Proposed Data Collection Plan to Assess Injury to Louisiana and Mississippi Estuarine Dolphin Stocks: Third Addendum

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Approval of this work plan is for the purposes of obtaining data for the Natural Resource Damage Assessment. Each party reserves its right to produce its own independent interpretation and analysis of any data collected pursuant to this work plan.

The trustees have developed a preliminary conceptual model of the DWH release, potential pathways and routes of exposure, and potential receptors. This preliminary model has informed the trustees' decision to pursue the studies outlined in the work plan. By signing this work plan and agreeing to fund the work outlined, BP is not endorsing the model articulated in the work plan.

This plan will be implemented consistent with existing trustee regulations and policies. All applicable state and federal permits must be obtained prior to conducting work.

Jessica White — 8/1/2011

Department of Commerce Trustee Representative — Date

8/11/11

Louisiana Trustee Representative — Date

8/2/2011

BP Representative — Date

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Original Plan Signed by NOAA and Louisiana: May 22, 2010
Addendum Signed: June 9, 2010
Second Addendum: November 1, 2010

Original survey plan: Conduct biopsy sampling and photo-identification (photo-ID) of bottlenose dolphins at 3 sites in the northern Gulf of Mexico: Barataria Bay (photo-ID and biopsy), Chandeleur Sound (biopsy only), and Mississippi Sound (photo-ID and biopsy). Additional photo-ID and biopsy surveys also conducted in St. Joseph Bay, Florida by Chicago Zoological Society.

Survey plan revision: Extend surveys in Barataria Bay, Mississippi Sound and Chandeleur Sound for 4 additional seasons over a 12 month period (Table 1).

Rationale: Oil from MC252 has been documented in Barataria Bay, Chandeleur Sound and Mississippi Sound. Each of these areas is inhabited by bottlenose dolphins, and dolphin surveys of each area were conducted from May 2010 through June 2011. These early surveys documented the presence of individual animals through photo-ID and genetics. Follow-up surveys should help to assess potential changes in seasonal abundance, to estimate dolphin survival rates, to increase sample sizes for genetic stock assessments, and to collect longitudinal tissue samples for a total of two years after the spill began. Additionally, sampling through the spring of 2012 will include a second peak calving season.

Sample Analyses: Analyses for genetic samples is described in the Genetics Analysis Plan, which will be amended to cover the additional samples taken under this Addendum. Analysis of tissue samples will be described in a future dolphin analytical plan. BP and the Trustees agree to work together in good faith to cooperatively develop this addendum. However, if BP and the Trustees are unable to reach consensus on any individual element(s) of the analytical addendum, the Trustees reserve the right to proceed independently on those elements on which no agreement was reached. The Trustees will provide a draft of the cooperative analytical addendum to BP by September 15, 2011.

Modified survey plan: A total of seven follow-up photo-ID surveys will be conducted in two of the three sites where oil exposure of bottlenose dolphin stocks was documented under the original survey plan activities. Four seasonal photo-ID surveys will be conducted in Mississippi Sound (Summer 2011 through Spring 2012) (Seasons are defined as Summer – June, July, August; Fall – September, October, November; Winter – December, January, February; Spring - March, April, May). Three seasonal photo-ID surveys will be conducted in Barataria Bay (Fall 2011 through Spring 2012). A Summer 2011 photo-ID survey will not occur in Barataria Bay under this Plan because a similar survey was conducted under the November Addendum. No photo-ID surveys will be conducted in Chandeleur Sound since conditions in this area were found to be unsafe for this type of activity under the original survey plan activities.

The photo-ID surveys will be similar to previous surveys except that the survey windows are extended to 14 days per site per season. These days are added to increase the probability of encountering good weather conditions and meeting the sampling goals of each seasonal survey. To account for poor weather, survey windows include roughly 2 days for each full survey day required (i.e., 7-8 survey days are required to complete a seasonal survey). Each seasonal photo-ID survey will be conducted by 2 boats, each staffed with 3 scientists. The goal is to complete 3 replicate surveys each season per site.

A total of five follow-up biopsy surveys will be conducted to obtain adequate seasonal sample sizes for genetic stock structure analysis. Biopsy surveys will be conducted across all three of the sites where oil exposure of bottlenose dolphin stocks was documented under the original survey plan activities. Two seasonal biopsy sampling surveys will be conducted in Chandeleur Sound and Mississippi Sound (Summer 2011 & Winter 2011/12). One seasonal biopsy survey will be conducted in Barataria Bay (Winter 2011/12). (Biopsy samples will be collected from about 30 dolphins captured and released in Barataria Bay in Summer 2011 as part of the Dolphin Health Assessment Plan). Each seasonal biopsy survey will be conducted during a 20-day window using 1 boat staffed with 4 scientists. The goal is to obtain 30-35 biopsy samples per season per site. Again, the survey window includes roughly 2 days for each full survey day required (i.e., assumes an average of 3 samples/day during 10 survey days).

Data Handling and Sharing:

A. *Data Handling*

MC 252 NRDA chain-of-custody procedures will be observed for all NRDA samples. All samples will be transferred with appropriate chain-of-custody forms. Camera memory cards (and accompanying GPS track data files) will be handled under Chain-of-Custody after a card is full or after the study is completed pursuant to the **NRDA Field Sampler Data Management Protocol,** 10-22-2010, which includes the protocol for transferring and uploading digital photos.

All field and laboratory data will be collected, managed and stored in accordance with any written SOPs developed for this project.

All materials associated with the collection or analysis of samples under these protocols or pursuant to any approved work plan, except those consumed as a consequence of the applicable sampling or analytical process, must be retained unless and until approval is given for their disposal in accordance with the retention requirements set forth in paragraph 14 of Pretrial Order # 1 (issued August 10, 2010) and any other applicable Court Orders governing tangible items that are or may be issued in MDL No. 2179 IN RE: Oil Spill by the Oil Rig "DEEPWATER HORIZON" (E.D. LA 2010). Such approval to dispose must be given in writing and by a person authorized to direct such action on behalf of the state or federal agency whose employees or contractors are in possession or control of such materials.

B. *Data Sharing*

Copies of all non-analytical data collected in accordance with this plan, (including raw data, field sheets, and field notes, photos, photo logger forms and GPS files), will be transferred to the NOAA NRDA Sample Intake Team following NRDA data management protocols. An identical copy of all documentation will be provided *as requested* to BP/Cardno-ENTRIX and the Louisiana Oil Spill Coordinator's Office (LOSCO) within a reasonable timeframe once data intake, QA analyses and data entry procedures are complete, but no later than 45 days after the data are collected. In the event that this Addendum is not signed when field data are collected, non-analytical data shall be shared not later than 45 days after the Addendum is signed. All *tissue* samples collected pursuant to this Addendum will be submitted to laboratories that are operated in a manner that is consistent with the guidelines of the Analytical Quality Assurance Plan for the Mississippi Canyon (Deepwater Horizon) Natural Resource Damage Assessment (version 2.2).

Field teams will complete data sheets each day. Each team member will sign the data sheet indicating agreement on the content of the data sheet. The Trustee representative will retain custody of all completed data sheets until they are transferred to the data intake team, which will meet the field crew at the NOAA lab in Pascagoula, Mississippi after the completion of each survey window. BP/CardnoENTRIX representatives, if present, may obtain a copy of all data sheets and photographs once data intake has been completed. In addition, the data will also be added to NOAANRDA.org within 72 hours of completion of data intake. Photomatching will be performed using the Finbase database. The finbase database (with the photo catalog used for the analysis), including the matches to date will be provided to BP under the following schedule:

- NRDA Data collected during 2010 (under main plan): October 1, 2011
- NRDA Data collected from March and April 2011 (main plan and addendum): January 30, 2012
- NRDA Data collected from May 2011 and June 2011: March 31, 2012

This Plan does not include any laboratory analysis. The following provision will apply to any laboratory data obtained pursuant to a cooperative addendum developed as described above in the *Sample Analysis* section.

Each laboratory shall simultaneously deliver raw data collected pursuant to a cooperative plan, including all necessary metadata, generated as part of this work plan as a Laboratory Analytical Data Package (LADP) to the trustee Data Management Team (DMT), the Louisiana Oil Spill Coordinator's Office (LOSCO) on behalf of the State of Louisiana and to BP (or ENTRIX on behalf of BP). The electronic data deliverable (EDD) spreadsheet with pre-validated analytical results, which is a component of the complete LADP, will also be delivered to the secure FTP drop box maintained by the trustees' Data Management Team (DMT). Any preliminary data distributed to the DMT shall also be distributed to LOSCO and to BP (or ENTRIX on behalf of BP). Thereafter, the DMT will validate and perform quality assurance/quality control (QA/QC) procedures on the LADP consistent with the authorized Analytical Quality Assurance Plan, after which time the validated/QA/QC'd data shall be made available simultaneously to all trustees and BP (or ENTRIX on behalf of BP). Any questions raised on the validated/QA/QC results shall be handled per the

procedures in the Analytical Quality Assurance Plan and the issue and results shall be distributed to all parties. In the interest of maintaining one consistent data set for use by all parties, only the validated/QA/QC'd data set released by the DMT shall be considered the consensus data set. In order to ensure reliability of the consensus data and full review by the parties, no party shall publish consensus data until 7 days after such data has been made available to the parties. Also, the LADP shall not be released by the DMT, LOSCO, BP or ENTRIX prior to validation/QA/QC absent a showing of critical operational need. Should any party show a critical operational need for data prior to validation/QA/QC, any released data will be clearly marked "preliminary/unvalidated" and will be made available equally to all trustees and to BP (or ENTRIX on behalf of BP).

Estimated Costs: $995,200 (Table 2). The Amendment budget covers the costs of managing the project, processing data (e.g., photos) and analysis of photo-ID data (e.g., managing and matching). The analysis costs of biopsy samples are not included.

The Parties acknowledge that this budget is an estimate, and that actual costs may prove to be higher. BP's commitment to fund the costs of this work includes any additional reasonable costs within the scope of this approved work plan that may arise. The trustees will make a good faith effort to notify BP in advance of any such increased costs.

Durable Equipment - All durable equipment (such as cameras, GPS, etc.) purchased by BP for this study will be returned to BP or its designated representatives at the conclusion of use for this study, unless otherwise agreed.

Some equipment needed for this study may be in BP's existing inventory. BP-owned equipment will be used if available and when appropriate to the needs of the proposed work.

Table 1. NRDA 2011-2012 Bottlenose Dolphin Sampling Schedule
(Summer – Jun, Jul, Aug; Fall – Sep, Oct, Nov; Winter – Dec, Jan, Feb; Spring – Mar, Apr, May) .

Season/Site	Summer 2011	Fall 2011	Winter 2011	Spring 2012
		Photo-ID		
Mississippi Sound (days)	14	14	14	14
Barataria Bay (days)	-	14	14	14
Chandeleur Sound (days)	-	-	-	-
		Biopsy		
Mississippi Sound (days)	20		20	
Barataria Bay (days)	-		20	
Chandeleur Sound (days)	20		20	

Table 2. Cost Estimate.

OBJECT CLASS	SPECIFICS ON BUDGET ESTIMATE	AMOUNT
Laboratory manager to oversee photo-processing, database management	1 full-time contractor for [redacted]	**$120,000**
Photo-Identification Analyses	1 full-time contractor for [redacted]	**$110,000**
Remote Biopsy Fieldwork		
Labor	[redacted] person team for remote biopsy collection - [redacted] @ [redacted]	$200,000
Travel	[redacted] people, @ [redacted]	$80,000
Supplies	Sample vials, liquid N2 shipper, biopsy supplies	$10,000
Equipment	Vessel maintenance (1 vessel)	$6,000
Other	Fuel costs (~$400 daily) (1 vessel)	$20,000
Total Biopsy		**$316,000**
Photo-Identification Fieldwork		
Labor	[redacted] person team for photo-ID surveys - [redacted] @ [redacted]	$294,000
Travel	[redacted] people, [redacted]	$117,600
Supplies	Batteries, SD cards, cameras, lenses	$8,000
Equipment	Vessel maintenance (2 vessels)	$10,000
Other	Fuel costs (~$400 daily) (2 vessels)	$19,600
Total Photo-Identification		**$449,200**
Project Total		**$995,200**