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3 HEARING ON ``THE BP OIL SPILL: ACCOUNTING FOR THE SPILLED

4 OIL AND ENSURING THE SAFETY OF SEAFOOD FROM THE GULF''

5 THURSDAY, AUGUST 19, 2010

6 House of Representatives,

7 Subcommittee on Energy and Environment

8 Committee on Energy and Commerce

9 Washington, D.C.

10 The Subcommittee met, pursuant to call, at 11:39 a.m.,
11 in Room 2123 of the Rayburn House Office Building, Hon.
12 Edward Markey [Chairman of the Subcommittee] presiding.

13 Member present: Representative Markey.

14 Staff present: Bruce Wolpe, Senior Advisor; Melissa
15 Cheatham, Professional Staff Member; Caitlin Haberman,
16 Special Assistant; Lindsay Vidal, Special Assistant; Jen
17 Berenholz, Deputy Clerk; Andrea Spring, Minority Professional
18 Staff; Mary Neumayr, Minority Counsel; Garrett Golding,
19 Minority Legislative Analyst; and Lyn Walker.

|
20 Mr. {Markey.} Welcome to the Subcommittee on Energy and
21 Environment.

22 For anyone who has been diagnosed with a life-
23 threatening illness, one of the best words you can hear is
24 ``remission,'' whether it is cancer, HIV or some other
25 illness. A battery of modern cures can reduce the disease to
26 lower, perhaps even to undetectable levels. Yet even in
27 remission, there is often unease that the disease could
28 return and the pestering inevitable scientific and
29 metaphysical questions arise: Where did it go? Could it
30 come back?

31 Right now, we are in a similar state in this
32 environmental disaster. After many trials and several false
33 starts, BP finally created a system to cap and seal the well.
34 Oil has not come from the Macondo well for about a month. We
35 are no longer at the bleeding stage. A tourniquet has been
36 applied to the well, and now we are told we may need to wait
37 for the final procedure, the relief well, until September.

38 And so just like a patient in remission, we have reached
39 a more stable stage of health with this bill. To say the
40 well is capped is tantamount to a cure would be false
41 confidence. Like unseen internal bleeding in a trauma
42 patient, the veiled oil persisting in the Gulf poses

43 continued risks. Today, we are here to ask the same
44 questions about this spill as a patient or a doctor would of
45 a disease: Where did it go, and could it come back?

46 According to the most recent estimates, 4.9 million
47 barrels of oil spewed from BP's well over the course of this
48 100-day gusher. Of that oil, some was captured, some was
49 dispersed and some evaporated or naturally dispersed. Yet,
50 at least 1.3 million barrels still remain unaccounted for in
51 the waters and marshes of the Gulf, an amount five times
52 larger than was spilled during the entire Exxon Valdez
53 disaster.

54 Just as we are worried about rogue weapons sold on the
55 black market harming the public, we must be vigilant about
56 rogue oil from this disaster harming the public, putting a
57 black mark on Gulf seafood or Gulf tourism.

58 In addition to all the oil, millions of gallons of
59 dispersant chemicals have been used in unprecedented ways.
60 Just a few weeks ago, FDA told me that they had determined
61 that dispersants have a low potential to accumulate in
62 seafood and do not pose a significant public health risk
63 through human consumption. While this news is welcome, it
64 addresses only the issue of short-term toxicity. The FDA
65 knows little about the long-term impacts that these compounds
66 will have on marine life, nor do they know how the presence

67 of oil and dispersants may influence the concentration of
68 other toxic compounds in seafood species.

69 We have yet to see the full picture of hazards posed by
70 this spill. The work done by the FDA, NOAA and EPA will be
71 critical in ensuring that fish and shellfish from the Gulf is
72 safe to eat for years to come.

73 And so we will ask today: where do we go from here?
74 Where should monitoring and cleanup efforts be focused in
75 this new chapter of recovery and restoration? Are the clouds
76 of oil suspended below the ocean's surface still a concern?
77 What about the plumes of methane gas? Where have these
78 plumes gone and will microbes consuming methane use up oxygen
79 in the water, potentially asphyxiating areas of the Gulf?
80 What impact will all the oil, methane and the chemical
81 dispersants have on marine life in the Gulf and on Gulf
82 seafood supply in the years ahead? Is seafood from the Gulf
83 safe to eat today? Will it be safe to eat in the future?
84 American families want the only oil in their seafood to be
85 cooking oil.

86 Ending BP's gusher in the Gulf does not, by itself, cure
87 the harm that has been done. The treatment of the region
88 from this disaster has only just begun.

89 To have a successful, continued response to this spill,
90 we need to do three things going forward: One: monitor the

91 health of the waters, wetlands, wildlife and people of the
92 Gulf. Two: maintain the pressure on BP and others to
93 continue the recovery and restoration process. And three:
94 muster the attention of our entire country on solving the
95 economic and environmental challenges from our continued
96 dependence on oil, especially foreign oil.

97 We have an extremely distinguished group of witnesses
98 appearing before us today. We appreciate the fact that it is
99 the middle of the summer. We know that many people have gone
100 away. However, the oil has not gone away, and it is
101 important for the Gulf of Mexico residents to know that the
102 attention on this issue has not gone away. That is why we
103 are having this hearing today.

104 [The prepared statement of Mr. Markey follows:]

105 ***** COMMITTEE INSERT *****

|

106 Mr. {Markey.} So let us turn to our first witness, Dr.
107 Bill Lehr. He is a Senior Scientist in the Emergency
108 Response Division of NOAA, where he leads the spill response
109 group. He has been active in spill research and response for
110 more than 15 years. We thank you, Dr. Lehr, for being here.
111 Whenever you feel comfortable, please begin.

|

112 ^STATEMENTS OF BILL LEHR, SENIOR SCIENTIST, OFFICE OF
113 RESPONSE AND RESTORATION, NATIONAL OCEANIC AND ATMOSPHERIC
114 ADMINISTRATION; DONALD KRAEMER, ACTING DEPUTY DIRECTOR,
115 CENTER FOR FOOD SAFETY AND APPLIED NUTRITION, FOOD AND DRUG
116 ADMINISTRATION, ACCOMPANIED BY VICKI SEYFERT-MARGOLIS, SENIOR
117 ADVISOR TO THE CHIEF SCIENTIST, FDA'S OFFICE OF THE
118 COMMISSIONER; AND PAUL ANASTAS, ASSISTANT ADMINISTRATOR,
119 OFFICE OF RESEARCH AND DEVELOPMENT; ENVIRONMENTAL PROTECTION
120 AGENCY

|

121 ^STATEMENT OF BILL LEHR

122 } Mr. {Lehr.} Thank you, Chairman Markey and members of
123 the subcommittee for this--

124 Mr. {Markey.} Could you turn on your mic?

125 Mr. {Lehr.} It should be on. There we go.

126 Mr. {Markey.} Thank you.

127 Mr. {Lehr.} Thank you again, Chairman Markey and
128 members of the subcommittee, for the opportunity to testify
129 here for the National Oceanic and Atmospheric
130 Administration's role in the recent Deepwater Horizon oil
131 spill response. I would like to discuss the critical roles
132 that NOAA services during oil spills and their importance to

133 their contributions to protect and restore natural resources,
134 communities and economies affected by this recent terrible
135 event in the Gulf of Mexico.

136 NOAA's scientific experts have been assisting with
137 response from the first day both on scene and through our
138 headquarters and regional offices. NOAA's support has
139 included daily trajectories of the spilled oil, weather data
140 for short- and long-term forecasts, special forecasts for
141 cleanup operations such as the in situ burning. NOAA experts
142 analyze the satellite imagery and also perform real-time
143 observations to help verify the spill location and movement.
144 In addition, NOAA scientists are providing expertise and
145 assistance regarding sea turtles, marine mammals and other
146 protected resources such as corals. NOAA is also
147 coordinating with the federal and States co-trustees and
148 responsible parties to conduct natural resource damage
149 assessment which is a process that quantifies the total
150 losses and develops restoration projects that compensate the
151 public for their losses.

152 NOAA has also participated in a number of interagency
153 expert teams. These include the Flow Rate Technical Group
154 that estimated the size of the spill that you referred to,
155 and also a joint effort with NOAA, the Department of
156 Interior, the Coast Guard, the National Institute of

157 Standards and Technology and other outside experts to develop
158 an oil budget calculator to estimate for response purposes
159 the fate of the spilled oil.

160 Now, there has been a lot of discussion on this budget,
161 so let me get into a little detail on it. Basically,
162 according to what our experts were able to determine, the oil
163 that was spilled could be divided up into four basic
164 categories. About one-quarter of it was either recovered
165 directly, was burned in situ or was skimmed on the surface.
166 Another quarter either evaporated or dissolved into the water
167 column, and another quarter, as you mentioned before several
168 times, the size of the Exxon Valdez remains out there for
169 cleanup purposes, and then another quarter was dispersed into
170 the water column.

171 Now, part of that was through natural dispersion and
172 other was through the use of dispersants. Dispersants for
173 the Deepwater Horizon spill were only used where oil was
174 present on the surface of they were applied at the wellhead
175 on the sea floor. A total of 1.8 million gallons of
176 dispersants were used. The effects of the dispersants are
177 being monitored by NOAA, also the dispersed oil. There are
178 over 2,000 water samples that have been collected in the deep
179 waters of the Gulf. As well as analyzing for oil, they have
180 also analyzed for components of the dispersants and thus far

181 only one dispersant component, propylene glycol, was detected
182 in a sample that was close to the wellhead.

183 In addition, EPA is monitoring surface water samples for
184 the presence of dispersant components near the shoreline, and
185 my colleague from EPA can discuss that.

186 Finally, to ensure the safety of fishermen and
187 consumers, NOAA prohibited commercial and recreational
188 fishing in certain areas of the Gulf of Mexico because of the
189 spill. Now that the wellhead is capped and new oil is no
190 longer flowing in the Gulf, NOAA scientists are going back
191 into the spill area taking seafood samples to determine which
192 areas are safe for fishing. An area is only reopened to
193 fishing if visible oil is no longer present in the area and
194 only after the seafood passes rigorous sensory and chemical
195 testing. To date, every seafood sample from reopened waters
196 or outside the closed area has passed sensory and chemical
197 testing for contamination of oil dispersant. No unsafe
198 levels of contamination of the seafood have been found. NOAA
199 has begun to reopen portions of the closed area but only
200 after being assured that the fish products within the closed
201 area meet the Food and Drug Administration's standards for
202 public health and wholesomeness.

203 To conclude, the attention at this point is focused on
204 evaluating fisheries for reopening, shoreline cleanup,

205 monitoring of subsurface oil both near shore and in
206 deepwater, and conducting natural resource damage assessments
207 with our co-trustees.

208 Thank you for allowing me to testify today, and I am
209 happy to answer any questions that you may have.

210 [The prepared statement of Mr. Lehr follows:]

211 ***** INSERT 1 *****

|
212 Mr. {Markey.} Thank you very much.

213 Our next witness is Mr. Donald Kraemer. He is the
214 Deputy Director of the Office of Food Safety at the U.S. Food
215 and Drug Administration, where he is responsible for the
216 administration of the FDA's seafood policy. He has been with
217 the FDA since 1977. You may proceed, Mr. Kraemer.

|
218 ^STATEMENT OF DONALD KRAEMER

219 } Mr. {Kraemer.} Good afternoon, Chairman Markey and
220 members of the subcommittee. I am Donald Kraemer, Acting
221 Deputy Director of the Center for Food Safety and Applied
222 Nutrition at the U.S. Food and Drug Administration. With me
223 is Dr. Vicki Seyfert-Margolis, Senior Advisor to the Chief
224 Scientist at FDA's Office of the Commissioner. We appreciate
225 the opportunity to discuss FDA's role in ensuring the safety
226 of seafood harvested from the Gulf of Mexico in the wake of
227 the Deepwater Horizon oil spill.

228 FDA is an active and integral part of the federal
229 government's comprehensive, coordinated, multi-agency program
230 to ensure that seafood from the Gulf of Mexico is free from
231 contamination as a result of the oil spill. This program is
232 important not only for consumers who need to know that food
233 is safe but also for the fisheries industry, which needs to
234 be able to sell its product with confidence. FDA is working
235 closely with the National Oceanic and Atmospheric
236 Administration, the Environmental Protection Agency, other
237 federal agencies and state authorities in the Gulf region. I
238 would like to note the high level of cooperation that FDA has
239 experienced among these agencies both at the leadership and

240 among the technical and scientific staffs that carry out the
241 research, testing and analysis needed to fulfill our
242 respective missions.

243 The federal government is taking a multi-pronged
244 approach to ensure that marketed seafood from the Gulf of
245 Mexico is not contaminated as a result of the oil spill.
246 These measures include the precautionary closure of
247 fisheries, the surveillance and testing of seafood products
248 and a heightened emphasis on FDA's Hazard Analysis and
249 Critical Control Point, or HACCP, regulations. Beyond our
250 ongoing work to ensure that currently marketed seafood is
251 safe, FDA in conjunction with NOAA and the Gulf States have
252 developed a strict protocol for reopening closed fisheries in
253 a manner that will ensure the safety of seafood from these
254 previously closed areas. We are also planning for additional
255 research into potential hazards to the food supply presented
256 by crude oil and dispersant chemicals.

257 The primary preventative controls for protecting the
258 public from potentially contaminated seafood is the closure
259 of fishing areas that have been or are likely to be affected
260 by the oil spill. Immediately after the oil spill, FDA
261 worked with NOAA and the States to ensure that the
262 appropriate closures were put in place. These closures are
263 enforced by federal and State wildlife officials as well as

264 the U.S. Coast Guard.

265 The second element of our approach is a heightened
266 emphasis on FDA's longstanding HACCP program for seafood in
267 which processors are obligated to identify hazards that are
268 reasonably likely to occur and institute preventive controls
269 to address them. The framework of our seafood HACCP program
270 is proving its value in the context of this extraordinary
271 public health challenge. Over the past several weeks, FDA
272 has conducted more than 300 inspections of seafood processors
273 in the Gulf region to verify that they are implementing
274 controls to ensure that they receive fish harvested only from
275 waters in which fishing is permitted.

276 The third element is a verification that the other
277 controls are working properly. This is the analysis of a
278 variety of seafood samples that have been commercially
279 harvested from Gulf waters. We are testing for polycyclic
280 aromatic hydrocarbons, or PAH, the primary contaminants of
281 concern in oil. FDA has so far tested for PAH in about 500
282 animals comprising a variety of seafood including shrimp,
283 crab and oysters from open State waters. The results of all
284 samples have shown PAH levels well below the levels of
285 concern, usually by a factor of 100 to 1,000, essentially the
286 same levels as were seen before the oil spill.

287 With respect to the reopening of closed waters, FDA,

288 NOAA and EPA worked in close cooperation with agencies in the
289 five Gulf States to establish a single agreed-upon protocol
290 for reopening to ensure the safety of seafood harvested from
291 these waters. Under the protocol, waters impacted by oil
292 will not reopen until, one, all oil from the spill is no
293 longer present in quantities or forms that could contaminate
294 seafood; two, a scientifically valid sampling plan is agreed
295 upon; and three, all samples from the area successfully pass
296 both sensory and chemical analysis to ensure that they
297 contain no harmful oil residues.

298 In our sensory analyses, expert examiners check the odor
299 and appearance of raw seafood and the taste and odor of
300 cooked seafood. Samples that pass sensory testing are sent
301 for chemical analysis for oil which allows scientists to
302 conclusively determine whether PAH contaminants are present
303 in the fish or shellfish tissue that could be consumed. To
304 date, all samples have passed sensory testing for oil or
305 dispersants and the results of all chemical analyses have
306 shown PAH levels to be well below the levels of concern,
307 again by a factor of 100 to 1,000. To date, Alabama,
308 Louisiana, Florida and Mississippi have reopened some
309 portions of their coastal waters to recreational and
310 commercial fishing with concurrence from FDA that the
311 criteria under the joint reopening protocol have been met.

312 Additional reopenings are likely in the coming weeks.

313 Finally, with respect to the impact of dispersants used
314 in the Gulf on seafood safety, the current science indicates
315 a low risk that these dispersants will bioconcentrate in
316 seafood and they are therefore unlikely to present a food
317 safety concern. Further, NOAA and EPA data confirm that
318 dispersants are not present at detectable levels in the
319 overwhelming number of water samples taken. However, out of
320 an abundance of caution and in order to gather additional
321 information, NOAA and FDA are conducting additional studies
322 to reaffirm that dispersants do not accumulate in tissues of
323 fish and shellfish. FDA will continue to study the long-term
324 impacts of chemical dispersants on seafood safety and we will
325 take any new relevant information into account and adjust our
326 protocols accordingly.

327 I see that I have exceeded my time, so I will forego my
328 concluding comments.

329 Mr. {Markey.} You may continue, sir.

330 Mr. {Kraemer.} Thank you.

331 Then to conclude, Mr. Chairman, the safety of consumers
332 is FDA's highest priority and a responsibility we take very
333 seriously. In close coordination with federal and State
334 agencies, we have been proactive in monitoring this disaster,
335 planning for its impacts and mobilizing our personnel and

336 facilities to take the steps needed to ensure safe food
337 supply. The protocols and approaches we have implemented are
338 protecting American consumers while minimizing the negative
339 impact on Gulf seafood processors.

340 Thank you for the opportunity to discuss these important
341 issues, and I look forward to answering your questions.

342 Thank you.

343 [The prepared statement of Mr. Kraemer follows:]

344 ***** INSERT 2 *****

|
345 Mr. {Markey.} Thank you, Mr. Kraemer, very much.

346 Our next witness is Dr. Paul Anastas. Dr. Anastas is
347 the Assistant Administrator for EPA's Office of Research and
348 Development and the EPA Science Advisory. He has conducted
349 groundbreaking research on the design, manufacture and use of
350 environmentally friendly chemicals. We welcome you, Doctor.
351 Whenever you feel comfortable, please begin.

|
352 ^STATEMENT OF PAUL ANASTAS

353 } Mr. {Anastas.} Thank you, Chairman Markey. I
354 appreciate the opportunity here to testify on the important
355 issue of dispersants and their use in the BP Deepwater
356 Horizon crisis.

357 We have now passed day 120 of the BP oil spill tragedy,
358 a tragedy that resulted in loss of life, livelihoods, and put
359 the Gulf Coast ecosystem in peril. We are relieved that the
360 well is currently sealed and that dispersant use has been
361 reduced to zero. We hope and expect that this will continue
362 to be the case.

363 As the President has said, this tragedy does not end
364 with the sealing of the well. The President and EPA are
365 committed to the long-term recovery and the restoration of
366 the Gulf Coast, one of our most precious ecosystems. In
367 addition to its other responsibilities with oil spill
368 response, EPA continues to rigorously monitor the air, water
369 and sediments for the presence of dispersants and crude oil
370 components that could have an impact on health or the
371 environment. These data are posted on EPA's website and are
372 publicly available.

373 EPA has a role in the use of dispersants, which are

374 chemicals that are applied to the oil to break it down into
375 small particles. The dispersed oil mixes with the water
376 column and is diluted and degraded by bacteria and other
377 microscopic bacteria. Specifically, EPA is responsible for
378 managing the product schedule of dispersants available in the
379 oil spill response.

380 The decision to use dispersants as part of a larger oil
381 spill response is not one that EPA took lightly. When
382 considering dispersant use, we are faced with environmental
383 tradeoffs. The potential long-term effects on aquatic life
384 are still largely unknown, and BP has used over 1.8 million
385 gallons of dispersant in a volume never before used in the
386 United States, but because of our aggressive and constant
387 monitoring, what we do know right now is this: our
388 monitoring data overwhelmingly confirm modeling results that
389 dispersants are not present at levels of detection per our
390 method. For the rare anomaly, we investigate to either
391 confirm or disprove the validity of a detection. To put this
392 in context, of the more than 2,000 NOAA-generated samples and
393 the nearly 1,000 EPA-generated samples, there have been only
394 two detections above the method detection limit. These were
395 immediately investigated, and our monitoring continues. Our
396 monitoring results also show that oxygen in the water is not
397 being depleted to dangerous levels.

398 Now, given the unprecedented nature of the spill, the
399 EPA directed BP to identify less-toxic alternative
400 dispersants. When the company failed to provide this
401 information, EPA decided to conduct this testing
402 independently in a rigorous, peer-reviewed manner.
403 Specifically, EPA conducted acute toxicity tests to determine
404 lethal concentrations of eight available dispersants. First,
405 we tested each of the eight dispersants alone. Then we
406 tested the Louisiana sweet crude oil alone. And finally, we
407 tested mixtures of the oil with each of these eight
408 dispersants. These standard tests screen species called
409 mysid shrimp and silverside fish to determine the relative
410 hazard of each of the dispersants. These two species are
411 widely considered to be representative of those found in the
412 Gulf and were tested during a juvenile life stage when
413 organisms are most sensitive to pollutant stress. The tests
414 were conducted over a range of concentrations including those
415 much greater than what aquatic life is generally expected to
416 encounter in the Gulf.

417 EPA's testing delivered three important results. One,
418 all of the eight dispersants when tested alone could be
419 categorized as slightly toxic to practically nontoxic. Two,
420 the oil alone was generally moderately toxic. Three,
421 mixtures of oil and each of the eight dispersants were no

422 more toxic than the oil alone in these tests. All of these
423 results indicate that the eight dispersants tested possess
424 roughly the similar acute toxicities.

425 While these data are important, I want to emphasize that
426 continued monitoring is absolutely necessary. EPA has
427 directed BP to monitor for indicators of environmental stress
428 like decreased oxygen levels and increased toxicity to small
429 organisms called rotifers. To date, we have not seen
430 dissolved oxygen levels approach levels of concern to aquatic
431 life. We have also seen no excessive mortality in rotifers.
432 While more work needs to be done, we see that the dispersants
433 have worked to help keep oil off of our precious shorelines
434 and away from sensitive coastal ecosystems.

435 The crisis has made it evident, that additional research
436 is needed. Congress has recently appropriated EPA \$2 million
437 to begin a long-term study on the impacts of dispersants.
438 These funds will support research on the short- and long-term
439 environmental and human health impacts associated with the
440 oil spill and dispersant use. We will also further our
441 research efforts to include innovative approaches to spill
442 remediation and to address the mechanisms of environmental
443 fate, transport and effects of the dispersants. EPA will
444 continue to take science-based approaches to dispersant use.
445 We will continue monitoring, identifying and responding to

446 public health and environmental concerns. In coordination
447 with our federal, State and local partners, EPA is committed
448 to protecting Gulf Coast communities from the adverse
449 environmental effects of the Deepwater Horizon oil spill.

450 In conclusion, we will persist in asking the hard
451 questions until we more fully understand the long-term
452 effects of the BP oil spill and conduct the investigations
453 required to enable the Gulf's long-term recovery. EPA is
454 fully committed to working with the people of the Gulf, our
455 federal partners, the scientific community and NGOs toward
456 the recovery of the Gulf of Mexico and the restoration of its
457 precious ecosystem.

458 At this time I welcome any questions.

459 [The prepared statement of Mr. Anastas follows:]

460 ***** INSERT 3 *****

|
461 Mr. {Markey.} Thank you, Dr. Anastas, very much.

462 The Chair will now recognize himself for a period of
463 asking questions.

464 Dr. Lehr, intended or not, I think the reaction to the
465 oil budget report that was released last week is one of
466 relief. People want to believe that everything is okay, and
467 I think this report and the way it is being discussed is
468 giving many people a false sense of confidence regarding the
469 state of the Gulf. Overconfidence breeds complacency and
470 complacency is what got us into this situation in the first
471 place. Dr. Lehr, how much oil was actually discharged into
472 the Gulf?

473 Mr. {Lehr.} By the best estimates of the combined
474 efforts of the FRTG plus the Department of Energy National
475 Laboratories, the best estimate to date would be 4.1 million
476 barrels plus or minus 10 percent.

477 Mr. {Markey.} So it would be 4.1 million barrels
478 discharged?

479 Mr. {Lehr.} That were actually discharged into the
480 environment. There was 800,000 barrels that was released
481 from the wellhead but was captured directly and pumped up
482 above.

483 Mr. {Markey.} So is the 800,000 included in the oil

484 budget baseline?

485 Mr. {Lehr.} The oil budget baseline follows closely the
486 form that is established by the Incident Command System
487 Situation Unit for preparing categories of where to record
488 the oil, and for the purpose of response, that would be the
489 standard procedure, so we follow the standard procedure, and
490 yes, that is included in that budget for response.

491 Mr. {Markey.} But that oil went directly into ships on
492 the--

493 Mr. {Lehr.} That is correct.

494 Mr. {Markey.} --surface and never was in the water at
495 all. Is that correct?

496 Mr. {Lehr.} That is correct.

497 Mr. {Markey.} The 800,000 barrels. So there were 4.1
498 million barrels that were actually discharged into the water?

499 Mr. {Lehr.} That is correct.

500 Mr. {Markey.} Now, out of the 4.1 million barrels
501 discharged, how many barrels are still in the Gulf or on its
502 shores in some form?

503 Mr. {Lehr.} Probably about three-fourths would still
504 be, roughly, I would say. To go through the calculations
505 that we have, the only oil that you would say that is
506 actually removed from the environment would be that 800,000
507 plus the amount that was burned. The stuff that evaporated

508 into the atmosphere is still in the environment, the stuff
509 that is dissolved into the water column, the amount that
510 dispersed into the water column as droplets plus the amount
511 that was on the sheen on the surface or in small tar balls,
512 so in that case, I would say most of that is still in the
513 environment. It is not available for response, which was the
514 purpose of the oil budget numbers. You cannot do any
515 recovery operation on oil that is evaporated or is dissolved
516 into the water column.

517 Mr. {Markey.} So even according to the calculations of
518 the oil budget, the report that was released last week,
519 between 60 and 90 percent of the discharged oil, that is, the
520 oil that actually went into the ocean, remains in the Gulf of
521 Mexico, and that would be between 2.45 and 3.675 million
522 barrels. Is that accurate?

523 Mr. {Lehr.} I would have to do the calculations here in
524 my head, but when you were including your numbers there, I
525 mean, the oil that evaporated, which was a substantial
526 amount, whether it is still in the Gulf of Mexico, I don't
527 know. You would have to look at how it was transported by
528 the wind. So I think you would want to stick with just the
529 amount that would be in the water column or on the shoreline,
530 and that would be the amount that we estimated as being
531 naturally dispersed or chemically dispersed, and the amounts

532 that are on the shoreline. Now, some of that has been
533 recovered on the shoreline as well and the amount that has
534 been dispersed is biodegrading. We still are working to
535 determine the rate. So again, the numbers that we put in the
536 budget calculator for response purposes, to answer the
537 question about what is the fate of it in the long term, that
538 is a different question. That is for the damage assessment.

539 Mr. {Markey.} Dr. Lehr, I am interested in
540 understanding how BP has performed in terms of removing
541 spilled oil from the Gulf before it hits land. What
542 percentage of the oil that was spilled into the Gulf was
543 actually removed from the ocean? I am talking about burning
544 and skimming and actually removing the oil from the
545 ecosystem. That is, of the--

546 Mr. {Lehr.} Of course, you want--

547 Mr. {Markey.} Let me say it. Of the 4.1 million
548 barrels of oil that actually went into the ocean, what
549 percent was removed by BP?

550 Mr. {Lehr.} I would have to redo these calculations
551 since these were based on the 4.9 million as opposed to--

552 Mr. {Markey.} But--

553 Mr. {Lehr.} Are you talking about--

554 Mr. {Markey.} Actually the only issue I think that the
555 American people are concerned about is the 4.1 million

556 barrels that actually went into the ocean, so it is important
557 for us to discuss that issue and separate it from the oil
558 that just went directly into the ships and never was in the
559 ocean at all, because that is where the concern is, and
560 people should have a very good understanding of what
561 percentage of that oil has been removed thus far. So do you
562 have a number or--

563 Mr. {Lehr.} You would have to take the ratio of 4.9
564 divided by 4.1 and then multiply that by these fractions that
565 we have down here for--

566 Mr. {Markey.} So if you could use your own chart, Dr.
567 Lehr, and break that down in a way that could help us to
568 understand of the 4.1 million barrels, how much BP did--

569 Mr. {Lehr.} So if you take the 5 percent that was
570 burned and multiply that by the ratio of 4.9 to 4.1, and I
571 must admit, in the era of pocket calculators, I can't do that
572 math in my head. And then if you take the amount that was
573 skimmed, 3 percent, and multiply that by 4.9, by 4.1--

574 Mr. {Markey.} Now, are you using 4.9 or 4.1 as you are
575 doing this?

576 Mr. {Lehr.} No, you asked me to use it with the new
577 ratio.

578 Mr. {Markey.} Okay, 4.1.

579 Mr. {Lehr.} Then I have to multiply those numbers by

580 that ratio. I could get a calculator and see what that ratio
581 is.

582 Mr. {Markey.} Do you have assistants here with you?
583 Has anyone accompanied you here this morning, Dr. Lehr?
584 Could one of your assistants do that?

585 Mr. {Lehr.} I have got a calculator here. I need to
586 multiply by 1.2 times each of those percentages, so roughly
587 the burn would then roughly be 6 percent, and the skimmed
588 would be 4 percent, roughly.

589 Mr. {Markey.} So between the skimming and the burning,
590 10 percent of the 4.1 million barrels would have been removed
591 from the ocean, leaving 90 percent unaccounted for?

592 Mr. {Lehr.} Well, there would also be whatever was
593 recovered on the shoreline, which we didn't--

594 Mr. {Markey.} No, that is what I am saying. In the
595 arithmetic we are doing right now, so the burning is 6
596 percent, the skimming is 4 percent?

597 Mr. {Lehr.} Right.

598 Mr. {Markey.} So let us continue then with the
599 arithmetic. What else--

600 Mr. {Lehr.} Okay. So then you had whatever was
601 captured in the residual, and we have not quantified that
602 quantity and how much of that as they do the beach recovery
603 and so on. So I can't give you the numbers on that. We were

604 again looking at it for response purposes.

605 Mr. {Markey.} So again, let us recapitulate here for a
606 second. Six percent was burned, 4 percent skimmed, and an
607 unknown amount was collected on the beaches. Is that
608 correct?

609 Mr. {Lehr.} Right.

610 Mr. {Markey.} And can you tell us the reason that has
611 not been calculated yet?

612 Mr. {Lehr.} It was mixed in with--you know, you don't
613 pick up just oil on the beaches. You pick up oil and debris
614 and there is a question of trying to separate that out. It
615 is not a simple process.

616 Mr. {Markey.} Has there been even a range that has been
617 put together in terms of some estimate of how much oil that
618 might represent?

619 Mr. {Lehr.} There may have been. I am not aware. But
620 I could get back to you and get that answer to you.

621 Mr. {Markey.} Well, in the wake of the Exxon Valdez
622 spill in 1989, both the Government Accountability Office and
623 the Office of Technology Assessment published reports looking
624 at the capacity to recover oil after a major spill. They
625 found that given technologies available at that time, we
626 could really only recover 10 to 15 percent of the spilled
627 oil. So it seems to me that BP's oil recovery effort comes

628 in on the low effort of what was achievable 21 years ago.
629 You seem to have come in at the number of approximately 10
630 percent plus whatever was on the beaches, but still within
631 that range of 10 to 15 percent that was determined to be
632 recoverable after the Exxon Valdez spill. Would you agree
633 with that?

634 Mr. {Lehr.} Yes. I mean, in terms of the actual oil on
635 those categories. Now, there was of course in this case the
636 unusual event of a large amount of natural dispersion and the
637 addition of large amounts, a record amount, as far as I'm
638 aware, of chemical dispersants, and that is considered a type
639 of response. So one would have to say, how do you weigh
640 that, so--

641 Mr. {Markey.} I understand, but I am just--

642 Mr. {Lehr.} In terms of the standard mechanical and,
643 you know, burn operations, beach recovery, I would say yes,
644 this was about average for what we have seen from major
645 spills.

646 Mr. {Markey.} I am just trying, if I could, Doctor, I
647 am just trying to divide the question so that the public can
648 understand what it is that we are talking about. So in terms
649 of just recoverable oil, it is somewhere in the range of 10
650 percent?

651 Mr. {Lehr.} And in my mind, that is not a passing

652 grade, only 10 percent of 4.1 million barrels actually having
653 been recovered. I think we all saw this coming, and with all
654 of BP's talk about using golf balls, nylons and hair to clean
655 up the spilled oil, I think it is important that even using a
656 21-year-old grading system that BP has done a very poor job
657 in cleaning up the Gulf.

658 So Dr. Lehr, throughout the entire BP saga, I have
659 pushed for BP and the Unified Command to make this process as
660 transparent as possible. The way I see it, the more people
661 we have independently analyzing and verifying the data and
662 information associated with the spill, the better and more
663 informed our response decisions will be.

664 With regard to the oil budget, is this something NOAA
665 does as part of the operational response to a major oil
666 spill?

667 Mr. {Lehr.} The oil budget is a traditional part of a
668 response. As I mentioned before, there's a special form
669 that's filled out as part of the situation unit in the
670 Incident Command System. The standard procedures for that
671 use, amongst other things, a model that was developed by NOAA
672 but also they used some other techniques such as observers
673 estimating the size of the spill. In the case of this spill,
674 because it was so large, because it went on for so long and
675 in particular because it was occurring at a mile underneath

676 the water surface, it was necessary to develop the special
677 tool, which is what we did with the budget calculator. Now,
678 I have noticed in the press that this is called the NOAA
679 budget calculator. I would like to receive credit for that
680 but one thing in science that you have to do is to recognize
681 the contributions of other, and so this really was a joint
682 effort of both government agencies and the outside experts in
683 the field to develop this tool.

684 Mr. {Markey.} Now, Doctor, is there an established
685 methodology for making the oil budget calculations?

686 Mr. {Lehr.} There is a standard form that you would
687 calculate to divide the budget into, but in terms--and there
688 is a normal procedure that we had to modify because of the
689 circumstances for the spill.

690 Mr. {Markey.} In the case of the Deepwater Horizon
691 spill, how long has NOAA been calculating an oil budget to
692 guide the response efforts from the Unified Command?

693 Mr. {Lehr.} In terms of the Incident Command, we
694 started working I believe in either June, starting to work on
695 the development of the tool, and were providing guidance for
696 some time in July for the Incident Command.

697 Mr. {Markey.} So has NOAA been using the established
698 methodology for calculating an oil budget in this case?

699 Mr. {Lehr.} I am going to have to ask for

700 clarification, what you mean by--we did use the standard
701 procedures for estimating oil for each of the techniques
702 based on methods that had been used in the past but were
703 modified. Let me give you an example. In calculating
704 dispersion, natural dispersion, this is based on looking at
705 something called the energy dissipation rate that is due to
706 breaking waves. Now, we of course obviously in the case
707 here, we had a plume that was subsurface. We didn't have
708 breaking waves but we did have an energy dissipation rate and
709 we had to then employ some of the experts that worked on the
710 FRTG to help us calculate that energy dissipation rate so we
711 could get a new estimate for natural dispersion.

712 In the case of evaporation, we have some standard models
713 for estimating the evaporation of Louisiana sweet crude. It
714 is in our oil library database. But that is for spills that
715 happen at the surface, and the spills that are coming from a
716 mile deep, there is dissolution that occurs before it gets to
717 the surface. Many of the same molecules that would evaporate
718 on the surface become dissolved in the water so we had to
719 modify that to handle those cases. So it was the standard
720 procedures, and to the extent that we had to modify them for
721 the specific instances that happened in this spill.

722 Mr. {Markey.} Can I ask, has NOAA made available the
723 background data and formulas that were used to reach

724 conclusions on what happened to the spilled oil?

725 Mr. {Lehr.} In terms of the--one component in terms of
726 the flow rate, there have been reports on that. In terms of
727 the oil budget calculator, which is what I assume that you
728 are referring to, this was an oil spill emergency, not an oil
729 spill experiment. When we put together the team, our
730 priority was to get an answer as quickly as possible to the
731 Incident Command. Now, the technical documentation is being
732 written and will be peer reviewed. It will be long. It will
733 be boring. It will be filled with graphs and charts and all
734 the references and the passive voices that are typical of
735 such reports, and I assure you, it will bore everybody except
736 for those handful of us who actually like to do oil spill
737 science, but I noticed that some of our academic friends have
738 asked us for this.

739 For our younger friends, I would suggest that patience
740 in this case is a virtue. In an emergency, you first get the
741 answer. You do not tell Admiral Allen that he has to wait 3
742 months while your report goes through peer review, but that
743 will come. We welcome people's comments on it. I would
744 encourage the new people who are coming into the field from
745 nontraditional areas of this to stay interested in it. We
746 like to welcome the new blood, but you are going to have to
747 wait a little bit for that report to get out.

748 Mr. {Markey.} Well, I appreciate the desire to complete
749 a full peer review, Doctor, but you have already issued four
750 pages of findings and a 10-page supplement that explains some
751 of the calculations in greater detail. If much of this oil
752 budget is standard procedure for NOAA in response to an oil
753 spill, why can't that information be made available sooner,
754 especially given the historic issues that many independent
755 scientists have voiced regarding the conclusions of this
756 report?

757 Mr. {Lehr.} Well, I would say this. I would prefer,
758 and I think all the scientists would prefer that because the
759 questions now are on a different time frame and we move from
760 the response to damage assessment, that it is better to take
761 the time to do it right. Now, yes, some of the methods are
762 standard but some of them had to be modified, as I mentioned
763 in my testimony, in terms of the evaporations calculations
764 and the natural dispersion. We are doing a thorough
765 literature survey because again our understanding is, this
766 report is going to be looked at not only by oil spill
767 scientists who have been doing this for 20 years, in many
768 cases are contributing to the report, but by other scientists
769 who are coming to this, this is their first major spill
770 event, so we wanted to provide a complete document here that
771 will answer all their questions.

772 Mr. {Markey.} Let me ask this. Will NOAA agree to make
773 available to the public the citations of the scientific
774 literature, formulas or actual algorithms that would allow
775 independent scientists to evaluate the report's findings?

776 Mr. {Lehr.} Of course.

777 Mr. {Markey.} Will you release that now?

778 Mr. {Lehr.} It is still being compiled.

779 Mr. {Markey.} You have already released a report last
780 week. Could you give us for the public consumption the
781 citations of the scientific literature, formulas or actual
782 algorithms that you used in creating your oil budget?

783 Mr. {Lehr.} All that--first of all, and again, I am
784 going to come back to this. This is not a NOAA product, this
785 is a product of a joint effort, and the --

786 Mr. {Markey.} What we are trying to do, Doctor, is to
787 get at the methodology so that we understand what was used in
788 order to produce your initial oil budget. You are saying
789 that it has to be reviewed for some time in order to
790 determine whether or not you got it right and so in order, I
791 think, to ensure that we have this done in a time frame that
792 provides the information to the residents of the Gulf of
793 Mexico, that you release these algorithms, you release the
794 scientific literature that you relied upon so that there can
795 be independent eyes, independent judgments that are also

796 allowed in real time to be able to make judgments as to
797 whether or not the formula which was used was the correct one
798 to be used, given the consequences to the public if that
799 formula was not constructed accurately. In other words,
800 would you support making that information available to the
801 public, speaking for NOAA?

802 Mr. {Lehr.} For NOAA--and I would assume that all the
803 experts that contributed will also be releasing this
804 information. That's what the purpose of the report is.
805 Representative Markey, what we are doing in this case is
806 going through the standard procedure which is done for a
807 scientific report. We get the experts. They all contribute
808 to the report. We send it back to them for them to look at
809 to make sure that we have got their comments and their
810 opinions and their assessments correct and then we send it
811 out, as you say, to independent scientists. That is what a
812 peer review is. We sent it out to people, and we will
813 welcome recommendations for peer review.

814 Mr. {Markey.} But when will that happen, Doctor?

815 Mr. {Lehr.} Excuse me?

816 Mr. {Markey.} What is the time frame for that to
817 happen?

818 Mr. {Lehr.} Well, it has been delayed by a week,
819 because I am having to come here, but we are hoping to get it

820 out within 2 months.

821 Mr. {Markey.} Two months? That is not timely enough,
822 Doctor. That is the problem. That is what we are trying to
823 get at right here. We are trying to telescope the time frame
824 that it will take in order to get that information into the
825 hands of independent scientists.

826 So you don't want to make all of the data and models
827 available but you have given us conclusions that result from
828 these models of the data. You then say you don't want to
829 make the models and data available to outside scientists
830 because you are still having everything peer reviewed post
831 release of your budget report. That is to me unacceptable.
832 We need to have that information. The report that you
833 released last week received international attention. There
834 are many people who are making decisions based upon that
835 report. So it is important right now, Dr. Lehr, for that
836 information then to be made public so that not only is it
837 being peer reviewed in the regular process but because of the
838 real-life consequences for the lives of the people in the
839 Gulf of Mexico and outside of the Gulf of Mexico, because of
840 the toxic nature of the material in the Gulf, that that
841 information be made public. There is too long of a gap that
842 is going to elapse under the process that you have adopted.

843 The real issue here is that the public has a right to

844 know right now what is going on in the Gulf of Mexico, and
845 your report should be analyzed by others right now so that we
846 are sure we got it right, because if your numbers are wrong,
847 2 months from now could be too late in terms of the remedial
848 recommendations which are made to the public, to the fishing
849 industry, to the consuming public in terms of the
850 consequences for their families. So I ask again for you to
851 release that information, that data.

852 The flow rate team estimated that 4.9 million barrels of
853 oil flowed from the Deepwater Horizon well. The uncertainty
854 of this estimate is plus or minus 10 percent, as you said.
855 Does NOAA have certainty with regard to the figures for the
856 estimates of what happened to all 4.9 million barrels? What
857 is the best and worst case estimate for the residual oil that
858 remains in the Gulf?

859 Mr. {Lehr.} We have--we do, as part of the calculator,
860 do have the estimates of uncertainty for each of the various
861 processes, so, for example, in terms of the burn, there are
862 some ASTM standard for the burn rate that were applied to the
863 spill. It gives us a high degree of confidence. We have
864 very low uncertainty for the estimates for that. For
865 evaporation and dissolution, again, we have taken samples and
866 matched them up with models from both NOAA, from Environment
867 Canada and from a large research organization in the European

868 Union, and those results match closely so we are fairly
869 confident on those values.

870 Now, when we get into the dispersed oil, the uncertainty
871 becomes larger, particularly for the use of the chemical
872 dispersants subsurface, which is a new experience to us, and
873 we were very conservative there. Now, we employed the
874 expertise of the National Institute of Standards and
875 Technology, who has brought in some very excellent
876 statisticians to calculate the net uncertainties on it. That
877 is given in those extra pages that I believe you were given
878 there, but that will also be in the final report, and
879 Representative Markey, I will commit today to do whatever I
880 can to speed up the report. I appreciate the concern on it.
881 I hope that you and the public and the other academics
882 appreciate that because of the importance, because of the
883 points that you just stressed, we want to make sure that it
884 is done right, and that is why I am making sure that we
885 brought in the experts and--

886 Mr. {Markey.} Here is the thing, Doctor. You shouldn't
887 have released it until you knew it was right because so much
888 is going to depend upon that release, and if you are not
889 confident that it is right, then it should not have been
890 released because it basically sent a signal with regard to
891 how much of the problem remains, and that is really something

892 that is obviously of great concern to people who live in the
893 Gulf. They don't want to be forgotten. They don't want this
894 to be downplayed or lowballed, which is in some quarters what
895 has happened since that report was released. So I think it
896 is important, since it has been released, to be examined
897 right now so that we can be sure that those numbers were
898 accurate and independent scientists can quickly look at the
899 formulas and corroborate or question, but it should not be
900 something that is done in a boring academic setting over a
901 prolonged period of time. It is something that has to be
902 done in a dynamic setting in real time because of the
903 resources that may need to be dedicated to this problem to
904 ensure that it is remediated in a shorter period of time than
905 otherwise if your estimates are inaccurate, so that is
906 critical, and from a political perspective, the longer the
907 time that elapses is the lower the political pressure and the
908 public attention will be there to ensure that the resources
909 are brought to the problem. And so we have to make sure that
910 we do this in a timely fashion so that unlike the Exxon
911 Valdez spill, we actually do something in real time so that
912 everything that can be learned about it is learned about it,
913 and you agree, Doctor, that the amount of oil which is still
914 in the Gulf of Mexico and unaccounted for is at least five
915 times the size of the Exxon Valdez spill? You do agree with

916 that?

917 Mr. {Lehr.} Well, I agree that this is--and I also note
918 that NOAA is taking a lead role in monitoring the oil that is
919 out there. We will continue to do that. I don't think the
920 report should be interpreted as saying that somehow this
921 spill is over with.

922 Mr. {Markey.} No, it is not that it is over with, but
923 there was an optimistic spin in some quarters that was placed
924 upon that report, and since that is happening in real time,
925 then the independent evaluation of that report must happen in
926 real time because if it is wrong, then many opportunities for
927 a calibrated response to the defects in the report will have
928 been lost and so that is why it is important for you to
929 surrender this information now to independent scientists.

930 So according to NOAA's oil budget, 408,792 barrels of
931 oil were chemically dispersed out of a total of 4.1 million
932 barrels, approximately 9 percent of the total oil in the Gulf
933 of Mexico. This means that 43,900 barrels of dispersant were
934 needed to get rid of 408,792 barrels of oil. This means that
935 one barrel of dispersant dispersed just over nine barrels of
936 oil, yet according to your budget documentation, a
937 dispersant-to-oil ratio of one to 20 is considered
938 successful. Dr. Lehr, it seems to me that the ratio used in
939 this disaster of one to nine would not be successful by

940 NOAA's own definition. Would you agree with that?

941 Mr. {Lehr.} What we did for--and this is an area that
942 we had the hardest time calculating, was the effectiveness of
943 the chemical dispersant. The dispersant that was applied
944 subsurface, what we called ideal conditions. We made sure--I
945 mean, the dispersant was being injected into the oil so it
946 was making direct contact. It was a very turbulent flow
947 regime there. So this would be the ideal conditions for
948 dispersant operations. We asked the people who make a living
949 applying dispersants what they thought would be the
950 effectiveness and they had numbers as high as 30 or 40 to one
951 ratio. We looked at the literature, and the oil industry
952 literature suggested that a successful operation was 20 to
953 one, so we decided to be conservative and say we will go with
954 the 20 to one. We may very well have underestimated the
955 effectiveness of that subsurface dispersant.

956 Now, at the surface where a lot of the dispersant was
957 applied, they were applying on oil which had partially
958 weathered and had partially emulsified. The viscosity was
959 high, and according to past spills, dispersants would have
960 been not as effective, but there was a study that was done by
961 SINTEF, a research group out of Norway, with this emulsified
962 oil using these dispersants that said that it was showing
963 some effectiveness, plus there were some observations on

964 scene by NOAA personnel and Coast Guard personnel that
965 suggested that the surface operations were being at least
966 partially effective. So what we did was to scale down what
967 we would estimate would be the effectiveness of the surface
968 operation. I believe we estimated it would be like four or
969 five barrels per amount of dispersant sprayed and that would
970 take into account that some of the dispersant did not
971 interact with the oil. You don't always hit the oil. And
972 secondly, the fact that the oil had emulsified to such an
973 extent that it was more difficult to disperse and to form the
974 small droplets that are necessary for the oil to disperse in
975 the water column.

976 Mr. {Markey.} So Dr. Anastas, according to the budget
977 documentation of dispersant-to-oil ratio, one to 20 is
978 considered successful but this was a ratio which was one to
979 nine. Do you believe that that constitutes a successful
980 application of dispersant?

981 Mr. {Anastas.} I think my colleague, Dr. Lehr, noted
982 the significant uncertainty in the estimates of dispersion.
983 All of the evidence, all of the monitoring that was conducted
984 in an ongoing way that was required by EPA during the
985 application, especially the subsurface application of the
986 dispersant, showed effectiveness. We ensured through
987 fluorescent spectrophotometry that particles were being

988 formed. This was a high-energy system. We have reason to
989 believe and evidence shows that it was an effective and
990 relatively efficient--

991 Mr. {Markey.} So given your own numbers and your own
992 analysis, how successful would you say that it was?

993 Mr. {Anastas.} Well, I don't think that there is a way
994 to measure the ratio between chemically dispersed and
995 biologically dispersed oil, so I don't think we can have
996 precise numbers. I do think the estimates, as Dr. Lehr
997 noted, whether it is 20, 30 or 40 to one in terms of a ratio
998 would be more potentially in the ballpark.

999 Mr. {Markey.} Well, dispersed doesn't mean exactly the
1000 same thing as gone, does it?

1001 Mr. {Anastas.} No, it does not.

1002 Mr. {Markey.} For example, if I put a spoonful of sugar
1003 in my iced tea and stir it, the sugar is dispersed. You
1004 can't see it. But if I then drink the iced tea, it still
1005 tastes sweet because the sugar is still there. The sugar is
1006 dispersed but it is present. Isn't that somewhat analogous
1007 to the situation we face in the Gulf with this dispersed oil
1008 as well?

1009 Mr. {Anastas.} Not exactly. The sugar dissolves in
1010 solution. Dispersant means that it is being broken up into
1011 small particles, the whole purpose of which is to make them

1012 more ingestible and digestible by the microbes because the
1013 only time that oil actually goes away is when it is degraded.
1014 Now, that degradation can happen through biological
1015 processes. It can happen through physical processes.
1016 Physical processes, when it is broken down by the water
1017 itself, is called hydrolysis. When it is broken down by
1018 temperature, it is called thermolysis. When it is broken
1019 down by light, it is called photolysis. These degradation
1020 processes all combine and the whole purpose of the dispersant
1021 is to make it more accessible to these degradation processes.

1022 Mr. {Markey.} What is the time frame for that process
1023 to take place? How do you measure that in terms of the
1024 actual amount of oil that is as a result more subject to
1025 being consumed because the dispersant has been released? How
1026 can you measure that over such a vast area?

1027 Mr. {Anastas.} There have been studies done even by the
1028 EPA and its partners, and part of the rationale for applying
1029 dispersants is because we have seen rates of degradation
1030 increase by as much as 50 percent with the use of
1031 dispersants.

1032 Mr. {Markey.} Did you say 15 or 50?

1033 Mr. {Anastas.} Five zero, 50 percent, over those
1034 untreated.

1035 Mr. {Markey.} Thank you.

1036 Dr. Lehr, government scientists have now estimated that
1037 4.9 million barrels of oil escaped from the BP Macondo well
1038 but that number does not include the methane that also came
1039 out of the well, much of which entered the Gulf of Mexico.
1040 Although the impacts of methane are not well understood as
1041 that of oil is understood, we know that it has the potential
1042 to cause harm when released at such significant levels above
1043 the natural seepage of methane in the Gulf. As part of the
1044 natural resources damage assessment and associated
1045 restoration plan, will NOAA be looking at the impact of the
1046 release of methane from the BP well?

1047 Mr. {Lehr.} In terms of the effect, I would believe the
1048 NOAA folks would take that into consideration for sure. Now,
1049 I am not part of the damage assessment team. We have a
1050 different group that does that. And the oil budget
1051 calculator did not take it into account because it was an oil
1052 budget calculator. There is no response to dissolved gases
1053 that you can't put skimmers out and so on. So that is why it
1054 wasn't in the report that you saw. But in terms of the
1055 damage assessment, certainly you would take into account all
1056 the hydrocarbons that were released and what effects they
1057 would have on the environment.

1058 Mr. {Markey.} Just a few weeks ago in response to a
1059 letter I wrote, FDA explained that while it does not

1060 presently monitor for dispersant chemicals in the issue of
1061 seafood, the agency is working closely with NOAA to conduct
1062 further studies to determine if dispersant chemicals or their
1063 metabolites can bioconcentrate in the flesh of seafood
1064 species. Mr. Kraemer, what is the status of these studies?

1065 Mr. {Kraemer.} Mr. Chairman, I would like to refer this
1066 question to Dr. Margolis.

1067 Mr. {Markey.} Could you identify yourself for the
1068 record, Doctor?

1069 Ms. {Seyfert-Margolis.} Dr. Vicki Seyfert-Margolis.

1070 Mr. {Markey.} And what is your title, please?

1071 Ms. {Seyfert-Margolis.} I am the Senior Advisor for
1072 Science Innovation and Policy in the Office of the
1073 Commissioner of Food and Drug Administration.

1074 We have been working with NOAA on developing chemical
1075 methodologies for the detection of one of the major
1076 components of dispersant, which is dioctyl sulfosuccinate
1077 sodium salt, or DOSS. This component is about 20 percent of
1078 the total Corexit dispersant which was applied in the Gulf.
1079 Essentially what we have done is two series of studies where
1080 we are exposing crabs and fish in tanks in controlled
1081 settings to DOSS at 100 parts per million, which is an
1082 effective concentration of 20 parts per million of the DOSS.
1083 We then do exposure 24 hours with subsequent washouts in

1084 clean saltwater for 24, 48 and 72 hours and then assess the
1085 concentration of DOSS in the hepatopancreas or liver as well
1086 as the muscle tissue. We have preliminary data to date
1087 suggesting that there is not any bioconcentration of DOSS in
1088 the hepatopancreas or in the muscle tissue of crabs.

1089 Mr. {Markey.} Could you explain what DOSS is so that
1090 the public who is watching can understand what that is?

1091 Ms. {Seyfert-Margolis.} Sure. DOSS is a detergent,
1092 essentially a detergent-like compound that is actually found
1093 in a variety of products including a number of over-the-
1094 counter products. It is used to help disperse the oil but it
1095 is generally an inert nontoxic substance, and there have been
1096 significant studies on toxicity of DOSS demonstrating a lack
1097 of toxicity of this particular component of Corexit.

1098 Mr. {Markey.} Please continue.

1099 Ms. {Seyfert-Margolis.} So essentially we conducted
1100 these tank studies and we found no evidence to date of
1101 bioconcentration of DOSS in the crabs and some shrimp that
1102 have been tested so far. We are still actively assessing
1103 these samples in the controlled setting, and additionally we
1104 are able to go back to all of the retrospective samples which
1105 were collected because this particular component is present
1106 in the fraction or extract that we made for monitoring PAH
1107 for the reopenings.

1108 Mr. {Markey.} What about the other components of
1109 Corexit in addition to DOSS? Have you done the analysis of
1110 the other components of Corexit, this chemical that was shot
1111 into the ocean in order to determine the toxicity of those
1112 components?

1113 Ms. {Seyfert-Margolis.} We have not. We have started
1114 with this as a marker for DOSS because it is one of the
1115 principal components of the Corexit and therefore will be
1116 very readily detectable so it essentially serves as a marker
1117 for the dispersant.

1118 Mr. {Markey.} What is the time frame that you are going
1119 to use in order to do an analysis of the other components in
1120 Corexit to determine whether or not there is a toxicity,
1121 there is a danger that could attach to it if human beings
1122 consumed that chemical?

1123 Ms. {Seyfert-Margolis.} Some of the other components
1124 that are present in Corexit such as the petroleum distillates
1125 would be found in our PAH analysis as well, so it would be
1126 difficult to distinguish those from petroleum distillates in
1127 the oil itself. We are not currently looking at any of the
1128 other components of Corexit.

1129 Mr. {Markey.} You are--can you repeat that?

1130 Ms. {Seyfert-Margolis.} We are not currently doing
1131 tests on the other components of Corexit right now because we

1132 wanted to establish the methodologies using the principal,
1133 one of the principal components which we felt we could detect
1134 readily as a first step.

1135 Mr. {Markey.} How long will it take you before you
1136 actually conduct experiments on the other components?

1137 Ms. {Seyfert-Margolis.} I can't speak to that because
1138 it is not clear whether or not we have the methodologies in
1139 hand to detect all those at the present time.

1140 Mr. {Markey.} So if you find DOSS in your seafood
1141 samples, then what?

1142 Ms. {Seyfert-Margolis.} Then we would consider that as
1143 something that we would need to go back and reevaluate the
1144 samples for a possible presence of dispersant.

1145 Mr. {Markey.} Are there potentially other components in
1146 Corexit that are known to be toxic?

1147 Ms. {Seyfert-Margolis.} There are a number of
1148 components of Corexit. I think the EPA could probably speak
1149 better to toxicity studies that have been done on the various
1150 components of Corexit.

1151 Mr. {Markey.} Dr. Anastas, are there other components
1152 in Corexit that have been known to be very toxic?

1153 Mr. {Anastas.} I guess I would first start off by
1154 saying that the testing that we conducted, that the
1155 Administrator ordered conducted, was on Corexit itself. So

1156 of course when you are looking at the entire formulation, all
1157 of the components and their contributions to toxicity would
1158 be considered, and it is important to look at the formulation
1159 as a whole. So the toxicity results that I reported in my
1160 opening statement--

1161 Mr. {Markey.} So are you saying that as a result, that
1162 there is no point in even bothering to examine the other
1163 components in Corexit because you have already studied
1164 Corexit?

1165 Mr. {Anastas.} No, I am saying that when you do
1166 toxicity studies on the Corexit as a whole, you are in
1167 essence doing toxicity studies on the components.

1168 Mr. {Markey.} And what I am asking, as a result, if I
1169 can go back to the FDA, does that mean that there is no
1170 reason to do any further studies of these materials, even
1171 though some of them are known to be toxic?

1172 Mr. {Kraemer.} Mr. Chairman, FDA, first of all, is
1173 fully aware of what are the components of Corexit, and we
1174 have looked at each one of these for toxicity, and as you are
1175 aware, in our response to your letter to the agency, each of
1176 these components are low toxicity to humans. I think we have
1177 to separate here the distinction between toxicity to marine
1178 animals as I think was the concern that EPA was suggesting
1179 from toxicity to humans if it is present in the flesh of the

1180 fish, so of course FDA's concern is the latter toxicity to
1181 humans if it in the flesh of the fish. We have looked at
1182 each of these components of Corexit and they are all very
1183 common household constituents so they are in things such as
1184 lip gloss and toothpaste and a variety of over-the-counter
1185 drugs, so they have been approved for use for consumption by
1186 people. These are components that FDA reviews for food
1187 additive purposes, also reviews--

1188 Mr. {Markey.} You have yet to put in place, though, a
1189 test in order to determine whether or not any of these
1190 components are in the fish. Is that correct? You have only
1191 done a study so far on the DOSS as a marker but not on these
1192 other chemicals. So as you are sitting here as the FDA and
1193 representing the public's interest in determining whether or
1194 not these fish are safe to eat, it is without having
1195 completed the study in terms of these actual component
1196 chemicals inside of the fish. Is that correct?

1197 Mr. {Kraemer.} I would to, if you don't mind, put that
1198 question in the context of what we have done, and I do intend
1199 to answer your question specifically, but the first question
1200 that FDA wanted to answer with respect to dispersants is
1201 whether the constituents of or the components of the Corexit,
1202 what do we know about those and what do we know about
1203 whether, one, they can get into the flesh of the fish, and

1204 two, if they were in there, what would be the risk to humans.
1205 The answer to all of these is that they have a very low
1206 potential to get into the flesh of fish. That doesn't mean
1207 they won't get in at any level, it means that they have a low
1208 likelihood of getting into the fish and are highly unlikely
1209 to accumulate at levels above what is in the environment,
1210 which we believe is comforting.

1211 The second question as I mentioned is, do the
1212 components, are they toxic in and of themselves, and as I
1213 said, we are aware of all of these components and they have
1214 common uses in products that either intentionally consumed,
1215 or as in the case of lip gloss, do get consumed as a matter
1216 of course because of the way they are used, and these
1217 components have approval levels in each of those uses, and
1218 those levels are much higher than the levels that under any
1219 circumstance you could imagine would end up in the flesh of
1220 the fish. So it is true that we have decided that in the
1221 case of DOSS in particular, at least as a starting place, we
1222 are looking to see whether--we want to confirm in a
1223 definitive study what we already believe we know the answer
1224 to, and that is, that is unlikely to bioconcentrate, and as
1225 Dr. Margolis put forward a minute ago, the studies, although
1226 just underway at the current way, but the preliminary
1227 information is very suggestive that they will not

1228 bioconcentrate, so again confirming what we believe we
1229 already knew. It is a reasonable question to ask if we can
1230 look at the other components. I think that is something that
1231 we ought to do.

1232 Mr. {Markey.} Just so I can understand, Doctor, so
1233 right now in the parts of the Gulf that have been reopened
1234 for fishing, you have okayed the consumption of that food,
1235 those fish, even though you haven't completed testing on the
1236 component parts of Corexit but with the belief that it does
1237 not accumulate in fish at a level that would pose a danger to
1238 the public as they consume that fish. Is that correct?

1239 Mr. {Kraemer.} It is correct to an extent, but what I
1240 would like to clarify is that we are doing some analysis of
1241 the fish. This is through the sensory testing that I
1242 mentioned earlier. And to give you an understanding there,
1243 these are experts who are trained. I think there is a
1244 misunderstanding by many about the nature of this test.
1245 Quite frankly, these are folks who go through significant
1246 training. Not every one of them can get through that
1247 training and demonstrate the skill to be able to pick up
1248 different odors, but the panels that we have in place on the
1249 Gulf Coast now, these are both NOAA and FDA people working
1250 together, are truly expert, and they have been calibrated
1251 against the standard of seawater, oil and dispersant that was

1252 collected at the well site so they can detect that combined
1253 odor. They were also calibrated specifically against the
1254 odor of dispersant, which has a much milder odor but still
1255 detectable, and so all of the samples that we are using for
1256 reopening of waters have been run through this analysis. We
1257 recognize that there is more comfort in having a chemical
1258 test, and that is the reason that we have engaged with NOAA
1259 in the development of the chemical test for the DOSS
1260 component. We believe it is highly unlikely that dispersant
1261 will be present by itself but there is certainly the
1262 possibility that it could, so that is the purpose for the
1263 develop of that test capability.

1264 But again, I don't want to suggest that we lightly came
1265 to the conclusion that the components of Corexit are unlikely
1266 to accumulate and if they did are nontoxic. There is an
1267 extensive body of science around all of these components
1268 which FDA has looked into. So as we have said and made
1269 public statements, we are confident that based on the current
1270 science, the likelihood for bioconcentration in fish is very
1271 low, and should it occur, the toxicity of those components
1272 would be very low. The studies that we are talking about are
1273 really there because of the unprecedented nature of this
1274 spill. We want to be able to assure the public that we have
1275 a test but we don't believe there is any risk to the fish

1276 that is caused as a result of the fish that are already on
1277 the market.

1278 Mr. {Markey.} In the same letter, FDA stated that it
1279 defers to EPA to determine if dispersant and oil residues can
1280 accumulate in aquatic plants and eggs. Dr. Anastas, can oil
1281 and dispersant bioconcentrate in fish eggs?

1282 Mr. {Anastas.} The properties of oil and the degree to
1283 which it dissolves in fat can allow oil to in principle enter
1284 into fat tissues and potentially enter those biological
1285 systems. All of the models that we have done on the
1286 dispersants would certainly suggest that we would not see the
1287 dispersants entering into and bioaccumulating and
1288 biomagnifying in the way that oil may.

1289 Mr. {Markey.} Is it possible that a fish may be caught
1290 and test clean in the adult tissues but contain eggs that
1291 have high levels of these toxic chemicals?

1292 Mr. {Anastas.} I am not aware of a mechanism by which
1293 that could occur.

1294 Mr. {Markey.} You believe that it could occur?

1295 Mr. {Anastas.} No, I am not aware--

1296 Mr. {Markey.} You are not aware?

1297 Mr. {Anastas.} --of a mechanism by which that could
1298 occur.

1299 Mr. {Markey.} Do you believe that further testing on

1300 eggs meant for human consumption be performed to ensure that
1301 all fish products on the market are safe?

1302 Mr. {Anastas.} I am sorry. If you could repeat that,
1303 please?

1304 Mr. {Markey.} Should further testing on eggs meant for
1305 human consumption be performed to ensure that all fish
1306 products on the market are safe?

1307 Mr. {Anastas.} I would defer to my FDA colleagues on
1308 that. I would have to say that the more data that we have,
1309 the more sampling we have to verify this is always good, that
1310 we need to rely on the data and the data needs to drive us.

1311 Mr. {Markey.} Dr. Lehr, how do FDA and NOAA ensure that
1312 fish that were located in oiled waters and were contaminated
1313 with toxic chemicals from the oil have not been swimming to
1314 areas that have been cleared for fishing?

1315 Mr. {Lehr.} I mean, the presumption here is that when
1316 you take it, the fish is guilty until proven innocent, so to
1317 speak. So when they do their sampling, the fish has to--you
1318 don't assume that it is cleared. You assume that it has to
1319 pass the tasting test, and then only then if it passes those
1320 does it then go to the laboratories of NOAA for the testing
1321 for the PAHs. So I would say that in the case here that we
1322 have that that we would take that into account. However, to
1323 be on the safe side, there is a five-mile buffer between the

1324 area where the places would be open or have not been closed
1325 in the first place and where oil has appeared so--

1326 Mr. {Markey.} Are you--

1327 Mr. {Lehr.} You would have to be an athletic fish.

1328 Mr. {Markey.} Are you right now engaging in intensive
1329 testing where the oil is still present in large quantities?
1330 Are you doing testing there?

1331 Mr. {Lehr.} The testing for the fish is being done in
1332 areas where the oil is no longer present on the surface.

1333 Mr. {Markey.} Where the oil is--

1334 Mr. {Lehr.} It is in the areas where either oil was
1335 never present or in areas where it hasn't been present for
1336 some time. Then they do the sampling. And then of course,
1337 every sample has turned out to be negative. They never
1338 detected any PAHs in the fish.

1339 Mr. {Markey.} And I am just going to use a
1340 hypothetical, and I don't know how accurate this is but let
1341 us just use it as a hypothetical, that the bluefin tuna,
1342 which is ultimately caught off of Georges Bank off of New
1343 England does spawn down in the Gulf of Mexico. Let us say
1344 just for the sake of the discussion and only for the sake of
1345 the discussion that some of that spawning is going on right
1346 now inside of the much more oiled area of the Gulf. We know
1347 that those fish are ultimately going to migrate up off the

1348 coast of New England. What is the testing for that fish or
1349 other fish that is going on inside of the oiled area that
1350 will ensure that it is safe when it finally reaches the part
1351 of the ocean where that fish or any fish is caught?

1352 Mr. {Lehr.} I think I am going to defer that question
1353 to experts that can answer that better than I can right now.

1354 Mr. {Markey.} Is there someone here who can do that for
1355 us? Can you move up to the microphone, please, and identify
1356 yourself?

1357 Mr. {Gray.} Chairman Markey, I am John Gray. I am the
1358 legislative affairs person. We don't have a person from the
1359 fisheries service here. We had one witness and it was going
1360 to be Mr. Lehr, so we can get those answers to you but we
1361 don't have that person here.

1362 Mr. {Markey.} I think that is an important issue to be
1363 resolved in people's minds because it just seems, I think, to
1364 someone that thinks about the fishing industry that these are
1365 not stationary or territorial entities in many instances. We
1366 are seeing sharks all up and down the coastline of New
1367 England and they don't seem to limit themselves just to a 5-
1368 mile radius right now, and just to say don't worry about it a
1369 few miles further away, that the sharks only stay within a 5-
1370 mile radius doesn't seem as though that would be the kind of
1371 warning that the public would think was sufficient in order

1372 to guarantee the safety of their families. So I think this
1373 is important information for us to have and the more that it
1374 can be put in very simple terms for the public, I think the
1375 better it will be for the fishing industry and for the
1376 consuming public.

1377 Mr. Kraemer, you are seeking recognition?

1378 Mr. {Kraemer.} Yes. I would just like to respond a bit
1379 on that. I think there are several answers to that question
1380 or several pieces of the answer to that question. The NOAA
1381 testing has included testing outside of the closed areas, and
1382 the purpose of that testing was to look for whether or not--
1383 first of all, to determine whether or not the closures were
1384 sufficiently protective, so this 5-nautical-mile buffer zone
1385 that was put around it we believe is sufficiently protective.
1386 The question, though comes, was it sufficiently protective.
1387 So testing was performed outside the area in which the
1388 closures were. Beyond that, both NOAA and FDA have done
1389 market sampling, so this is fish that were commercially
1390 harvested certainly in open waters so samples were collected
1391 there, and we believe we would have picked up any indication
1392 that there were fish that had higher than expected levels.
1393 And then finally, especially true for finfish, they clear the
1394 PAHs very rapidly from their body, usually within a matter of
1395 days. So a scenario of a fish that contaminated in the Gulf

1396 making it up to New England I think is highly improbable and
1397 we don't believe that that would be something that consumers
1398 should be worried about.

1399 Mr. {Markey.} Are you actually testing for that,
1400 though, given the unprecedented underwater experiment--

1401 Mr. {Kraemer.} We are testing Gulf product, that is,
1402 product that has been commercially harvested in the Gulf and
1403 that is currently being marketed, so we are testing that
1404 product, and again, it is not showing levels of PAHs above
1405 the background levels that were there before the spill
1406 occurred. So we believe that the fish coming out of the Gulf
1407 do not have levels that are of concern.

1408 Mr. {Markey.} Mr. Kraemer, is the FDA monitoring
1409 seafood recovered from the Gulf for the presence of heavy
1410 metals present in crude oil?

1411 Mr. {Kraemer.} We are not, no, but there is a NOAA
1412 program, the Mussel Watch program, that it is a bit of a
1413 misnomer in the Gulf in that it is not mussels that are being
1414 tested, it is oysters, but these are what we would call a
1415 sentinel species in that they are the species that is most
1416 likely to absorb contaminants including heavy metals, the
1417 most likely to hang onto that within their flesh and also the
1418 species most likely to bioconcentrate, that is, have it at
1419 levels above what would be in the environment. So this

1420 program has been in place for decades in the Gulf so we have
1421 a very solid--well, in fact, nationwide--so we have a very
1422 solid background level. We know what the levels of these
1423 contaminants are. It includes any of the heavy metals, for
1424 example, that you would be concerned about.

1425 Mr. {Markey.} But are you monitoring for it right now?

1426 Mr. {Kraemer.} I would defer to NOAA to answer what has
1427 been done on this but I wanted to mention that FDA has not
1428 but the NOAA program we believe is a good sentinel program.

1429 Mr. {Markey.} Let me go to NOAA then because it is my
1430 understanding that compounds like mercury, arsenic and other
1431 heavy metals that are present in crude oil have the ability
1432 to accumulate in the tissues of fish in levels that may cause
1433 harm particularly to pregnant women and children. Has the
1434 FDA or NOAA here examined seafood for the presence of heavy
1435 metals? Dr. Lehr.

1436 Mr. {Lehr.} There is some monitoring that is being done
1437 as part of the Mussel Watch program in the area. Again, I am
1438 going to defer to my colleagues to answer that correctly, and
1439 we will get back to you with an answer to that.

1440 Mr. {Markey.} So Mr. Kraemer, back over here at FDA,
1441 you don't screen for heavy metals. You think that NOAA may
1442 but the witness today does not know the answer to that
1443 question.

1444 Mr. {Kraemer.} I hate to speak for NOAA in this regard
1445 but it is our understanding that NOAA has collected a
1446 sampling run, if you will, from one end of the Gulf to the
1447 other where they would normally collect for the Mussel Watch
1448 but that the results are not yet back, so we don't have
1449 analyses of them. We do not expect to see an increase based
1450 on this spill but certainly those results will be
1451 confirmatory of that.

1452 Mr. {Markey.} Well, Mr. Kraemer, I wrote a letter to
1453 the FDA on this issue of heavy metals 6 weeks ago and I have
1454 yet to receive an answer from the FDA.

1455 Mr. {Kraemer.} And I apologize for that, Mr. Chairman.
1456 I would be happy to respond to those questions at this time.

1457 Mr. {Markey.} I would not have asked the question if I
1458 did not believe that it was important. I mean, heavy metals
1459 obviously have a danger that attaches to them and to have
1460 this kind of regulatory black hole be created here today
1461 between the FDA and NOAA in terms of knowing what the
1462 response is to testing for heavy metals in this fish which we
1463 know can accumulate in fish is something that obviously
1464 should have been identified within the last 6 weeks since I
1465 wrote the letter. When can I expect that response from the
1466 FDA?

1467 Mr. {Kraemer.} In a matter of days.

1468 Mr. {Markey.} Thank you, Mr. Kraemer, very much.

1469 Dr. Lehr, how does FDA and NOAA ensure that fish that
1470 were located in oiled waters and were contaminated with toxic
1471 chemicals from the oil are not then swimming to other areas?
1472 I am sorry. I have already asked that question.

1473 Let me move on to the FDA and NOAA. You have agreed on
1474 a protocol to examine when closed federal harvest waters can
1475 be reopened. That protocol relies heavily on surveillance
1476 tests and sampling that generate data about the concentration
1477 of particular contaminants found in seafood. It is my
1478 understanding that there have been fishery reopenings in
1479 State waters within 3 miles of the coastline of Louisiana and
1480 Mississippi. Does NOAA and FDA have access to the data that
1481 is used to drive the reopening decisions in State waters
1482 within 3 miles of the coastline of Mississippi and Louisiana?
1483 Mr. Kraemer.

1484 Mr. {Kraemer.} Thank you, Mr. Chairman. The answer is
1485 yes. The protocol that was developed jointly by FDA, NOAA
1486 and EPA along with the five Gulf Coast States calls for the
1487 States to provide that data to FDA and NOAA. I should say
1488 that for reopening purposes, the States are acting under
1489 their own authority, as I think you know.

1490 Mr. {Markey.} What role does the FDA and NOAA have in
1491 the opening and closing of State waters?

1492 Mr. {Kraemer.} When the State has made a decision that
1493 they would like to reopen a portion of their waters for a
1494 particular fishery, for example, for finfish or for shrimp,
1495 they develop a sampling protocol or plan, and that identifies
1496 how many of each of the species and where they are going to
1497 be located that they intend to collect. FDA and NOAA review
1498 that proposal and either concur with it or make
1499 recommendations for changes, and at that point the State then
1500 goes out and collects those samples and submits them to the
1501 NOAA laboratory in Pascagoula, Mississippi, which is where
1502 the sensory testing that I described a minute ago is
1503 performed. If a sample passes the sensory testing, then it
1504 is submitted to a chemical laboratory, and this is where the
1505 samples split. If it is federal waters, which isn't the
1506 question you raised, the sample would go to a NOAA
1507 laboratory. If it is a State waters, then the sample is
1508 handled by FDA or one of the State laboratories that we have
1509 under contract, and that is where we perform the analysis for
1510 PAH. The sensory analysis, as I mentioned, is for odors
1511 indicative of oil as well as odors that are indicative of oil
1512 contamination--I am sorry, of dispersant contamination.

1513 Mr. {Markey.} So can the FDA and NOAA state
1514 unequivocally that fish caught in the State waters are safe
1515 to eat? Can you state that unequivocally?

1516 Mr. {Kraemer.} FDA has expressed confidence in the fish
1517 that are commercially marketed from the Gulf Coast, and as I
1518 said, we--I didn't mention that the sample results then come
1519 back to FDA and NOAA for review and FDA then provides its
1520 concurrence to the State before the State reopens. So we are
1521 aware of the state of the oiling in that area and we are
1522 aware of the levels of the results of the analytical tests
1523 before the water is reopened by the State. So yes, we are
1524 able to vouch for the safety of those fish with respect to
1525 the contamination from the spill.

1526 Mr. {Markey.} Dr. Lehr, do you agree with that? Do you
1527 agree that the federal government is able to vouch
1528 unequivocally that the fish caught in State waters are safe
1529 to eat as well as federal waters?

1530 Mr. {Lehr.} I would say that the fish caught is meeting
1531 all the standards that were developed by FDA and NOAA.

1532 Mr. {Markey.} And what about noncommercial fishing?
1533 Recreational fishing is a major tourism sector in the Gulf.
1534 Can we be sure that those fish are safe to eat as well? Mr.
1535 Kraemer.

1536 Mr. {Kraemer.} FDA is directly responsible for
1537 recreational catch but I can tell you that again the States
1538 again exercise that control except in federal waters where
1539 NOAA exercises that control. But the States have implemented

1540 closures for recreational catch that mirror the closures that
1541 they have for commercial catch. So the safety of the
1542 recreational catch should be at the same level as commercial.

1543 Mr. {Markey.} Thank you, Mr. Kraemer.

1544 Dr. Anastas, with regard to the use of dispersants, Dr.
1545 Suatoni of the Natural Resources Defense Council says in her
1546 testimony that ``it would be unwise to draw conclusions about
1547 the safety of this unprecedented application of chemical
1548 dispersants from two laboratory experiments and field
1549 observations.'' Do you agree or disagree with that
1550 statement?

1551 Mr. {Anastas.} I think it is important to follow the
1552 data.

1553 Mr. {Markey.} Excuse me?

1554 Mr. {Anastas.} I think it is important to follow the
1555 data, and what that means is that we look at the data and
1556 what that data tells us but never remain satisfied. That is
1557 why we have ongoing monitoring programs. That is why we will
1558 always continue to ask the tough questions. That is why we
1559 are looking to have an ongoing long-term research plan so we
1560 do understand not only the current situation but the long-
1561 term effects.

1562 Mr. {Markey.} Thank you.

1563 Mr. Kraemer, polycyclic aromatic hydrocarbons, PAHs, are one of

1564 the most concerning compounds present in oil because of their
1565 significant health impacts. However, these compounds are
1566 also very quickly metabolized in aquatic species,
1567 particularly in certain types of fish. It is my
1568 understanding that polycyclic aromatic hydrocarbons are often
1569 metabolized into products that are retained in the flesh and
1570 can be more toxic than the parent compounds. In the market
1571 surveillance, is the FDA examining the metabolites of PAHs in
1572 the analytical sampling tests?

1573 Mr. {Kraemer.} It is my understanding that what we are
1574 looking for is specific PAHs and not any metabolites of those
1575 PAHs. So I think the short answer is no.

1576 Mr. {Markey.} Dr. Seyfert?

1577 Ms. {Seyfert-Margolis.} I think there is two points of
1578 clarification I would like to add, Chairman Markey, to go
1579 back to your question on heavy metals, which I would like to
1580 get to. To clarify on the metabolite issue, we have been
1581 engaging some experts in academia to discuss just this. I
1582 have had several conversations with Dr. Overton at LSU about
1583 their experiences with PAHs and metabolites that may be
1584 derived from those but we are not currently testing for
1585 those, but I do want to add that to date we haven't found any
1586 level. In fact, almost every test that we have conducted on
1587 the fish and shrimp that have been collected to date and

1588 other seafood has been completely negative, below our limit
1589 of detection for the PAHs themselves, if not very, very low
1590 levels as Mr. Kraemer stated, a thousand times below what
1591 would one--

1592 Mr. {Markey.} Have you been looking at fish that are
1593 right now inside the oiled areas?

1594 Ms. {Seyfert-Margolis.} No.

1595 Mr. {Markey.} I think that that is important for
1596 people, and I would recommend to you that you do some testing
1597 there. I think it is important for the public to know that
1598 inside the oiled area you are also doing testing because
1599 people will be concerned that there could be some migration
1600 outside of that oiled area subsequently, especially if the
1601 fish then move to areas where they are traditionally caught
1602 that might not be there in that area and that might not be
1603 this month or next month or the month after but some point in
1604 the future I think it would be very helpful if you would do
1605 some of that testing as well just so that we can see what
1606 happens in the most concentrated area as opposed to where you
1607 are now testing, and I think that is important information.
1608 I actually think it is important information going forward
1609 long term. We should know what happens to fish where the oil
1610 is most dense at this time. Doctor.

1611 Ms. {Seyfert-Margolis.} Just one more point of

1612 clarification on I think this point which is very well taken
1613 and your points on heavy metals. We are also engaging with
1614 NIH and other scientists to develop long-term toxicity
1615 studies. I think those are incredibly important in terms of
1616 looking at potential for accumulation of heavy metals and
1617 toxicities that may derive from that. And again, I would add
1618 that we do think that the surveillance through the Mussel
1619 Watch program is an incredibly important first line of
1620 defense but that there are active discussions about long-term
1621 toxicity studies and we will be engaging in these studies for
1622 years to come.

1623 Mr. {Markey.} Again, I would think that it would be
1624 important to begin those studies right now by going to the
1625 most potentially toxic areas and finding the samples now that
1626 are then used as your baseline, and I think that is long term
1627 going to be something that a lot of people wished was there
1628 in significant quantities in order to match off about what is
1629 then found at the periphery, so I would recommend to you that
1630 you do that.

1631 And again, let me ask the question again. Do you plan
1632 to test for metabolites?

1633 Ms. {Seyfert-Margolis.} I think this is part of our
1634 ongoing discussions with NIH. In fact, there is a meeting
1635 happening right now with several of the agencies and long-

1636 term toxicity studies and the design of those is one of the
1637 points under discussion.

1638 Mr. {Markey.} Thank you.

1639 Mr. Kraemer, there has been much criticism of the
1640 seafood sampling plan, particularly about the method of risk
1641 assessment. It is my understanding that the level of
1642 contamination with PAHs that is considered safe does not take
1643 into account vulnerable populations such as pregnant women
1644 and children, and this is because the assumptions made in the
1645 plan calculate safe levels based on an average adult male
1646 body weight of 176 pounds. Has the FDA produced guidelines
1647 to ensure that children and pregnant women are adequately
1648 protected from contaminants that may be present in seafood?

1649 Mr. {Kraemer.} I think the short response to that is
1650 that we believe that the levels of concern that we
1651 established for the reopening protocol are quite conservative
1652 and will be sufficiently protective for all populations but
1653 we also acknowledge that these are valuable comments and we
1654 are committed to looking again at the calculation of the
1655 levels of concern to make any judgments about whether we need
1656 to modify the levels that we have established for the
1657 reopening. I would like to point out, though, that again as
1658 we mentioned before, the levels that we are finding in fish
1659 flesh are essentially at levels that they would have been at

1660 before the spill. So whether or not the values would change,
1661 we are not seeing levels that should be of concern for
1662 children or pregnant women.

1663 Mr. {Markey.} And I appreciate the conclusion which you
1664 reach, but as you know, for 100 years, almost all medical
1665 research was done on the prototypical 176-pound male and only
1666 in the 1990s under pressure from the women's movement that
1667 independent research that dealt with the unique nature of
1668 women and children begin to be introduced. So the very fact
1669 that the classic 176-pound male is still used here is
1670 something that I think you should reexamine in terms of
1671 whether or not that is sufficient to deal with the more
1672 vulnerable population which are women and children in this
1673 particular instance. The extrapolation of all of these
1674 lessons over to women and children I think is something is
1675 probably not outdated and this may be one of the last
1676 remaining models that continues to stay on the books as the
1677 exclusive means by which such a measurement is in fact made
1678 of the risk to human beings.

1679 Mr. Kraemer, if an analytical test conducted by NOAA
1680 indicates that contaminated seafood has been found that was
1681 harvested from open waters, how does NOAA communicate this to
1682 FDA and what is the feedback method to stop others from
1683 fishing in the same place?

1684 Mr. {Kraemer.} Well, we have communications with NOAA
1685 at a number of levels so we communicate at the senior
1686 leadership level, we communicate through the National
1687 Incident Command process and we also communicate on multiple
1688 daily calls between all three agencies at the staff,
1689 scientific and technical levels, so any one of those routes
1690 could be used to move that information. Fortunately, we
1691 haven't had to deal with that information yet, but if it were
1692 to occur, we would immediately investigate, and that
1693 investigation would be to look at the analytical results,
1694 confirm that they in fact show that the product is what FDA
1695 would call adulterated and if we found in fact that it did
1696 reach that level of concern, either we or the State would act
1697 through our authorities to remove that product from the
1698 market, and also to reevaluate the adequacy of the closure
1699 that is in place.

1700 Mr. {Markey.} Thank you.

1701 Dr. Lehr, last Friday Admiral Allen issued a directive
1702 for a coordinated integrated system of ocean monitoring
1703 involving federal, State and academic monitoring efforts to
1704 detect remaining submerged oil in the Gulf. Can you tell us
1705 more about this effort and why this directive was necessary
1706 at this time? Was this coordination not occurring over the
1707 past 4 months?

1708 Mr. {Lehr.} Coordination in terms of tracking the
1709 subsurface oil has been happening since the beginning of the
1710 spill. In fact, early on in the spill, we went out and made
1711 arrangements with the experts who are experts in, for
1712 example, well blowouts from the Carson University, provided
1713 us their information of how the oil would act. We also made
1714 arrangements with SINTEF, which has a subsurface model that
1715 we could track the oil and now we have brought in our own
1716 models that are tracking it as well, tied in with all the
1717 detailed sampling that is being done. Now, I think the
1718 directive now of course other groups and other agencies have
1719 been doing it and the idea is to now bring them all together
1720 as a coordinated approach. I think that is a good idea.

1721 Mr. {Markey.} Are you saying that this is nothing more
1722 than a continuation of what has been going on all along?

1723 Mr. {Kraemer.} I would say this--

1724 Mr. {Markey.} And I guess I would ask, why was a new
1725 directive necessary if this was something that is nothing
1726 more than a continuing effort?

1727 Mr. {Kraemer.} I think what the admiral is stressing is
1728 that we are focusing now on the subsurface oil with the
1729 surface problem being removed and bring in extra resources to
1730 do that. Many of the folks at NOAA that I know of who are
1731 doing the surface trajectory have now been transferred to

1732 working on the subsurface trajectory collection, so I think
1733 to say it is a redirection as the problem has evolved and
1734 leave it at that.

1735 Mr. {Markey.} Thank you. What do we know about the
1736 dispersed oil and dispersant that is on the ocean floor?
1737 What species are affected there and how does that impact the
1738 food chain? Dr. Anastas.

1739 Mr. {Anastas.} I think you are asking an extremely
1740 important question. There are issues that we are looking to
1741 in real time develop research plans in the immediate and the
1742 longer term to fully understand what the oil is doing. I do
1743 refer back to the opening statements about we are not
1744 detecting dispersants in any concentrations to the limits of
1745 our methods of detection, so we are not seeing the presence
1746 of those substances.

1747 Mr. {Markey.} So are you saying you are not seeing
1748 dispersants and oil collecting on the ocean floor at this
1749 time?

1750 Mr. {Anastas.} In the thousands of samples that have
1751 been run, we are not detecting dispersants, the dispersant
1752 constituents on the ocean floor at this time. We have not
1753 seen a hit of dispersants at this time. We have the one hit
1754 that was referred to in NOAA, the one hit that was referred
1755 to at EPA in EPA testing. But the question that you asked

1756 about the oil on the ocean floor, we have seen some reports
1757 in the media that have talked about the oil on the ocean
1758 floor. This is something that as we look to ensure we
1759 understand the long-term effects, that this is exactly one of
1760 the questions that we need to investigate and find out,
1761 either confirm or disprove the presence of this oil and also
1762 to understand the impacts of this oil.

1763 Mr. {Markey.} Thank you.

1764 Why don't we do this? Why don't we hear from each one
1765 of you in reverse order of your opening testimony so that you
1766 can tell us what it is that you want the American public to
1767 understand about the state of the Gulf of Mexico at this
1768 particular point in time? We will begin with you, Dr.
1769 Anastas.

1770 Mr. {Anastas.} Thank you very much. I think the single
1771 message that Administrator Jackson has sent is that we need
1772 to be vigilant on understanding what the nature of the
1773 problems are, the immediate term and the long term, and that
1774 monitoring is crucial, that this crisis is not over, that the
1775 monitoring will continue, the work will continue, the
1776 research will continue into the long term, and getting that
1777 understanding not only to inform our decisions but to make
1778 sure that we get it to the American public as quickly as
1779 possible is one of our primary goals in accomplishing our

1780 mission of protecting human health and the environment.

1781 Mr. {Markey.} Great. Thank you, Dr. Anastas, and thank
1782 you for your work on this issue.

1783 Mr. Kraemer.

1784 Mr. {Kraemer.} Thank you. The question that we are
1785 very often asked in FDA is, what should a consumer do to make
1786 sure that their next meal of Gulf seafood is safe, and the
1787 answer I like to give to that and I would like to respond
1788 here is that they needn't do anything. That is FDA's job.
1789 And we take that job very seriously. We are confident that
1790 the program that FDA has put together along with our
1791 colleagues in the federal and State governments is
1792 sufficiently protective and that they need not take any steps
1793 to protect themselves from the seafood, that it is
1794 essentially at the same level of safety as it was before the
1795 spill. Having said that, we recognize that this is an
1796 unprecedented event, and our looking at the long-term safety
1797 of this source of food is something that we can't overlook,
1798 and I think we have mentioned here a few ideas of things that
1799 we do need to look at into long-term studies, the development
1800 of methods that can detect contaminants that we presently
1801 can't detect, and we think those are positive steps to
1802 providing further assurance to the public.

1803 Mr. {Markey.} Thank you, Mr. Kraemer, very much.

1804 And Dr. Lehr.

1805 Mr. {Lehr.} Thank you, Mr. Chairman. Before I get to
1806 my closing, I want to correct one thing. I am good scientist
1807 but perhaps a bad impromptu speaker, and so one of the things
1808 that you brought up was to suggest that this calculator was
1809 not involving independent scientists. The independent
1810 scientists contributed to the development of the calculator
1811 and independent scientists, very qualified scientists, will
1812 be the ones who are doing the reviewing of it. The field of
1813 oil spill science I like to say is so small that we could
1814 have a meeting in a ballroom and still have plenty of room to
1815 dance, and we have been able to tap many of the biggest names
1816 in that field for both the review and for the development.
1817 So I would like to stress that, particularly since there are
1818 other folks who this is their first big spill and they are
1819 coming in and perhaps don't have the background in this area.

1820 Now, for my other comment, as my colleagues have said,
1821 this is a continuing operation. The spill is far from over.
1822 We are beginning in a new phase, and NOAA and all the other
1823 agencies will be involved in this, and for those of us who
1824 are spill experts, we get paid for doing this but what I
1825 would like to think and people don't get enough credit to,
1826 when we went to develop our tools both in terms of the flow
1827 rate calculations and in terms of this budget calculation, we

1828 went out to many of the independent academics and other
1829 experts, and in many cases they were not being paid any
1830 compensation. I have not yet had a single instance where any
1831 of those folks have refused to work on any of the projects
1832 and the requests that we have done. So if there is a silver
1833 lining in the terrible event of the spill, it is the extent
1834 to which the American people are willing to volunteer their
1835 efforts at both the highest expertise levels down to the
1836 fellows who are volunteering to come out and clean up the
1837 beaches. Such tragedies do bring out the best in our country
1838 and I think that that is something that should be more
1839 brought forward perhaps.

1840 Mr. {Markey.} Thank you, Dr. Lehr, and again, thank all
1841 of you for your work.

1842 The point that I was making earlier was that in terms of
1843 the study that was released last week, first you gave the
1844 answer and now you are going to be showing your work, but in
1845 a peer-reviewed way, and that is the opposite of the way in
1846 which a study of that magnitude would be released, and all I
1847 am saying is that given the way that this has unfolded, that
1848 it is important that everyone including independent
1849 scientists who may not have participated in your creation of
1850 these models can see the assumptions upon which they were
1851 based now, given the fact that the peer review is going on

1852 right now but the science experiment in the Gulf of Mexico is
1853 occurring in real time so that there can be a real capacity
1854 to have all questions asked and answered not months from now
1855 as part of a boring academic exercise sometime next year but
1856 right now when concern is at its highest.

1857 So again, I restate my request to you that you provide
1858 that information to independent scientists who are not part
1859 of your study so that there can be a fresh set of eyes and
1860 minds that are applied to it because the consequences are
1861 great if you are wrong. If you are wrong, the consequences
1862 could be great. So let us just err on the side of safety.
1863 Let us have that information be given to the rest of the
1864 scientific community given the way in which that record was
1865 put together.

1866 So we thank you, Dr. Lehr, and again, in no way do we
1867 want to say anything other than we thank you for the work
1868 which you have done thus far. It is an exceedingly difficult
1869 working environment. It is unprecedented what has occurred
1870 in the Gulf of Mexico. We have this hearing principally
1871 because the public has a right to know, that there should not
1872 be a 6-week period, a month-and-a-half period where Congress
1873 has not been working on this issue, given the fact that it is
1874 our responsibility to make sure that the public interest in
1875 all aspects is protected.

1876 So we thank you, and we ask you perhaps to make yourself
1877 available to return again to answer additional questions
1878 because this is something that obviously is going to affect
1879 the Gulf of Mexico for months and years to come. With the
1880 thanks of the committee, we appreciate your contribution.

1881 Before we hear from our next set of witnesses, for the
1882 record, the subcommittee invited the Louisiana Department of
1883 Wildlife and Fisheries to participate in this hearing. The
1884 Louisiana Department of Wildlife and Fisheries makes the
1885 decisions regarding opening or closing of fisheries in State
1886 waters affected by the spill and has been working in
1887 consultation with the FDA regarding opening and closing of
1888 fisheries. Although nobody from the department was able to
1889 attend, the Louisiana Department of Wildlife and Fisheries
1890 submitted a statement for the record which I ask unanimous
1891 consent to move into the record at this time. Without
1892 objection, so ordered.

1893 [The information follows:]

1894 ***** COMMITTEE INSERT *****

|
1895 Mr. {Markey.} I would also like to move into the record
1896 a statement from the Center for Science in the Public
1897 Interest. Without objection, so ordered.

1898 [The information follows:]

1899 ***** COMMITTEE INSERT *****

|
1900 Mr. {Markey.} We will now move to hear from our
1901 witnesses, and we ask those witnesses to please move up to
1902 the witness table.

1903 Welcome back to the Subcommittee on Energy and
1904 Environment. Let me begin by making a unanimous consent
1905 request that all members be allowed to submit statements for
1906 the record and any questions which they would like to submit
1907 to the witnesses who are testifying here today. Without
1908 objection, so ordered.

1909 Our next witness is Dr. Ian MacDonald. Dr. MacDonald is
1910 a Professor of Biological Oceanography at Florida State
1911 University. His research uses satellite imaging to locate
1912 natural oil releases on the ocean surface. We thank you for
1913 coming, Dr. MacDonald. Whenever you feel comfortable, please
1914 begin.

|
1915 ^STATEMENTS OF IAN MACDONALD, PROFESSOR, DEPARTMENT OF
1916 OCEANOGRAPHY, FLORIDA STATE UNIVERSITY; DEAN BLANCHARD,
1917 PRESIDENT, DEAN BLANCHARD SEAFOODS, INC.; ACY COOPER, JR.,
1918 VICE PRESIDENT, LOUISIANA SEAFOOD ASSOCIATION; MIKE VOISIN,
1919 CHIEF EXECUTIVE OFFICER, MOTIVATIT SEAFOOD, LLC; AND LISA
1920 SUATONI, SENIOR SCIENTIST, OCEANS PROGRAM, NATURAL RESOURCES
1921 DEFENSE COUNCIL

|
1922 ^STATEMENT OF IAN MACDONALD

1923 } Mr. {MacDonald.} Well, I am a Professor of Oceanography
1924 at Florida State University. Today, however, I am speaking
1925 solely on my own findings, and I wanted to say before I
1926 embark on technical discussions that I have 30 years of
1927 professional and private experience traveling around,
1928 cruising on, diving to the bottom of the Gulf of Mexico, and
1929 I deeply and fiercely love this ocean and its people and I
1930 thank you for your exemplary service during this catastrophe.

1931 I would like to comment briefly with a critique on the
1932 NOAA oil budget report which we discussed earlier. I feel
1933 that this report was misleading, and although it presents
1934 science, it was done by very competent scientists without any
1935 citation to the scientific literature. Without the

1936 algorithms, without the formulas and the actual budget that
1937 are referred to, it is impossible for someone reading this
1938 report to check the numbers that are there, and we have
1939 concern about those numbers.

1940 So as I think you very ably demonstrated in your
1941 examination, we really can only account for 10 percent of the
1942 oil that was discharged, that 4.1 million barrels that was
1943 discharged through burning and skimming. The balance of the
1944 oil remained in the environment. There may have been some 10
1945 percent that evaporated into the atmosphere that is gone from
1946 the ocean but the balance is still in the ocean. The
1947 question is, how is it partitioned between the water column
1948 and the floating material that will have sunk to the bottom
1949 or become buried on the beaches, and this partitioning which
1950 was done or this separation into categories which was done by
1951 the oil budget is really pretty theoretical at this point.
1952 We need to check on that. There are findings that are coming
1953 out that I think will cause this into question.

1954 But let us just take this 26 percent, this 1.3 million
1955 barrels. As you say, this is five times the Exxon Valdez
1956 release. This oil has already degraded, has already
1957 evaporated and emulsified. It is going to be very resistant
1958 to further biodegradation. This oil is going to be in the
1959 environment for a long time. I think that the imprint of the

1960 BP release, the discharge, will be detectable in the Gulf of
1961 Mexico environment for the rest of my life, and for the
1962 record, I am 58 years old, so there is a lot of oil. It is
1963 not gone and it is not going away quickly.

1964 I would also like to comment on an aspect of the spill
1965 that hasn't received a lot of attention and that is the
1966 methane gas. All of the numbers about the release, the
1967 discharge have been presented in volumes of oil, barrels of
1968 oil. If, however, we calculate, we know that the Macondo
1969 field well was very rich in gas and we have good numbers on
1970 that from the Flow Rate Technical Group. If we take those
1971 numbers and we present all the discharge in terms of units of
1972 mass equivalents or barrel of oil equivalents, it turns out
1973 that the oil plus the gas is equal to 1.5 times the oil
1974 alone. In other words, if we conclude that there are 4.1
1975 million barrels of oil released, the actual discharge in
1976 barrel of oil equivalents is in excess of 6 million barrels.
1977 Because this oil, this material was released at the bottom of
1978 the ocean, it transited the ocean. Some of it, much of it
1979 perhaps still remains in the ocean so I would contend that
1980 for the purposes of the Oil Pollution Act, this was a
1981 discharge and this total pollutant load should be included in
1982 our assessment of how far this spill went down.

1983 I would also like to comment on the so-called resilience

1984 of the Gulf of Mexico. Now, a fair reading of the report
1985 indicates that this 90 percent, this huge volume of oil
1986 represents a massive does of hydrocarbons in the Gulf of
1987 Mexico ecosystem. There has been some talk about the
1988 resilience of the Gulf of Mexico. My concern, my first
1989 concern is not for a whole-scale die-off but for a
1990 depression, some decrease, 10 percent, 15 percent of the
1991 productivity and the biodiversity of the Gulf of Mexico
1992 ecosystem. Now, this might be--if we had a 10 percent
1993 decrease, this might be very difficult to demonstrate
1994 scientifically. It might be even harder to prove in a court
1995 of law. Nonetheless, if we sustain this impact over many
1996 years, it would be a severe affect.

1997 My greatest concern, however, is that some of the damage
1998 will be so severe that we may have tipping point effects that
1999 will overwhelm the resilience of the ecosystem, and this
2000 unfortunately has been the case, has been the scientific
2001 result looking at Prince William Sound in the wake of the
2002 Exxon Valdez spill. We need to hope that this won't happen.
2003 We need to do more than hope. We need to watch very
2004 carefully, and I have drafted as part of my submission here a
2005 list of species that I think we should be watching closely.
2006 These include some of the big species, the shrimp, the tuna
2007 and so forth, but they also include more humble members of

2008 the ecosystem such as fiddler crabs, the Coquina clams that
2009 are so abundant on the beaches. We need to be watching these
2010 populations through time, not just next year but for years to
2011 come, because it may take several years to notice the impact.
2012 A healthy environment has to support the species that depend
2013 on the healthy environment. If we watch those species, we
2014 will know they go. Is my time up? Okay.

2015 [The prepared statement of Mr. MacDonald follows:]

2016 ***** INSERT 4 *****

|
2017 Mr. {Markey.} Yes, it is, but you will have time during
2018 the question-and-answer period to elaborate.

2019 Our next witness is Mr. Dean Blanchard. He is the
2020 President and sole owner of Dean Blanchard Seafoods located
2021 in Grand Isle, Louisiana. Dean Blanchard Seafoods is the
2022 largest dockside shrimp broker in the United States and the
2023 third largest in the world. Thank you for coming, Mr.
2024 Blanchard. Whenever you feel ready, please begin.

|
2025 ^STATEMENT OF DEAN BLANCHARD

2026 } Mr. {Blanchard.} Yes. Thank you for having us,
2027 Chairman.

2028 I want to say, we visit your State regularly, and gosh,
2029 it reminds me of Grand Isle.

2030 We are here today to talk about seafood safety, and we
2031 have a few concerns, and basically I have taken a moment to
2032 outline a few of my major concerns as an independent seafood
2033 business owner of Grand Isle regarding the effects of the BP
2034 oil spill.

2035 If a seafood product is put onto the market and is later
2036 determined to have made the consumer ill because of oil
2037 and/or dispersant contamination, who will be determined to be
2038 the responsible party? That is one of our major concerns
2039 right now because we are having trouble getting product
2040 liability insurance. I have been responsible for moving, it
2041 is just a guess, but I believe in my lifetime about 300
2042 million pounds of shrimp, and I have never seen anyone get
2043 sick. You know, we are born in this business. Pretty much
2044 everyone in the seafood business is born and raised in it.
2045 You don't just decide one day I am going to be a seafood
2046 business guy. So we have good people in our business and we

2047 know the shrimp, you know, and I am hoping that will keep the
2048 public safe. We are testing our shrimp. We are checking it.
2049 I won't put nothing on the market that I won't eat myself. I
2050 stayed about 2 weeks without eating shrimp, and I felt like I
2051 was going to die and I decided I was going to start eating it
2052 again because it was so good. But that is one of our major
2053 concerns is, who is going to be responsible. I have a
2054 feeling that if I get sued I am going to be the one paying
2055 the bill.

2056 Another concern we got, our commercial shrimpers and
2057 fishermen are hesitant to fuel up their boats, buy ice and
2058 oil and salt because they believe that the open waters will
2059 be closed once more, or that they will find oil-contaminated
2060 seafood which they know I will not buy and they are going to
2061 have to dispose of it. It is difficult for an out-of-work
2062 fisherman to pay for these expenses without the confidence in
2063 the government, who dictates the openings and closures, and
2064 without the confidence in BP's press releases which state
2065 that virtually all of the recoverable oil has been recovered.

2066 You know, if you go out shrimping right now and you
2067 watch to catch oil, they can go catch oil. But if you want
2068 to catch good shrimp, you can catch good shrimp also. So,
2069 you know, I told every fisherman, you know, when you bring me
2070 the product, it is going to be scrutinized 10 times more than

2071 it has ever been before, so if you think anything is wrong,
2072 don't bring it to me. I will not buy it. I will not take
2073 the chance of getting sued or getting someone sick. You
2074 know, the last thing I ever want is for somebody to say I got
2075 them sick or a pregnant woman, you know, that would be hard
2076 to live with, so we are taking extra precautions to make sure
2077 that doesn't happen.

2078 You know, we are having, like I said, a difficult time
2079 locating insurance companies who will sell us insurance, and
2080 that is--you know, what I am scared of is not somebody
2081 actually getting sick, I am scared of someone trying to make
2082 money off of this, you know. That is the scary part, you
2083 know.

2084 Basically in summary, we in the seafood industry have
2085 very little trust in the government, you know. When I try to
2086 sell seafood, I tell them, I say well, the government said
2087 they did thousands of tests and everything is all right, and
2088 they say is that the same government that said only 1,000
2089 barrels a day was leaking out the well, and I say well, it is
2090 the same government but it is a different branch.

2091 So that is some of the problems we are having and we
2092 appreciate with the help of people like you that maybe we
2093 will get down to the bottom of it, but I firmly believe that
2094 all the seafood I have seen so far is safe. I eat seafood

2095 probably six, seven times a week. I haven't had any problems
2096 with the seafood. So we are hoping that the government is
2097 doing the right job and making sure everybody is safe and
2098 maybe we can all get through this one day. Thank you.

2099 [The prepared statement of Mr. Blanchard follows:]

2100 ***** INSERT 5 *****

|
2101 Mr. {Markey.} Thank you, Mr. Blanchard, very much, and
2102 thank you for being here today.

2103 Our next witness is Mr. Acy Cooper, Jr. He is a
2104 fisherman from Plaquemines Parish and the Vice President of
2105 the Louisiana Shrimpers Association. He is the owner of the
2106 commercial shrimp boat the Lacy K, and we thank you for
2107 coming, Mr. Cooper. Whenever you are ready, please begin.

|
2108 ^STATEMENT OF ACY COOPER, JR.

2109 } Mr. {Cooper.} I would just like to talk a little bit
2110 about the damages done to our community.

2111 This oil spill, we have oil on the bottom of our
2112 waterways. We have reports of numerous fish kills. We know
2113 the oil is there. NOAA keeps saying that the oil is not
2114 there. Everybody said it is not there. We know it is there.
2115 I worked in one part of this particular bay for 2 months and
2116 we wear hazmat suits, we wear gloves, we taped up. They said
2117 oil is not there. When they got rid of me the last day I was
2118 working for BP, I found oil is on the bottom. I reported it
2119 to the Coast Guard, reported it to BP, brought them up there,
2120 showed them it was there.

2121 This has catastrophic effects on our community, our
2122 industry, our way of life. We do not need to let this lay
2123 because BP is going to step out of here and they are trying
2124 to get out of here now. We need to make sure we stop on top
2125 of things because if we let them leave now, we are going to
2126 be in deep trouble. Everybody says it is over with. They
2127 want to paint a picture that in a perfect world it would be.
2128 Right now, as you have seen this morning, 90 percent of the
2129 oil is still there, and that is one thing we are definitely

2130 scared of. The places that we do have that is clean, we know
2131 it is clean, like they were just stating. We are worried
2132 about when it comes in tomorrow or the day after tomorrow
2133 that we can't fish there anymore.

2134 The main thing is that we monitor the fish areas that
2135 are clean. Let us work in the fish areas that are clean.
2136 Where it is not clean, we can just stay away from it. Our
2137 fishermen are not going to come in and sell anything that is
2138 bad. We want to make sure what we put on the market is good.
2139 That is one of the main things that we discussed. We have
2140 meetings on our own and we do discuss this.

2141 Now, we need to make sure that BP stays in place for as
2142 long as it needs to be because we see right now that they are
2143 trying to move out and they are trying to go. We don't need
2144 to let them leave now. Finish the job they started. They
2145 did it. They need to clean it up. Like Dean said, if we get
2146 somebody sick, it is going to come back on us. The process
2147 of having a dockside waiver saying that we caught them in
2148 open areas in the marsh, they are making us sign waivers that
2149 we caught them in open marsh. Now, who are we going to make
2150 responsible for that? Is BP going to step up and be
2151 responsible for what we have to do? I signed it for Dean.
2152 He signed it for the processors. Who signs for us? So we
2153 are going to wind up with the burden of having to take the

2154 brunt of this. We can't make any money.

2155 It opened on August 16, the season. I went out.

2156 Normally I would catch a couple thousand pounds to 10,000

2157 pounds. I caught 500 pounds of shrimp at \$1.25. Those same

2158 shrimp last season was around \$2, \$2.25. They went down \$1.

2159 Now, if I can't get the price for my shrimp and I can't catch

2160 them, how am I going to survive? I have been doing this for

2161 35 years. My father is 74 years old. He still does it. My

2162 sons do it. Hopefully their sons will do it, hopefully. I

2163 don't see any future in it. With the prices and everything

2164 that is going on now, we may not have a future. Who is going

2165 to be liable for that? BP needs to step up and make sure

2166 they pay us for what they have done, keep this industry

2167 going. Our docks can't afford to keep going. What happens

2168 if they go out? One link is broken in this chain and we lose

2169 our industry. This is something we have been doing all our

2170 lives. Who do we go to then?

2171 I just want to make sure they understand that we are not

2172 happy with what is going on right now. They said the oil is

2173 gone. It is not gone. It is on the bottom. We can take you

2174 and show you. I brought the Coast Guard, I brought BP and

2175 showed them. You stir the bottom up and oil comes up. So

2176 whoever said it is gone, as you heard today, they said 75

2177 percent was gone before, 90 percent is still there and it is

2178 going to come into our shores eventually somewhere, if not in
2179 Louisiana, somewhere else. Thank you.

2180 [The prepared statement of Mr. Cooper follows:]

2181 ***** INSERT 6 *****

|
2182 Mr. {Markey.} Thank you, Mr. Cooper. And just so you
2183 know, the reason that we are having this hearing is that BP
2184 knows that we are not going away. We are going to stay on
2185 them until they do the job. We know that BP did not stand
2186 for Be Prepared. Right from the very first day when they
2187 said there was 1,000 barrels per day all the way until today,
2188 they never had a plan put in place to deal with something
2189 like this, and we just can't allow them to believe that the
2190 coast is clear, that they can retreat without having to pay
2191 for everything that they are responsible for.

2192 Mr. {Cooper.} Let me say one more thing. You heard
2193 them talking earlier about 5-mile bumpers. Where I found the
2194 oil, the season was open in that area this last--the 16th.
2195 It was open where I found the oil at. And they are talking
2196 about giving a tradeoff, a tradeoff for the dispersants, and
2197 the only tradeoff that we feel they gave to is our industry
2198 because when you sink it like that, we can't see it coming
2199 in. Our shrimp and fish, they are all bottom feeders. That
2200 is where it went, to the bottom. So it is deeply concerning
2201 for us where it is out there coming in on our bottoms.

2202 Mr. {Markey.} Thank you, Mr. Cooper.

2203 Now we will hear from Mr. Mike Voisin. He is the Chief
2204 Executive Officer of Motivatit Seafood, and oyster processing

2205 plant in Houma, Louisiana, a family-owned business. The
2206 Voisin family has been involved in the seafood industry since
2207 1770. Mr. Voisin also serves on the Louisiana Wildlife and
2208 Fisheries Commission, the Louisiana Oyster Dealers
2209 Association and the Louisiana Oyster Taskforce. We welcome
2210 you, Mr. Voisin.

|
2211 ^STATEMENT OF MIKE VOISIN

2212 } Mr. {Voisin.} Thank you, Mr. Chairman, and good
2213 afternoon. The opportunity to come before you is a pleasure
2214 today, and thank you for this opportunity.

2215 Mr. {Markey.} And may I also say that in Congress there
2216 are two places that everyone thinks has a very funny accent,
2217 and one of them is Louisiana and the other one is from
2218 Boston, so this is a gathering of those. The other 48
2219 States, they all think they speak plain English but we know
2220 that our accents are the authentic ones, so welcome.

2221 Mr. {Voisin.} Thank you, Mr. Chairman.

2222 Our company has an oyster farm in south Louisiana that
2223 comprises about 10,000 acres of water bottoms. We produce
2224 anywhere from 45 to 75 million oysters annually, and on the
2225 bottom we always have 2- to 3-year classes of oysters or 135
2226 to 225 million oysters on the water bottom at any time.

2227 In addition to running my family business, you mentioned
2228 my relationship with the Wildlife and Fisheries Commission of
2229 Louisiana as a member. I am also past chairman of the
2230 National Fisheries Institute.

2231 Louisiana is second only to Alaska in total seafood
2232 landings. In 2008, our commercial fishermen harvested 1-1/4

2233 billion pounds of seafood, which represented nearly \$660
2234 million in dockside value. Meanwhile, 3.2 million
2235 recreational fishermen along our shores took to the water,
2236 completing a total of 24 million fishing trips.

2237 The Deepwater Horizon oil spill is clearly an ecological
2238 and human tragedy that will surely affect not only the
2239 fragile habitats where fish and shellfish are harvested, but
2240 the very core of the community that brings these iconic
2241 delicacies from the waters of the Gulf to the tables of
2242 America. That culture and those Americans need your support
2243 during these challenging times.

2244 The seafood community has been actively engaged with
2245 both state and federal officials as they closely monitor the
2246 Gulf waters and only now begin to reopen those waters. We
2247 have worked closely with NOAA, the Department of Wildlife and
2248 Fisheries, Department of Health and Hospitals and other
2249 groups including the Environmental Protection Agency as well.

2250 We strongly supported the precautionary closures at the
2251 outset of this tragic event in order to ensure consumers
2252 continue to have access to seafood maintained with the level
2253 of quality and safety expected in the Gulf of Mexico. And
2254 now, as we did then, we support regulators as they reopen
2255 those same waters and continue their ongoing efforts to
2256 protect consumers.

2257 We agree that closing harvest waters which could be
2258 exposed to oil was the best way to protect the public because
2259 this prevented potentially contaminated seafood from entering
2260 the marketplace. Closures made with the intent to ensure
2261 seafood was as safe as possible were balanced with not
2262 closing any fishing areas unnecessarily. And as a testament
2263 to that system, we know now that no contaminated product has
2264 made its way into the market.

2265 Waters are reopened only when oil from the spill is no
2266 longer present and the seafood samples from the area
2267 successfully pass chemical testing. Sensory analysis testing
2268 is a heavily established, verifiable and highly scientific
2269 way to detect contamination. That testing continues
2270 aggressively as well. In fact, FDA has collected 5,658
2271 specimens, as well as NOAA, that all of these samples have
2272 been 100 to 1,000 times below the threshold levels for any
2273 margin of safety relating to any human health concern.

2274 The Gulf seafood community applauds the Administration
2275 for taking the lead on the coordination of a comprehensive
2276 multi-government agency response and we appreciate the
2277 collaborative efforts of NOAA, FDA, EPA and the State
2278 authorities including the Louisiana Department of Health and
2279 Hospitals. We are pleased that the State agencies are
2280 working closely with the federal government and we are

2281 thoroughly confident that every necessary step is being taken
2282 to ensure the continued safety of seafood sourced from the
2283 Gulf. After thousands of tests, the public should not be
2284 concerned about the safety of Gulf seafood. We have all seen
2285 media reports raising questions about that same seafood,
2286 which stand in contrast to all the federal and State testing
2287 we have seen. It is absolutely critical to the Gulf seafood
2288 community that a consistent and precise message continues to
2289 be delivered to the consumers who may unnecessarily shy away
2290 from this otherwise very healthy product.

2291 The Gulf of Mexico has 600 square surface miles of
2292 water, and during the 100 days or so of this event, the
2293 Mississippi River carried 1,600,000,000 plus gallons of water
2294 into that Gulf of Mexico. We know it is 5,000 feet deep,
2295 probably more like 10,000 to 13,000 feet deep. There is a
2296 lot of water out there. We have corresponded with doctors,
2297 MDs, and we have spoken to scientists. We have educated
2298 ourselves and understand that the demonstrable risk from
2299 dispersants is negligible and we hope further studies will be
2300 able to help consumers better understand that challenge.

2301 I would like to thank you and the Administration for all
2302 the efforts that are you are putting forth to make sure that
2303 we continue to do the right things relating to this seafood
2304 concern. Thank you, Mr. Chairman.

2305 [The prepared statement of Mr. Voisin follows:]

2306 ***** INSERT 7 *****

|
2307 Mr. {Markey.} Thank you, Mr. Voisin, very much, and we
2308 thank the members from the Louisiana delegation, Mr. Melancon
2309 and Mr. Scalise, for their work in helping to make sure that
2310 we keep BP accountable and the government accountable to
2311 ensure that the innocent victims of this continue to be
2312 protected.

2313 Our next witness is Dr. Lisa Suatoni. She is the Senior
2314 Scientist in the Oceans Program at the Natural Resources
2315 Defense Council. She earned her PhD in ecology and
2316 environmental evolutionary biology from Yale University. We
2317 welcome you, Dr. Suatoni.

|
2318 ^STATEMENT OF LISA SUATONI

2319 } Ms. {Suatoni.} Thank you. Thank you for this
2320 opportunity to testify.

2321 Mr. Chairman, recent communications by the federal
2322 government on the oil spill have been optimistic. We are
2323 hearing that pieces of the puzzle are falling together, that
2324 the picture looks better than many of us had feared and that
2325 we have turned the corner. However, previous experience from
2326 other oil spills tells us that we are only at the beginning
2327 stages of this event from an ecological perspective, that the
2328 story is necessarily complex and many unanswered questions
2329 remain.

2330 In my testimony today, I will focus on three recent
2331 actions from the federal government that have raised
2332 concerns. First, the concerns, the tradeoffs associated with
2333 the use of dispersants. As we have from Dr. Anastas today,
2334 the EPA conducted recent toxicological studies on the
2335 dispersants Corexit and we heard that Corexit had equal
2336 toxicity to other dispersants, that Corexit had much lower
2337 toxicity than the oil itself and that the Corexit-oil mixture
2338 had about equal toxicity to the oil, at least to two test
2339 species. However, with the release of these findings, the

2340 federal government concluded that the picture is becoming
2341 clearer, that the use of Corexit was an important tool in
2342 this response. Well, it may be tempting to conclude that use
2343 of dispersants was a wise decision in this oil spill, we
2344 think that conclusion is premature. As you already mentioned
2345 today, we think it is unwise to form that conclusion on the
2346 basis of two toxicological studies and observations in the
2347 field that Corexit is at exceedingly low concentrations. As
2348 you pointed out, you raised many important additional
2349 questions today and there are additional ones too.

2350 For example, what proportion of the oil that would
2351 otherwise have ended up on the coast didn't because of the
2352 use of dispersants? Where is the chemically dispersed oil?
2353 Is it encountering vulnerable benthic ecosystems on the
2354 shallow shelf or in deep ocean canyons? Is the chemically
2355 dispersed oil more able to get into the food chain than the
2356 oil alone? Is it getting into the food chain? Is it
2357 possible for the dispersant to biomagnify in the food chain?
2358 These are all outstanding questions. It is clear that the
2359 use of chemical dispersants is a tradeoff but it is not at
2360 all clear that we understand what tradeoff we have made.

2361 On the remaining oil in the environment, we have already
2362 heard a critique from Dr. MacDonald about the federal oil
2363 budget, and NRDC agrees with him, the assertion that 75

2364 percent of the oil is no longer in the environment is an
2365 overinterpretation of the data and misleading. Because of
2366 the uncertainty associated with the rate of biodegradation of
2367 the oil, we really don't know how much oil remains in the
2368 environment. This needs to be directly measured. If you do
2369 a more direct interpretation of the federal oil budget, it
2370 reveals that 50 percent of the oil may remain in the
2371 environment. That is over 100 million gallons, or nine times
2372 the Exxon Valdez spill. That is a lot of oil.

2373 In addition, the federal oil budget appears to be a
2374 preliminary budget that was perhaps prematurely released. It
2375 was released before peer review. It was released without any
2376 discussion of the precision associated with those estimates.
2377 It is a partial tally of the hydrocarbons in the environment.
2378 Again, as we have heard today, it didn't contain methane,
2379 which scientists believe comprised half of the total
2380 hydrocarbons that went into the environment. And it was a
2381 partial analysis of the fate of the oil. For example, it
2382 didn't provide estimates of how much oil went into an oil
2383 slick or what proportion of the oil made it to the coast or
2384 what proportion of the oil is now on the sea floor. As
2385 presented, the federal oil budget was a partial snapshot of
2386 the oil in time. It doesn't directly address where the oil
2387 was, where it is going and how long it will remain in the

2388 environment, and it of course didn't address the ecological
2389 impacts. To fully understand the risk of the remaining oil
2390 or the impacts to the environment, this picture needs to be
2391 filled out and the oil budget needs to be refined.

2392 Relating to the safety of seafood, recent statements
2393 from the federal government made today in fact assure
2394 Americans that the open fishing grounds and the seafood in
2395 the market have no oil in them and present no health hazard
2396 whatsoever. Again, many important questions remain. My
2397 colleague, Dr. Gina Solomon, who is in the health program at
2398 NRDC, highlights three primary concerns that we have.

2399 First, much of the data in the contamination of the Gulf
2400 seafood are not publicly available so scientists cannot
2401 independently review the findings. NOAA has released data on
2402 fewer than 100 of the samples out of thousands that they say
2403 they have, and only on finfish, not on shrimp. Data from the
2404 State waters has not yet been released. Second, the seafood
2405 monitoring that is currently being done may not be adequate
2406 in terms of sample size and in terms of failure to monitor
2407 heavy metals, which you discussed today, and the dispersants.
2408 Third, assumptions using the FDA risk assessment fail to
2409 adequately account for exposure to polycyclic aromatic
2410 hydrocarbons to vulnerable populations, mainly developing
2411 fetuses, young children, and subsistence fishing communities,

2412 and that is largely because of the assumptions you already
2413 raised about the weight of adult males.

2414 In conclusion, the Gulf oil disaster represents the
2415 largest oil spill in U.S. history. We understand that the
2416 government wants to turn the corner and wants to signal that
2417 the Gulf is on its way to recovery. However, the facts
2418 simply do not bear that out. This is still a huge amount of
2419 oil in the environment. No matter how you interpret the
2420 federal oil budget, everyone agrees with that. It does a
2421 disserve to the Gulf region and to the public at large to
2422 diminish the problem that this oil presents to the health of
2423 Americans and the ecosystems of the Gulf of Mexico. The
2424 government needs to take the time to do a careful study to
2425 assess the fate and the effects of this spill and greater
2426 transparency is warranted. In the end, we believe that this
2427 follow-through is the only thing that will keep this
2428 catastrophe from being such a big disaster.

2429 [The prepared statement of Ms. Suatoni follows:]

2430 ***** INSERT 8 *****

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2431 Mr. {Markey.} Thank you, Doctor, very much.

2432 Now we will turn to questions from the committee, and I
2433 will begin with you, Dr. MacDonald.

2434 I think that there is a lot of concern about how far the
2435 oil and methane from the spill has spread in the Gulf, how
2436 long it will remain and what harm it could cause. I know
2437 that these questions are areas of active research for you and
2438 for the broader academic community. Can you give us a brief
2439 overview of what academic scientists are finding in that
2440 regard?

2441 Mr. {MacDonald.} Well, this week and today in fact we
2442 have seen the release of a number of careful studies, one by
2443 the University of South Florida reporting on results from a
2444 recent research cruise with the research ship Weather Bird, a
2445 careful study of the oil budget by a scientist at the
2446 University of Georgia in Athens, and today the release of a
2447 major paper published in Science by Richard Camilli and
2448 colleagues. These reports collectively show different
2449 aspects of the spread of the oil and its related compounds
2450 that raise major concerns. The Camilli report documents the-
2451 -and this is the best science that I have seen yet out of
2452 this process. The Camilli report documents the spread of
2453 compounds called BTEX, and these are the polycyclic aromatic

2454 hydrocarbons, and the ones of greatest concerns, these are
2455 benzenes, xylene, toluene and so forth. These are the most
2456 toxic components of the oil, and they track a very large
2457 plume of this material spreading to the south and the
2458 southwest of the spill.

2459 Now, I will note that in that report, they document that
2460 some 6 to 7 percent--I believe those numbers are correct--of
2461 the BTEX released from the well, the total discharge was
2462 included in that plume. This plume is at 1,100 meters. If
2463 that BTEX is a tracer on the total amount of oil released and
2464 entrained into these deepwater layers, that suggests that we
2465 don't know very well what happened to the balance, and in
2466 fact, the upper layers of the ocean including the surface of
2467 the ocean may have received a bigger dose of oil than we are
2468 presently worried about.

2469 We do know from my work and other work that has been
2470 done that the oil spread over an area of many thousands of
2471 square kilometers, and as it degraded, as it emulsified and
2472 sank, it rained down particles of oil, and this oil became
2473 more concentrated as it reached the coast so we now have a
2474 very widespread amount of oil that is scattered in layers,
2475 and this is what the findings from the Weather Bird
2476 documented. They took core samples going towards Panama City
2477 and they found oil on the bottom everywhere. Now, just

2478 sampling with a core, that suggests that either you are very
2479 unlucky or there is a lot of oil on the bottom, and the
2480 Georgia study confirmed many of the points that have been
2481 made in this hearing.

2482 Mr. {Markey.} Okay. Great. Thank you.

2483 While this hearing was ongoing, the Woods Hole
2484 Oceanographic Institute released a study, and it is a
2485 snapshot from the middle of June, and what they found was a
2486 plume of oil from the well at least 22 miles long, 1.2 miles
2487 wide and 650 feet high at a depth of 3,000 feet below the
2488 surface in the Gulf, and contrary to government oil budget
2489 report that said dispersed oil is biodegrading quickly, Woods
2490 Hole scientists found that microbes are degrading the plume
2491 relatively slowly, in the words of Woods Hole. That means
2492 that the oil is persisting for longer periods than expected.
2493 They don't know how toxic it is or if it poses a threat, and
2494 unlike some other researchers, they did not find areas of
2495 severe oxygen depletion, that is dead zones. They explained
2496 this discrepancy because of their use of an older lab-based
2497 technique rather than the use of modern sensors which can
2498 give oxygen readings that are too low when the sensors are
2499 coated with oil. So I just wanted to put that on the record.

2500 Mr. Cooper, how many years have you been shrimping?

2501 Mr. {Cooper.} Thirty-five years myself.

2502 Mr. {Markey.} Now, have you been out shrimping
2503 recently?

2504 Mr. {Cooper.} Yes, sir, on the 16th of August it opened
2505 up and I went that day.

2506 Mr. {Markey.} Now, did you see anything different or
2507 unusual in terms of the waters or the shrimp?

2508 Mr. {Cooper.} Not in the area I went, which we didn't
2509 have a whole lot of concentration of oil come in, it was a
2510 clean area, so no, at that point I didn't. I just didn't
2511 have enough shrimp. It wasn't there.

2512 Mr. {Markey.} Dr. Suatoni, would you like to comment on
2513 that in terms of the long-term impact?

2514 Ms. {Suatoni.} Well, we are concerned primarily with
2515 regard to the shrimp and the presence of the subsurface oil,
2516 and that, as Mr. Cooper said, oil is present in open grounds
2517 and that there may be more exposure. The marine
2518 invertebrates do not process polycyclic aromatic hydrocarbons
2519 as quickly as food fish so we think there needs to be special
2520 care taken with the sampling of invertebrates.

2521 Mr. {Markey.} Dr. MacDonald, would you like to comment?

2522 Mr. {MacDonald.} Well, I think that the survival of the
2523 Gulf seafood industry requires the survival of seafood, and
2524 we have to be concerned. I mean, this is anecdotal. This is
2525 one fishing trip and I am sure you have gone out before, Mr.

2526 Cooper, and not caught as many fish as you wanted to.

2527 Mr. {Cooper.} Correct.

2528 Mr. {MacDonald.} So this one event doesn't tell us the
2529 whole story. But the fishermen, however healthy the seafood
2530 is, if they can't catch it because there has been a lot of
2531 some year classes, then all of the protection and the
2532 vigilance of the FDA is not going to sustain the Gulf seafood
2533 industry because it won't be there. So that is my concern.

2534 Mr. {Markey.} Mr. Cooper, are you going to go out
2535 shrimping again soon?

2536 Mr. {Cooper.} Yes, sir.

2537 Mr. {Markey.} What is your plan right now?

2538 Mr. {Cooper.} When I get back home, I will be back in
2539 the water.

2540 Mr. {Markey.} Okay. Great. Now, Mr. Cooper, are you
2541 convinced that there is no oil in the areas open to
2542 shrimping?

2543 Mr. {Cooper.} Like I told you earlier, one spot where I
2544 did find the oil was, they say a 5-mile bumper zone. It
2545 wasn't 5 miles that one of the bays I did find oil in.

2546 Mr. {Markey.} Now, in your opinion, is there any way
2547 that NOAA or the FDA can be sure that there is no oil in the
2548 water where shrimping is taking place?

2549 Mr. {Cooper.} I found it the last day when I was

2550 working with BP over 2 months in the same area, and it just
2551 so happened, one of my last days that I worked, we found it.
2552 I called the Coast Guard and BP and had them come out there
2553 and I had to bring it to their attention. The Coast Guard
2554 wouldn't come. Finally, I caught one that was in the bay and
2555 brought him over there and showed him, so I went to a town
2556 hall meeting and I brought it before them and invited them
2557 all to come see what I found, and they did come, the
2558 commander of the Coast Guard and BP came with me and I did
2559 show them in this bay, disturb the bottom and the oil comes
2560 to the top, and they say it is unrecoverable oil but still
2561 yet this opened this bay up for trawling.

2562 Mr. {Markey.} Now, Mr. Blanchard, some have suggested
2563 that people raising concerns about the quality of seafood
2564 simply want to continue to collect checks from BP. Can you
2565 deal with that issue for us just so we can understand what is
2566 going on down in the Gulf in terms of the relationship
2567 between this program to pay the fisherman who need to be paid
2568 and again an incentive to get back out there as soon as you
2569 can, everything is okay. So how should we be viewing this
2570 tension?

2571 Mr. {Blanchard.} Well, I told BP from the very
2572 beginning that they was going about it the wrong way. What
2573 we asked them to do was to help the fisherman and give them

2574 an incentive to go back fishing. If they would have left the
2575 fisherman fish, even though they had to go further away from
2576 their home, even though they would have to go to different
2577 fishing grounds, well, pay them for that. Give them an
2578 incentive to go out. Then it would have kept the market
2579 going, you know. But BP took the approach that they were
2580 going to do a PR program and put all the shrimpers to work
2581 for them, but in my opinion, BP never tried to pick up the
2582 oil. They have never tried to pick up the oil. I have
2583 talked to hundreds of boats that said they found oil,
2584 contacted BP and BP told them not to try to pick it up and go
2585 the other way, and this has been going on for a hundred and
2586 some days. I have lived through this.

2587 Mr. {Markey.} Why do you think that is the attitude of
2588 BP?

2589 Mr. {Blanchard.} It was cheaper to sink it. Out of
2590 sight, out of mind and out of here. That is the approach BP
2591 took, you know.

2592 But as far as going back to seafood testing, all the
2593 seafood right now is probably being tested more than any
2594 other product in the world, you know. I don't believe beef
2595 or pork or any seafood in the world--we get seafood from
2596 foreign countries that personally wouldn't eat. It's
2597 probably being grown in a sewer, and the FDA checks 1 to 2

2598 percent out of it, and out of the 1 to 2 percent they check,
2599 40 percent to 60 percent is no good, it is rejected. So, you
2600 know, that is one thing I wanted to bring up. All the
2601 seafood right now is being tested probably more than any
2602 product in the world, so hopefully they are doing their job
2603 and they are doing it right.

2604 What I would like to see is for one time before I die is
2605 somebody that works for the government be held accountable
2606 for something. Whoever is testing it, whatever agency is
2607 testing it, they ought to come out and give us a paper and
2608 say we guarantee this product is good, and if something goes
2609 wrong, they will be held accountable, not us.

2610 Mr. {Markey.} Well, you know that is why we are having
2611 this hearing. You know that is what is happening here today.
2612 We are sending a very strong signal to those who are
2613 responsible that--

2614 Mr. {Blanchard.} Well, that is what I would like to
2615 see.

2616 Mr. {Markey.} --they are representing to the American
2617 people that this is safe.

2618 Mr. {Blanchard.} I think if they would be held
2619 accountable, people would have more trust in the government
2620 agencies. But, you know, there are certain government
2621 agencies that are responsible for this oil spill when nobody

2622 is being held accountable.

2623 Mr. {Markey.} Well, you know, we are going along
2624 beginning with the Minerals Management Service--

2625 Mr. {Blanchard.} That is what I would start with.

2626 Mr. {Markey.} --and there are a lot of people there who
2627 are going to be made accountable, and we are going to move
2628 through this entire process. We are not going away. We are
2629 going to make sure that all of the lessons that can be
2630 extracted from what happened are learned and implemented in
2631 order to protect the public.

2632 Mr. Cooper, in your testimony, you indicated that BP
2633 required you to wear a hazmat suit when you went out into the
2634 waters. How long ago was that?

2635 Mr. {Cooper.} Oh, 2 weeks ago.

2636 Mr. {Markey.} Now you are being told to head back out
2637 into the same waters without any additional protection. Is
2638 that correct?

2639 Mr. {Cooper.} And that is very troubling, yes, it is.

2640 Mr. {Markey.} Do you think that you are being asked to
2641 work in an unsafe environment?

2642 Mr. {Cooper.} Not necessarily. Some of the areas, they
2643 didn't have the oil, so I don't see in those areas that it is
2644 unsafe, but in some of the areas, yes, it is unsafe. If they
2645 are going to make us wear hazmat suits and tape up and take

2646 hazmat training, how can you send fishermen back out again?
2647 But some of the areas, yes, the oil never came, no, it is not
2648 there. Some of these guys had to take these jobs instead of
2649 fishing, and I know there is a big controversy in Louisiana
2650 right now. A bunch of people wants the fishermen to go back
2651 to work. We only have limited areas to fish. They want to
2652 put them back into the waters and make them go to work but
2653 then they are paying us lower prices, with high fuel prices.
2654 The price is not there. We don't have the area to work. So
2655 these guys have to do it. But the opening and closing of the
2656 seasons with wildlife and fisheries, they pretty much had to
2657 do what they had to do, and if it means going out there and
2658 working for BP to make a living, well, so be it. That is
2659 what they had to do.

2660 Mr. {Markey.} Now, in your testimony, you indicated a
2661 smaller than normal size catch this week. Have you noticed
2662 any other changes to the shrimp or to the fish, the color,
2663 the size, the spots, the smells?

2664 Mr. {Cooper.} Not in this area, no, sir. This area was
2665 a clean area.

2666 Mr. {Markey.} Thank you.

2667 Mr. Voisin, would you like to inject your thoughts at
2668 this point?

2669 Mr. {Voisin.} Thank you, Mr. Chairman. I just want to

2670 say that there are two small areas in south Louisiana that
2671 have been oiled, and that is the Barataria system where Mr.
2672 Cooper actually harvests and Mr. Blanchard has his dock, and
2673 then out at the mouth of the river, Pasalutra. We have 7,500
2674 miles of shoreline in south Louisiana if you go in and out
2675 every bayou and every bay and lake. Only about 400 miles of
2676 those were oiled. It happens to significantly be where Mr.
2677 Blanchard and Mr. Cooper are located. Seafood from
2678 throughout Louisiana is safe. It is wholesome. And while
2679 there can be questions raised--

2680 Mr. {Markey.} You are saying that the seafood which is
2681 being sold is safe but there are many areas where if it was
2682 caught and sold it would not be safe. Is that what you are
2683 saying?

2684 Mr. {Voisin.} No, the seafood--

2685 Mr. {Markey.} You are saying all seafood caught
2686 anywhere off of the coastline of Louisiana is now safe? Is
2687 that what you are saying?

2688 Mr. {Voisin.} All the seafood caught off the coastline
2689 of Louisiana is now safe and that is put into the commercial
2690 market. Yes, sir. Eighty-seven percent of our State is
2691 currently open to the harvest of seafood. That occurred last
2692 week as a result of the intensive testing and protocols. And
2693 I know we have talked a lot about protocols today and about

2694 the dispersant testing and oil testing. Looking at the risk
2695 assessment based on the protocol, Mr. Chairman, I took a look
2696 at it, and in terms of oysters, oysters are consumed at about
2697 a quarter a pound per capita consumption. In the risk
2698 assessment, they used a number between 9 and 10 pounds per
2699 capita consumption on an annual basis, and they figured that
2700 exposure at 5 years, so they are exceeding the per capita
2701 consumption by 40 times and they exposure by 5 years, and
2702 they are looking at the risk of illness at one in 10,000,
2703 which is traditionally looked at as one in either 100,000 or
2704 one in a million, so that is being magnified significantly,
2705 and we are meeting by 100 to 1,000 fold all of the criteria
2706 in the reopening protocols.

2707 Mr. {Markey.} So I just wanted to again clarify. You
2708 are not represented that in the areas, the federal waters
2709 that are now closed, that it is safe to eat the fish that is
2710 caught in those areas. You are not saying that?

2711 Mr. {Voisin.} I did not say that, sir. In the open
2712 waters where fish are being harvested and commercially sold,
2713 I would feed it to my kids, my wife, and we do eat it often,
2714 yes, sir.

2715 Mr. {Markey.} But in those other areas, you would not
2716 feed that fish to your family, in the waters are now closed?

2717 Mr. {Voisin.} In the waters that are closed, we can't.

2718 I mean, we can't harvest from those--

2719 Mr. {Markey.} That is what I am saying.

2720 Mr. {Voisin.} So the bottom line is, that as they do
2721 the reopening and go through the protocol, absolutely I would
2722 feed that to my family.

2723 Mr. {Markey.} Let me get back to you, Mr. Cooper. Can
2724 you give us a comment? And then you, Mr. Blanchard.

2725 Mr. {Cooper.} Would I eat the shrimp? We have been
2726 eating them. I have been eating them. Not in the areas that
2727 are closed, no, I haven't eaten them, but the ones I caught,
2728 I did eat. I will eat them.

2729 Mr. {Markey.} Mr. Blanchard?

2730 Mr. {Blanchard.} I definitely eat them. I don't think
2731 there is any difference on what is open and what is closed.

2732 Mr. {Markey.} Okay. Great. Thank you.

2733 Dr. MacDonald, could you comment here, and divide the
2734 question here first in terms of what you believe is safe and
2735 what is not safe and how the American people should be
2736 viewing this.

2737 Mr. {MacDonald.} Well, I would certainly eat them too,
2738 and perhaps I can have the occasion sometime. I will say
2739 that my concern remains the productivity, not the safety. I
2740 think that we have to have a productive Gulf, and the 350-
2741 mile statistic is heartening, that it could have been worse.

2742 But as you move offshore, you get a lot of areas that have
2743 got oil on the bottom, you know, further out, and as you go
2744 to the east, we see a lot of oil off Mississippi, Alabama and
2745 Florida, my State. In those areas when people go offshore
2746 and take samples, they are finding this buried oil and they
2747 are finding this buried oil in the beaches and they are
2748 finding this oil in the marshes, and that 350 miles did get a
2749 lot, and the edges of these marshes where the marsh grasses
2750 were oiled, my concern is that, you know, if it dies back 10
2751 percent or 5 percent, that opens up, that dilates these
2752 channels. It makes them wider. That means the flow of water
2753 through is greater. That means the loss of wetland is
2754 greater. We have a tremendous amount of work to do to
2755 restore the Gulf of Mexico. We had a lot to do before all
2756 this and now we have a whole bunch more.

2757 So my concern is the ecosystem and the productivity. I
2758 believe in the fishermen and the FDA and protecting our
2759 safety.

2760 Mr. {Markey.} Dr. Suatoni, you have heard the comments
2761 on this question. Can you add yours as well?

2762 Ms. {Suatoni.} I would like to emphasize, build on what
2763 Dr. MacDonald said, but emphasize that long-term monitoring
2764 is imperative. What we learned from the Exxon Valdez spill
2765 was that oil that gets into the coast and into low-oxygen

2766 zone stays toxic in its kind of full toxic form for decades,
2767 and any time it gets disturbed or it rains, it can seep into
2768 the environment, and these near-coastal fisheries, I think it
2769 is important that they continue to monitor for the exposure
2770 to polycyclic aromatic hydrocarbons and metals over the long
2771 term.

2772 Mr. {Markey.} Can I ask this, Dr. Suatoni? Was there
2773 anything that was of concern to you that you heard on the
2774 opening panel from the government officials? What is it that
2775 stuck out that you think needs more attention?

2776 Ms. {Suatoni.} A few things stuck out. One was that
2777 they are only now developing tests to examine whether or not
2778 dispersants bioaccumulate. That seems to be something that
2779 we should have known since dispersants are a common tool in
2780 oil spill response. Another thing that you know we are
2781 concerned about is that the risk assessment used by the FDA
2782 is not adequately conservative for specific vulnerable
2783 populations. It was reassuring to hear that they are open to
2784 reconsidering that margin of safety. And I would say with
2785 regards to seafood, those were the two primary concerns.

2786 Mr. {Markey.} Was there anything of concern, Mr.
2787 Voisin, that you heard in the opening testimony that you
2788 would like us to continue to focus on?

2789 Mr. {Voisin.} Thank you, Mr. Chairman, and I would say

2790 that I stated earlier in response to Dr. Suatoni that I feel
2791 that the risk assessment that deals with the protocol for
2792 reopening basically are much more conservative than there
2793 should be any concern related to. I think they have gone way
2794 beyond what would be conservative to the nth degree, and I
2795 described that a moment ago in my answer to you.

2796 Mr. {Markey.} Even though you heard concerns about
2797 heavy metals and other issues, that is not of concern to you?

2798 Mr. {Voisin.} Having spent countless hours talking to
2799 PhDs as well as doctors relating to this and the
2800 metabolization of all of these things through finfish and
2801 shellfish, I personally think that there is no concern
2802 relating to those, although there is a concern and we should
2803 be concerned--

2804 Mr. {Markey.} Even though there have never been any
2805 studies on this subject, you still have no concern?

2806 Mr. {Voisin.} I personally do not, no, sir, given the--

2807 Mr. {Markey.} Do you have concerns, Mr. MacDonald?

2808 Mr. {MacDonald.} Regarding the government report?

2809 Mr. {Markey.} About any aspect of this including the
2810 testing for heavy metals and the other issues that seem to
2811 still be unresolved.

2812 Mr. {MacDonald.} Yes. My concern is for the coastal
2813 and marine ecosystem of the Gulf of Mexico. I am concerned

2814 that I have not yet heard from NOAA their plan for monitoring
2815 the continued health of this ecosystem and I think that when
2816 we look at the oil spill budget, it is unmistakable that an
2817 enormous dose of oil was given and really putting it simply,
2818 Mother Nature is being made to clean up our big mess, and I
2819 think Mother Nature suffers for it. I think that we need to
2820 endow a permanent fund for the restoration, the understanding
2821 and the sustenance of the Gulf of Mexico coastal and marine
2822 ecosystem in perpetuity, and I don't hear that coming from
2823 NOAA and I would like to hear that.

2824 Mr. {Markey.} Great.

2825 Mr. Blanchard, Mr. Cooper, Mr. Voisin, everyone wants
2826 the Gulf seafood industry to rebound from the BP disaster.
2827 Your industry did not cause this mess. Your industry, your
2828 business and livelihoods were harmed by the spill. What
2829 would each of you ask the federal government to do to help
2830 establish the safety of Gulf seafood and to help reassure the
2831 consuming public about the safety of Gulf seafood? You heard
2832 the questions that I posed to the government panel that
2833 appeared here earlier about the need for additional tests to
2834 be done to help address some of the issues that have not yet
2835 been definitely addressed such as the metabolites of the oil,
2836 the effect of dispersants, heavy metals and long-term impacts
2837 that this disaster could have on the quality and productivity

2838 of seafood in the Gulf. Do you agree that those should be
2839 priorities and what other issues would you like the
2840 government to address?

2841 Mr. {Blanchard.} Well, what I didn't like what I heard
2842 about the government, it looked like they were just checking
2843 the open places. If it would be me, I would go to the worst
2844 place and check that first and then see what I am looking at,
2845 you know. It looked like every time you listened to the
2846 government, they would say we just checked the open places.
2847 Well, why don't we check the closed place and see why it is
2848 closed, you know? Nobody seems to be checking that. And,
2849 you know, we have been severely harmed by this. I call them
2850 bad people, BP. You know, since this happened in this 100-
2851 some days, I got my secretary to look at the bills we paid.
2852 We paid \$488,000 in bills, and I received \$165,000 in
2853 payments from BP, and, you know, it reminds me, I heard the
2854 President said that he wasn't going to let our cash flow be
2855 interrupted, but if I don't have \$323,000 to pay my bills, I
2856 am out of business. You know, why is nobody holding BP
2857 accountable to come in and make it right what they have done
2858 to us?

2859 Mr. {Markey.} Well, I will tell you one thing. This
2860 committee wants to work with you, Mr. Blanchard. We want to
2861 make sure that BP stands for ``bills paid.''

2862 Mr. {Blanchard.} Yeah, that sounds better.

2863 Mr. {Markey.} And that includes your bills. So let us
2864 work together on that and make sure your bills are paid but
2865 other people's bills as well. Thank you.

2866 Mr. {Blanchard.} Thank you very much.

2867 Mr. {Markey.} Mr. Cooper?

2868 Mr. {Cooper.} Just to make sure they keep long-term
2869 testing and they just don't forget about it, and one other
2870 issue as far as what is going on in the Gulf now with the
2871 Vessel of Opportunity. They are trying to take the money
2872 that we made working with BP off our claims, and that is not
2873 fair for the fishermen that went out there and did the job.
2874 We were cleaning their mess, and now they are going to hold
2875 us, our claims towards that money, and that is not fair for
2876 what we just did. We went out there. We put our lives on
2877 the line. We cleaned their mess up and now they are going to
2878 take it against our claims, and that is totally wrong. For
2879 BP to even think about doing something like this is uncalled
2880 for because we did a job and we expect to get paid for the
2881 job that we did.

2882 Mr. {Markey.} Mr. Voisin?

2883 Mr. {Voisin.} Thank you, Mr. Chairman. I believe that
2884 long-term testing is critical to the Gulf and the survival of
2885 the Gulf. I believe that the State of Louisiana--I know that

2886 the State of Louisiana has requested \$457 million from BP for
2887 a 20-year testing program. We have not approved it yet but
2888 it is needed to continue to monitor the health of our
2889 species, the viability of its reproductive cycles.

2890 But more importantly, one of our great challenges is the
2891 brand of the Gulf of Mexico. The brand of Gulf seafood has
2892 taken the greatest hit in the history of my seven generations
2893 of family that have plied the waters of south Louisiana.
2894 People need to understand there may be questions but there
2895 are no questions about what is in the market today, that
2896 there may be questions about fishing areas that are closed,
2897 and we should ask those questions, but that product that is
2898 in the market today is wholesome and safe based on
2899 tremendously conservatively science and we need to convince
2900 those American people. Customers at restaurants are now
2901 instead of ordering oysters on the half shell, very close to
2902 my heart, shrimp cocktails, they are saying instead of having
2903 that as an appetizer, I will have chicken wings, and instead
2904 of having that grouper as my main course, I will have a
2905 steak. We need to overcome that. A hundred-plus days of oil
2906 gushing in the bottom right-hand corner of the TV screen has
2907 branded us as something other than we are. We have a
2908 challenge. We will meet that challenge.

2909 However, the challenge is in a very small part of the

2910 whole Gulf of Mexico. We need to look at the whole. It is
2911 200 million gallons of oil that has escaped from this
2912 situation. We need to deal with it. We are blessed in the
2913 Gulf of Mexico with having the microbes that will eat oil.
2914 That was not the case in relationship to the Valdez incident
2915 where they don't have the warm water. We are cursed with
2916 that warm water and that warm water as well.

2917 Mr. {Markey.} Would you like you to see more testing in
2918 the areas that have the heaviest concentration of oil right
2919 now? Would you like to see that implemented now so that we
2920 will have that information in the long term going forward,
2921 Mr. Voisin?

2922 Mr. {Voisin.} I think it is happening, Representative
2923 Markey. I believe that that is happening. Could more--more
2924 is better. I think NOAA--

2925 Mr. {Markey.} We heard on the opening panel that there
2926 was no intensive program to do that right now. You would
2927 like to see that kind of intensive program right now?

2928 Mr. {Voisin.} I would support that, and I have been on
2929 conference calls with NOAA where they have reported they are
2930 doing testing in the closed areas. I have been on conference
2931 calls with the FDA as well. Now, that is what they have
2932 indicated on those conference calls, that they have done
2933 testing of seafood products in those areas. They have done

2934 oil plume testing and they have indicated that they are
2935 continuing to do that. Today, I forget the guy from NOAA-
2936 Mr. {Markey.} So you want them right now to be testing
2937 the fish inside of the closed areas? You want that to
2938 happen?

2939 Mr. {Voisin.} I believe, Mr. Markey, they are. Yes, I
2940 do want it.

2941 Mr. {Markey.} But if they are not doing it right now,
2942 you believe it is important for them to test the fish inside
2943 of the most oiled areas right now?

2944 Mr. {Voisin.} Absolutely, yes, sir.

2945 Mr. {Markey.} Absolutely?

2946 Mr. {Voisin.} Absolutely.

2947 Mr. {Markey.} Okay. Great. That helps us a lot.

2948 So let us do this. Why don't we ask each one of you to
2949 give us your closing thoughts in reverse order of the opening
2950 statements so that we have a sense of what it is that you
2951 want us to retain, to focus on, as we are going forward in
2952 the Congressional oversight of this greatest of all
2953 environmental calamities. So we will begin with you, Dr.
2954 Suatoni.

2955 Ms. {Suatoni.} Thank you. NRDC is concerned with the
2956 recent tone of the communications and analyses coming out of
2957 the federal government. There is a desire to rush to

2958 judgment, to turn the corner and accelerate the analysis of
2959 the impacts the oil has had on the ecosystem, and it is of
2960 great concern. According to the Oil Pollution Act, the
2961 federal government is required to fully and fairly assess the
2962 impacts of the oil spill, and we hope that they take the time
2963 and do the necessary comprehensive study that is required to
2964 get that done.

2965 Mr. {Markey.} Thank you.

2966 Mr. Voisin.

2967 Mr. {Voisin.} Thank you, Mr. Chairman. The Gulf of
2968 Mexico States, the State of Louisiana that I live in, have
2969 been challenged in the last 5 years by five major events,
2970 this spill being the most recent significant event. We will
2971 be scarred but we will not be broken as a result of this.
2972 The seafood community is a viable community. My family left
2973 France under exile orders in the 1770s, went to Canada and
2974 was kicked out of Canada. So far we have not been kicked out
2975 of Louisiana and hopefully that won't occur. We will be
2976 resilient.

2977 You know, people aren't really interested necessarily in
2978 the rough seas that you have but whether or not you bring the
2979 ship in, and we are going to be about, and I hope the federal
2980 government continues its effort and doubles if appropriate
2981 and needed to bring that ship in and that is safe seafood of

2982 clean and healthy Gulf Coast. We will have scars from this
2983 just like I do from different accidents and challenges in my
2984 life but I am viable. The Gulf is a viable place to live.
2985 The seafood is wholesome and safe. It is harvested from the
2986 Gulf of Mexico and we want Americans to know that.

2987 Mr. {Markey.} Thank you, Mr. Voisin.

2988 Mr. Cooper.

2989 Mr. {Cooper.} Long-term testing on the oil, testing on
2990 the Corexit and also testing on our harvest and whether it is
2991 has been depleted or not, a stock assessment to see what is
2992 happening to our fisheries because the last season that just
2993 opened, it really opened your eyes and said what is going to
2994 happen, so that is some of the things that we would like to
2995 see, testing on the Corexit for sure, no doubt, and the oil
2996 for long term.

2997 Mr. {Markey.} Great. Thank you.

2998 Mr. Blanchard.

2999 Mr. {Blanchard.} Yes. Thank you. Well, basically for
3000 28 years of my life I have had a product that has always been
3001 known as the best because it was the best, and I would just
3002 like the perception of the American public to know it is the
3003 best again, you know. You know, in our business, we don't
3004 work 9 to 5, we work 5 to 9, you know. We work 7 days a
3005 week. It is my life. I guess I will say it like Tony

3006 Hayward: I pretty much want my life back. You know, I want
3007 my life back. They took everything that I worked for all
3008 these years and one company doesn't know what they are doing
3009 or cut too many corners and put me out of business, I mean,
3010 just ruined my whole life, and nobody is being held
3011 responsible but me, and I didn't do anything wrong. I mean,
3012 I am just so confused. I go to work like I always do. I
3013 walk around in circles, don't know what to do. I mean, until
3014 it happens to you, you know, until you live through what we
3015 are living through, you know, it just--I don't know what is
3016 going to happen, you know. Every night I go to sleep, I
3017 can't sleep. I lay down in my bed. I know how many squares
3018 I got on the ceiling, you know.

3019 You know, I just hope that the government makes BP clean
3020 everything up and everything returns back to normal and the
3021 American public has confidence that the seafood that we are
3022 going to buy, we are not going to sell them anything I
3023 wouldn't eat myself, and the last thing we want to do is get
3024 anybody sick and we will do the best that we can and make
3025 sure everything is all right. Thank you.

3026 Mr. {Markey.} Thank you, Mr. Blanchard.

3027 And to you and Mr. Cooper, we thank you for coming here
3028 today. We know that you are individuals who have a
3029 tremendous amount at stake here, and just so you know, if at

3030 any point tomorrow, next week, next month, that you can just
3031 dial our number here on the committee to help you personally
3032 with your own family situations as you are going forward, and
3033 we will give you the number to call as soon as this hearing
3034 is done just so that you know that there is someone who will
3035 be behind you.

3036 Mr. {Cooper.} Thank you very much.

3037 Mr. {Markey.} It takes a lot of courage for you guys to
3038 be here today and we appreciate that.

3039 Dr. MacDonald.

3040 Mr. {MacDonald.} BP is going to have to pay a fine, Mr.
3041 Chairman, a big fine, and my concern is that that fine will
3042 be dedicated to restoring the Gulf of Mexico, not disappear
3043 into a treasury somewhere, and I hope that the houses of
3044 Congress can work together and the parties can work together
3045 to guarantee that the money that is paid here goes into
3046 permanent restoration projects. I am talking about restoring
3047 marshes. I am talking about marine protected areas where
3048 they are needed. I am talking about better enforcement of
3049 coastal runoff. Those are all things that have to happen to
3050 make our Gulf whole again. That is what we all want. If you
3051 all will do that, you will have massive support from the
3052 people of the Gulf of Mexico. Thank you very much.

3053 Mr. {Markey.} Thank you, Dr. MacDonald, very much. And

3054 I would also like to add, Dr. MacDonald, that the House of
3055 Representatives just 3 weeks ago did adopt one of your
3056 recommendations to the oil spill response bill that we passed
3057 on the House Floor to create a new trust fund for oceans so
3058 that funds raised from drilling in our oceans will also go
3059 towards protecting and improving our oceans. The Senate has
3060 said that they will take up the legislation when they return
3061 in September. That is always problematic, dealing with the
3062 Senate, but we did in the House of Representatives take your
3063 recommendation and implement it, and hopefully the same will
3064 be true in the Senate so that it can go to President Obama's
3065 desk.

3066 What we have learned today is that the oil is not gone.
3067 The oil remaining in the Gulf waters or washed up on the
3068 floor is equivalent to 10 Exxon Valdez-size spills and could
3069 be much more. Most of the Gulf has been reopened to fishing
3070 but the industry is not in the clear. Long-term impacts on
3071 stocks remain unknown. If one contaminated catch makes it to
3072 market and makes people sick, then the reputation and the
3073 credibility of one of America's most important fisheries will
3074 be in jeopardy.

3075 So we must engage this issue with continued caution and
3076 vigilance is necessary. We have seen some premature
3077 celebration. Dispersed oil is not the same as oil which has

3078 disappeared. Data, formulas, algorithms need to be made
3079 public so that independent scientists can verify the
3080 conclusions that are now shaping the debate on what to do
3081 now. We need to test the fishing stocks in the closed
3082 fishing areas now so that we understand what is going on now.
3083 That will help us in the future to protect the fishermen, to
3084 protect the consumers of fish in our country, but we must
3085 spend the money now so that in the future there are no
3086 questions that are unexamined, that we ensure that the
3087 compensation is given to those who will need it for as long
3088 as possible until we make everything as safe as is possible.
3089 All of that is in my opinion going to be something that this
3090 committee and the American people will need to be vigilant to
3091 ensure is put in place so that the people in the Gulf of
3092 Mexico at the end of the day are made completely whole.

3093 BP in my opinion will try to walk away as fast as they
3094 can. BP lowballed the size of the spill in the first week
3095 saying it was 1,000 barrels. Then they said it was 5,000
3096 barrels. They knew in the first week that it was a huge
3097 spill. It turns out to be between 53,000 and 63,000 barrels
3098 per day. That is not 1,000 barrels. That challenged the
3099 level of response in those first weeks, in those first months
3100 because of the misleading information. People were less
3101 vigilant than they would have been. The response was less

3102 intense than it would have been if we understood the
3103 magnitude. We must continue that level of vigilance. We
3104 must assume that we need to use all of our resources to
3105 understand what is going on right now so that in the future
3106 there can be the proper protections which are put in place
3107 and that the proper compensation is given to all of those
3108 whose lives have been adversely affected by what has
3109 happened.

3110 So while BP might be spending tens of millions of
3111 dollars on their television commercials saying that they are
3112 on the job, even today we identified many questions which
3113 have yet to be answered in a satisfactory fashion and we need
3114 to make sure that they are for the long-term wellbeing of the
3115 residents of the Gulf.

3116 We thank you all for being here today and we hope to be
3117 able to stay in close contact with you. Thank you.

3118 [Whereupon, at 3:05 p.m., the Subcommittee was
3119 adjourned.]