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Deepwater Horizon Trustees
RE: December Monthly Report on Joint NRD Activities

Dear Trustees:

Find attached the December 2011 Deepwater Horizon monthly NRD cooperative report. This report is provided to identify pending actions, ensure timely agreement on matters of concern to the Trustees and BP, and provide for a month look ahead in field activity planning. Information presented here is accurate to the best of our knowledge, but this document may contain inadvertent errors.

As we begin our data compilation and reporting efforts, we note that many work plans are not fully executed, even though associated field activities are complete. Twenty-one work plans for which field work is complete have not been fully executed; 5 are in the NOAA and BP signature process; and 21 additional work plans are waiting for additional Trustee signatures.

Please provide an update as to timing as to when we can have fully executed plans, and let us know if you would like to discuss any of the comments or status of the ongoing cooperative NRD program. We also request that this Monthly Activity Report be placed into the Deepwater Horizon Administrative Record.

Regards,

Robin Bullock
Director, Natural Resources Damages and Environmental Science
BP Gulf Coast Restoration Organization

Deepwater Horizon Incident Monthly Report December 2011

Safety

- No key safety issues were raised during December, but as we continue in the winter, our field efforts will be impacted by rough seas and cold temperatures, so precautions will need to be taken to ensure safe operations.
- A grounding of a LDFW vessel occurred during collection of marine mammal and turtle prey species. There were no injuries and required reports were filed.

Key Decisions in December

- **Birds:** Cooperative QA of the Searcher Efficiency data set was conducted.
- **Deepwater Benthic Communities:** SPMDs deployed at the Pinnacles (Alabama Alps and Roughtongue Reef) and retrieved in October 2010 were shipped to CAS and will be analyzed under Trustee COC. BP agreed to pay the costs associated with the invoice, which includes a number of SPMDs that were lost at sea.
- **Deepwater Benthic Communities:** Per TWG discussions, the level of professional judgment to be included in PI study reports will be described in detail in each study plan.
- **Early Restoration:** BP and the Trustees announced eight proposed early restoration projects to the public, and the Trustees released the Deepwater Horizon Oil Spill Draft Phase I Early Restoration Plan and Environmental Assessment on December 15, 2011.
- **Fish (Oysters):** Spring 2011 Recruitment Sampling Plan Amendments 1 and 2 were signed. The 2011 Quadrat and Sediment Sampling Plan was also signed. Cooperative field work for these plans concluded December 2011
- **Fish (Oysters):** BP received the Trustees' proposed Oyster Intertidal plan on November 11, 2011; BP has declined to participate, but has requested the data.
- **Human Use:** The Aerial Imagery Cooperative Work Plan was fully executed on December 3, 2011.
- **Toxicity:** During SETAC, BP and Trustees met November 15. Discussions included the following:
 - BP and Trustees will generate updated tables with detailed information on toxicity testing plans and share them before tests on a monthly basis.
 - BP and NOAA will sharing their toxicity test results (in form of formal reports) in Q1 2012 on previously conducted toxicity studies.
 - Trustees agreed to provide lab certification information on treatment of vertebrate animals used in their program's toxicity studies.
 - NOAA agreed to provide BP a sample of weathered oil for analysis and evaluation of NOAA's weathering protocol.

Pending Decisions as of December 31, 2011

- **Birds:** Trustees to provide the datasets related to Trustee independent data collection efforts (2011 Colonial Waterbird Photographic Census, Piping Plover Study, and Breeding Shorebird Supplement).
- **Birds:** The Trustees asked BP to provide funding for them to hire a contractor to conduct Quality Assurance on the remaining bird data bases. BP is reviewing that request.
- **Deepwater Benthic Communities:** Trustees are requesting that BP reimburse for the costs of collecting tissue and sediment samples during the BOEMRE *Ron Brown* Lophelia II study in October 2010. M.E. Rolle of NOAA will provide information to BP on the costs that were incurred for data collection for consideration. Information has not yet been provided.

- **Emergency Restoration:** The Emergency Restoration Plan for Response Impacts to Seagrasses in Northern Gulf of Mexico is in the final stages of review and preparation for signature. BP is awaiting Trustee signature.
- **Fish:** The Oyster Transition Amendment 2 is in review.
- **Fish:** The NRDA Sargassum Sample Processing Plan was submitted to BP for review on November 1, 2011, and is currently in review.
- **Fish:** A revised draft of the Sargassum Injury Assessment Plan: Sargassum Mapping Using Remote Sensing was submitted to BP on November 14, 2011, and is currently in review.
- **Fish:** Trustees and BP to discuss scope and timing of blue crab studies in Mississippi.
- **Human Use:** BP and the Trustees agreed to extend the Human Use Aerial Imagery Cooperative Plan through March 31, 2012. BP and the Trustees are circulating the extension Addendum for signature.
- **Water Column/Plankton:** The Trustees provided a revised draft of the NRDA Plankton Processing Plan – Analysis of Zooplankton Samples on December 12, 2011 and BP/Cardno ENTRIX provided a revised version with data sharing language approved for signature on December 16, 2011. The Trustees responded with revisions on December 20, 2011, and the plan was in review as of December 31, 2011.
- **Water Column/Plankton:** The Trustees provided the initial draft of the Image Data Processing Plan: Holocam, DAVPR, VPRII on December 1, 2011. The plan is in review with BP/Cardno ENTRIX.
- **NOLA NRDA Office at the Unified Area Command:** BP NRDA's active presence in NOLA is no longer necessary as field activities stand down, so BP has asked the Trustees to secure work locations for their staff other than on the 17th floor at 1250 Poydras. Office space at 1250 Poydras will be available through February 2012. As of the end of December, the BP NRD team has demobed from NOLA and are housed in Houston.

Data Management as of December 31, 2011

- **Birds:** BP believes the exchange of cooperatively collected data is materially complete with the exception of information held by the Trustees related to the piping plover, 2011 breeding shorebird, 2011 Glen Ford Overflight, 2010 waterfowl flight, analyses of blood samples, and NPS osprey nesting data.
- **Deepwater Benthic Communities:** The Trustees provided the 2010 Tier 1 Deepwater Communities Study video and photo files as well as fish counts and a synopsis of the results from Leg 2 (mesophotic reefs) of that study. Historical fish count data from 1997-2005 has been committed, but has not yet been received by BP.
- **Deepwater Benthic Communities:** Meiofauna and macrofauna data from 68 softbottom sediment OSAT sampling locations were to be delivered by end of October. Only macrofauna from only 24 locations were delivered. Data for an additional 26 stations is ready and the remaining 18 stations will be ready shortly (pending lab QA finalization). Labs are behind schedule and a revised schedule has not been provided. BP requested interim data (e.g., monthly) as they become available. Cardno ENTRIX/BP provided a proposal for prioritizing the outstanding macro/meiofauna samples and spreading the samples among additional laboratories to expedite sample processing time. Interlab calibration is underway.
- **Deepwater Benthic Communities:** BP/Cardno ENTRIX provided a strawman to the Deepwater Benthic Communities, Water Column and Chemistry/Data Management TWG for beginning QA/validation discussions. The strawman includes QA/validation of infauna taxonomy. The Chemistry/Data Management TWG will set up a webinar to discuss the path forward.
- **Deepwater Benthic Communities:** BP and the Trustees will prepare a joint request for video data from the West Florida Shelf mesophotic reefs from NOAA. BP will prepare a draft request and provide it to the Trustees for review and forwarding.

- **Human Use:** Exchange of aerial imagery data pursuant to the first Aerial Imagery Cooperative Plan is scheduled to be complete in January 2012.
- **Nearshore Sediment and Water:** BP/Cardno ENTRIX provided concurrence on a draft Data Entry and Validation Protocol submitted by Trustees for entering/authenticating observational data collected as part of the LDEQ Sediment and Water Baseline and Preassessment Studies. The Trustees then provided BP/Cardno ENTRIX with a spreadsheet of tabularized observational data for verification. A review was conducted and results reported back to Trustees on December 13, 2011.
- **Marine Mammals & Turtles:** Data sharing and laboratory analysis language continued to be developed for incorporation into several work plans. DOI provided the 2011 Kemps nesting data in mid-November 2011. Several data entries were redacted and efforts are being made to understand what was redacted and why. Sargassum response data continues to be requested as well as UME data. Data from the dolphin live capture health assessments is being transmitted to BP periodically via NOAA/NRDA.
- **Shoreline:** All analytical data from fall 2011 marsh assessment surveys are still pending. Also pending is revised elevation data. LIDAR imagery and data was sent to BP at the end of December.
- **Water Column:** Trustees and BP will compare post-processing methods for CTD/fluorometry data with the intent of developing a common post-processing SOP and consensus QA/QC dataset for all cooperative and independent offshore water column studies.
- **Water Column/Plankton:** Data sharing and laboratory QA/QC language continued to be developed for incorporation in the NRDA Plankton Processing Plan – Analysis of Zooplankton Samples.

Trustee Council/BP Communications in December 2011

- **Early Restoration:** BP and the Trustees engaged in several teleconferences to further discuss the proposed early restoration projects and engage in negotiations in December. BP and the Trustees also continued to discuss the project details and draft the form and project stipulations.
- **Human use:** BP and the Trustees signed the Aerial Imagery Work Plan on December 3, 2011. BP and the Trustees engaged in further conversation to extend the work plan through March 31, 2012, and the addendum is currently being circulated for signature.
- **Marine Mammals and Turtles:** On December 23, 2011, NOAA presented a new proposed joint plan for photoidentification of coastal dolphins in Alabama. Trustees are expecting comments by early January 2012.
- **NOAA Request for Response:** Provided response to NOAA request concerning use of Mr. Grabe on December 12, 2011.
- **Forward Funding Requests:** Forward funding requests received; BP is evaluating.

Planned January 2012 Field Activities

- **Birds:** None planned.
- **Deepwater Benthic Communities:** None planned.
- **Fish (Oysters):** Both the 2011 Recruitment Plan and the 2011 Quadrat and Sediment Sampling Plan were completed in December 2011. At present, no cooperative data collection activities are planned for 2012.
- **Fish:** Collection of blue crab megalopae and adults – initiated October 12, 2011.
- **Human Use:** Cooperative Aerial Imagery will be implemented in January 2012 pursuant to the plan addendum.
- **Marine Mammals & Turtles:** Turtle and dolphin prey sampling began October 7, 2011, and is continuing intermittently due to weather conditions. Aerial surveys for distribution and abundance of oceanic marine mammals and turtles will resume in January 2012. Photo ID and

remote biopsy collection for dolphins will resume in January 2012. Discussions about appropriate data sharing provisions and development of plans for laboratory analyses are ongoing. Cardo ENTRIX has been participating in the field work.

- **Water Column:** None planned.

Joint Work Plans Signed in December 2011				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Human Use	Human Use Aerial Imagery Cooperative Work Plan	11/19/2011	12/3/2011	

Data Summary Reports Transmitted to Date (as of December 31, 2011)				
DSR Number	DSR Short Title	Transmittal Date	Comments	Outstanding Data Issues
DSR 134	Water Column Profiling to Measure Dissolved Phase	10/16/2011		
NA	AUV survey	10/13/2011		

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Aerial Imagery	Aerial Photography Overflights			Spring aerial imagery acquisition is complete. Fall aerial imagery acquisition is complete.
Aerial Imagery Work Plan	Original draft submitted as a comprehensive work plan intended to describe the scope of airborne and spaceborne imagery acquisition, mapping interpretation, and analysis.			Revised draft developed that provides only for mapping of feature primitives (e.g., land-water interface; habitat maps for marsh, SAV, flats, beaches) and basic change detection. Interpretation and analysis components of original draft have been tabled.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Birds	Quality Assurance/Quality Control			Draft work plan provided by Trustees on 11/18/2011. BP is reviewing.
Deepwater Benthic Communities	Deepwater Coral SPMD Deployment Plan	Pending	7/9/2010	Awaiting Trustee signature based on BP comments and signature page provided to Trustees on 7/9/2010. Field work is complete.
Deepwater Benthic Communities	Deepwater Corals ROV Hardground Survey			BP to provide detailed description of PI report contents. Field work is complete.
Deepwater Benthic Communities	HOS Sweetwater 4 and 6 – ROV Sediment and Water Sampling Plan - Addendum			BP provided comments on the addendum for revised sampling dates and sheen on 12/15/11. Field work is complete.
Deepwater Benthic Communities	Mesophotic Reef Study			BP provided comments to the Trustees on 10/14/2011. Field work is complete.
Deepwater Benthic Communities	Red Crab Study			BP commented on initial draft scope of work on 7/11/2011. BP received draft study plan from Trustees on 7/26/2011; the cruise departed 7/27/2011 and is complete. BP provided operations-targeted comments on 7/27/2011; more detailed comments in preparation.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Deepwater Benthic Communities – Analysis Plan	ROV Megafauna/Megaplankton Consolidated Analysis Plan			Trustees provided preliminary comments on this plan on 12/15/11. BP to revise the study plan based on the feedback.
Deepwater Benthic Communities	Red Crab Data and Sample Analysis Plan			BP requested a cooperative analysis plan on 7/27/2011.
Deepwater Benthic Communities	SPI Survey Addendum #1			BP sent the Trustees on 10/25/2011 a no-cost addendum that addresses the removal of the water column data collection and adds one day to the study. Field work is complete.
Deepwater Benthic Communities	SPI Survey Addendum #2			Trustees received draft on 10/25/2011. Second round of comments completed and sent to the Trustees on 11/29/2011. Plan should be ready for signature process, pending Trustee agreement of last round of comments. Field work is complete.
Deepwater Benthic Communities /Water Column – Seeps	Natural Hydrocarbon Seep Study Plan			BP reviewing comments received from the Trustees on 11/1/2011. Field work is complete.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Deepwater Benthic Communities	Seeps Plan Microbial Water and Sediment Core Processing SOP Addendum			Trustees provided comments on the addendum on 12/16/11. BP requested a conference call with the relevant reviewers to resolve the remaining issues.
Deepwater Benthic Communities	Coral Aging Plan			BP comments sent to Trustees 10/24/2011.
Fish	Blue Crab Megalopae Study in Mississippi			Field effort has begun. Trustees are preparing draft plan for BP review.
Fish	Gulf Sturgeon - Year 2 NRDA Assessment - Fall 2011 & Spring 2012			BP provided second round of comments on 9/20/2011.
Fish	Transition Oyster Sampling Plan Amendment 2			BP received the draft plan for review and comment on 10/28/2011. Field work is complete.
Fish	Sargassum Injury Assessment: Sargassum Mapping Using Remote Sensing			BP received the draft plan on 11/14/2011.
Fish	NRDA Sargassum Sample Processing Plan			BP received the draft plan on 11/1/2011.
Marine Mammals & Turtles	Dry Tortuga MARU and HARP Recovery & Servicing Mission July 11-13, 2011			Field work is complete.
Marine Mammals & Turtles – Analysis Plan	2011 Addendum 2 - Budget Increase Assessment of Juvenile Sea Turtles in Sargassum Communities			Final addendum has not yet been made available for review.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Marine Mammals & Turtles	Addendum to Sargassum Turtle Plan for Organizing and Linking Sea Turtle Data Sets Gathered During Response and Assessment Efforts for the MC252 Deep Water Horizon Oil Spill			BP provided comments in late April 2011. This proposal appears to have been pulled from the cooperative process due to response data sharing issues.
Marine Mammals & Turtles	Post Release Monitoring and Tracking Loggerhead Turtles			Trustees revising draft plan as agreed by email on 10/21/2010. Field work is complete.
Marine Mammals & Turtles	Investigation of Marine Mammal Morbidity and Mortality through Active Surveillance for Strandings			BP received revised draft on 5/27/2011. Discussions over future scope of work and data exchange are ongoing.
Nearshore Benthic	Submerged Oil Plan 2011 – Addendum 1 - Sediment Sampling with Vibracorer			BP received this plan on 10/27/2011. The Trustees have not provided data results to support the justification or need for this plan.
SAV	Tier 2 Plan (PEMD Monitoring, Rapid Assessment, Submerged Oil Sentinel Monitoring, Pre-Assessment Low Altitude Aerial Photography of Seagrass Beds)			Final comments submitted to Trustees and resolved 12/7/11. Trustees commenced signature process on 12/8/11.
SAV	Tier 3 Plan			Trustees revising plan to address prior BP comments and to include Fall 2011 Signature Verification Addendum. Field work is complete.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
SAV – Emergency Restoration	MC 252/DWH Emergency Restoration Plan For Response Impacts to Seagrasses in Northern Gulf of Mexico			BP sent the draft final plan to the Trustees on 11/21/2011.
Shoreline	Work Plan for Impacts to Marsh Fiddler Crabs and Periwinkles along the Gulf of Mexico			Trustees proposed plan to BP on 9/16/2011. Cardno ENTRIX provided comments on 10/5/2011. Trustees submitted revised plan to BP on 11/15/2011. Field work is complete.
Shoreline	North Barataria Bay Addendum to the Monitoring Plan for Coastal Vegetation			BP responded to Trustee comments on 12/13/2011. Field work is complete.
Shoreline	Addendum for the States of Mississippi and Alabama to the Sampling and Monitoring Plan for the Assessment of MC252 Oil Impacts to Coastal Wetland Vegetation in the Gulf of Mexico			BP responded to Trustee comments on 9/13/2011. Trustees indicated at the Shoreline face-to-face meeting on 11/18/2011 that the plan was ready for signature. BP waiting for final plan. Field work is complete.
Water Column	December Cooperative Cruise- (NOAA/BP-CardnoENTRIX NRDA Cooperative Deep Tow Cruise 2/December 2010 Arctic-HOS Davis 5-Sarah Bordelon Cruise)	Original Signature Page 12/17/2010	Amended Signature Page 3/26/2011	Signature Page was revised after Trustee signed. BP requested Trustees re-sign in March 2011 so all signatures are on one sheet. Awaiting new Trustee signature.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Water Column	NRDA UV Radiation Sampling Plan - October 2010 Cruise Plan			In July 2011, it was determined that this plan, while agreed to, was never signed. On 7/12/2011, BP requested the Trustees to start the signature process. Field work complete.
Water Column - Plankton	Plankton Sampling Plan – Fall 2010 Shakedown Cruise 1 – Nick Skansi			Trustees reviewing revised plan provided 2/8/2011. Field work is complete.
Water Column - Plankton	Plankton Sampling Plan – Fall 2010 Shakedown Cruise 2 – Nick Skansi			Trustees reviewing revised plan provided on 2/8/2011. Field work is complete.
Water Column - Plankton	Plankton Sampling Plan – Fall 2010 Cruise 3 – Nick Skansi			Trustees reviewing revised plan provided 1/11/2011. Field work complete.
Water Column – Plankton	Plankton Sampling Plan – Fall 2010 Cruise 4 – Nick Skansi			Trustees reviewing revised plan provided 1/11/2011. Field work is complete.
Water Column - Plankton	Addendum - NRDA Spring 2011 1-meter MOCNESS Plankton Sampling Plan			BP agreed that this plan was ready for signature on 6/17/2011. Field work is complete.
Water Column - Plankton	Summer 2011 Plankton Imaging Cruise Plan ISIIS - McArthur II			BP agreed this plan was ready for signature on 6/16/2011. Field work is complete.
Water Column - Plankton	Summer 2011 1-meter MOCNESS Plankton Sampling Cruise Plan			BP agreed this plan was ready for signature on 7/12/2011. Field work is complete.

Joint Work Plans Under Revision/Awaiting Signature (December 2011)				
TWG	Plan	Signature Date		Comments
		NOAA/USFWS	BP	
Water Column - Plankton	Plankton Processing Plan – Analysis of Zooplankton Samples			Trustees and BP working through final data sharing language as of 12/31/2011.
Water Column - Plankton	Image Data Processing Plan: Holocam, DAVPR, VPRII			Trustees provided draft for review on 12/1/2011. Plan in review with BP/Cardno ENTRIX.

Joint Work Plans Awaiting Louisiana Signature (December 2011)			
TWG	Plan	Date NOAA/USFWS Submitted to Louisiana	Comments
Birds	Carcass Persistence Study	6/12/2011	Field work is complete.
Birds	Colonial Waterbird (CWB) Extension 2 (BRPE and GREG satellite telemetry)	7/29/2011	Satellite data collection in progress.
Birds	Osprey Rapid Assessment	11/1/2010	Awaiting DOI and LA signatures. Field work is complete.
Birds	Raptor – Osprey Rapid Assessment Addendum – Bird Study #9	4/27/2011	Field work is complete.
Birds	Using Radio Telemetry to Determine the Fates of Bird Carcasses Drifting in NGOM	7/15/2011	Field work is complete.
Corals	Shallow-water Coral Tier 1 Plan Addendum	5/17/2011	Field work is complete.
Deepwater Benthic Communities	HOS Sweetwater ROV Sediment Sampling Study	3/23/2011	Field work is complete.
Deepwater Benthic Communities	HOS Sweetwater ROV Sediment and Bottom-Water Sampling Cruise Plan July-September 2011	11/10/2011	Field work is complete.
Deepwater Benthic Communities	Sediment Profile Imaging (SPI) Study Plan	4/6/2011	Field work is complete.
Fish	2011 Oyster Quadrat and Sediment Sampling	10/14/2011	Field work is complete.
Fish	Assessment Plan for Sargassum Communities and Associated Fauna in the Northern GoM: Addendum	10/29/2011	Field work is complete.
Marine Mammals & Turtles	Addendum February 2011 ADCP Maintenance and HARP Recovery Plan	3/18/2011	Field work is complete.
Marine Mammals & Turtles	Genetic Analysis of Stock Structure, Species Identification and Sex Determination for Marine Mammal Biopsies and Strandings	7/29/2011	Laboratory analyses delayed due to federal contracting issues.

Joint Work Plans Awaiting Louisiana Signature (December 2011)

TWG	Plan	Date NOAA/USFWS Submitted to Louisiana	Comments
Marine Mammals & Turtles	Kemp's Ridley Nesting Study Addendum	10/18/2011	Field work is complete.
Marine Mammals & Turtles	Northern Gulf of Mexico MARU Recovery Mission Plan November, 2011	11/9/2011	Field work is complete.
Marine Mammals & Turtles	Spatial Distribution (Aerial) Marine Mammal and Turtles 2011	1/30/2011	Aerial surveys in progress.
Shoreline	Deepwater Horizon, Mississippi Canyon 252 Spill Light Detection and Ranging (LIDAR) Data Acquisition	11/21/2011	Field work is complete.
Water Column	HOS Davis Cruise 3 Addendum	12/4/2010	Field work is complete.
Water Column - Plankton	Late-Summer 2011 McArthur II Small Pelagics Sampling Plan	10/14/2011	Field work is complete.
Water Column - Plankton	NRDA 1-meter MOCNESS Spring 2011 Plankton Sampling Plan	7/19/2011	Field work is complete.
Water Column - Plankton	Offshore Deep Meso- and Bathypelagic Fish Sampling Plan September 2011	9/23/2011	Field work is complete.