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VIA MAIL

Deepwater Horizon Natural Resource Damages Trustees
U.S. Fish and Wildlife Service
P.O. Box 49567
Atlanta, GA 30345

Re: Notice of Availability; Request for Comments on *Deepwater Horizon* NRDA Draft Phase IV Early Restoration Plan (“ERP”) (80 Fed. Reg. 29019 (May 20, 2015))

Dear *Deepwater Horizon* Natural Resource Damages Trustees:

On behalf of the BP Gulf Coast Restoration Organization and BP Exploration & Production Inc. (collectively "BP"), we are pleased that the Trustees and BP have continued to make significant progress to advance the *Deepwater Horizon* early restoration program. As the Trustees stated in their Federal Register notice announcing the Draft Phase IV ERP (hereinafter "Draft Plan"), the Early Restoration Framework Agreement (hereinafter "Framework Agreement") is intended "to commence implementation of early restoration projects that will provide meaningful benefits to accelerate restoration in the Gulf as quickly as practicable." Moreover, as the Trustees have agreed, BP's commitment to fund early restoration pursuant to the Framework Agreement is "voluntary and not otherwise required at this stage of the NRDA process."

The publication of the Draft Plan is a significant milestone in this process, covering 10 projects that are expected to cost \$134 million. BP supports all 10 projects described in the Draft Plan and believes that these projects meet the criteria set forth in the Framework Agreement and support our mutual goal of expediting restoration in the Gulf of Mexico at the earliest opportunity.

While the Draft Plan contains sufficient information to evaluate and comment on these 10 early restoration projects, BP disagrees with portions of the Draft Plan, for example:

- BP disagrees with unsubstantiated Trustee statements regarding the natural resource damages assessment ("NRDA") and potential injuries resulting from the *Deepwater Horizon* oil spill;
- BP disagrees with Trustee statements that conflict with the data available to us, are missing citations to any other supporting data, studies, or publications, and/or appear to be based on speculation;
- BP notes that, when discussing the Trustees' preliminary injury assessment, the Draft Plan should acknowledge and discuss the fact that natural resource damages ("NRD") pursuant to the Oil Pollution Act ("OPA") are limited to "measurable or observable adverse" injuries where such injuries result from the release of oil;
- BP notes that the Trustees should discuss the legal concept of baseline in the Draft Plan, and the fact that the goal of the NRD legal regime (for primary restoration) is not to restore natural resources to a pristine condition, but rather to restore injured resources to the condition that would have existed had the incident not occurred; and
- BP notes that there are several places in the Draft Plan, detailed below, where the Trustees have made errors in describing terms of the project agreements with BP, which must be corrected in the Final Plan.

BP also notes that the Trustees included monitoring plans for each of the 10 proposed projects in the Draft Plan, two of which were negotiated with BP and will be updated in the Final Plan if those projects are selected (Proposed Sea Turtle Early Restoration Project and Proposed Texas Rookery Islands Project). BP supports the revised, agreed-upon versions of the Sea Turtle and Texas Rookery Islands Plans to be included in the Final Plan, and if new information or concerns about the draft monitoring plans are raised during the public comment period, BP will work with the Trustees to address them in the final versions.

BP believes that the public generally, and specifically the residents of the Gulf Coast, have a vested interest in having direct access to monitoring information and data for each of the 10 proposed projects (as well as the previous projects approved in Phases 1 – 3). To the best of our knowledge, this is the first time that restoration projects of this magnitude (over \$800 million in early restoration funds) have been proposed and will be funded prior to the completion of an NRD assessment and claim. Therefore, public transparency on the effectiveness of these projects is critical.

As described in more detail in our comments below, there is an opportunity to improve the 8 monitoring plans not negotiated with BP. As stated above, BP and the public should be provided with more detail on the data that will be collected through monitoring, and believes that the data must be made publicly available via one of the many Trustee websites that are described in the Draft Plan. It is important that monitoring data collected from these projects are shared with BP and the public and contribute to the information learned about the habitats and resources in the Gulf of Mexico and the understanding of the effectiveness of the types of restoration projects selected by the Trustees.

As you are aware, BP's voluntary agreement to provide \$1 billion for early restoration does not concede any factual injury or waive any defenses to any NRD claim. BP notes that, in addition to the specific comments made below, there may be additional portions of the Draft Plan, or statements within the Draft Plan, that BP disagrees with, and the lack of a comment below is without prejudice to raise additional legal or factual issues in any future proceeding or context. BP reserves its right to raise further objections once data, analysis, and other information requested in this letter, and relied upon by the Trustees in preparing the Draft Plan, is provided to BP.

In addition, BP notes that the Framework Agreement between the Trustees and BP, which describes the early restoration program and the money set aside to fund early restoration projects, has implementing criteria which are different and separate from the Trustee Allocation Agreement. As stated in BP's comments on the Phase I and Phase III Draft Early Restoration Plans, the Trustee Allocation Agreement is an agreement solely among the Trustees, and BP is not bound by its terms.

BP requests that this letter be included in the Administrative Record that is being maintained by the Department of the Interior for the NRDA of the *Deepwater Horizon* accident.

Comments:

I. Executive Summary

A. Page 1, ¶1: The Trustees' statement that "well over one million gallons of dispersants were applied to the waters of the spill area" is vague and misleading. The Draft Plan should note that the dispersant application program was conducted under the direction of the Federal On Scene Coordinator ("FOSC") for the U.S. Coast Guard and in consultation with the Environmental Protection Agency ("EPA"). The text should be corrected to explain that 1.8 million gallons of dispersants were applied.

B. Page 1, fn. 1: The Trustees' definition of dispersants is unscientific and colloquial. A more precise definition used by EPA, a co-Trustee in this NRDA, is more appropriate: "Dispersants are chemicals that can be used to break up oil and speed its natural degradation." <http://www.epa.gov/bpspill/factsheets/dispersants-factsheet.pdf>.

C. Page 1, fn. 1: The reasons for the use of dispersants should be explained in this Draft Plan; i.e. that their use was intended to disperse and degrade oil more quickly in the water column offshore, in order to decrease the amount of oil on the water surface, and reduce the amount of oil that reached shorelines, and ultimately reduce the potential for impacts to shoreline resources.

II. Chapter 1: Introduction, Purpose and Need, and Public Participation

A. Page 1, ¶1: The Trustees' statement that "well over one million gallons of dispersants were applied to the waters of the spill area" is vague and misleading. The Draft Plan should note that the dispersant application program was conducted under the direction of the Federal On Scene Coordinator ("FOSC") for the U.S. Coast Guard and in consultation with the Environmental Protection Agency ("EPA"). The text should be corrected to explain that 1.8 million gallons of dispersants were applied.

B. Page 1, fn. 1: The Trustees' definition of dispersants is unscientific and colloquial. A more precise definition used by EPA, a co-Trustee in this NRDA, is more appropriate: "Dispersants are chemicals that can be used to break up oil and speed its natural degradation." <http://www.epa.gov/bpspill/factsheets/dispersants-factsheet.pdf>.

C. Page 1, fn. 1: The Trustees should explain to the public the reasons for the use of dispersants in this Draft Plan, as set forth in comment I.C. above.

D. Page 7, ¶4: Per OPA Regulations, the first sentence should read "Restoration activities are intended to cost effectively restore..."

III. Chapter 2: Affected Environment and Environmental Setting

A. General: BP notes that the overall environmental complexity in the Gulf of Mexico and the changing baseline present challenges to any assessment. The Trustees' Draft Plan lacks any discussion of the challenges of doing an injury assessment in such an environment. When the Trustees discuss their preliminary assessment of injury in the Draft Plan, they should discuss how multiple natural and anthropogenic factors affect the baseline (chemical and ecological), and how the Trustees are taking into account this complex and changing baseline in the assessment.

B. Page 1, ¶3: BP notes that the available evidence does not support the Trustees' assertion that there was "extensive oiling...from Texas to the Florida Panhandle." According to the Unified Command's Shoreline Cleanup and Assessment Technique ("SCAT") survey team, MC252 oil had been observed by SCAT teams as far west as Vermillion Parish in Louisiana and as far east as the Florida panhandle, geographically per SCAT, but only a portion of this range was "extensively" oiled.

IV. Chapter 3: The Deepwater Horizon Oil Spill Natural Resource Injury Assessment

A. 3.1 – Introduction

1. Page 1, ¶3: While the parties have collected a large amount of data using a "cooperative approach," much of the data and analysis used to support the findings in this Draft Plan appear to come from studies that the Trustees have not shared with BP or the public. Because BP has not had the opportunity to participate in some of the referenced data collection efforts or analysis, nor to see some of the underlying data and analysis, BP reserves its right to raise further objections to the material in this draft after such information becomes available to BP.

B. 3.2 – The Injury Assessment Process: Assessing Injuries in a Complex, Interconnected Ecosystem

1. General: BP notes that the Trustees do not describe "the injury assessment process" consistent with the National Oceanic and Atmospheric Administration's ("NOAA's") Guidance Document on Injury Assessment (a co-Trustee in this NRDA) and notably fails to discuss baseline conditions, which NOAA's Guidance Document emphasizes as fundamental to an injury assessment. See http://www.darrp.noaa.gov/library/1_d.html.

2. General: BP notes that per NOAA's Guidance Document, any discussion of the injury assessment process should include a discussion of baseline conditions, and at least a brief explanation of how baseline conditions may vary over time in the Gulf of Mexico, as this is an area of high natural variability, and an area where baseline sources of hydrocarbons and other chemicals are prevalent.

3. General: Many of the Trustees' conclusions and statements related to alleged injury to natural resources, as set forth in this section of the Draft Plan, are unsupported by citations to data, and/or appear to be premature based on the data that is available to BP and the public. BP has not received much of the data described or relied upon by the Trustees in the "Injuries to Natural Resources" subsections below (Section 3.3. et seq.). BP requests that the Trustees provide to BP all data, analysis, and other information that the Trustees, collectively or individually, possess related to the statements in Section 3.3 of the Draft Plan, including any information that demonstrates

or indicates potential injury resulting from the Deepwater Horizon accident, any information that demonstrates or indicates a lack of such injury, and any information related to baseline conditions. Or, at a minimum, explain the pathways that exposed the resources and services being addressed by the proposed restoration projects in this Draft Plan.

4. Page 2, ¶1: "Oil from the Spill spread, through a variety of different pathways, over a large area of the Gulf of Mexico environment." This statement requires clarification and context by the Trustees so the reader can understand which areas of the Gulf of Mexico were impacted by oil.

5. Page 2, ¶1: "An array of habitats and associated biological communities and organisms were exposed to the oil and/or gas, including, deep water soft bottom sediments, deep water coral reefs, and mesophotic coral reefs; water column; and nearshore and shoreline habitats such as submerged aquatic vegetation (SAV), intertidal and subtidal reefs, marshes, and beaches (OSAT 2010 and White et al. 2012)." The references cited by the Trustees in the Draft Plan are inadequate given the available literature and the availability of these data. The following references should be added:

- a) Boehm, Paul D., Linda L. Cook, and Karen J. Murray. "Aromatic hydrocarbon concentrations in seawater: Deepwater Horizon oil spill." In *International Oil Spill Conference Proceedings (IOSC)*, vol. 2011, no. 1, p. abs371. American Petroleum Institute, 2011;
- b) Wade, Terry L., Stephen T. Sweet, José L. Sericano, Norman L. Guinasso, Arne-R. Diercks, Raymond C. Highsmith, Vernon L. Asper et al. "Analyses of water samples from the Deepwater Horizon oil spill: Documentation of the subsurface plume." *Monitoring and Modeling the deepwater horizon oil spill: a record-breaking enterprise. Geophysical Monograph Series 195* (2011): 77-82;
- c) Diercks, Arne-R., Raymond C. Highsmith, Vernon L. Asper, DongJoo Joung, Zhengzhen Zhou, Laodong Guo, Alan M. Shiller et al. "Characterization of subsurface polycyclic aromatic hydrocarbons at the Deepwater Horizon site." *Geophysical Research Letters* 37, no. 20 (2010).

6. Page 2, ¶1: BP notes that the Trustees' statement "[o]il and dispersant vapors also were present in the atmosphere in some areas" is vague and is not supported by references to data or publications. Results of thousands of air monitoring samples collected during the response clearly show that concentrations of oil and dispersants were well below those levels known to be potentially harmful. BP reserves its right to challenge claims that oil and dispersant vapors were present, and/or had any effect, in any particular location at a particular time.

7. Page 3, Third Bullet: This bullet should clarify that BP and other members of the incident command opposed the freshwater release undertaken by Louisiana because it was not likely to keep floating oil away from the shoreline, and because it was expected to lower salinity to levels that could be harmful to oysters and some other salt water species that live in the area impacted by the freshwater release. See Oyster White Paper (Oct. 9, 2013), attached hereto.

8. Page 2, ¶1: "As appropriate, field and laboratory data are combined in mathematical computer models to enable interpretation and quantification of injuries at the broad spatial and ecological scale necessary for the NRDA". BP notes that the proper term is estimation not quantification as models do not give "answers;" rather, they provide frameworks for understanding, approximating, and developing hypotheses to be tested. The Trustees should clarify and revise this statement should read: "As appropriate, field and laboratory data are combined in mathematical computer models to enable interpretation and estimation of injuries at the broad spatial and ecological scale necessary for the NRDA."

C. 3.3 – Injuries to Natural Resources

1. 3.3.1 – Laboratory Toxicity Testing Program

- a) Page 4, ¶1: "Trustees continue to stay abreast of current research, which may impact the understanding of ecological injury in the northern Gulf of Mexico." While this is true and important, the Trustees should confirm that they

can replicate the results of this research before they are used in injury assessments.

b) Page 4, ¶4: “Overall, the results of the Trustees’ aquatic toxicity testing program will provide a means for the Trustees to reach conclusions. . . .” The Trustees’ statement suggests that lab results can be extrapolated to the field without direct evidence of effects in the field. If the Trustees assert that this is a valid assumption, then the Draft Plan should state that assertion, and the Trustees should further explain the validity of that assumption.

c) Page 4, ¶5: BP declined to participate in the Trustees’ avian toxicology tests due to the animal testing aspect in several of these studies.

2. 3.3.2 – Deep Benthic Environments

a) Page 5, ¶2: BP notes that the statement that “[d]eep sea habitats are important reservoirs of biodiversity” is not supported by references to data or publications. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

b) Page 5, ¶2: As stated in BP’s Phase 3 DERP/PEIS comments, BP notes that the Trustees **again inappropriately cited** Grassle (1991). As previously brought to the Trustees’ attention, Grassle (1991) **neither** uses the term “marine snow” **nor** states that marine snow provides “much of the energy” reaching the sea floor. Moreover, Grassle (1991) does not report any data from the Gulf of Mexico; rather, the data used to define the high biodiversity of deep benthic sediments were obtained from the western Atlantic Ocean. The Trustees’ should correct this inappropriate use of this citation and make efforts not to make this mistake in future early restoration plans.

c) Page 5, ¶2: BP notes that this paragraph intentionally avoids mentioning natural oil and gas seeps as a significant energy input into to the deep water Gulf of Mexico.

d) Page 5, ¶3: The Trustees’ assertion that the deep benthic habitats of the Gulf of Mexico are both “unique and sensitive” is not supported by references to data or publications. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

e) Page 5, ¶3: The Trustees’ statement regarding potential impacts to coral colonies, planktivorous fish, and sediment-dwelling animals is not supported by references to data or publications. Nor are there any supporting citations for alleged injuries to mesophotic corals or planktivorous fishes. BP requests that the Trustees provide all data, analysis, and other information that the Trustees, collectively or individually, possess related to these issues, including any information that demonstrates or indicates potential injury to coral colonies, planktivorous fish, and sediment-dwelling animals resulting from the Deepwater Horizon accident, any information that demonstrates or indicates a lack of such injury, and the data and information used by the Trustees to establish baseline conditions to which the alleged demonstrated injury is compared.

In addition, BP notes that the statement that there are documented injuries that include “losses to mesophotic coral reefs located to the north and northeast of the wellhead” is in conflict with the available data. The water and sediment data do not demonstrate exposure to harmful levels of petroleum hydrocarbons at locations of mesophotic reefs. (Gulf Science Data, Water Chemistry Data File. Website: <http://gulfsciencedata.bp.com/>, directory: Water; subdirectory: Water Chemistry; filename: WaterChemistry_W-01v02-01.csv (zipped). Last modified May 2014, and Gulf Science Data, Submerged Sediment Chemistry Data File. Website: <http://gulfsciencedata.bp.com/>, directory: Offshore Sediment; subdirectory: Sediment Chemistry; filename: SedimentChemistry_S-01v01-01.zip. Last modified January 22, 2014.). Finally, the paragraph should discuss the 2014 video data which further evaluated coral health and the numbers of planktivorous fishes at mesophotic reefs compared to pre-spill video data for those resources.

f) Page 5, ¶3: The Draft Plan claims that “The footprint of injury around the wellhead includes areas of soft bottom sediment in which diversity of sediment-dwelling animals has been reduced (Montagna et al. 2013) and deep sea coral

habitats which have been degraded (White et al. 2012, Hsing et al. 2013, Fisher et al. 2014).” This is inaccurate, insofar as these corals are not within documented areas of sediment contamination around the wellhead. In addition, it is important to note the presence and influences of natural oil seeps near the allegedly injured coral, when evaluating the potential for injuries in this area (Boehm and Carragher, 2012). According to the report from the 2010 Response Operational Science Advisory team (OSAT), a key finding was that sediment exceedances of aquatic life benchmarks were limited to within 3 km of the wellhead. This was based on extensive sediment sampling and analysis for hydrocarbon compounds and fingerprinting using PAHs and petroleum biomarkers. OSAT consisted of scientists from the USEPA, USGS, NOAA, BOEMRE, USCG, and BP.

3. 3.3.3. – Water Column Fish and Invertebrates

a) Page 5-6, ¶4 and 1: BP notes that the statements concerning the fate, chemical weathering, transport and toxicity of the oil are not supported by references to data or publications. BP suggests adding references in this section of the Draft Plan to Diercks et al. (2010); Boehm et al. (2011) and Wade et al. (2011), cited above, which all document the limited areal extent of potentially harmful concentrations of oil components. In addition, BP requests that the Trustees provide to BP all data, analysis, and other information that the Trustees, collectively or individually, possess related to these issues, including data and analyses showing oil concentrations by location, depth and duration; any additional information that demonstrates or indicates potential offshore water column injury resulting from the Deepwater Horizon accident; any information that demonstrates or indicates a lack of such injury; and any information related to baseline conditions. In addition, BP requests all models, including model inputs, algorithms and computer codes, used to support the statement in the Draft Plan that “[t]his indicates that injuries to water column organisms were widespread, both spatially and in terms of the diversity of organisms and life stages that were affected.”

b) Page 6, ¶1: BP notes that the statement on areal extent of oiling is a cumulative number that grossly overstates the actual oil coverage on any day of the incident. BP also notes that the Trustees’ preliminary measurement of injury in “cubic miles” of surface water is also puzzling, and the Trustees should include a description of the water depth that they are using to calculate “cubic miles.”

c) Page 6, ¶1: The Trustees’ statement concerning the kinds of organisms and life stages that are associated with the alleged “widespread” injuries is subjective, and is not supported by references to data or publications. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

d) Page 6, ¶1: BP notes that there is no explanation, citation, or reference to data to explain how the “Trustees are accounting for temporally variable surface water oiling in calculations of exposure and injury.” BP requests that the Trustees provide all data, analysis, and information related to this statement.

e) Page 6, ¶1: BP notes that there is no explanation for how “[c]oncentrations of oil components are calculated for multiple depth intervals.” Literature references (Diercks, et al; Wade et al; Boehm et al., cited above) are required to draw such conclusions and must be provided. BP requests that the Trustees provide all data, analysis, and information related to this statement.

f) Page 6, ¶1: No data or citations are provided to support how the Trustees are gathering and analyzing information on “the density and abundance of organisms that live in the water column, including variations in their distribution over space and time.” Citations are required to draw conclusions and must be provided. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

g) General: BP notes that additional information on biodegradation as a natural attenuation mechanism is conspicuously absent from the Trustee's Draft Plan. The word "biodegradation" does not appear even once in the Draft Plan. BP suggests adding publications attesting to the high rate of biodegradation of hydrocarbons. See

(1) Edwards, B. R., C. M. Reddy, et al. (2011). "Rapid microbial respiration of oil from the Deepwater Horizon spill in offshore surface waters of the Gulf of Mexico." *Environmental Research Letters* 6(3): 035301;

(2) Hazen, T.; Eric Dubinsky, A.; DeSantis, T.Z.; Andersen, G.L.; Piceno, Y.M.; Singh, N.; Jansson, J.K.; Probst, A.; Borglin, S.E.; Fortney, J.L.; Stringfellow, W.T.; Bill, M.; Conrad, M.E.; Tom, L.M.; Chavarria, K.L.; Alusi, T.R.; Lamendella, R.; Joyner, D.C.; Spier, C.; Baelum, J.; Auer, M.; Zemla, M.L.; Chakraborty, R.; Sonnenthal, E.L.; D'haeseleer, P.; Holman, H.-Y.N.; Osman, S.; Lu, Z.; Van Nostrand, J.D.; Deng, Y.; Zhou, J.; Mason, O.U., 2010. Deep-sea oil plume enriches indigenous oil-degrading bacteria. *Science* 330, 204-208;

(3) Valentine, D.L., Kessler, J.D., Redmond, M.C., Mendes, S.D., Heintz, M.B., Farwell, C., Hu, L., Kinnaman, F.S., Yvon-Lewis, S., Du, M., Chan, E.W., Tigreros, F.G., Villanueva, C.V., 2010. Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill. *Science* 330, 208-211;

(4) Valentine, D.L., Mezic, I., Macešić, S., Crnjarić-Žic, N., Ivic, S., Hogan, P.J., Fonoberov, V.A., Loire, S., 2012. Dynamic autoinoculation and the microbial ecology of a deep water hydrocarbon irruption. *PNAS* 109, 20286-20291.

4. 3.3.4 – Marine Mammals

a) Page 6, ¶3: BP notes that the statement that "thousands of marine mammals were exposed to oil from the Spill" is unsubstantiated and misleading. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

b) Page 6, ¶3- Page 7, ¶1-2: The Draft Plan cites a 2014 publication by Schwacke et al. for the assertion that bottlenose dolphins exposed to oil in Barataria Bay, LA "demonstrated signs of severe ill health, with many dolphins sampled in Barataria Bay given a 'guarded,' 'poor' or 'grave' prognosis." BP notes that there is more recent data that the Trustees should also discuss in this paragraph relating to the same issues raised by the Schwacke publication. For example, the Draft Plan should include analyses of subsequent dolphin health assessment data that would show the survival of the dolphins assessed as being in poor and guarded condition, and also provide additional data on parameters such as hormones. The Draft Plan also relies on the Unusual Mortality Event (UME) for marine mammals that began before the Deepwater Horizon accident, and cites several publications (Litz 2014; Venn-Watson 2015) relating to the UME. The cause of the UME, however, is still "undetermined" according to NOAA (a co-Trustee in this NRDA), and NOAA's website states that "no definitive cause(s) has yet been identified for the increase in cetacean strandings in the northern Gulf from 2010 to the present." See

http://www.nmfs.noaa.gov/pr/health/mmume/cetacean_gulfofmexico_faq.htm
<http://www.nmfs.noaa.gov/pr/health/mmume/>. The investigation into this

UME is ongoing and is looking at a number of different contributing factors. According to NOAA, 54 out of 177 dolphins have tested positive for *Brucella* starting in March 2010 before the DWH accident to the end of 2013 so far.

http://www.nmfs.noaa.gov/pr/health/mmume/cetacean_gulfofmexico2010_brucella.htm. BP also notes that other factors were also in play during the time of the UME. In Litz 2014, the authors raised the question of environmental factors (salinity and temperature) and anthropogenic factors including fishery

interactions. The climatic data presented by Carmichael et al. (2012) correlates cold temperatures and low salinity with strandings in the northern Gulf of Mexico. BP requests that the Trustees provide all data, analysis, and other information that the Trustees, collectively or individually, possess related to these issues, including any information that demonstrates or indicates potential injury to bottlenose dolphins resulting from the Deepwater Horizon accident, any information that demonstrates or indicates a lack of such injury, and any information related to baseline conditions.

5. 3.3.5 – Sea Turtles

a) Page 7, ¶4-5: The Trustees' statement that "tens of thousands" of neritic turtles were exposed to oil within the footprint of surface oiling is not supported by references to data or publications; moreover, Trustee reports indicate the collection of a much smaller number of oiled neritic turtles during the accident, indicating that the estimate of "tens of thousands" of oiled turtles is grossly inflated and inconsistent with the evidence, or that oil exposure has little to no adverse effect on neritic sea turtles. See, e.g., "Turtles Documented by Date, State, and Disposition, per day: April 30, 2010 - February 15, 2011," NOAA Fisheries, available at <http://www.nmfs.noaa.gov/pr/health/oilspill/turtles.htm>

b) Page 7, ¶4: The Trustees' statement that "Sea turtles were exposed to oil in open water, and in Sargassum habitat, or on nesting beaches, either through ingestion of oil, direct contact with oil, and/or inhalation of volatile oil and dispersant-related compounds. In addition, response activities, such as collecting and burning oil at sea, skimmer operations, boom deployment, berm construction, increased lighting at night near nesting beaches, beach cleanup operations and boat traffic may have injured sea turtles directly or by blocking access to turtle nesting beaches and changing their reproductive behavior." BP notes that there were response programs in place to minimize these potential impacts, and these included the use of Best Management Practices and the use of wildlife observers with authority to stop operations when needed to protect wildlife at the response site.

c) Page 7-8, ¶4-6: The Trustees should add text to clarify that, of the approximately 1,000 dead sea turtles found between April 26, 2010, and December 2011, the majority of these turtles drowned and showed no signs of oil or oil exposure. Only three percent were oiled based on currently available data. Many of the collected sea turtles had fish in their stomachs and esophagi, which is indicative of being trapped in a net, as those species do not typically prey on fish. See Dr. Jane Lubchenco, "Oil Spill Clarifies Road Map for Sea Turtle Recovery," NOAA, available at http://www.nmfs.noaa.gov/mediacenter/docs/2011/mar/oil_spill_clarifies_road_map_for_sea_turtle_recovery.pdf

6. 3.3.6 – Birds

a) Page 8, ¶2: The impacts asserted by the Trustees in this paragraph should be prefaced with the word "potentially," as the Trustees note that the NRDA is still underway.

b) Page 8, ¶2: The Trustees state that "[t]he northern Gulf of Mexico is critically important..." The term "critically," unless supported by a reference from the scientific literature, should be struck, or at a minimum, defined.

c) Page 9, ¶1: BP disagrees with the Trustee statements in this paragraph. For example, the text states that "[a]pproximately 8,500 live impaired and dead birds were collected in the northern Gulf of Mexico as part of wildlife rescue and NRDA operations during and following the Spill." This figure conflicts with the available information, such as the report Deepwater Horizon Bird Impact Data from the DOI ERDC NRDA Database 12 May 2011, which states that a "Grand Total" of 7,258 birds were collected (both dead and alive), and neglects to indicate that over 850 of the birds collected survived. See <http://www.fws.gov/home/dhoilspill/pdfs/Bird%20Data%20Species%20Spreadsheets%2005122011.pdf>.

d) Page 9, ¶1: BP notes that while some birds that died or were impaired as a result of the accident were not collected, some birds were collected for

reasons entirely unrelated to the accident. Therefore, BP requests that Trustees provide all data, analysis, and information regarding the basis for the Trustees' statement that the 7,258 birds collected were "a fraction of the total number of birds that were killed or impaired."

e) Page 9, ¶2: The Trustees state: "[t]his approach allows for controlled laboratory testing of the oil to specifically identify adverse effects and for confirmation that these effects are observed in oiled, wild birds." The Trustees are also monitoring population trends, survival, and reproduction of birds actually in the northern Gulf of Mexico; these relevant data should be discussed in this section.

7. 3.3.7 – Oysters

a) Page 9, ¶4: The Trustees' assertion that the release of freshwater from Mississippi River diversion structures was "part of a set of response actions" is misleading. The unilateral opening of freshwater diversions by Louisiana was not approved by Unified Area Command or the FOSC. This has been further confounded by a series of subsequent events, including severe freshwater flooding in 2011 along the Mississippi River, drought in other areas of the Gulf coast, and Tropical Storm Lee in 2011. BP disagrees that the release of freshwater by the State of Louisiana constituted an appropriate response activity under OPA. This paragraph should clarify that BP and other members of the incident command opposed the freshwater release undertaken by Louisiana because it was not likely to keep floating oil away from the shoreline, and because it was expected to lower salinity to levels that could be harmful to oysters and some other salt water species that live in the area impacted by the freshwater release.

b) Page 9, ¶5: The Trustees' statement that "oyster eggs, sperm, and larvae were exposed to oil and potentially dispersants" is not supported by references to data or publications. BP is not aware of any data showing that oyster populations were affected by exposure to oil or dispersant compounds from the Deepwater Horizon accident in 2010. See Oyster White Paper (Oct. 9, 2013), attached hereto. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

c) Page 9, ¶5: BP is not aware of any technical basis for the Trustees' statement that early larvae rise to the surface and remain there. Extensive historic literature and past NRDA's document early larvae throughout the water column with their exact position dependent on environmental/physiochemical factors. BP requests that the Trustees provide all data, analysis, and information related to this statement.

d) Page 9, ¶6: In regard to spat settlement being identified as being low since 2010, BP is aware that the Oyster Task Force reported a lack of spatfall in 2009, especially in the vicinity of the Mississippi River and expressed concern that record rainfall and snowmelt in 2009-2010 was bound to cause additional problems (Oyster Task Force 2010). Additionally, similar freshwater events in 2011 and 2012 have been identified as factors in reduced reproductive success in similar areas (LDWF 2011, 2012).

8. 3.3.8 – Marsh and Mangrove Habitat

a) Page 107, ¶5: The Trustees' reliance on the study of Littorina snails to evidence "impacts on animals" is questionable. The same study found no differences in fiddler crab abundance in heavily oiled areas, and crabs were the primary species surveyed in this study. BP noted this in our Phase 3 DERP/PEIS comments, and notes the Trustees' questionable use of this study again in this Phase 4 Draft Plan.

9. 3.3.9 – Beach Habitat

a) Page 11, ¶1: BP notes that available evidence does not corroborate that "about 600 linear miles of sand beach habitat were oiled as a result of the Spill." According to Unified Command records, there were 922 miles of beach habitat surveyed, of which the maximum number of oiled miles were recorded as 555 miles. Of these 555 miles, 407 miles were described as "heavy",

“moderate”, or “light” at the maximum observed oiling conditions, with 148 miles observed as “very light” or “trace” at maximum oiling conditions.

b) Page 11, ¶1: In addition, available evidence does not corroborate that any beaches in Texas were oiled above baseline conditions. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

c) Page 11, ¶1: BP notes that available evidence also does not corroborate that “[a]t least 400 miles of oiled beaches also experienced some level of impairment due to response activities.” BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

10. 3.3.10 – Unvegetated Nearshore Sediment

a) Page 11, ¶1-3: The Trustees’ statement “[a]nalysis of over 2,500 sediment samples” needs to be clarified. The accuracy of the number of sediment samples collected within one kilometer of the shoreline depends on how “nearshore” is defined (e.g., whether the term includes intertidal areas) and whether the Trustees are considering samples that were analyzed for PAHs or were analyzed only for TPH. BP notes that the presence of TPH alone is not indicative of MC252/Macondo oil. In addition, due to the high number of oil spills in Coastal Louisiana, the Trustees’ analysis should include a discussion of fingerprinting the oil to MC252/Macondo (see also comment 2.f), above).

b) Page 11, ¶1-3: The Trustees’ statement that finding “the presence of PAHs” in the 2,500 sediment samples analyzed is indicative of “injury to nearshore species” is misleading, as it suggests that all of the samples were above a “toxicity level” and were fingerprinted as MC252. BP notes that the presence of PAHs alone is not indicative of MC252/Macondo oil. BP requests that the Trustees provide all data, analysis, and information related to this statement, including all data related to the fingerprinting of the sediment samples.

c) Page 11, ¶1-3: The Trustees’ statement that the degree of contamination was sufficient to cause adverse effects to survival, reproduction, health, and “overall ecosystem productivity,” is not supported by the text in the section, nor is BP aware of any data to support population or ecosystem level impacts. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

d) Page 11, ¶3: The Trustees do not explain why they only evaluated sediment samples collected within 1 km of the shoreline. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

e) Page 11, ¶3: BP notes that there is also no reference to data or publications to support the Trustees’ statement that the “highest concentrations occurring adjacent to heavily oiled vegetated shorelines.” BP requests that the Trustees provide all data, analysis, and technical explanation and evidence related to this statement.

11. 3.3.11 – Submerged Aquatic Vegetation

a) Page 12, ¶2: The Trustees provide no citation to data or publications regarding the “oil” that “was detected in samples at several SAV sites.” BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

b) Page 12, ¶2: The Trustees allege that “at least 10 square miles of SAV beds were oiled and/or adversely affected by a variety of response actions” but provide no support for where and how that number was derived. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

c) Page 12, ¶2: The Trustees also do not specify the geographic location of the allegedly oiled SAV or the type of alleged oiling (i.e., sediment or vegetative oiling), nor was the nature or magnitude of alleged injury to SAV documented

or described. BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

12. 3.3.12 – Recreational Use

a) Page 12, ¶1: “The Spill resulted in closures of beaches, fishing areas, publicly owned and managed areas, and waterways, preventing access to these areas by both local and more distant recreational users.” BP requests that the Trustees provide to BP all data and other information that the Trustees, collectively or individually, possess or control related to the alleged closures and advisories.

b) Page 12, ¶2: The Trustees state they are “evaluating recreational use data from a variety of sources and surveys for determining impacts in other coastal areas where the data described above are unavailable.” BP requests that the Trustees provide all data and other information that the Trustees, collectively or individually, possess related to surveys or other sources of information on determining coastal impacts.

c) Page 13, ¶3: “Preliminary Trustee review of recreational use data indicates that over ten million recreational user days were lost or otherwise adversely affected by the Spill.” BP requests that the Trustees define “user day” and the method or factors used to exchange/convert “otherwise adversely affected” user days into “lost user days.”

D. 3.4 – Use of Assessment Data to Inform Early Restoration Project Selection

1. General: BP notes that the correct title for this section of the Draft Plan should be “Use of Response and Assessment Data to Inform Early Restoration Project Selection.”

2. Page 13, ¶4: As previously noted above, the available evidence does not support the assertion that there was “extensive oiling...from Texas to the Florida Panhandle.” According to the Unified Command’s Shoreline Cleanup and Assessment Technique (“SCAT”) survey team, MC252 oil had been observed by SCAT teams as far west as Vermillion Parish in Louisiana and as far east as the Florida panhandle, geographically per SCAT, but only a portion of this range was “extensively” oiled.

3. Page 13, ¶4: “In addition, initial results from the Trustees’ assessment clearly show that oiling caused very large reductions in coastal recreation from Texas to Florida.” BP requests that the Trustees provide all data and other information that the Trustees, collectively or individually, possess related to “large reductions in coastal recreation from Texas to Florida.” BP also requests that the Trustees define “large reductions,” including a full description the baseline conditions from which the “large reductions” are asserted.

E. 3.5 – References

1. BP notes that key available references are missing, including on water column chemistry, oil seeps, biodegradation, sea turtles, birds, and marine mammals. The following references should be added:

a) Boehm, Paul D., Linda L. Cook, and Karen J. Murray. "Aromatic hydrocarbon concentrations in seawater: Deepwater Horizon oil spill." In *International Oil Spill Conference Proceedings (IOSC)*, vol. 2011, no. 1, p. abs371. American Petroleum Institute, 2011;

b) Wade, Terry L., Stephen T. Sweet, José L. Sericano, Norman L. Guinasso, Arne-R. Diercks, Raymond C. Highsmith, Vernon L. Asper et al. "Analyses of water samples from the Deepwater Horizon oil spill: Documentation of the subsurface plume." *Monitoring and Modeling the deepwater horizon oil spill: a record-breaking enterprise. Geophysical Monograph Series 195* (2011): 77-82;

c) Diercks, Arne-R., Raymond C. Highsmith, Vernon L. Asper, DongJoo Joung, Zhengzhen Zhou, Laodong Guo, Alan M. Shiller et al. "Characterization of subsurface polycyclic aromatic hydrocarbons at the Deepwater Horizon site." *Geophysical Research Letters* 37, no. 20 (2010).

d) Edwards, B. R., C. M. Reddy, et al. (2011). "Rapid microbial respiration of oil from the Deepwater Horizon spill in offshore surface waters of the Gulf of Mexico." *Environmental Research Letters* 6(3): 035301;

e) Hazen, T.; Eric Dubinsky, A.; DeSantis, T.Z.; Andersen, G.L.; Piceno, Y.M.; Singh, N.; Jansson, J.K.; Probst, A.; Borglin, S.E.; Fortney,

- J.L.; Stringfellow, W.T.; Bill, M.; Conrad, M.E.; Tom, L.M.; Chavarria, K.L.; Alusi, T.R.; Lamendella, R.; Joyner, D.C.; Spier, C.; Baelum, J.; Auer, M.; Zemla, M.L.; Chakraborty, R.; Sonnenthal, E.L.; D'haeseleer, P.; Holman, H.-Y.N.; Osman, S.; Lu, Z.; Van Nostrand, J.D.; Deng, Y.; Zhou, J.; Mason, O.U., 2010. Deep-sea oil plume enriches indigenous oil-degrading bacteria. *Science* 330, 204-208;
- f) Valentine, D.L., Kessler, J.D., Redmond, M.C., Mendes, S.D., Heintz, M.B., Farwell, C., Hu, L., Kinnaman, F.S., Yvon-Lewis, S., Du, M., Chan, E.W., Tigreros, F.G., Villanueva, C.V., 2010. Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill. *Science* 330, 208-211;
- g) Valentine, D.L., Mezic, I., Macešic, S., Crnjarić-Zic, N., Ivic, S., Hogan, P.J., Fonoberov, V.A., Loire, S., 2012. Dynamic autoinoculation and the microbial ecology of a deep water hydrocarbon irruption. *PNAS* 109, 20286-20291.
- h) Gulf Science Data, Water Chemistry Data File. Website: <http://gulfsciencedata.bp.com/>, directory: Water; subdirectory: Water Chemistry; filename: WaterChemistry_W-01v02-01.csv (zipped). Last modified May 2014.
- i) Gulf Science Data, Submerged Sediment Chemistry Data File. Website: <http://gulfsciencedata.bp.com/>, directory: Offshore Sediment; subdirectory: Sediment Chemistry; filename: SedimentChemistry_S-01v01-01.zip. Last modified January 22, 2014.
- j) <http://www.epa.gov/bpspill/factsheets/dispersants-factsheet.pdf>
- k) http://www.darrp.noaa.gov/library/1_d.html
- l) http://www.nmfs.noaa.gov/pr/health/mmume/cetacean_gulfofmexico_faq.htm
- m) <http://www.nmfs.noaa.gov/pr/health/mmume/>
- n) http://www.nmfs.noaa.gov/pr/health/mmume/cetacean_gulfofmexico2010_brucella.htm.
- o) "Turtles Documented by Date, State, and Disposition, per day: April 30, 2010 - February 15, 2011," NOAA Fisheries, available at <http://www.nmfs.noaa.gov/pr/health/oilspill/turtles.htm>
- p) Dr. Jane Lubchenco, "Oil Spill Clarifies Road Map for Sea Turtle Recovery," NOAA, available at http://www.nmfs.noaa.gov/mediacenter/docs/2011/mar/oil_spill_clarifies_road_map_for_sea_turtle_recovery.pdf
- q) <http://www.fws.gov/home/dhoilspill/pdfs/Bird%20Data%20Species%20Spreadsheets%2005122011.pdf>.

V. Chapter 4: Introduction of Proposed Phase IV Early Restoration Projects

A. Pages 6-7, Section 4.6: As stated above, BP and the Trustees support the revised, agreed-upon version of the negotiated monitoring plans for the Proposed Sea Turtle Early Restoration Project and Proposed Texas Rookery Islands Project.

B. Page 7, Section 4.7: The Trustees state that an "important consideration in the project selection process" was the "nexus between the project and the injury." The Trustees further state in Chapters 5-14 that the selected early restoration projects have a "nexus" or "clear nexus" to the injury. BP's voluntary agreement to provide \$1 billion for early restoration does not concede any particular injury or waive any defenses to the Trustees' potential NRD claim. Likewise, BP supports the selected early restoration projects in the Draft Plan, but does not thereby concede the existence or quantity of any particular injury resulting from the *Deepwater Horizon* accident. The NRD assessment is still underway, and the extent of injury and recovery will be determined at a later date. To address uncertainty about the extent of injury and recovery at this stage of the process, many of the projects have alternative or cascading NRD offset credits, so that the credit for the project can be appropriately scaled to injuries that are quantified later in the NRDA process.

C. Page 11, 4.9.1, Texas Rookery Project: BP notes that the NRD Offset credit is not limited to laughing gulls.

VI. Chapter 5: Proposed Texas Rookery Islands Project

A. Page 1, Section 5.1.1: BP notes that the NRD Offset credit is not limited to laughing gulls.

B. Pages 15-16, Section 5.15: BP notes that “appropriately scaled” is not part of the term sheet and must be removed in the final version.

VII. Chapter 7: Proposed Bike and Pedestrian Use Enhancements at Davis Bayou, Mississippi District, Gulf Islands National Seashore

A. Page 10, Section 7.1.6, Footnote 2, First Bullet in Footnote: The correct language is, “The Parties agree to restate” not “The Trustees agree to restate.”

VIII. Chapter 8: Proposed Bon Secour National Wildlife Refuge Trail Enhancement Project

A. Page 5, Section 7.1.5, Footnote 1, First Bullet in Footnote: The correct language is, “The Parties agree to restate” not “The Trustees agree to restate.”

IX. Chapter 13: Proposed Sea Turtle Early Restoration Project

A. Page 20-21, Section 13.1.7: The NRD Offsets have a qualifier of “aquatic and terrestrial” that is not in the term sheet and must be removed in the final version.

B. Page 45, 1st Bullet, Sub-bullet: The Trustees’ statement regarding “minor to moderate beneficial effects” is inconsistent with the characterization of the project being important to the Kemp’s ridley population. For example, without the project, only 25% of PINS is readily accessible to survey teams. With the project, the remaining 75% of PINS can be readily surveyed. As stated on Page 7, “The proposed cabin construction would improve detection and protection efforts on PAIS beaches, thereby decreasing response time, increasing corral capacity and shortening the travel distance from nest to corral, with the goal of thereby increasing hatchling survival”.

Further support that this proposed project will result in a greater benefit to the species than characterized in this section of the Draft Plan can be found in the long-term recovery plan for species of turtles in the GOM (i.e., Bi-National Recovery Plan for Kemp’s Ridley Sea Turtles, NOAA 2011), which includes the same project components as this early restoration project. According to the Recovery Plan, these components are the type of projects that are expected to have the most significant benefits for the Gulf of Mexico sea turtle populations. As such, please explain the characterization of benefits as “minor to moderate” compared to the projects described in the Recovery Plan which presumably would be receiving public funding.

X. Chapter 14: Proposed Pelagic Longline Bycatch Reduction Project

A. Page 5, ¶3: “Animals including small and large pelagic fish were exposed to oil and dispersants in the water column as a result of the Spill.” BP requests that the Trustees provide all data, analysis, and technical explanation and evidence in the Final Plan related to this statement.

XI. Appendix B: Phase IV Early Restoration Project Monitoring Plans

A. B.2 – Texas Rookery Islands

1. As stated above, BP supports the revised, agreed-upon version of the negotiated monitoring plan for this project.

B. B.3 – Restoring Living Shorelines and Reefs in Mississippi Estuaries

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? Where is the “Data QA/QC, Clearance, and Release Steps” document? Where is the copy of the “CompQAP”? BP requests that the Plan be updated with the locations where the raw monitoring data and the QA and QAP documents, including data products for each monitoring parameter, will be posted for public review. BP also requests that the data listed for each parameter be included in the Annual Report and made available to the public. As stated previously in this letter, it is important to provide details where this data will be posted for public review.

2. General: Why is biological monitoring and water quality monitoring only in years 3 and 5?

3. Page 26, Goal 1, Objective 2, and Table B-3, Pages 30 and 33:

a) What is the basis for the performance criterion of 84 gww/m² of non-bivalve invertebrate infauna and epifauna?

b) Why are bivalves excluded from this criterion?

C. B.4 – Bike and Pedestrian Use Enhancements at Davis Bayou, Mississippi District, Gulf Islands National Seashore

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including records of observations, will be posted for public review, in addition to an explanation of how this count data will be

used by the resource managers. BP also requests that the Plan clarify whether an Annual Report will be created similar to the other plans, and that Trustees explain what is meant by the “brief narrative.” As stated previously in this letter, it is important to provide details where this data will be posted for public review.

D. B.5 – Bon Secour National Wildlife Refuge Trail Enhancement Project, Alabama

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including visitor counts using visual observation or automated counters of recreators, will be posted for public review, in addition to an explanation of how this count data will be used by the resource managers. BP also requests that the Plan clarify whether an Annual Report will be created similar to the other plans, and that Trustees explain what is meant by the “brief narrative.” As stated previously in this letter, it is important to provide details where this data will be posted for public review.

E. B.6 – Osprey Restoration in Coastal Alabama

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including data sheets and photos, and the Annual Reports and Annual Status Reports, will be posted for public review. As stated previously in this letter, it is important to provide details where this data will be posted for public review.

2. Objective 2, Parameter 1, b) and f): The Trustees should visit the platforms during the breeding season; this should be clarified in the final version of the Plan.

F. B.7 – Point aux Pins Living Shorelines

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including data sheets and photos, and the Annual Reports and Annual Status Reports, will be posted for public review. As stated previously in this letter, it is important to provide details where this data will be posted for public review.

2. Objective 1: When will As-Built drawings be posted and made publicly available?

3. Objective 2: Performance Criterion: What is the basis for 90% presence/absence of infauna/epifauna organisms? Shell Belt and Coden Belt Roads Living Shoreline specifies “90% of breakwater units have coverage of invertebrate infauna and epifauna.”

4. Objective 2: Data: When will species composition and density data be posted and made publicly available?

5. Objective 3: To track trends of shoreline erosion over time, when will annual erosion rates and supporting data be posted and made publicly available?

6. Section B.7.4.2: The Trustees developed QA/QC guidance for the Early Restoration Projects which dictates the minimum requirements for QA/QC clearance and release. This is described in the Trustees’ approved document, “Data QA/QC, Clearance, and Release Steps” which was not provided in this Draft Plan. Will the Trustees use this guidance for release of data and public posting?

G. B.8 – Shell Belt and Coden Belt Roads Living Shoreline

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including data sheets and photos, and the Annual Reports and Annual Status Reports, will be posted for public review. As stated previously in this letter, it is important to provide details where this data will be posted for public review.

2. Objective 1: When will As-Built drawings be posted and made publicly available?

3. Objective 2: The statement of Performance Criterion on Page 64 is different that stated on Page 66. Is the performance criterion 90% presence/absence of infauna/epifauna organisms or 90% have coverage of invertebrate infauna and epifauna of breakwater units? Which is the correct criterion and what is the basis for this criterion?

4. Objective 2: Data: When will species composition and density data be posted and made publicly available?

5. Objective 2, Parameter 1: What is the basis for 75% survival of marsh plantings?
6. Objective 3, Parameter 2: When will 1m² coverage plot data be posted and made publicly available?
7. Section B.8.4.2: The Trustees developed QA/QC guidance for the Early Restoration Projects which dictates the minimum requirements for QA/QC clearance and release. This is described in the Trustees' approved document, "Data QA/QC, Clearance, and Release Steps" which was not provided in this Draft Plan. Will the Trustees use this guidance for release of data and public posting?

H. B.9 – DOI Seagrass

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including data sheets and photos, and the Annual Reports and Annual Status Reports, will be posted for public review. As stated previously in this letter, it is important to provide details where this data will be posted for public review.
2. Objective 2, Parameter 1: When will .0.25 m² quadrat data along with corresponding locations (latitude and longitude) be posted and made publicly available?

I. B.10 – Sea Turtle Early Restoration Project A: Kemp's Ridley Sea Turtle Nest Detection and Enhancement Component

1. As stated above, BP supports the revised, agreed-upon version of the negotiated monitoring plan for this project.

J. B.11 – Sea Turtle Early Restoration Project B: Enhancement of the Sea Turtle Stranding and Salvage Network and Development of a Sea Turtle Emergency Response Program Component

1. As stated above, BP supports the revised, agreed-upon version of the negotiated monitoring plan for this project.

K. B.12 – Sea Turtle Early Restoration Project C: Gulf of Mexico Shrimp Trawl Bycatch Reduction Component

1. As stated above, BP supports the revised, agreed-upon version of the negotiated monitoring plan for this project.

L. B.13 – Sea Turtle Early Restoration Project D: Texas Enhanced Fisheries Bycatch Enforcement Component

1. As stated above, BP supports the revised, agreed-upon version of the negotiated monitoring plan for this project.

M. B.14 – Pelagic Longline Bycatch Reduction Project

1. General: Where is the data generated from this monitoring plan going to be posted so that BP and the public can review it? BP requests that the Plan be updated with the locations where the raw monitoring data, including data sheets and photos (aggregated if required), and the Annual Reports and Annual Status Reports, will be posted for public review. As stated previously in this letter, it is important to provide details where this data will be posted for public review.

Thank you for the opportunity to provide comments. As stated above, BP supports the early restoration process and the projects that the Trustees have developed and proposed for public comment, and looks forward to the implementation of these projects.

Sincerely,



Laura W. Folse
Executive Vice President
Response and Environmental Restoration

cc (via E-mail): Administrative Record
DWH Trustee Council
Steve Palmer (BP Legal)
Jean Martin (BP Legal)
Bea Stong (BP GCRO)
Lisa Hawke (BP GCRO)
Matt Douglas (Arnold & Porter LLP)
Brian D. Israel (Arnold & Porter LLP)

ATTACHMENT 1

Oyster White Paper (Oct. 9, 2013)

Oyster White Paper:
A Response to NOAA's 2014 Deepwater Horizon NRD Funding Request
Brett Marston, Arnold & Porter LLP
October 9, 2013

I. Introduction

NOAA's 2014 funding request calls for almost \$22 million in oyster studies.¹ For the reasons explained below, the Trustees' request has articulated no reasonable basis for funding these studies. BP has already paid over \$26 million to the Trustees for various oyster studies, including \$2.2 million through the National Pollution Fund Center's (NPFC's) funding process and \$18.9 million for oyster studies requested in the interim partial claim for 2013. As discussed below, the Trustees' request for millions of additional dollars to study oysters will not serve to illuminate any actual injury suffered by oysters as a result of the Deepwater Horizon accident.

NOAA justifies its request with vague allegations of impacts to oysters from MC-252 contaminants and broad assertions of an "extended injury period with little evidence of recovery in the oyster population."² In the 2013 funding request, NOAA states that "[s]ampling conducted by NOAA and its contractors throughout 2011 reinforced NOAA's concern that both spat settlement and abundance of live seed and market oysters in subtidal oyster reefs remain low in areas throughout much of the Gulf 18 months or more following the Incident."³ The Trustees further allege that "analysis of larval settlement patterns ... shows widespread recruitment failure in 2010, 2011, and 2012, suggesting ongoing reproductive difficulties."⁴ The Trustees propose to continue to investigate nearshore areas because of "preliminary findings of potential continued exposure of oysters to MC252-related contaminants, low abundance in areas with submerged oil, and the greater than expected extent of potential oyster habitat."⁵

Unfortunately, these claims are incomplete and misleading. Multiple sources of data indicate that oil and dispersant compounds did not have an effect on subtidal oysters in the northern Gulf, and that any effect on intertidal oyster populations is minimal and already studied sufficiently for assessment purposes. While 2010 did see widespread apparent oyster mortalities in Breton Sound and Barataria Bay, these effects are likely attributable not to oil but to increased freshwater from Mississippi River diversion structures. Because the effects of increased

¹ NOAA, Third Interim Partial Claim for Assessment and Restoration Planning Costs (2014) [hereinafter "NOAA Claim (2014)"] at 128.

² *Id.*

³ NOAA, Second Interim Partial Claim for Assessment and Restoration Planning Costs (2013) [hereinafter "NOAA Claim (2013)"] at 157.

⁴ *Id.*

⁵ NOAA Claim (2014) at 136.

freshwater largely wane with the freshwater itself, most of the effects of Louisiana’s decision to open the diversions were likely confined to 2010. Effects that may not be confined to 2010 are likely difficult to distinguish from effects of subsequent periods of high freshwater.

Accordingly, and as discussed in greater detail below, the Trustees are simply unable to establish an underlying premise of the “likelihood of injury and the need for restoration.” 15 C.F.R. § 990.30. Absent such a premise, the proposed studies are not “reasonable assessment costs,” and the studies should not be funded.

II. No Apparent Effects from Oil in 2010

Put simply, despite nearly four years of research and observation, the Trustees have presented no evidence that oyster populations were affected by exposure to oil or dispersant compounds from the Deepwater Horizon accident in 2010. Available data from a variety of sources confirm this conclusion.

Evidence of oiled reefs from the accident has been virtually nonexistent. During 2010 sampling for the Louisiana Department of Wildlife and Fisheries (LDWF) annual stock assessment for the public oyster seed grounds, “no direct oiling of sampled reefs was noted.”⁶ Subsequent stock assessments have also not mentioned observations of oiled beds. Similarly, according to a review of field notes from the 2010, 2011, and 2012 NRD sampling efforts, field personnel did not document a single visibly oiled oyster bed. In nearly four years of sampling, the only indication of visibly oiled oysters of which we are aware was a single sample reportedly collected near Timbalier Island in March 2013.⁷

Seafood safety testing provides additional support for the same conclusion that subtidal oyster beds were not exposed to oil in 2010. Seafood in the Gulf was repeatedly tested for oil and dispersant compounds. The basic conclusions of this extensive testing regimen are well known:

- “Of 2384 seafood samples collected between April 30, 2010 and October 27, 2011, trace levels of polycyclic aromatic hydrocarbons (PAHs) were detected in 740 samples and dioctyl sodium sulfosuccinate (DOSS), a major component of the dispersants used in the Gulf, was detected in 99 samples. No (0) sample results showed levels of concern, meaning that any chemicals were below levels that could potentially threaten the public’s health.”⁸ For oysters specifically, in

⁶ LDWF 2010 Stock Assessment at vii.

⁷ BP technical consultants were not present at this sampling event, and BP does not currently have any detailed information on the sampling results.

⁸ Louisiana Department of Health & Hospitals, Archived Seafood Surveillance, (Nov. 30, 2011), <http://new.dhh.louisiana.gov/index.cfm/page/78/n/103>.

1408 total samples, less than half (662) had any detectable levels of PAHs or DOSS.⁹

- “In most cases, no PAHs were found, and, when they were, the PAH levels in the seafood were 100-1000 times below the levels which would raise a health concern.”¹⁰

Finally, extensive testing data for the NRDA tell the same story:

- NOAA reported that screening of sediment samples associated with oyster beds found less than 1 percent of the sediment samples had obvious oil present (6 of 1997), and none of those 6 samples with oil present have associated TPAH data presently available.
- Baseline TPAH concentrations in sediment samples collected in May 2010 and associated with oyster resources in Louisiana were reported by MusselWatch to range from 0.2 to 1.1 ppm. Mississippi Department of Environmental Quality (MDEQ) pre-assessments conducted in late April and early May 2010 found a sediment TPAH range from 0.02 to 5.1 ppm.
- NOAA chemistry data available on Query Manager and associated with oyster sampling programs indicate that only 1.23 percent of available sediment samples are greater than 1 ppm TPAH, and no samples have been greater than 4 ppm TPAH.

Despite the extraordinary amount of dollars spent to date in assessing oyster beds in nearshore areas, including intertidal beds, the Trustees have been unable to find any significant source of ongoing injury. A single Trustee presentation of preliminary results from a 2012 oyster study asserts that intertidal beds in oiled areas could have been exposed to oil.¹¹ Data from the Trustee study have only become recently available to BP. However, these data are not sufficient to establish a need to continue assessment on oyster beds. The Trustees themselves agreed to take sediment samples in nearshore areas during initial cooperative oyster sampling efforts to investigate the potential for continued exposure to Macondo oil in any sampling location. The Trustees made a unilateral decision in late 2012 to reverse course, however, and they did not collect sediment or tissue samples that could be tested for the presence of Macondo oil or other contaminants. Trustees therefore gave up the opportunity to associate sediment

⁹ *Id.* at 4.

¹⁰ Michael R. Taylor, U.S. Food and Drug Administration, *Gulf Seafood Is Safe To Eat After Oil Spill*, (Jan. 11, 2012), <http://blogs.fda.gov/fdavoices/index.php/2012/01/gulf-seafood-safety/>.

¹¹ *DWH Oyster NRDA Technical Working Group Intertidal 2012: Preliminary Results for Trustees and RP* (Nov. 8, 2012).

chemistry with other indicators of oyster health in 2013, even though BP had agreed to fund that work. Since the existing evidence does not show widespread ongoing exposure to Macondo oil, there is no rational basis for conducting more studies to evaluate the effects of such exposure.

III. Diversion Effects

A. Freshwater Diversion Openings Were Widespread in 2010

Starting in late April 2010, freshwater diversion structures were opened by the State of Louisiana, adding high levels of freshwater input into Barataria Bay and Breton Sound at the critical spring spawning season for oysters. Freshwater continued to flow through diversion structures through the hot summer months and in some cases through August 2010, well after the well was capped. Flow from Bayou Lamoque and the Caernarvon Diversion into Breton Sound and from Davis Pond into Barataria Bay apparently constituted the bulk of the freshwater released from the Mississippi River by Louisiana during this period.¹²

Government sampling data indicate that the diversions significantly reduced salinity in Breton Sound and Barataria Bay. According to an LDWF report issued in May 2011, the “average recorded bottom salinity during this sampling event was 3.2 parts per thousand (ppt) in the Breton Sound basin and 9.9 ppt in the Barataria Basin.”¹³

It is widely assumed that the reduction in salinity from the freshwater diversion openings caused mortality to resident oyster populations. LDWF issued a report in May 2011 indicating that low salinity caused oyster mortalities and noting a likely correlation between oyster mortalities and proximity to the Mississippi River.¹⁴ In Breton Sound, the report indicates that approximately 93 percent of spat, 81 percent of the seed oysters, and 56 percent of the sack oysters (harvestable size) died, with mortality higher in areas located closer to sources of freshwater.¹⁵ In the Barataria Basin, the report estimates that approximately 49 percent of spat, 32 percent of the seed oysters, and 34 percent of the sack oysters died.¹⁶

¹² Published reports indicate that maximum discharge capacities from the largest diversions were 12,000 cubic feet per second (cfs) (Bayou Lamoque), 10,650 cfs (Davis Pond), and 8,800 cfs (Caernarvon). See Press Release (May 12, 2010), <http://emergency.louisiana.gov/Releases/05122010-Lamoque.html>.

¹³ LDWF, *Comprehensive Report of the 2010 Oyster Mortality Study in Breton Sound and Barataria Basins*, (May 2011) at 1, http://www.wlf.louisiana.gov/sites/default/files/pdf/document/34262-oyster-mortality-study/ldwf_-_oyster_mortality_study_-_exec_summary__full_report_combined.pdf [hereinafter “Louisiana Oyster Mortality Study”].

¹⁴ See Louisiana Oyster Mortality Study, *supra* note 13.

¹⁵ *Id.* at 1 & tbl. 1, 4.

¹⁶ *Id.* at 4.

The detrimental effects of extended low salinity on oysters, particularly when temperatures rise, are well known. According to LDWF, for example, “[s]cientific research indicates that reproduction of oysters becomes limited as salinities drop below seven parts per thousand (ppt). Additionally, salinities below five ppt coupled with water temperatures above 23° Celsius has [sic] been documented to cause significant oyster mortalities. As depressed salinities continue into the hotter summertime months, physiological stress on oysters increases and mortalities can occur.”¹⁷ Similarly, the Gulf States Marine Fisheries Commission (GSMFC) notes that “[s]alinities less than 10 ppt through the spring and summer inhibit [oyster] spawning and reduce larval survival thereby resulting in insufficient numbers of mature oyster larvae.”¹⁸

Louisiana’s May 2011 report does not suggest that oil or dispersants affected reefs in this area. The report draws no connection between oiling or dispersant compounds and the mortality event. Instead, the resulting mortalities were “similar in nature to documented oyster mortality events in past years,”¹⁹ including “most recently in 2009 – large fresh water inputs (“freshets”) were observed in coastal Louisiana during summertime months.”²⁰ The pattern of mortalities in these two basins tracked the differences in salinity changes between the two areas: “Based on discrete salinity measurements recorded during sampling, it is not surprising that the Breton Sound basin suffered more of a mortality signal than did the Barataria basin.”²¹ In sum, based upon Louisiana’s own data, the increased oyster mortality in these basins resulted from freshwater diversion openings, not from contamination by oil or other compounds.

¹⁷ LDWF 2011 Stock Assessment at ix [citations omitted].

¹⁸ GSMFC, *The Oyster Fishery of the Gulf of Mexico, United States: A Regional Management Plan*, (Mar. 1991) at 5-16.

¹⁹ Louisiana Oyster Mortality Study at 4.

²⁰ *Id.* at 2 [citations omitted].

²¹ *Id.* at 4.

B. Effects of the Diversions in 2010 Cannot Be Expected To Extend into 2013

LDWF suggests that the effects of increased freshwater include oyster mortality due to decreased salinity, low dissolved oxygen, and stratification of the water column; potentially increased prevalence of certain parasites including sponges; fouling of beds that inhibit settlement; and increased siltation on beds.²² Nearly all of these potential effects of increased freshwater flows in 2010 are connected to the temporary lower salinity regime created by the influx of freshwater. Low dissolved oxygen and stratification are phenomena that tend to follow low salinity events and eventually recede after salinity rises once the natural freshet ends or flow rates through managed diversions fall.

Commercial landings data further bolster the conclusion that any effects from the 2010 diversions were likely short lived. Commercial landings data from NOAA suggest that oysters are still commercially available in the northern Gulf in numbers near pre-Spill averages.²³ Similarly, preliminary data indicate that Louisiana oyster landings in both 2011 and 2012 were at or slightly below the long-term state average of 11.06 million pounds.²⁴ These landings levels are particularly significant in light of multiple environmental factors discussed below that have affected oysters since 2010.

IV. Subsequent Events Have Confounded Any Relationship between 2010 Diversions and Oyster Populations

Subsequent developments in many areas of the Gulf have had dramatic and negative effects that complicate, or even render impossible, any assessment of allegedly lingering effects from 2010. Portions of Louisiana and Mississippi experienced extreme flooding in 2011. Some of those areas in Louisiana affected by the 2011 floods were also affected by freshwater diversions in 2010.²⁵ In 2012, some areas of Louisiana experienced high inputs of freshwater and corresponding low salinity levels in spring and early summer.²⁶ Early indications appear to

²² See LDWF 2011 Stock Assessment at x, 1-3, and 1-6 to 1-7.

²³ <http://www.st.nmfs.noaa.gov/Assets/economics/documents/feus/2011/FEUS2011%20-%20Gulf%20of%20Mexico.pdf> (Landings of oysters in the Gulf of Mexico were 25.052 million pounds in 2004, 20.174 million pounds in 2005, 19.674 million pounds in 2006, 22.518 million pounds in 2007, 20.655 million pounds in 2008, 22.833 million pounds in 2009, 15.870 million pounds in 2010, and 18.386 million pounds in 2011.) Recently released preliminary data from 2012 report commercial landings of 20.479 million pounds. Data available at <http://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index>.

²⁴ http://www.wlf.louisiana.gov/sites/default/files/lotf_minutes_3.19.13.pdf.

²⁵ Indeed, Louisiana's 2011 stock assessment report noted that in the Breton Sound area in Louisiana east of the Mississippi River, the 2011 flooding represented the "fourth consecutive year of abnormally high spring inputs or late season increases in Mississippi River discharge." LDWF 2011 Stock Assessment at 2-7.

be that salinity was depressed in 2013 in some of the same areas as well, particularly in Louisiana east of the Mississippi River.²⁷

A. 2011 Flooding and Tropical Storm Lee

Beginning in March 2011, the Mississippi River basin experienced flooding of historic proportions. In 2011 “[r]iver stages and flow rates broke records up and down the river during what was the largest flood in recorded history on the Mississippi River.”²⁸ The Pearl River system also “input a relatively large volume of fresh water into western Mississippi Sound in March 2011.”²⁹ In response to the spring flooding, the U.S. Army Corps of Engineers (ACOE) opened two major diversion structures. The Morganza Spillway opening flooded approximately 4,600 square miles of rural Louisiana.³⁰ Between May 9 and June 21, 2001, the Bonnet Carre Spillway pushed substantial amounts of freshwater into Lake Pontchartrain; maximum discharge rates were 316,000 cfs.³¹

During the 2011 flooding, additional freshwater also flowed into Breton Sound through open areas of the Bohemia Spillway north of Port Sulfur. The 2011 flooding created a “complete breach of the river” at an area that is now known as Mardi Gras Pass.³² Mardi Gras pass is still open and allows freshwater to flow into Breton Sound.³³ If not altered by proposed construction activities, it is predicted to continue to enlarge.³⁴

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²⁶ “Low salinity conditions occurred again in parts of the Louisiana coastline during critical reproductive time periods in the spring of 2012. Coastal Study Areas 1 North, 1 South, and 6 each experienced low salinities (< 7 parts per thousand) over large expanses of oyster habitat.” LDWF 2012 Stock Assessment at vi. Coastal Study Areas 1 North and 1 South include areas east of the Mississippi River.

²⁷ Supporting data from the U.S. Geological Survey available upon request.

²⁸ ACOE, *Room for the River*, (2012) at 7-8

http://www.mvd.usace.army.mil/Portals/52/docs/regional_flood_risk_management/RoomForTheRiver_lowres.pdf.

²⁹ LDWF 2011 Stock Assessment at 1-4.

³⁰ <http://www.nws.noaa.gov/hic/summaries/WY2011.pdf>.

³¹ LDWF 2011 Stock Assessment at 1-3.

³² <http://www.mississippiriverdelta.org/blog/2012/03/21/mardi-gras-pass-a-new-diversion-on-the-mississippi-river-springs-to-life/>.

³³ The flow of water at Mardi Gras Pass was not measured, but it has apparently been documented to be 2,400 cfs with estimates of up to 5,000 cfs. See <http://www.saveourlake.org/PDF-documents/our-coast/Mardi%20Gras%20Pass/LPBF%20summary%20Mardi%20Gras%20Pass%201-18-2013.pdf>.

³⁴ *Id.*

According to NOAA, total direct damages from the spring 2011 Mississippi River floods were estimated at \$3.4 billion.³⁵ A draft LDWF report predicted major impacts to the oyster industry from the historic 2011 flooding – nearly \$500 million over three years.³⁶ According to the ACOE report on the 2011 flooding, the State of Louisiana did not give ACOE a formal estimate of damage to oyster resources.³⁷ ACOE estimates that the effect on oyster resources from the operation of the spillways alone (apart from any flooding from the Mississippi River) was approximately \$80 million.³⁸

In addition to the historic 2011 spring flooding, Louisiana and other portions of the Gulf Coast were hit by Tropical Storm Lee on September 1 and September 2. The storm produced 10 to 15 inches of rain over Louisiana, Alabama, and Mississippi, resulting in significant additional freshwater input.³⁹

As noted in Section III.A above, low salinity can cause widespread mortality and inhibit successful reproduction and spat settlement, particularly when combined with high temperatures. Given the frequent freshwater events in recent years in several areas of Louisiana, trends in oyster resources there can likely be explained by focusing on salinity regimes during critical spring, summer, and early fall spawning periods.

B. Subsequent Events In Other States

Like Louisiana, other states in the northern Gulf have also seen harvests and populations fluctuate since the Spill due to factors unrelated to any alleged contamination from the Deepwater Horizon accident.

- On September 6, 2012, Governor Rick Scott of Florida requested a federal declaration of a fisheries failure for the Florida oyster fisheries in the Gulf of

³⁵ <http://www.nws.noaa.gov/hic/summaries/WY2011.pdf>. This estimate of direct damages includes damage to private property, structural damage, and lost agriculture, but does not include economic losses. *Id.*

³⁶ LDWF, *2011 Mississippi River Flood Impacts*, (Draft dated July 2011). The draft report also notes that “[o]yster reefs may have also been negatively impacted by fouling organisms and sediment following the introduction of large volumes of freshwater.”

³⁷ ACOE, *Mississippi River and Tributaries System, 2011 Post-Flood Report*, at V-22, available at [http://www.mvd.usace.army.mil/Portals/52/docs/regional_flood_risk_management/Docs/MRT_PostFloodReport_\(Main%20Report\).pdf](http://www.mvd.usace.army.mil/Portals/52/docs/regional_flood_risk_management/Docs/MRT_PostFloodReport_(Main%20Report).pdf) (hereinafter “ACOE 2011 Flood Report”) (“Information was requested about the impacts to Louisiana oysters, but the Louisiana state resource agencies declined to comment on their situation.”).

³⁸ *Id.*

³⁹ <http://www.nws.noaa.gov/hic/summaries/WY2011.pdf>.

Mexico, particularly in Apalachicola Bay.⁴⁰ Governor Scott's request attributed the causes of low harvest of oysters in Florida primarily to low levels of freshwater from drought, and from overharvesting of illegal oysters, not to effects of oil from the Deepwater Horizon accident.⁴¹

- On June 22, 2011, Governor Haley Barbour of Mississippi requested a fisheries disaster declaration for Mississippi. Governor Barbour's letter outlining the request emphasized the effects of increased input of freshwater into Mississippi Sound through the Bonnet Carre Spillway.⁴² On September 12, 2012, acting Secretary of Commerce Rebecca Blank determined that there was a commercial fisheries failure due to a fishery resource disaster for the oyster fishery in 2011 to 2013 and the blue crab fishery in 2011.⁴³ Neither Governor Barbour nor the Department of Commerce concluded that the Deepwater Horizon accident caused the commercial fisheries failure for the Mississippi oyster fishery or the Mississippi blue crab fishery.
- On March 26, 2012, Governor Rick Perry of Texas requested a federal disaster declaration for the Texas oyster fishery. Governor Perry's request cited severe drought and a closure of the oyster fishery due to a red tide bloom as causes of revenue and landings reductions in the Texas oyster fishery.⁴⁴ Neither Governor Perry's request, nor the federal response, attributed problems in the Texas oyster industry to effects from the Deepwater Horizon accident.⁴⁵

V. Conclusion

A connection between the current status of oyster populations in the Gulf of Mexico and the 2010 Deepwater Horizon accident is non-existent. Virtually all available evidence indicates that oysters in 2010 were not oiled. Available evidence suggests that the conditions of oyster

⁴⁰ Letter from Gov. Rick Scott (FL) to Rebecca Blank, Acting Secretary, U.S. Dept. of Commerce (Sept. 6, 2010) (requesting a declaration of commercial fishery failure due to a fishery resource disaster for Florida's oyster harvesting areas in the Gulf of Mexico).

⁴¹ *See id.* See also Press Release, *Gov. Scott: Florida Will Take Historic Legal Action Against Georgia in Fight to Save Apalachicola*, (Aug. 13, 2013), available at <http://www.flgov.com/2013/08/13/gov-scott-florida-will-take-historic-legal-action-against-georgia-in-fight-to-save-apalachicola/> ("Historically low water levels brought about by Georgia's excessive consumption have caused oysters to die because of higher salinity in the Bay and increased disease and predator intrusion.").

⁴² http://www.nmfs.noaa.gov/sfa/sf3/disasters/MS_Flood_2011/MS_Request.pdf.

⁴³ http://www.nmfs.noaa.gov/stories/2012/09/docs/blank_bryant_9_13_12.pdf.

⁴⁴ http://www.nmfs.noaa.gov/sfa/sf3/disasters/TX_RedTide/TX_Request.pdf.

⁴⁵ http://www.nmfs.noaa.gov/sfa/sf3/disasters/TX_RedTide/TX_Decision.pdf.

resources in 2010 were influenced by increased freshwater from diversion structures, not by oil. Most of the effects were likely either confined to injury resulting from the 2010 diversions, or confounded by subsequent, intervening events, including freshwater flooding and low salinity levels in 2011 and 2012. There are indications that freshwater inputs in 2013 also affected oyster populations in some areas.

Accordingly, given the extremely limited nature of any Spill-related effects on oysters, as well as subsequent intervening events, additional study of this resource is neither probative nor necessary for conducting a natural resource damages assessment under the Oil Pollution Act. Because the Trustees are unable to establish an underlying premise of the “likelihood of injury and the need for restoration,” 15 C.F.R. § 990.30, the proposed studies are not reasonable assessment activities, and the studies should not be funded.