

MS Canyon 252 Incident

Work Plan for Obtaining Near Shore Spatial Extent of On-Water Oil Samples

This plan outlines the steps that will be employed to collect on-water oil samples to document the presence of oil from the incident in *near shore areas*. Sampling personnel will consist of Trustee personnel and/or contractors and, as requested, RP personnel and/or contractors.

OBJECTIVE

The objective of this plan is to obtain initial samples of *on-water* oil believed to be from the MS Canyon 252 event for PAH characterization and PAH fingerprinting. Samples will be collected opportunistically from areas identified by the SCAT teams or other information sources as having appreciable oil accumulations on water in near shore areas. For the purposes of this plan, near shore areas are defined as waters less than half-mile away from shorelines. On-water oil samples will be collected from locations where sensitive resources or shorelines exist and appreciable quantities of oil pose a significant threat to natural resources and services (i.e., injuries potentially will occur). Fingerprinting results from this initial oil sampling effort will not be extrapolated beyond the immediate sampling location but may be used to validate fate and transport model inputs, particularly concentrations of selected PAHs at or near sampling locations generated by models.

The fate of discharged oil from the incident is dependent on many factors and the situation is changing daily. Therefore, a rigid set of criteria for identifying areas for sampling cannot be provided. However, it is estimated that the Trustees would need to collect less than 150 samples over the next several weeks for the purposes of this study. If the incident is ongoing for many weeks and months from the date this plan is signed, then the Trustees reserve the right to collect more samples from affected areas, as appropriate. At this time, the sampling will take place on the waters of Louisiana. As conditions warrant, sampling may increase to include other states.

MATERIALS LIST

Appropriate PPE

- Personnel Flotation Devices
- Modified Level D (Tinted safety glasses + steel toe shoes)
- Nitrile Gloves
- Sunscreen

- Insect Repellant

Sample Materials

- Sample containers as required
- Sample container labels and clear tape for affixing to containers
- Waterproof Sharpie pen
- Evidence tape
- Custody seals
- Ice chests with sufficient ice to keep samples at approximately 4 degrees Celsius for 10 to 12 hours. These ice chests shall contain bags for the ice to help reduce movement of samples during transit. They shall be staged at the Port, where source oil samples shall be repacked into ice chests after being transported to shore at ambient temperature
- Chain-of-Custody documents for each laboratory for each ice chest
- Dry cleaning cloth or towel
- Stand-by Fire Extinguisher(s)
- Handheld GPS device
 1. For each sampling location, record the following information on a field data sheet:
 2. Record GPS location information
 3. Note any difficulty in taking the sample
 4. Take an overview photo of the area and record the photo number.
 5. Note the approximate distance the sample is collected from the nearest shoreline

SAMPLE COLLECTION PROCEDURE

- 1) Properly trained sampling personnel will perform the sample collection. Trustee and/or RP representatives shall document the sampling, fill out the sample labels, log book, chain of custody forms, sample location and photo-document the sampling.
- 2) Appropriate PPE is to be donned during the sampling event.
- 3) Sample Containers: 4oz. straight side amber glass containers, pre-cleaned and certified with certificate of analysis and bar coded with Teflon lids required.
- 4) Procedures for taking samples from the surface of the water will vary with the sheen size and thickness, on-scene weather and sea state, the type of petroleum product, and all necessary safety precautions.

- 5) Collect the on-water oil by lowering the sample jar into the water and skim the oil layer or globules from the water surface into the sample jar. Continue the process until the sample container is approximately full, making an effort to limit head space. Decant if necessary, repeat until oil collection is complete. If the RP requests, split or duplicate samples will be collected.
- 6) Place the lid firmly and securely on each jar. Wipe any excess oil and water from outside of sample jar using dry cloth or towel. Properly dispose of dry cloth or towels.
- 7) Collect GPS (latitude and longitude) information for each sample.
- 8) Wrap Teflon tape tightly around edge and top of lid to seal the lid onto the jar. Place a custody seal on each bottle. Completely fill out with a Sharpie the sample labels. Samples should be labeled following standard NOAA sampling conventions (i.e., LAAP33-A0523-09901; first six characters are location code, second five characters are date code (where A=2010), "0" is for matrix (oil), 99 is sampling team, 01, 02, 03 is sample number. Place sample jars into original packing boxes.
- 9) Wrap each sample jar in bubble wrap to minimize the chance for breakage and place in coolers on ice to reduce the temperature to 4 degrees C.
- 10) Document sampling date(s), times(s), conditions, volumes, quantities, etc. on Chain of Custody forms. Transfer samples (on ice) to the Houma, LA Command Center for shipment to lab under the supervision of appropriate Trustees and following NRDA sample shipping instructions.
- 11) Unless instructed otherwise, Alpha Laboratories will be the receiving laboratory for analytical samples. If RP representatives collect split or duplicate samples, samples will be shipped under separate chain-of-custody to a lab of their choice and the RP will inform the Trustees of the selected lab. Distribution of all samples will be recorded in a central record in addition to the individual chain-of-custody records.

CHEMICAL ANALYSIS

Samples will be analyzed for PAHs (including the alkylated homologs)/fingerprinting or archived for future fingerprinting.

LOGISTICS

- 1) Sampling personnel will travel from Houma to the appropriate sampling vessel and will execute the sampling event, then return to Houma.
- 2) Sampling personnel will transfer the samples and documentation to the Houma Command Center.
- 3) Sampling personnel will prepare the final shipping packages and associated paperwork, and arrange shipping to the sample recipients.

BUDGET

The budget for sampling assumes a two-stage deployment. Costs are estimated exclusive of potential additional RP labor costs. First, a five-day term of ramp-up sampling (to allow for site orientation, verification of feasibility of sampling protocol, and training) will be conducted using three sampling personnel) using one vessel. The second stage of deployment will consist of two sampling personnel each on two boats. Ramp-up sampling for five days, including labor costs for three sampling personnel, one boat captain, vessel rental, and transport and shipment of collected samples is estimated at \$17,500. If additional ramp-up days are necessary, daily sampling costs are estimated at \$3,500. Stage two deployment costs, including labor costs for four sampling personnel, two boat captains, two vessel rentals, and transport and shipment of collected samples is estimated at \$5,200 per day.

HEALTH AND SAFETY

Sampling team will follow the NOAA Health and Safety Plan including for this incident. Sampling team will notify Houma NRDA office for location and safety status 3 times a day (beginning of day, middle of day, after return from field).

ANALYTICAL LABORATORY

All oil samples will be sent to Alpha Laboratories in Mansfield, MA.

DISTRIBUTION OF LABORATORY RESULTS

Each laboratory shall simultaneously deliver raw data, 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 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 ENTRIX. Thereafter, the DMT will validate and perform quality assurance/quality control (QA/QC) procedures on the LADP consistent with the authorized Quality Assurance Project Plan, after which time the validated/QA/QC'd data shall be made available to all trustees and ENTRIX. Any questions raised on the validated/QA/QC results shall be handled per the procedures in the Quality Assurance Project 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. 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 ENTRIX.

CONTACTS

NOAA: Laurie Sullivan, 707-320-7232

RP (ENTRIX): John Dimitry, 302-538-8349

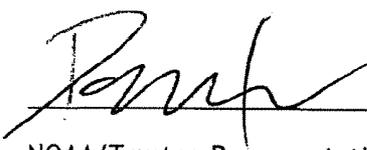
MC252 Incident:

Work Plan for Obtaining Spatial Extent of On-Water Oil Samples

Approval of this work plan is for the purposes of obtaining data for the Natural Resources Damage Assessment. Parties each reserve its right to produce its own independent interpretation and analysis of any data collected pursuant to this work plan.

APPROVED:

 _____ June 5, 2010
BP Representative: _____ Date

 _____ 6/5/10
NOAA/Trustee Representative: _____ Date

 _____ FOR KULAND
GUIDRY 8/16/2010
State Trustee Representative: _____ Date

6-18-10 draft

MS Canyon 252 Incident

Addendum to Work Plan for Obtaining Near Shore Spatial Extent of On-Water Oil Samples

This plan is being expanded to include collection of stranded oil and oil in vegetation or on other environmental media (in addition to the on-water sampling originally described) for the purpose of documenting the presence and current condition of oil believed to be from the MS Canyon 252 event on shorelines in different habitats in the Mississippi River delta region. Given the addition of samples collected on shore and the expansive shoreline, it is anticipated that the combined number of samples collected during this initial effort will increase to about 200. The number of samples collected will be commensurate with the extent of oiling and/or conditions at each site. Samples of potential interest include those that by appearance may not be from this incident. Samples collected by the Trustees will be analyzed to determine the general and specific character of the oil in accordance with the Analytical QAP and data will be delivered in accordance with the data sharing agreement in the original work plan. Professional judgment of the Trustee will be used to determine which samples will be analyzed and which will be archived for possible future analysis. Splits or separate samples collected by Entrix will be analyzed at the discretion of the RP in accordance with the Analytical QAP and data will also be delivered in accordance with the data sharing agreement in the original work plan.

The data and knowledge gained from the initial oil collection will be used to develop a sampling plan intended to document the temporal changes in the composition of the MS Canyon 252 oil in selected locations/habitats. In addition, oil sampling plans in shorelines beyond the Mississippi River delta area (in other states) may be implemented depending upon the degree(s) of oiling they may experience.

Revised Budget

The revised budget estimate for this work is as follows:

2-person trustee sampling team with boat and captain, per day: \$4,700

2 teams per day; total sampling-team-days through July 9, 2010 anticipated: 84

Total revised cost estimate (doesn't include analytical costs): \$394,800

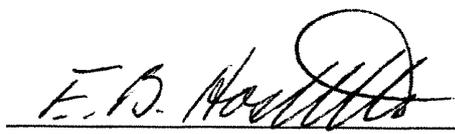
Approval of this addendum to the work plan is for the purposes of obtaining data for the Natural Resource Damage Assessment. Parties each reserve the right to produce their own independent interpretation and analysis of any data collected pursuant to this work plan.

MS Canyon 252 Incident
1st Addendum to Work Plan for Obtaining Near Shore Spatial Extent of On-Water Oil Samples
6-18-10 draft

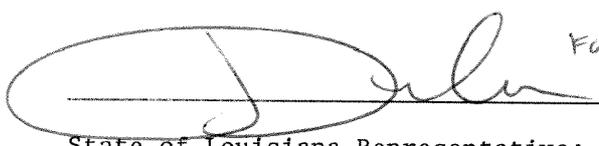
APPROVED:



BP Representative: July 4, 2010
Date



NOAA /Trustee Representative: 4 July 2010
Date



State of Louisiana Representative: 8/16/2010
Date

*FOR ROLOANS
GUIDAY*

MS Canyon 252 Incident

2nd Addendum to Work Plan for Obtaining Near Shore Spatial Extent of On-Water Oil Samples July 31, 2010

The first addendum to this plan expanded the original effort to include collection of stranded oil and oiled vegetation or other environmental media (in addition to the on-water sampling originally described) for the purpose of documenting the presence and current condition of oil believed to be from the MS Canyon 252 event on shorelines in different habitats in the Mississippi River delta region. The number of samples estimated in that addendum was 200 and the estimated cost was \$394,000. In practice approximately 300 samples have been collected in this effort to date by Trustee representatives and an unknown but smaller number of co-located samples have been collected by ENTRIX representatives.

This second addendum expands the plan's geographical scope to include sampling of weathered oil believed to have been transported to areas beyond the Mississippi River delta region in Alabama and Florida. It is anticipated that weathered oil sampling in these areas farther afield from the spill site will involve a gradual modification in the split between boat-based versus on-land surveying, with the physical nature of the oiling being different (e.g. more tar ball strandings rather than oil in other forms). In Alabama it is anticipated that four crews will spend 7 days surveying and collecting samples, with approximately a 50/50 split of walking and boat work. In Florida it is anticipated that four crews will spend 14 days surveying and collecting samples, with approximately an 85/15 split of walking and boat work. This would take the efforts as far east as the Apalachicola Peninsula on the Florida Panhandle. Given the dynamic conditions across the Gulf of Mexico, the spatial extent of the sampling area may be extended if SCAT assessment data or aerial surveys identify additional oiling. The total number of additional samples to be collected can only be roughly estimated given the uncertainties, but is anticipated to be approximately 200 samples.

Samples of potential interest include those that by appearance may not be from this incident. Samples collected by the Trustees will be analyzed to determine the general and specific character of the oil in accordance with the Analytical QAP and data will be delivered in accordance with the data sharing agreement in the original work plan. Professional judgment of the Trustee will be used to determine which samples will be analyzed and which will be archived for possible future analysis. Splits or separate samples collected by Entrix will be analyzed at the discretion of the RP in accordance with the Analytical QAP and data will also be delivered in accordance with the data sharing agreement in the original work plan.

Coincident with this NRDA oil sampling effort, the Incident Response is collecting and analyzing oil through the efforts of a Forensic Rapid Assessment Team (FRAT). It is anticipated that these data sets, collected for Response and NRDA purposes, may be compared and combined at some point in the future to provide more complete coverage and a more detailed assessment of the fate and transport of MS Canyon 252 oil. It is also anticipated that these oil collections, combined with surveying efforts of the NRDA shoreline teams, aerial imagery work

group, and other work groups, will provide more complete information for injury assessment purposes.

Additional Budget

The budget estimate for this additional work is as follows:

2-person trustee sampling team with boat and captain, per day: \$4,700

2-person trustee sampling team, walking, per day: \$1500

4 teams per day; total sampling-team-days from July 10 – August 31, 2010 anticipated: 84 (divided approximately 50/50 in Alabama and 85/15 in Florida between boat and walking surveys)

Total revised cost estimate (doesn't include analytical costs): \$196,400

Laboratory

Unless otherwise agreed upon by the Trustees and BP, all samples will be sent to TDI Brooks Lab.

Data Sharing

Each laboratory shall simultaneously deliver raw data, 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 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 ENTRIX. Thereafter, the DMT will validate and perform quality assurance/quality control (QA/QC) procedures on the LADP consistent with the authorized Quality Assurance Project Plan, after which time the validated/QA/QC'd data shall be made available to all trustees and ENTRIX. Any questions raised on the validated/QA/QC results shall be handled per the procedures in the Quality Assurance Project 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. 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 ENTRIX.

MS Canyon 252 Incident

2nd Addendum to Work Plan for Obtaining Near Shore Spatial Extent of On-Water Oil
Samples
July 31, 2010

Approval of this addendum to the work plan is for the purposes of obtaining data for the Natural Resource Damage Assessment. Parties each reserve the right to produce their own independent interpretation and analysis of any data collected pursuant to this work plan.

APPROVED:

Joyce Melny July 31, 2010
BP Representative: Date

Jennifer Bayce July 31, 2010
NOAA/Trustee Representative: Date

[Signature] FOR ROBERTA GUILP 8/10/10
State of Louisiana Representative: Date