

**IN RE OIL SPILL BY THE OIL RIG "DEEPWATER HORIZON"
IN THE GULF OF MEXICO, ON APRIL 20, 2010**

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA
MDL 2179, SECTION J
JUDGE BARBIER; MAGISTRATE JUDGE SHUSHAN**

**REPLY EXPERT REPORT OF FRANK M. PASKEWICH
CAPTAIN, UNITED STATES COAST GUARD (RET.)**

September 26, 2014

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APPENDIX A: List of Consideration Materials

I. INTRODUCTION

On August 15, 2014, I submitted an expert report evaluating the nature, extent and degree of success of BP Exploration & Production Inc.'s ("BP's") efforts to minimize and mitigate the effects of the *Deepwater Horizon* oil spill.¹ In that report, I offered six main opinions:

1. Working within the Unified Command, BP rapidly mobilized the resources needed for this unprecedented Response.
2. BP's response efforts were extraordinarily effective in mitigating the impacts of the *Deepwater Horizon* spill.
3. BP's response efforts were conducted safely.
4. BP worked collaboratively with the Coast Guard and other Unified Command partners in responding to the spill.
5. BP conducted operations transparently with a focus on community outreach.
6. BP's continued response efforts exceeded Unified Command requirements.

On September 12, 2014, the United States submitted three expert reports responding to certain aspects of my August 15 report, including reports from (1) Captain Mark VanHaverbeke; (2) Dr. Donald Boesch and Dr. Stanley Rice; and (3) Dr. Richard Clapp. Significantly, *none* of the United States' experts directly refutes any of my fundamental opinions set forth above. And nothing in any of the United States' expert reports changes the conclusions that I have reached in this case.

In this Reply Report, I respond to points that the United States' experts raise in their September 12 reports. The opinions that I express in this Report are in addition to those set forth in my prior reports, which I incorporate by reference.

II. RESPONSE TO CAPT. VANHAVERBEKE'S REPORT

Captain VanHaverbeke offers several responses to my August 15 report. I address each in turn below.

A. BP Made Substantial and Critical Contributions Needed To Support this Unprecedented Response.

Captain VanHaverbeke opines that "the Unified Command worked well, but much of the credit goes to the many stakeholders who supported the Response." In particular, he identifies contributions that the National Weather Service ("NWS") and ExxonMobil made to the

¹ BP Exploration & Production Inc. was the entity named as the Responsible Party under the Oil Pollution Act of 1990 ("OPA 90") in the *Deepwater Horizon* Response. See 4/28/10 National Pollution Funds Center OPA Designation Letter to BP Exploration & Production Inc. (LA-GOV 00032144). For ease of reference, as in my prior reports, I refer to BP Exploration & Production Inc. as "BP" throughout this Reply Report.

Response.²

I agree that members of the Unified Command “worked well” together during the *Deepwater Horizon* Response. I devoted an entire section of my August 15 report to explaining the many ways in which BP worked collaboratively with the Coast Guard and other Unified Command partners in responding to the spill, and how that collaboration aided the Response.³ BP provided critical personnel and other resources and spared no expense in supporting the Unified Command-led Response. The vast majority of responders were BP employees or contractors. As I noted in my August 15 report, of the more than 100,000 people who assisted with the Response, approximately 82,000 worked on behalf of BP and devoted more than 70 million hours to responding to the spill.⁴ By comparison, approximately 55 people from NWS and 16 people from ExxonMobil worked on the Response.⁵ While other stakeholders certainly contributed to the Response, that fact does not diminish or lessen BP’s unprecedented efforts to respond to the spill.

B. The Areas for Improvement that Captain VanHaverbeke Identifies Are Minor and Do Not Detract from the Success of the Response.

While Captain VanHaverbeke acknowledges that “the Unified Command worked well” during the *Deepwater Horizon* Response, he identifies certain areas of the Response that he believes “could have been handled better.”⁶ In my experience, no spill response is perfect, and every response could be improved upon in some way. Even if there were some areas for improvement, that does not mean that the Response was not effective or successful. The specific instances that Captain VanHaverbeke contends in his report “could have been handled better” are minor compared to the massive scope and scale of this Response. The examples that Captain VanHaverbeke identifies are part of the interaction and dialogue that typically takes place within a Unified Command organization. As described in my August 15 report, this type of collaboration is key to a successful spill response.⁷

Several of the “areas for improvement” that Captain VanHaverbeke identifies in his report require clarification or additional context. For example:

- **Forward Operating Bases.** Captain VanHaverbeke asserts that Admiral Landry “had to repeatedly ask BP” to establish Forward Operating Bases (“FOBs”) in Louisiana.⁸ In fact, BP and others in the Unified Command established several staging areas, branch

² Response Expert Report of Captain Mark G. VanHaverbeke (Ret.), dated September 12, 2014 (“VanHaverbeke Response Report”) at 2-3.

³ Expert Report of Captain Frank M. Paskewich, dated August 15, 2014 (“Paskewich Opening Report”) at 54-70.

⁴ Paskewich Opening Report at 16.

⁵ IAP Database (BP-HZN-2179MDL08389250); TRG Badging Database. Captain VanHaverbeke points out that an ExxonMobil employee initially suggested the use of subsea dispersants. This does not detract from BP’s efforts to promote and implement that technology, including designing delivery systems and deploying the new technology. Paskewich Opening Report at 30-32; Paskewich Response Report at 5.

⁶ VanHaverbeke Response Report at 2.

⁷ Paskewich Opening Report at 54-70.

⁸ VanHaverbeke Response Report at 2.

offices, and FOBs across the Gulf early in the Response.⁹ As Admiral Landry testified, BP did “step up” and establish the FOBs as requested.¹⁰ By May 6, more than 1,400 responders were based out of seven FOBs across the Gulf Coast.¹¹ Admiral Landry further testified that any delay in establishing FOBs had no effect on response operations: “In the big scheme of things, it was *a minor issue*. What they had to do in the beginning was they had to have workers drive from hotels in New Orleans, all the way out to the work sites, and then go back. . . . [I]t did not affect the response in Louisiana.”¹² In the end, FOBs were established as appropriate, and there was no impact on operations.

- **Expo-Type Community Outreach Meetings.** Captain VanHaverbeke points to Houma Incident Commander Captain Laferriere’s assertion that BP did not set up expo-type community outreach meetings until “almost a month” after he requested that the company do so.¹³ As described in my opening report, however, BP and its Unified Command partners initiated a robust community outreach program at the outset of the Response.¹⁴ Expo-type meetings were just one type of outreach meeting that was used; town hall meetings were another. By the time that Captain Laferriere joined the Response on May 22, 2010, BP and others in the Unified Command had held more than 100 town hall meetings in communities across the Gulf.¹⁵ BP promptly organized expo meetings after Captain Laferriere requested meetings in that format.¹⁶
- **Procuring Skimmers.** Captain VanHaverbeke asserts that “BP did not initially comply with Captain Laferriere’s request to double skimming resources.”¹⁷ Captain VanHaverbeke points to a June 8, 2010 email from Captain Laferriere to others in the Coast Guard requesting additional skimmers.¹⁸ BP and its Unified Command partners, however, were already in the process of obtaining available resources. On June 9, the day after Captain Laferriere’s June 8 request for additional skimmers, Scott Knutson, a Coast Guard representative in the Critical Resources Unit, responded to Captain Laferriere and assured him that BP and others in the Unified Command had mobilized all available

⁹ Deepwater Horizon Presentation (Apr. 28, 2010) (HCH070-008297) at 2; P. Murphy, *Crews Set Up Staging Area in Venice While Bracing for Oil Spill To Hit La. 's Coast*, Apr. 27, 2010 (SNL100-061742); 5/2/10 Organizational Chart (HCE148-003963); Crisis Action Team, *Staff Journal, Deepwater Horizon* (SNL103-006303) at 54, 132, 166.

¹⁰ Landry Dep. at 391:12-22.

¹¹ 5/3/10 Personnel List (BP-HZN-2179MDL02299537); 5/6/10 Personnel List (BP-HZN-2179MDL06317426).

¹² Landry Dep. at 392:5-13 (emphasis added).

¹³ VanHaverbeke Response Report at 3; Laferriere Dep. at 214:24-215:6.

¹⁴ Paskewich Opening Report at 70-72.

¹⁵ Laferriere Dep. at 129:9-15; Laferriere After Action Report (Ex. 13027) at 1; Daily Operational Report (May 23, 2010) (BP-HZN-2179MDL04855381) at 8; ICS 207, Houma 5/25/10 (BP-HZN-2179MDL00591134).

¹⁶ 6/2/10 LaFerriere Email to PPLOs (US_PP_USCG251901) (announcing intent to hold expo meetings); 6/4/10 Cross Email (BP-HZN-2179MDL07703381) (confirming plans to hold two expos in Plaquemines Parish and one expo in each of Terrebonne, Cameron, and Jefferson Parishes by June 22); 6/9/10 McCulloch Email (US_PP_USCG251935) (Captain Laferriere gave opening remarks at the first expo on June 8).

¹⁷ VanHaverbeke Response Report at 3 (citing Laferriere Dep. at 309, 349-50, 357-58, 369).

¹⁸ VanHaverbeke Response Report at 3 n. 8 (citing Suttles Email to RADM Watson (Ex. 13042) at 1).

equipment.¹⁹ Captain VanHaverbeke acknowledges that the requested “skimmers were provided.”²⁰ By June 21, FOSC Admiral Watson considered suspending offshore skimmer orders because “more than enough” were available.²¹

- **2011 Shoreline Cleanup Issue.** Citing Captain Julia Hein’s deposition, Captain VanHaverbeke asserts that “premature reductions in cleanup crews and problems with decisions by cleanup crews set back relations with the states....”²² Once again, additional context is helpful. Captain Hein testified that the particular instance at issue occurred in Mississippi and was the result of a misunderstanding about the requirements of the then newly-implemented Shoreline Cleanup Completion Plan (“SCCP”). Captain Hein clarified the issue by preparing a memorandum explaining the SCCP requirements “so that everybody was all on the same page.”²³ As expected, BP and the Unified Command worked together to successfully resolve the issue.²⁴ This is another example of the type of interaction and cooperation that I expect to see between an FOSC and an RP.
- **Risk Communication Expert.** Captain VanHaverbeke asserts that BP is responsible for some of the problems with the media because the company did not hire a particular risk communication expert from New York whom Captain Laferriere requested until “over a month into the response.”²⁵ Captain Laferriere did not join the Response until one month after the incident, however, and BP did in fact hire the specialist whom Captain Laferriere requested.²⁶ More fundamentally, as I explained in my August 15 report, the media challenges confronting the Response were complex and pervasive.²⁷ Attempting to explain them as attributable to the lack of involvement of a single individual trivializes those challenges and the efforts that the Coast Guard and BP took to overcome them.

None of the “areas for improvement” that Captain VanHaverbeke identifies changes my opinion that, despite intense media scrutiny and outside influences beyond its control, BP mounted an extraordinarily effective response effort that minimized and mitigated the effects of the *Deepwater Horizon* oil spill.²⁸ The manner in which the Coast Guard and BP worked

¹⁹ 6/9/10 Knutson Email (BP-HZN-2179MDL04827120) (“[A]ll domestic and Canadian equipment within several days transit have already been procured and are in the Gulf. Remaining equipment which is more than a few days away, both domestic and international, has either been procured or is in the final contract stages.”).

²⁰ VanHaverbeke Response Report at 3.

²¹ 6/21/10 Watson Email to Neffenger (CGL001-0177366).

²² VanHaverbeke Response Report at 3 (citing Hein Dep. at 87, 134-35).

²³ Hein Dep. at 256:7-20; Shoreline Cleanup Completion Plan (Ex. 12184) at 6-10 (setting out the procedure for changing patrol frequency); *id.* at 37-38 (Hein memorandum clarifying cleanup standard).

²⁴ Hein Dep. at 256:7-20.

²⁵ VanHaverbeke Response Report at 4; Laferriere Dep. at 276:4-15.

²⁶ Laferriere Dep. at 276:4-15, 300:21-301:9 (the BP Houma Incident Commander “made that happen”).

²⁷ Paskewich Opening Report at 55-60.

²⁸ See also, e.g., Nelson, Bauer, et al., *Assessment of Geographic Setting on Oil Spill Impact Severity in the United States*, J. Sustainable Energy Eng., p. 11 (2014) (concluding that relative to the Exxon Valdez oil spill, “response crews assessed the Deepwater Horizon site much more efficiently and quickly,” which helped “allow[] for a faster recovery of the fisheries and economy of the [Gulf]”).

together to address these issues was both appropriate and illustrative of the collaboration and successful Response operations that I described in my previous reports.²⁹

C. The EPA Initiated Arbitrary Dispersant Limitations That Hindered the Response.

Captain VanHaverbeke disagrees with my conclusion that the EPA “acted in a manner inconsistent” with the National Contingency Plan (“NCP”) in pressing for the issuance of the dispersant limitations set forth in Addendum 3 to the original May 10, 2010 Dispersant Monitoring and Assessment Directive.³⁰ Although he interviewed Admiral Landry, Captain VanHaverbeke does not refute my fundamental conclusions that (1) dispersants are an effective and appropriate spill response tool, with well-understood environmental trade-offs; (2) that a group of 50 government and other scientists gathered in Baton Rouge on the same day that Addendum 3 was issued and recommended that dispersant use should continue during the *Deepwater Horizon* Response as it had up to that point; (3) that the EPA repeatedly contacted Admiral Landry asking her to sign Addendum 3 and to impose arbitrary limits on the use of dispersants; (4) that those dispersant limitations were based on political and public concerns, rather than on science; and (5) that more oil hit the beach as a result of the EPA’s dispersant limitations.³¹

In response to the points that Captain VanHaverbeke does raise, I offer the following observations. *First*, while I agree with Captain VanHaverbeke that the National Response Team (“NRT”) can advise the FOSC (through the Regional Response Team) in a Spill of National Significance like the *Deepwater Horizon* spill, that is not what happened here. To the contrary, the EPA circumvented the NCP framework by bypassing Regional Response Team (“RRT”) VI and engaging directly with the FOSC, Admiral Landry.³² This is evident in the multiple communications that high-ranking EPA officials exchanged with Admiral Landry and others in the Coast Guard in the hours leading up to the issuance of the directive. After receiving for the first time a draft of Addendum 3 from the EPA on the evening of May 25, 2010, Admiral Landry responded that she was “very uncomfortable with directing ceasing all surface dispersants until EPA and others do testing that shows significant impacts from use. We still may need that tool”³³ Admiral Landry wrote to EPA officials Dana Tulis and Sam Coleman again later that night, suggesting that the agency simply send a letter to BP about dispersant use and “[l]eave out the directive.”³⁴

On the morning of May 26, 2010, the day that Addendum 3 was issued, the EPA continued to contact Admiral Landry with repeated requests that she sign the directive. At 9:42

²⁹ Paskewich Opening Report at 54-69; Paskewich Response Report at 11-13.

³⁰ VanHaverbeke Response Report at 6. The same considerations apply to Addendum 2, as described in my opening report. Paskewich Opening Report at 60-61.

³¹ VanHaverbeke Response Report at 1; Paskewich Opening Report at 26-32, 60-66.

³² Hanzalik Dep. at 132:24-133:4.

³³ 5/25/10 RADM Landry Email to Tulis and Coleman (EPE107-013195) at 2; 5/25/10 Email Exchange between RADM Landry and Tulis (EPE020-013889). RADM Landry initially responded that “it wouldn’t be a normal evening if I was not working an EPA dispersant issue.” *Id.*

³⁴ 5/26/10 RADM Landry Email to Tulis (EPE020-005440).

a.m., Admiral Landry responded to Ms. Tulis and Mr. Coleman, explaining that this was “the worst time for another directive” because the Unified Command was “about to go into TOP KILL which will release more oil to the surface than over the last few weeks,” making the use of surface dispersants an important response tool.³⁵ At 9:44 a.m., Admiral Landry reiterated that she did not want to sign Addendum 3, because of the “potential for needing” to use surface applications of dispersants over the coming days.³⁶ Shortly thereafter, NRT Chairman Captain Anthony Lloyd of the Coast Guard stepped in, specifically asking the EPA to “hold off on directing operational information” about the proposed dispersant limitations directly to the FOSC and instead to work through the NRT and RRT VI. Captain Lloyd noted that this was especially important given Admiral Landry’s need “to focus on the VERY sensitive top kill operation” that was taking place at the time.³⁷ The EPA nevertheless continued to contact Admiral Landry about the directive.

At 10:56 a.m., Admiral Landry emailed RRT VI Chairman Captain Hanzalik (who was at the Baton Rouge Dispersant Forum that was taking place that day), emphasizing that she was “not stopping dispersants” and did not intend to sign the directive.³⁸ After receiving yet another email from the EPA indicating that the White House had weighed in, however, Admiral Landry responded at 10:59 a.m. — just three minutes after she had told Captain Hanzalik that she would *not* sign the directive — stating that she was “standing by” and would in fact sign it.³⁹ As Captain Hanzalik testified, “the reason why the directive was signed was because Admiral Landry had pressure put on her to sign those directives She told me she had to sign it.”⁴⁰ These facts do not reflect the involvement of the NRT or the RRT in accordance with the NCP, but rather that the EPA circumvented the NCP and apparently pressured Admiral Landry to issue the directive.

Second, Captain VanHaverbeke notes that “[m]ost Coast Guard FOSCs are not scientists” and “seek advice from other agencies with greater expertise, including the EPA.”⁴¹ While this is generally true, the consensus of the more than 50 EPA and other scientists at the Baton Rouge Forum concluded that: “Surface application of dispersants has been demonstrated to be effective for the DWH incident and *should continue to be used*.”⁴² In my opinion, there was no scientific basis for the arbitrary limitations imposed in Addendum 3.

Finally, Captain VanHaverbeke expressly states that he has no opinion on “[w]hether limiting the use of aerial dispersants after May 26th” was the correct decision.⁴³ I do: In my opinion, as FOSCs Admiral Watson and Admiral Zunkunft concluded, the EPA-imposed

³⁵ 5/26/10 RADM Landry Email to Coleman and Tulis (EPE107-012382) at 1.

³⁶ 5/26/10 RADM Landry Email to Coleman (HCG311-001795) at 1.

³⁷ 5/26/10 Lloyd Email to Tulis (HCG311-001786) at 1-2 (emphasis in original).

³⁸ 5/26/10 RADM Landry Email Exchange with Hanzalik and Lloyd (HCG311-001786) at 1.

³⁹ 5/26/10 RADM Landry Email to Tulis and Coleman (HCG375-009474) at 1.

⁴⁰ Hanzalik Dep. at 110:22-111:23.

⁴¹ VanHaverbeke Response Report at 7. In his September 12 Report, Captain VanHaverbeke also offers opinions about technological advancements during the *Deepwater Horizon* Response. VanHaverbeke Response Report at 8-9. I addressed these issues in my prior two reports.

⁴² *Deepwater Horizon* Dispersant Use Meeting Report (Ex. 11839) at 8 (emphasis added).

⁴³ VanHaverbeke Response Report at 7.

dispersant limitations in Addendum 3 arbitrarily tied the hands of the Unified Command and removed an important tool from the kit in responding to the spill.⁴⁴

D. The *Deepwater Horizon* Response Was Extraordinarily Effective in Minimizing the Impact of the Spill.

Captain VanHaverbeke criticizes calculations in my opening report about the overall effectiveness of the *Deepwater Horizon* Response.⁴⁵ In my August 15 report, I explained that, depending on whether government or BP spill volume estimates are used, BP and others in the Unified Command skimmed, burned, and chemically dispersed between 29% to 49% of the oil that was spilled in the *Deepwater Horizon* Incident. These results are roughly *two to five times* more than the 10-15% benchmark rate achieved in a typical spill response and dwarf the rates achieved in other spill responses, as shown in Figure 7 of my August 15 report.⁴⁶ Nothing in Captain VanHaverbeke's report changes my conclusion that BP mounted an extremely effective Response, especially when compared to other spill responses.

First, Captain VanHaverbeke points out that chemical dispersants "do not remove oil pollution from the marine environment" but disperse oil "throughout the water column." He also states that "in situ burning alters the composition of spilled oil and transfers a portion into the atmosphere as soot and gaseous emissions."⁴⁷ However, the other spill responses depicted in Figure 7 of my August 15 report do reflect the use of dispersants and in situ burning, if used.⁴⁸ In some of those spill responses, such as the *Ixtoc* response, chemical dispersants were applied in large quantities.⁴⁹ The use of dispersants and in situ burning are recognized response tools, and my analysis was designed to compare and contrast past responses using all response methods.

Second, contrary to Captain VanHaverbeke's assertion, the duration of the *Deepwater Horizon* Response did not make it any easier for BP and its Unified Command partners to respond effectively to the spill.⁵⁰ If anything, the length of this Response made sustaining operations even more challenging than in a typical spill response. As a point of reference, the *Ixtoc* spill response lasted more than nine months and yet resulted in a removal rate of only 9%, much lower than the 29-49% rate achieved in the *Deepwater Horizon* Response.⁵¹

⁴⁴ 7/14/10 RADM Zukunft Email to Stanislaus (EPE006-004696) at 1-2 ("I cannot take the dispersant tool out of my kit . . ."); 6/8/10 RADM Watson Email to Tulis (HCG536-001910) at 2 ("The Incident Commanders are concerned that limiting dispersants as a spill response tool will increase the probability of shore impacts.").

⁴⁵ VanHaverbeke Response Report at 4-5.

⁴⁶ Paskewich Opening Report at 19-20.

⁴⁷ VanHaverbeke Response Report at 4.

⁴⁸ Paskewich Opening Report at 19.

⁴⁹ Jernelov, A. and Linden, O., *Ixtoc I: A Case Study of the World's Largest Oil Spill* (1981) at 302-303 (according to well operator's estimate, more than roughly two and a quarter million gallons of dispersants were applied).

⁵⁰ VanHaverbeke Response Report at 4-5.

⁵¹ Paskewich Opening Report at 19. Captain VanHaverbeke also points out that "burning and dispersing oil are most effective when the oil is relatively fresh." VanHaverbeke Response Report at 4-5. I agree, which is one reason why the arbitrary dispersant limitations that the EPA imposed, and the resulting delays or impediments to dispersant use, in the *Deepwater Horizon* Response were even more detrimental to Response efforts.

Third, Captain VanHaverbeke's own calculation of the effectiveness of the Response operations is flawed and contrary to the United States' own estimates in this case. Captain VanHaverbeke asserts that "[i]n situ burning and chemically dispersing oil accounted for 13% of the total oil discharged."⁵² But in its Third Supplemental Interrogatory Responses, the United States concedes that the Unified Command burned or chemically dispersed 1.03 million barrels — or roughly 25% — of the oil that was spilled based on government estimates. Using BP's spill volume estimates, that number jumps to roughly 42%.⁵³ In either case, the Unified Command successfully burned and dispersed a much greater percentage of oil than Captain VanHaverbeke's 13% figure.⁵⁴

Finally, Captain VanHaverbeke asserts that skimming "amounted to an unremarkable three percent of the 4.9 million barrels of oil discharged."⁵⁵ Captain VanHaverbeke does not rely on the data in United States' Third Supplemental Interrogatory Response. He also seems to disregard the premise that dispersing and burning operations results in less oil that is available for mechanical recovery such as skimming. In my opinion, skimming, burning and dispersing should be viewed as complementary response techniques.

Captain VanHaverbeke's analysis does not alter my opinion that the Response was highly effective in minimizing the impacts of the spill.

III. RESPONSE TO DR. BOESCH AND DR. RICE'S REPORT

While Dr. Boesch and Dr. Rice state that they do "not evaluate . . . the effectiveness of the Unified Command's efforts to minimize and mitigate effects" of the *Deepwater Horizon* spill, they make certain observations about my August 15 report that warrant a response.⁵⁶

First, Dr. Boesch and Dr. Rice are critical of the statement in my report that the Unified Command skimmed, burned, and chemically dispersed 1.2 million barrels of oil during the Response. They assert that this figure is "dependent on some highly uncertain assumptions . . . based on rough estimates of the effectiveness of subsea dispersants that are still subject to disagreement among subject matter experts."⁵⁷ What Dr. Boesch and Dr. Rice fail to recognize, however, is that the 1.2 million barrel figure is derived directly from the United States' own interrogatory responses in this case. As discussed with respect to Captain VanHaverbeke's report, in its Third Supplemental Interrogatory Responses, the United States expressly admits that the Unified Command skimmed, burned, and chemically dispersed 1.2 million barrels of oil

⁵² VanHaverbeke Response Report at 4-5.

⁵³ U.S. Third Supp. Resp. to Interrog. at 5; Paskewich Opening Report at 70 n.75.

⁵⁴ VanHaverbeke Response Report at 4-5; U.S. Third Supp. Resp. to Interrog. at 5. Captain VanHaverbeke's assertion that "67% of the oil [was] discharged and deemed unrecoverable" is also not supported by the government's own estimates, which indicate that 44% of the oil discharged evaporated or dispersed naturally. *Id.*; U.S. Third Supp. Resp. to Interrog. at 5.

⁵⁵ VanHaverbeke Response Report at 5.

⁵⁶ Response Expert Report of Donald F. Boesch (Ph.D.) and Stanley D. Rice (Ph.D.) dated September 12, 2013 ("Boesch & Rice Response Report") at 15.

⁵⁷ Boesch & Rice Response Report at 16-17.

during the Response.⁵⁸

Second, without citing *any* support, Dr. Boesch and Dr. Rice assert that “the fact that large stretches” of the Gulf shoreline “were not oiled was predominantly because physical forces (winds, currents and tides) did not carry oil to those shores rather than the success of offshore mitigation efforts.”⁵⁹ This contention is contrary to the conclusions of multiple U.S. Coast Guard official reports and statements. For example, the Coast Guard’s On-Scene Coordinator Report (“FOSC Report”) concluded that response efforts “prevented millions of gallons of oil from impacting the sensitive shorelines of the GOM states.”⁶⁰ Likewise, the Coast Guard’s Incident Specific Preparedness Review (“ISPR”) found that the use of dispersants and in situ burning “significantly reduced the amount of oil that might otherwise have impacted near-shore habitats and environmentally sensitive areas.”⁶¹ Houma Incident Commander Captain Meredith Austin further observed that “we’ve managed to keep over 90% of the oil from hitting the shore, which is amazing.”⁶²

Finally, Dr. Boesch and Dr. Rice acknowledge that the Mississippi River diversions that the State of Louisiana implemented may have contributed “to significant declines in oyster populations and harvests. . . .” They assert that the State of Louisiana would not have undertaken the diversions had it not been for the spill.⁶³ There is no factual dispute, however, that the Mississippi River diversions were unilateral actions undertaken by the State of Louisiana that were not authorized by the Unified Command.⁶⁴ Neither the Coast Guard nor BP recommended, supported or endorsed the diversions, and Dr. Boesch and Dr. Rice do not contend otherwise.

None of the information in Dr. Boesch and Dr. Rice’s report changes my opinions about the effectiveness of the Response or any other issue.

IV. RESPONSE TO DR. CLAPP’S REPORT

Dr. Clapp, the United States’ human health expert, offers opinions about the health of workers during the *Deepwater Horizon* Response. While Dr. Clapp opines that some response workers reported certain medical conditions or symptoms, he does not disagree with my opinion that Response operations were conducted safely.⁶⁵ In fact, the federal government has issued several reports recognizing that, during the Response: “safety was a focus of the entire response organization”; that BP “took actions” to protect response workers; that the “aggressive safety program throughout the entire *Deepwater Horizon* Response proved effective”; that “the injury

⁵⁸ U.S. Third Supp. Resp. to Interrog. at 5.

⁵⁹ Boesch & Rice Response Report at 16.

⁶⁰ FOSC Report (Ex. 9105) at 44; *see also* ISPR (Ex. 9124) at 46 (“ISB [In Situ Burning] proved to be an effective tool for removing large volumes of oil from the water’s surface, preventing impact to environmentally and economically sensitive areas.”).

⁶¹ ISPR (Ex. 9124) at 47.

⁶² 6/13/10 Austin Email to Neary (Ex. 12484).

⁶³ Boesch & Rice Response Report at 17.

⁶⁴ Paskewich Opening Report at 66-68.

⁶⁵ Response Expert Report of Dr. Richard W. Clapp, dated September 12, 2014 (“Clapp Response Report”) at 27.

rate was extraordinarily low”; that the “response produced an exceptional safety record”; and that the Unified Command’s approach to safety in the Response “exemplified an all-hands-on-deck approach, with a genuine focus on the safety of its team members.”⁶⁶ My opinions are consistent with those government reports.

Dr. Clapp takes issue with the use of personal protective equipment (“PPE”) during the Response.⁶⁷ Dr. Clapp does not acknowledge that from early in the Response, BP worked cooperatively with federal agencies such as the Occupational Safety and Health Administration (“OSHA”), the National Institute for Occupational Safety and Health (“NIOSH”), the Coast Guard and others to develop guidelines for the use of PPE during response operations. As described in my opening report, BP worked with those organizations to prepare a detailed matrix specifying what PPE was required for each response task.⁶⁸

Next, Dr. Clapp identifies a single individual, a Ms. Connie Knight, who apparently was indicted for “falsely claiming to be a government employee” and impersonating a safety trainer during the *Deepwater Horizon* Response.⁶⁹ The Response involved a comprehensive safety program that trained more than 100,000 workers. Dr. Clapp does not claim that BP or anyone else in the Unified Command knew or should have known that Ms. Knight was not a federal employee or a qualified trainer. Indeed, in the plea agreement document that Dr. Clapp cites in his Report (from a case in which BP was not a party), the United States explains that Ms. Knight “*did not have any connection to the BP cleanup effort.*”⁷⁰ In my opinion, the incident with Ms. Knight does not detract in any way from the large-scale and effective efforts that the Unified Command, including BP, took protect workers in this Response.

Dr. Clapp criticizes the NIOSH worker rostering system used in the Response, stating that a relatively small number of “responders to the initial fire and sinking of the oil rig were likely missed” in the rostering effort.⁷¹ In my experience, however, rostering first responders is not the highest priority during emergency search and rescue operations. Even if NIOSH’s rostering system did not record all early responders, this does not diminish the landmark effort that the Unified Command and NIOSH undertook to develop a centralized roster of more than 55,000 response workers. As NIOSH explains, “this was the first time that a prospective,

⁶⁶ FOSC Report (Ex. 9105) at ix, 79, 90; ISPR (Ex. 9124 at 104); Michaels, D. and Howard, J. *Review of the OSHA-NIOSH Response to the Deepwater Horizon Oil Spill: Protecting the Health and Safety of Cleanup Workers*, Jul. 18, 2012 (Ex. 12221) at 5 (“Overall, the efforts to ensure the safety and health of these cleanup workers were very effective.”); RADM Watson Input to FOSC Report (Ex. 12427) at 2 (“Our safety record as a maritime service, has probably never been so good . . . [T]he safety record was not just luck . . . [C]ivilian mariners responded and conducted the operation side-by-side with the USCG as safely and effectively as any navy or combined fleet could have.”). As explained in my opening report, I do not offer any opinions on the existence or nature of any human health effects of the spill. Paskewich Opening Report at 49 n.251.

⁶⁷ Clapp Response Report at 27-28.

⁶⁸ Paskewich Opening Report at 51-52. Dr. Clapp’s implication that the PPE matrix was not available until August 2010 is mistaken. The matrix was available in early May 2010 and was updated over the course of the Response. The final version is dated August 2010. *Id.*; 8/14/10 Siver Email (CGL001-0148486).

⁶⁹ Paskewich Opening Report at 50-51; Clapp Response Report at 28.

⁷⁰ Factual Basis for Plea Agreement in *United States v. Connie M. Knight*, 2:12-cr-00261-LMA-ALC (E.D. La. 2012) (US_PP_RC005648) at 4 (emphasis added); Clapp Response Report at 28.

⁷¹ Clapp Response Report at 29-30.

centralized roster of workers had ever been developed for an event of this magnitude,” and it constituted “the largest activation of NIOSH personnel in the history of the Institute.”⁷² In my opinion, this massive effort was a notable accomplishment.

Dr. Clapp does not opine that the *Deepwater Horizon* Response operations were not conducted safely, and nothing in his report affects my opinion that the safety measures employed during the *Deepwater Horizon* Response serve as a model for future spill responses.

V. CONCLUSION

In closing, I would like to respond to a statement that Captain VanHaverbeke makes in the Conclusion of his September 12 report: that “[t]he unprecedented size of the spill required this equally unprecedented response.”⁷³ The *Deepwater Horizon* Response was unprecedented, not just in terms of the sheer size and scope of the operation, but in the manner in which BP and its Unified Command partners rapidly mobilized and supported the people and resources needed to respond to a spill of this scale, duration and complexity. To suggest that because the spill was unprecedented, BP had no choice but to mount this unprecedented Response, in my opinion, understates the significant role that BP played in helping to mitigate the effects of the spill.

As I detailed in my August 15 report, throughout the *Deepwater Horizon* Response, BP secured and supported the personnel and resources that were critical to the ultimate success of this unparalleled Response. Working with the Unified Command, BP mobilized the largest environmental emergency operation in the history of the United States. As the Coast Guard acknowledged in its FOSC Report, BP “made large-scale and significant contributions to logistics, procuring much needed resources, such as boom, skimmers, and decontamination equipment, and provided food, housing and transportation for the more than 47,000 response personnel” who were working on the Response each day.⁷⁴ BP “placed no limits on what was needed to make this response successful.”⁷⁵

BP’s financial and logistical contributions to the Response were essential to sustaining the massive scope and scale of the operations.⁷⁶ BP has devoted over \$14 billion to response and cleanup activities. As described in my opening report, BP proactively funded the Response, by advancing response costs, paying expenses directly and setting aside vast amounts for the payment of claims, rather than requiring that all claims for reimbursement be submitted through the Oil Spill Liability Trust Fund (“OSLTF”).⁷⁷ BP’s funding approach was a “novel” undertaking that was not required by the Unified Command or the NCP.⁷⁸

The outcome of the Response could have been very different had BP not been able or

⁷² NIOSH Deepwater Horizon Roster Summary Report (2011) at i. 1.

⁷³ VanHaverbeke Response Report at 9.

⁷⁴ FOSC Report (Ex. 9105) at 111.

⁷⁵ ISPR (Ex. 9124) at 102.

⁷⁶ FOSC Report (Ex. 9105) at xii.

⁷⁷ Paskewich Opening Report at 17, 77-78.

⁷⁸ 1/5/11 RADM Landry Email to RADM Zukunfi (Ex. 12535) (“BP reimbursing [OSLTF] fund as we go was a brand new and novel solution”).

willing to fund the extraordinary expenses involved.⁷⁹ As the Coast Guard's FOSC Report concludes, the solvency of BP was "pivotal" in sustaining the response operations.⁸⁰ The FOSC Report further explains that "without a solvent RP who was willing to undertake not only real-time funding of response costs—both directly but also in terms of payments to the [National Pollution Funds Center], as well as setting aside vast sums for claims—the OSLTF could have been overwhelmed."⁸¹ In my opinion, the government, with access only to the OSLTF as a funding mechanism, could not have accomplished a mobilization of personnel and equipment on the same scale as was achieved in the *Deepwater Horizon* Response.⁸² Because of BP's superb efforts — including supplying critical personnel, financial, logistical and other resources — BP and its Unified Command partners were able to mount a massive and highly effective Response that seasoned government responders have recognized for its success time and again.

During my Coast Guard career and in my current capacity managing an oil spill response cooperative, I have worked with hundreds of companies in the exploration and production industry as well as the shipping industry in planning, preparedness and response to oil spills. Outside the view of the public, companies train, drill and exercise their Oil Spill Response Plans in the event of an oil spill. They understand that an oil spill is an inherently unplanned, emerging event that requires the instantaneous collaboration and cooperation of a large number of response entities working, often under incredible stress and intense public scrutiny, toward the common goal of effectively mitigating the oil's impact. Their commitment to performing the best possible environmental response drives them, as well as the belief that their efforts are meaningful. I believe it is in society's best interest to recognize and incentivize companies that put forth their best efforts to minimize and mitigate the effects of an oil spill of any size, like BP did here. In my opinion, BP, working with the Unified Command, did its utmost to successfully mitigate the effects of the *Deepwater Horizon* spill to the maximum extent practicable and has earned recognition for its efforts.


⁷⁹ FOSC Report (Ex. 9105) at 161.

⁸⁰ FOSC Report (Ex. 9105) at xii.

⁸¹ FOSC Report (Ex. 9105) at 161; 1/5/11 RADM Zukunft Email (Ex. 12535) ("The claims process alone would have eaten our lunch had BP and eventually the GCCF not stepped up to the plate [O]ur OSLTF constraints are not going to answer the mail in a 21st century [Spill of National Significance] absent a solvent and cooperative [Responsible Party].").

⁸² McCleary Dep. at 203:6-11 ("[T]he responsible party, BP, had the means to fund a response of this size," and "there wasn't enough money in the OSLTF to fund the response if the Coast Guard had had to federalize the spill.").

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Frank M. Paskewich", written over a horizontal line.

Capt. Frank M. Paskewich (Ret.)

APPENDIX A: MATERIALS CONSIDERED

This rebuttal report incorporates the list of materials considered contained in Appendix A of my August 15, 2014 and my September 12, 2014 expert reports. In addition to those documents, the following materials are added to the list of materials that I have considered in forming my opinions in this matter. My review of the voluminous record in this case is continuing, and I reserve the right to supplement this list with additional materials relevant to my opinions.

| Document Title / Description | Dates Begn | Dates End | Exhibit Number |
|---|------------------------|------------------------|-----------------|
| Aug. 15, 2014 Expert Report of Captain Frank M. Paskewich (Ret.), including Appendices & Consideration Materials | N/A | N/A | |
| Aug. 15, 2014 Expert Report of Captain Mark G. VanHaverbeke (Ret.), including Appendices & Consideration Materials | N/A | N/A | |
| Aug. 15, 2014 Expert Report of Diane E. Austin (Ph.D.), including Appendices & Consideration Materials | N/A | N/A | |
| Aug. 15, 2014 Expert Report of Donald F. Boesch (Ph.D.), including Appendices & Consideration Materials | N/A | N/A | |
| Aug. 15, 2014 Expert Report of Richard W. Clapp (D.Sc., MPH), including Appendices & Consideration Materials | N/A | N/A | |
| Sept. 12, 2014 Response Expert Report of Captain Frank M. Paskewich (Ret.), including Appendices & Consideration Materials | N/A | N/A | |
| Sept. 12, 2014 Response Expert Report of Captain Mark G. VanHaverbeke (Ret.), including Appendices & Consideration Materials | N/A | N/A | |
| Sept. 12, 2014 Response Expert Report of Donald F. Boesch (Ph.D.) & Stanley D. Rice (Ph.D.), including Appendices & Consideration Materials | N/A | N/A | |
| Sept. 12, 2014 Response Expert Report of Richard W. Clapp (D.Sc., MPH), including Appendices & Consideration Materials | N/A | N/A | |
| Deposition Transcript of Admiral Meredith Austin (2014) and exhibits | N/A | N/A | |
| Deposition Transcript of Captain James Hanzalik (ret.) (2014) and exhibits | N/A | N/A | |
| Deposition Transcript of Captain Julia Hein (2014) and exhibits | N/A | N/A | |
| Deposition Transcript of Captain Roger Laferriere (2014) and exhibits | N/A | N/A | |
| Deposition Transcript of Dr. Jacqueline Michel (2014) and exhibits | N/A | N/A | |
| Deposition Transcript of James Dupree Vol. 1 (2011) and exhibits | N/A | N/A | |
| Deposition Transcript of James Dupree Vol. 2 (2011) and exhibits | N/A | N/A | |
| Deposition Transcript of Rear Admiral Mary Ellen Landry (2012) and exhibits | N/A | N/A | |
| On Scene Coordinator Report - DWH Oil Spill | HCP008-002191 | HCP008-002434 | Dep. Ex. 009105 |
| Final Action Memorandum - Incident Specific Preparedness Review (ISPR) | HCD004-019357 | HCD004-019191 | Dep. Ex. 009124 |
| Oil Budget Calculator - Technical Documentation - November 2010 | N/A | N/A | Dep. Ex. 009182 |
| J. Hanzalik Email to J. Lehto re Dispersant Use meeting - Thank you! | HCG188-067578 | HCG188-067578 | Dep. Ex. 011839 |
| Deepwater Horizon Dispersant Use Meeting Report | HCG188-067579 | HCG188-067687 | Dep. Ex. 011839 |
| Deepwater Horizon Shoreline Clean-up Completion Plan (SCCP) | PCG072-023415 | PCG072-023453 | Dep. Ex. 012184 |
| Michaels & Howard, Review of the OSHA-NIOSH Response to the Deepwater Horizon Oil Spill: Protecting the Health and Safety of Cleanup Workers (2012) | N/A | N/A | Dep. Ex. 012221 |
| NIOSH Deepwater Horizon Roster Summary Report | N/A | N/A | Dep. Ex. 012224 |
| M. Austin Email to K. Neary re NGA Director Visit | US_PP_USCG240875 | US_PP_USCG240877 | Dep. Ex. 012484 |
| S. Day Email to J. Watson et al. re FOSC Draft Input | HCE151-008498 | HCE151-008501 | Dep. Ex. 012527 |
| After Action Report: Deepwater Horizon MC252 Aerial Dispersant Response | N62040-000387 | N62040-000476 | Dep. Ex. 013037 |
| D. Suttles Email to J. Watson et al. re OFFSHORE SKIMMERS NOT FOR DISSEMINATION | BP-HZN-2179MDL04802646 | BP-HZN-2179MDL04802646 | Dep. Ex. 013042 |
| National Research Council, Oil Spill Dispersants Efficacy and Effects (2005) | ANA-MDL-000264448 | ANA-MDL-000264843 | |
| ICS 207 - Organization Chart - Houra IMT Period 35 | BP-HZN-2179MDL00591134 | BP-HZN-2179MDL00591134 | |
| Personnel List | BP-HZN-2179MDL02299537 | BP-HZN-2179MDL02299537 | |
| National Oil Spill Commission Meeting Conducted on Monday, September 27, 2010 "Meeting 3 Official Transcript" | BP-HZN-2179MDL03017551 | BP-HZN-2179MDL03017740 | |

| Document Title / Description | Date Begin | Date End | Exhibit Number |
|--|------------------------|------------------------|----------------|
| U.S. Dept. of Interior Minerals Management Service, Covered Offshore Facility Changes | BP-HZN-2179MDL03242830 | BP-HZN-2179MDL03242830 | |
| Letter from Clancy to Stein (May 19, 2009) | BP-HZN-2179MDL03348528 | BP-HZN-2179MDL03348530 | |
| J. Mutschler Email to M. Utsler et al. re Critical Resource Request: Offshore Skimming Assets | BP-HZN-2179MDL04827120 | BP-HZN-2179MDL04827124 | |
| Daily Operational Report 5/23/10) | BP-HZN-2179MDL04855381 | BP-HZN-2179MDL04855393 | |
| Big Gulp Oil Skimmers | BP-HZN-2179MDL05983642 | BP-HZN-2179MDL05983643 | |
| Personnel List | BP-HZN-2179MDL06317426 | BP-HZN-2179MDL06317426 | |
| I. Cross Email to A. Mallory et al. re BP Expos Coming to a Parish Near You | BP-HZN-2179MDL07703381 | BP-HZN-2179MDL07703381 | |
| IAP Database | BP-HZN-2179MDL08389250 | BP-HZN-2179MDL08389250 | |
| The Federal Interagency Solutions Group, Oil Budget Calculator Science and Engineering Team, Oil Spill Calculator, | BP-HZN-2179MDL09219786 | BP-HZN-2179MDL09220002 | |
| National Response Team, The EXXON VALDEZ Oil Spill, A Report to the President (May 1989) | C2U004-000946 | C2U004-001020 | |
| E. Siver Email to E. Biswell et al. re Emailing: Gulf Operations PPE Matrix ver 2.1 Final | CGL001-0148486 | CGL001-0148488 | |
| G. Loeb Email to McKinley re Summary of New Orders - Offshore Skimmers and attachments | CGL001-0177366 | CGL001-0177369 | |
| Email from Loeb attaching R. Laferriere Email to H. Parker re Flash Request: WX Forecast to Shift Oil East, More Skimmers Are Needed | CGL001-0177402 | CGL001-0177405 | |
| 6/22/10 J. Riddle Email and attachments | CGL001-0177534 | CGL001-0177535 | |
| M. Stanislaus Email to P. Zukunff re July 14 Aerial Dispersant Approval Request | EPE006-004696 | EPE006-004700 | |
| M. Landry Email to D. Tulis re letter/directive | EPE020-005440 | EPE020-005440 | |
| M. Landry Email to D. Tulis re letter/directive | EPE020-013889 | EPE020-013889 | |
| M. Landry Email to D. Tulis, S. Coleman, et al. re Dispersant Limitations | EPE107-012382 | EPE107-012384 | |
| S. Coleman Email to D. Tulis and M. Landry re letter/directive | EPE107-013195 | EPE107-013196 | |
| RRT VI In-Situ Burn Plan Part I (Operations Section) | HCD020-013902 | HCD020-013958 | |
| M. Austin Email to J. Korn re Hopedale | HCE003-002735 | HCE003-002736 | |
| R. Laferriere Email to J. Watson and R. Nash re Commanders estimate: skimmers | HCE011-002679 | HCE011-002680 | |
| 6/8/10 McCullough Email | HCE044-001127 | HCE044-001130 | |
| Organizational Chart - US government response to Deepwater horizon oil spill of national significance | HCE148-003963 | HCE148-003963 | |
| Interview Summary Form of ADM Mary Landry | HCG042-010010 | HCG042-010016 | |
| M. Landry Email to J. Hanzalik re Coast Guard agency-level corrections to errors in Deepwater Horizon Commission Staff Papers | HCG205-010627 | HCG205-010630 | |
| Email from M. Landry to J. McPherson re FW: Window of opportunity | HCG311-001138 | HCG311-001138 | |
| M. Landry Email to J. Hanzalik re Dispersant Limitations - Non Emergent Issue - RRT co chair rqt for NRT assist | HCG311-001786 | HCG311-001790 | |
| M. Landry Email to S. Coleman and J. Hanzalik re Dispersant Limitations | HCG311-001795 | HCG311-001797 | |
| M. Landry Email to D. Tulis and S. Coleman re Dispersant Limitations | HCG375-009474 | HCG375-009479 | |
| D. Tulis Email to J. Watson re Follow up on dispersant call between USCG, EPA and BP | HCG536-001910 | HCG536-001912 | |
| Deepwater Horizon Presentation (4/28/10) | HCH070-008297 | HCH070-008317 | |
| National Pollution Funds Center OPA Designation Letter to BP Exploration & Production Inc. | LA-GOV 00032144 | LA-GOV 00032147 | |
| U.S. Coast Guard, Oil Spill Response Offshore, In-situ Burn Operations Manual (2003) | N7J007-004792 | N7J007-004941 | |
| Special Monitoring of Applied Response Technologies ("SMART") Protocol | OBR013447 | OBR013492 | |
| P. Murphy, Crews Set Up Staging Area in Venice While Bracing for Oil Spill To Hit La.'s Coast | SNL100-061742 | SNL 100-061745 | |
| Crisis Action Team (CAT) Staff Journal, NOC Incident # 044-10, Deepwater Horizon - Gulf of Mexico | SNL103-006303 | SNL103-006180 | |

| Document Title / Description | Bates Begin | Bates End | Exhibit Number |
|---|---------------------|---------------------|----------------|
| Michel J, Nixon Z, Holton W, White M, Zengel S, Csulak F, Rutherford N, Childs C (2014) Three Years of Shoreline Cleanup Assessment Technique (SCAT) for the Deepwater Horizon Oil Spill, Gulf of Mexico, USA. International Oil Spill Conference Proceedings 2014:1251-1266. | US_PP_DBO007299 | US_PP_DBO007314 | |
| Shoreline Conditions Following the Exxon Valdez Spill as of Fall 1990 | US_PP_DBO007316 | US_PP_DBO007343 | |
| Plan for Assessment of the Shorelines Where 2010 Rapid Assessment Surveys Identified Shoreline Oiling That Were Not Surveyed by DWH SCAT Teams (February 21, 2014) | US_PP_DBO007344 | US_PP_DBO007350 | |
| Turner RE, Overton EB, Meyer BM, Miles MS, McClenahan G, Hooper-Bui L, Engel AS, Swenson EM, Lee JM, Milan CS, Gao H (In Press) Distribution and recovery trajectory of Macondo (Mississippi Canyon 252) oil in Louisiana coastal wetlands. Marine Pollution Bulletin http://dx.doi.org/10.1016/j.marpolbul.2014.08.011 | US_PP_DBO007592 | US_PP_DBO007602 | |
| Fitzpatrick & Fields, Institutionalizing Emerging Technology Assessment Process into National Incident Response (May 2012) | US_PP_MVH001521 | US_PP_MVH001537 | |
| Graham, Kenneth and Robert Ricks, Deepwater Horizon Incident & National Weather Service Decision Support Services (2010) | US_PP_MVH004073 | US_PP_MVH004111 | |
| J. Muzinic, Developers turn Boom Blaster Inventors (October 2010) | US_PP_MVH004118 | US_PP_MVH004120 | |
| Gulp Oil Skimmers | US_PP_MVH004126 | US_PP_MVH004128 | |
| Factual Basis for Plea Agreement in U.S. v. Connie M. Knight, 2:12-cr-00261-LMA-ALC (E.D.La. 2012), Rec. Doc. 26 | US_PP_RC005648 | US_PP_RC005652 | |
| Indictment in U.S. v. Connie M. Knight, 2:12-cr-00261-LMA-ALC (E.D.La. 2012), Rec. Doc. 1, p. 4. | US_PP_RC005653 | US_PP_RC005662 | |
| Judgment in U.S. v. Connie M. Knight, 2:12-cr-00261-LMA-ALC (E.D.La. 2012) (U.S. v. Knight), Rec. Doc. 60 | US_PP_RC005663 | US_PP_RC005667 | |
| American Thoracic Society, 1996 | US_PP_RC005673 | US_PP_RC005685 | |
| Sentencing Hearing Transcript in U.S. v. Connie M. Knight, 2:12-cr-00261-LMA-ALC (E.D.La. 2012) | US_PP_RC007507 | US_PP_RC007571 | |
| 6/1/10 Agenda, Oil Spill Community Forum, St. Tammany Town Hall Meeting | US_PP_USCG2_2644635 | US_PP_USCG2_2644636 | |
| RRT-VI FOSC Dispersant Pre-Approval Guidelines and Checklist (2001) | US_PP_USCG226633 | US_PP_USCG226680 | |
| R. Beyer Email to M. Austin re Memo instituting new acquisition procedures at Hopedale Branch | US_PP_USCG235844 | US_PP_USCG235844 | |
| Houma ICP Memo to FOB St. Bernard-Hopedale | US_PP_USCG235846 | US_PP_USCG235847 | |
| J. Hanzalik Email to J. Korn re Complete Statement of LCDR Martenson.doc | US_PP_USCG238074 | US_PP_USCG238075 | |
| Statement of E. Martenson, Lieutenant Commander, US Coast Guard | US_PP_USCG238076 | US_PP_USCG238093 | |
| R. Nelson Email to R. Laferriere re Parish Open House Events | US_PP_USCG251901 | US_PP_USCG251902 | |
| N. Auth Email to V. McCullough re ICP Houma Open House Plaquemines (Belle Chase) - Notes | US_PP_USCG251935 | US_PP_USCG251936 | |
| U.S. Coast Guard Oil Spill Response Research & Development Program A Decade of Achievement, Report CGD-07-03 (2003) | US_PP_USCG551986 | US_PP_USCG552064 | |
| BP Press Release, BP steps up shoreline protection plans on US gulf coast, http://www.bp.com/en/global/corporate/press/press-releases/BP-steps-up-shoreline-protection-plans-on-US-gulf-coast.html | N/A | N/A | |
| Deepwater Horizon Response Joint Press Conference, Part 1, available at http://www.youtube.com/watch?v=YYx7L86m8kc | N/A | N/A | |
| Deepwater Horizon Response Joint Press Conference, Part 2, available at http://www.youtube.com/watch?v=QrVeeCC7gi8 | N/A | N/A | |
| Factual Basis for Plea Agreement in United States. v. Connie M. Knight, 2:12-cr-00261-LMA-ALC (E.D. La. 2012) | N/A | N/A | |
| FDEP Beach Monitoring Report | N/A | N/A | |
| Findings of Fact and Conclusions of Law Phase One Trial [Rec. Doc. 13355] | N/A | N/A | |

| Document Title / Description | Bates Begin | Bates End | Exhibit Number |
|--|-------------|-----------|----------------|
| Findings of Fact and Conclusions of Law, Phase One Trial, Sep. 4 2014. Rec. Doc. 13355 | N/A | N/A | |
| Jernelov, A. and Linden, O. Ixtoc I: A Case Study of the World's Largest Oil Spill (1981). | | | |
| McClenachan et al. Effects of Oil on the Rate and Trajectory of Louisiana Marsh Shoreline Erosion (2013) | N/A | N/A | |
| Michel J, Owens EH, Zengel S, Graham A, Nixon Z, Allard T, Holton W, Reimer PD, Lamarche A, White M, Rutherford N, Childs C, Mauseth G, Challenger G, Taylor E (2013) Extent and degree of shoreline oiling: Deepwater Horizon oil spill, Gulf of Mexico, USA. PLoS One 8:e65087 | N/A | N/A | |
| Nelson, Bauer, et al., Assessment of Geographic Setting on Oil Spill Impact Severity in the United States, J. Sustainable Energy Eng. (2014), available at http://scrivener.metapress.com/content/4491802535hw2l2x/ | N/A | N/A | |
| OSAT-2 Report | N/A | N/A | |
| Perkinson D, Pace J (2014) FDEP Beach Monitoring Report. Escambia County segment FLES2-005 and FLES1-035 (NPS Ft Pickens), Florida Department of Environmental Protection, Tallahassee, FL | N/A | N/A | |
| Silliman BR, van de Koppel J, McCoy MW, Diller J, Kasozi GN, Earl K, Adams PN, Zimmerman AR (2012) Degradation and resilience in Louisiana salt marshes after the BP-Deepwater Horizon oil spill. Proc Natl Acad Sci USA 109:11234-11239 | N/A | N/A | |
| US's 3rd Supplemental Response to BP's Interrogatories (Rec Doc 55708915) | N/A | N/A | |
| TRG Badging Database | N/A | N/A | |
| 40 C.F.R. Part 300 et seq. | N/A | N/A | |
| Unified Command documents already available to the United States, including ICS forms, plans, and correspondence | N/A | N/A | |
| All documents and testimony cited in this report. | N/A | N/A | |