Why no bottom testing except in passes?

Most of MDEQ’s sampling was collected either nearshore in response to a complaint of visible oil or part of our sentinel monitoring efforts. The sentinel sampling in the passes was implemented primarily to look for oil that may be moving into the Sound underwater and undetected by surface surveillance. Most of the samples have been collected near the surface because through most of the response, that is where the oil was and expected to be. We included the bottom testing in the island passes (150 samples) as a means of detecting submerged oil if it came into the Sound with the expectation that if we saw it there, we would expand bottom sampling to other locations. All of the pass samples have been non-detect for Oil Range Organics in bottom samples. As the response has progressed, we have collected more subsurface samples from areas of concern reported by fishermen and near the oyster reefs.

Additionally current efforts are evaluating the entire MS Sound for subsurface or bottom oil. Thus far none have detected oil at these levels.

10. Why is the data on the MDEQ site not up to date. Last update was August 11!! Why so little testing? Only a few dozen locations. Only one south of the islands—heavy oil.

It typically takes 7 to 14 days to get the analytical results, have them quality assured, then posted to the web site. The last day of the sentinel sampling in the passes was August 6, as we were switching over to the more intensive grid sampling of Mississippi Sound. This sampling was held up several days due to weather. Our data managers are currently working on a Freedom of Information Act Request. We are also working on the best way to display complex data.

One site near Ship Island was mislabeled as a water sample when it was actually a water sample with small tar patties. We have concentrated our efforts in the Mississippi Sound. The National Park Service has taken a greater role south of the island.

11. So far your sample size for all species is not statistically significant.

The sample size for tissue samples may not be statistically significant from a research perspective; however, all the agencies involved (EPA, FDA, NOAA, and the states) routinely issue fish advisories for various contaminants. And, the amount of data available in this case, especially when viewed in aggregate, far exceeds what is typically required or available when issuing or rescinding an advisory. Several thousand tissue samples have been tested by state and federal agencies related to this spill. Each tissue sample represents a composite of multiple individual organisms (ie. minimum of 1/2 pound of shrimp, 10 crabs, 15 oysters, and up to 6 finfish)

12. What is the difference between Corexit and Agent Orange?

Agent Orange was a herbicide used in Vietnam as a defoliant. The herbicide contained a contaminant called dioxin, a byproduct of the manufacturing process, which was more toxic than the herbicide itself, and which had the chemical composition to bioaccumulate. Corexit 9500, nor its constituents, have the chemical composition that would cause them to bioaccumulate. They are polar compounds that typically do not penetrate cell walls, and therefore do not become incorporated in the tissues. Corexit is a mixture of several compounds, some of which are commonly found in other products including foods and pharmaceuticals.

13. Has there been any testing for dispersants in Mississippi seafood and fishing stocks? What is the basis for not being concerned about dispersants in seafood?

No testing in stocks. According to all the federal and state toxicologists we have talked to, the dispersants will not be a significant health issue for people in Mississippi for several reasons:

1. Corexit 9500 and its components do not have the necessary chemical and physical properties that would lead to bioaccumulation in tissues of aquatic organisms. The octanol–water partitioning coefficient indicates that it will not bioaccumulate, but FDA is conducting tests on fish and shellfish to confirm this.
2. The individual components are relatively non-toxic. Propylene glycol is used as a food additive and in skin and beauty aids. Organic sulfonic acid is used in lotions and pharmaceuticals that some elderly people take daily. The petroleum distillates, which are similar to mineral spirits, are potentially the biggest problem, but they are highly volatile and will not persist in the environment for long.
3. Corexit 9500 is less toxic than many compounds we use in our homes everyday. It has the same hazard rating as Dawn Dishwashing Liquid on its Material Safety Data Sheet, 1 (slight) for Health and 1 (slight) for Flammability. According to published data, it is 10 to 20 times less toxic to aquatic organisms than ammonia or chlorine bleach, which are common household cleaners.
4. We do not expect to see significant concentrations in Mississippi waters. As an extreme example, if all 1.8 million gallons of dispersant that were used in this spill were dispensed at the same time, over one square mile near the well site, after mixing the concentration would be 0.2 parts per trillion. This represents a huge overestimation of risk, because in reality the material was applied over 7 to 8 weeks, over a much greater area, so the actual concentration would be much lower.

According to published reports, the acute toxicity (LC₅₀) of Corexit 9500 is 20 parts per million to *Artemia* or brine shrimp. This means that it took 20 parts per million Corexit 9500 to kill 50 percent of the brine shrimp during this test. So the predicted worst case concentration of Corexit in the Gulf of Mexico is 100 million times less than the reported toxicity level.

To put these concentrations in perspective, it would take 20 drops of dispersant in 16 gallons of water to kill 50 percent of the brine shrimp. And the worst case concentration of dispersant, out in the area where it was applied, would be equivalent to 1/5 of a drop of dispersant in a string of railroad tank cars that stretched 10 miles long. So the chances of toxic concentrations of Corexit 9500 reaching Mississippi waters more than 80 miles from the well are extremely remote.

14. Fishermans found fishes with belly full of oil? How can you answer to this when you say samples are clear.

MDEQ has had one report of fish with oil in belly. We collected the fish and had them visually inspected and chemically analyzed. No oil was found in the chemical analyses, and the visual inspection revealed the dark coloration in the body cavity was the normal stomach and intestinal contents of mullet feeding in shallow marsh areas. We will be glad to investigate other cases where oil in the belly of fish is suspected.

15. Will you allow fishermen's to be apart of the sampling process? How can they be apart of the sampling process?

We used approximately 26 Vessels from the VoO program in the subsurface sampling effort, and Dr. Walker has offered for fisherman to go along with us while we sample or to take us to areas where they suspect contamination. Sampling is a detailed scientific and legal process that requires specific procedures and "Chain of Custody" procedures to be Utilized. MDEQ and MDMR continue to respond to all complaints and invite fisherman to lead our samplers to any suspect areas where samples may be collected.

16. How much dispersant in total has BP and the oil clean up efforts used to date. Seeing as BP has lost so much credibility in the public's eye can any other organization confirm their dispersant use numbers? Any enquiry into volume of dispersant use? E.g. a dispersant audit.
17. Will you personally put your money where your mouth is? Will any of you sign a contract taking personal responsibility for damages or injury or illness or death that occur because your science states these waters and seafood are safe? Delores Suarez.

Our staff continue to work, eat and live in these areas alongside residents.

18. Could I get a card or contact info for each of the panel members, so that we can have a similar meeting in Alabama? I hosted a meeting with 175 fishermen in Bayou La Batre last week that was similar.

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This was a meeting requested and hosted by Jackson county and Ocean Springs officials. If others would like a similar meeting they can request through the US Coast Guard, MDEQ, MDMR or their similar state agencies in other states.

19. To BP—Why are Louisiana boats on hire whether working or not, while Mississippi fishermen are not?

The VOO program is driven by operational demands. At the time of this meeting there are still VOO boats under hire by BP within MS. LA currently does have more operational demand for VOO boats than MS and thus more boats under hire.

20. Would you repeat, state or provide a comprehensive list of subcontractors (BP Subcontractors) operating in Mississippi? Further, could you state or provide a list of beach clean-up subcontractor and worker demographics (by race)?

Ya-Sin Shabazz

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- You asked for demographic data on the beach workers. We don't have that data. Many of the response workers, and most workers in the counties, are employed by a wide variety of contractors. We don't collect demographic data on contractor's employees.
- In addition, you asked for a list of subcontractors operating in Mississippi. As a general rule, we have tracked contract companies primarily based on whether they were deployed out of the Mobile incident command center. Consistent with our internal tracking system, attached is a list of subcontractors who are providing larger populations of workers in our oil spill clean up efforts in Mississippi, Alabama and Florida. We believe that many of the workers in Mississippi are employed by one of these companies.

21. Why are there still tarballs on Dauphin Island and at Bon Secour National Wildlife Refuge?

This is an AL question but this is not unexpected. Tar balls are continuing in MS areas. BP is committed to response and removal of all oil products.

22. Have the interiors of each of the lagoons on the barrier islands been checked for oiling?

Yes.

23. Why does FDA refuse to take responsibility for these foods they say is safe to consume? Why does BP not publicly promote the safe eating of our Gulf seafood? Avery Bates.

BP Response: 1. We're working directly with the DMR Seafood Marketing program provide assistance with their programs. 2. Given recent coastal counties tourism grants amounting to \$3 million. Working with grant recipients to have Mississippi seafood promotion as part of local tourism activities.

Under the Food, Drug and Cosmetic Act, as amended, an adulterated food may not be introduced, transported, or received into interstate commerce and/or "...if it bears or contains any poisonous or deleterious substance which may render it injurious to health." Therefore, under FDA's regulations it is the responsibility of the food producer, processor, transporter, and/or storage facility to ensure the safety of foods are introduced into interstate commerce.

24. What long term programs are in place to assess bioaccumulation of oil & dispersants the ecosystem?

DMR and MDEQ will continue to monitor fish and seafood from Mississippi waters to see if tissue concentrations change over time. The Natural Resource Damage Assessment (NRDA)

led by NOAA and the states will involve a small army of scientists to evaluate and address all long term environmental impacts from the spill.

In addition BP has committed \$500 million to fund long term research on the effects of the oil spill on the Gulf ecology.

25. What is being done to make us better prepared for the next spill? How will problems in this spill response be corrected?
- 3 lines of defense
 - booms deployed and maintained poorly
 - booms ineffective in even light chop with 8 knot breeze

The Area Contingency Plan (ACP) is designed to be a living document. The ACP will be evaluated and changes are expected. Additionally federal, state and local changes are expected. The Mineral Management Services (MMS) within the Department of the Interior has already been changed.

26. Why does it take so long for DEQ to responde and investigate complaints? Example—oil at Gulf Park Estates Pier Area. Documented by L. Williams video

DEQ has responded to this area numerous times and in fact can be seen in several of her videos. Much of what is shown in the Gulf Park Estates is the result of natural marsh conditions and not the result of the oil spill.

27. If seafood is as safe as all agencies agree who or whom or what party is held accountable?
James (Catfish) Miller

Yes, all seafood on the market is safe as ever.

Under the Food, Drug and Cosmetic Act, as amended, an adulterated food may not be introduced, transported, or received into interstate commerce and/or "...if it bears or contains any poisonous or deleterious substance which may render it injurious to health."
Therefore, under FDA's regulations it is the responsibility of the food producer, processor, transporter, and/or storage facility to ensure the safety of foods are introduced into interstate commerce.

28. What is purpose of HAAD Program high altitude aerosol dispersant?

We are not aware of this activity and no proof was offered.

29. Will NRDA baseline data be available to the public?
- Sample site shown?

- b. 1920 mg/l is not significant oiling? See data point south of Horn on MDEQ site. Mr. Gatian said only significant oil detected was in P.C. Harbor after a diesel spill. Please explain.
- c. This sample result is reported on the DEQ web site as a water sample. While the sample was mostly water it did contain several small “cornflake” size tar patties. The sample was extracted in total and analyzed. It was not segregated into separate water and tar patty samples for analysis. Based on all other results of water samples below mats of tar balls, we are confident the level of ORO found in this sample is due to the tar patties and not dissolved in the water column.

30. There has apparently been much more sampling and testing done than the public knows about. Communication with the public has been very poor. This has created anxiety, mistrust and anger among the public. What will be done to get this information to the public?

We will work harder to get the data checked for quality assurance so it can be made public.

31. Will you eat the seafood from the Gulf of Mexico?

Yes, to a person all the panelists indicated they are eating Gulf Seafood now.

32. Why do you expect the American public to believe that 210 million gallon of oil just disappeared not to mention dispersants and methane gas?

It did not magically disappear--some of it evaporated, some of it was picked up, some is being degraded by bacteria in the marshes and in the open gulf, and some will continue to wash up on our beaches as tarballs.

33. Why did sorbent probe not go all the way to bottom? Slide says “to near bottom.”

The sorbent pads are porous materials that will pick up sediments and other materials. We chose not to drag to avoid picking up sediments which would mask results and also because this portion of the plan was intended to check the water column. A separate tactic of sediment sampling was employed to check sediments for oil.

34. Was an effort made to check likely oil accumulation locations? Deep holes and channels?

Yes. All channels were included in the sorbent probe grids with many drops in each. Only 3 of the sediment sites were in or on the edge of the shipping channels. This is an area that needs further investigation.

35. Is the pad material that shows false positives for oil the same material used for the sorbent drops?

Yes. It's the best we have for a quick screening process. Based on the information we have, we believe the pads are useful to help target areas of suspected oil to sample, but not as a valid analytical tool.

36. Slide says there were 44 complaints/VoO reports. Dr. Walker said on MPB that there had been only one. Please explain.

That number's a total throughout the process. Dr. Walker may have been referring to VoO complaint directly to his office. DEQ has responded to complaints coming through our ready room, local command, local government officials. The 44 number is cumulative from the beginning of the response activities.

37. Why were there few or no sorbent drops done south of the islands? The area south of Cat Island had no sorbent drops on the slide. Grid was not as dense as north and east side of Cat.

The process started in the Sound. We will evaluate and decide how to proceed south side. The slide was produced while process still under way. We continue to complete all grids

39. What will Barbour and Walker do with unused BP money? Why not give some to Gulf Coast Research Lab? Gov. Riley in Alabama gave Dauphin Lab \$5,000,000.

These funds are dedicated to oil spill response. However, we are currently in talks with BP about reprogramming the remaining funds for projects related to: seafood safety and marketing, shorebird habitat restoration, improving rehabilitation and holding facilities at the Institute for Marine Mammal Studies, create/restore nearshore and offshore artificial reef habitat and to populate these habitats with fish, crab, and shrimp produced through Mississippi land-based aquaculture operations and for enhanced monitoring of Mississippi seafood.

38. With \$50 million dollars in hand to deal with the spill does the local marine lab not have money to test oiled crabs? Alabama gave their marine lab \$5 million.

I am not aware of how funds were spent in Alabama. It is my understanding that these funds are dedicated to oil spill response. We have a very good working relationship with the Gulf Coast Research Laboratory (GCRL), and they do the majority of research that we need. I am not aware of any request from GCRL to fund the research mentioned, but as always we would be glad to assist them in writing a grant or looking for a funding source for any important project they have.

39. When and how will we see a detailed accounting of where the \$50 million BP Grant money went?

The BP grant money so far has gone to the cities and counties, paid for the fabric fencing projects and the skimmers that are on lease to the state and the skimmers that were built for the state. At the end of the grant period, MDMR will release a summary of the grant by category. This is all public information, and we will release a detailed accounting upon receiving request for this information.

40. Have tissue samples been taken primarily from popular marketable fish? Have species such as Menhaden and mullet been tested? Wouldn't mullet be a good species to check? It seems

that their feeding mode and distribution would make them likely to assimilate oil and dispersants?

We have sampled shrimp, oysters, crabs and finfish, and I believe this question is specific to finfish. We sampled a variety of finfish, and some mullet have been tested, along with white trout, croaker, spotted seatrout, red drum, spot, Spanish mackerel, red snapper and triple tail. I am not aware of any menhaden being tested, but I will direct my staff to make sure some menhaden are sent in to the Mississippi State University Chemistry Laboratory for analysis.

41. How/What will the DMR do to restore credibility with the taxpayers?

We will work hard every day and continue to collect samples that are taken using accepted protocols to gather information to support the decision making process. We will do a better job to relay information to the public about the work that we are doing especially the work related to seafood safety.

42. Louisiana provides a weekly summary of seafood safety testing with tables of summary results. Why is this done in Mississippi?

Thank you for your question, and I agree we need to do a better job on getting seafood safety information out to the industry and the public. I just recently have seen the Seafood Update that Louisiana Department of Health and Hospitals has been producing, and I think it is well done and contains a lot of good information. I have directed my staff to start working on a similar newsletter that we can post on our website and send out to licensed commercial fishermen and seafood processors and dealers.

43. According to the CFR and under the NCP, Subpart J 300.910 (E) "Sinking agents shall not be authorized for application to oil discharges." Under what laws, (not regulations) are such activities illegal and what federal agency or entity has the authority to hold BP accountable, if indeed, such activity is illegal? The EPA has not shown this authority. On May 19, EPA told BP they had 4 days to change the dispersants used. Between May 28 and July 14, the USCG had approved 74 exemptions to BP. The CFR states, "The On-Site Command may authorize the use of any dispersants." What federal entity actually has the final authority to order BP to stop using dispersants; declare that spraying of dispersant after issuance of a cease and desist order is illegal; and prosecute BP for using product to sink oil? Documentation includes: Claims by BP and Coast Guard, BP boat docks, fish kills in area of eyewitness accounts, sick people in areas of eyewitness accounts.

44. Why does BP and the federal government claim that there was no dispersant used in local waters when I have pictures of empty 9500 and 9527 containers sitting on the docks in Dauphin Island and Bayou LaBatre, AL?

The pictures provided could not be verified. No dispersant application was ever approved for near shore use and none was applied by Response personnel.

45. What is purpose of 80 miles barrier of non-absorbent booms from Patten (sic) pass south?

We are not familiar with this.

46. Why is the sampling grid so thin around Cat Island? That area is where most of the oil reports from the public have been.

The grid had the same density of surveillance across the Sound. The map shown at the meeting, was a day or two old and did not reflect the final surveillance results. The slide was produced while process was still under way. We are continuing to complete all grids. DEQ has also responded to those reports and taken samples outside of this plan. Those sites are not included in the subsurface plan grid.