Thank you for this opportunity to testify. I am a Senior Scientist with the Oceans Program at the Natural Resources Defense Council (NRDC). My testimony is presented on behalf of NRDC, a national environmental organization with over a million members and online activists, dedicated to the protection of the earth – its people, plants and animals and the natural systems on which all life depends.

Recently communications about the oil spill from the federal government have been optimistic. We are hearing that pieces of the puzzle are falling into place, that the picture looks better than many had feared, that we have “turned the corner.”

However, previous research on oil spills tells us that we are at the beginning stages of this event, that the story is necessarily complex, that many crucial questions remain unanswered.

In my testimony today, I will focus on three recent actions by the government that have raised concern.

**Trade-off associated with dispersants**

The recent EPA laboratory studies on the toxicity of chemical dispersants found that the dispersant Corexit is less toxic than the oil released and that the dispersant/oil mixture has roughly the same toxicity as the oil itself.
With the release of these findings the federal government concluded that “the picture is becoming clearer” that dispersants were an "important tool in this response."

While it may be tempting to conclude that the use of dispersants during this oil spill was a good idea, this conclusion is premature. It would be unwise to draw conclusions about the safety of this unprecedented application of chemical dispersants from two laboratory experiments and field observations that the dispersants are successfully dispersing the oil.

Many important questions remain:

What estimated proportion of the oil that would otherwise likely end up on the coast was redirected to the open water? What organisms and ecosystems have been exposed to the chemically dispersed oil? Is the chemically dispersed oil encountering vulnerable benthic ecosystems by settling onto the shallow shelf or into deep ocean canyons? Is the chemically dispersed oil – or are the dispersants – getting into the food chain? Is there the potential for them to get into the food chain? What are the public health implications of exposure to dispersants by the response workers?

It is clear that the use of chemical dispersants is a tradeoff – but it’s not at all clear that we fully understand the tradeoff we made yet.

Oil Budget

A few weeks ago, an oil budget by the National Incident Command was released under the banner that 75% of the oil has been “taken care of by mother nature.” Exact percentages of the oil had been removed, evaporated, or dispersed were presented.

In actuality, nothing in the report suggests that 75% of the oil is gone. Given the lack of information about the rate of biodegradation, it is not clear what fraction of the oil remains in the

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1 Paul Anastas, Monday, August 2, 2010 in press conference on phase II EPA dispersant test results
2 Carol Browner, Wednesday, August 4, 2010 in NBC's "Today Show."
ocean. Dispersed oil is not the same as disappeared oil. A more direct interpretation of the federal government’s analysis shows that up to 50% of the oil may remain in the environment. This is a lot of oil – over 100 million gallons – or the equivalent of nine Exxon Valdez spills.

In addition, the federal oil budget was a partial tally of the hydrocarbons released into the environment (it did not include methane, which can also cause ecological harm) and an incomplete assessment of the fate of the oil.

Many important questions remain:

What is the location and the fate of the methane (which appears to equal the amount of oil released into the environment)? Where did the dispersed oil go? What is the rate of biodegradation of the oil in the water? What proportion of oil went to the coast or is on the bottom?

The released oil budget represents a ‘snapshot’ of the oil, in a moment in time. It does not directly address where the oil has been, where it is going, and how long it will remain in the system (or, importantly, the ecological impacts throughout). To fully understand the risks of the remaining oil and the extent of the damage, we need this picture to be filled in and this oil budget to be refined.

**Seafood Safety**

Recent statements by the federal government assure Americans that open fishing grounds and seafood in markets are free from oil and pose no risk to consumer safety.

However, many important questions and concerns remain. These include:

1. Much of the data on contamination in Gulf seafood are not publicly available, so scientists cannot independently review the findings. NOAA has released data on less than 100 samples out
of thousands that they say they have, and only on finfish, not shrimp. Data from state waters have not been released.

2. The seafood monitoring that is currently being done may not be adequate, in terms of small sample sizes and the failure to monitor for toxic metals and dispersants.

3. Assumptions used in the FDA risk assessment fail to adequately account for exposure of polycyclic aromatic hydrocarbons (PAHs) to vulnerable populations, such as the developing fetus, young children, and subsistence fishing communities.

4. Due to lack of public transparency, questions remain about the scientific basis by which states are making decisions on reopening fishing area. For example, is subsurface oil (in the water or on the bottom) being taken into consideration?

The Gulf oil disaster represents the largest oil spill in U.S. history. We understand that the government wants to turn a corner and signal that the Gulf is on the road to recovery. However, the facts simply do not bear this out.

There is still a huge amount of oil still in the ecosystem. Even accepting the government’s characterization that 75% is gone, then there would be as much as 50 million gallons in the system, almost 5 times the size of the Exxon Valdez spill. If the dispersed oil is included in that remaining fraction, the amount is potentially 100 million gallons.

It does a disservice to the Gulf region and to the public at large to minimize the problem that this amount of oil can cause. Recent research results suggest that there is reason to be concerned and that subsurface oil is doing harm.

The government needs to take the time to do careful study and assessment of the fate and effects of the spill on humans and wildlife before drawing broad conclusions. And, greater transparency is warranted. In the end, it’s the follow-through that will make this catastrophe less of a disaster.