

**MC252 Deepwater Horizon Oil Spill
Northern Gulf of Mexico HARP Servicing Cruise
September and December 2011 Mission Plan
August 25, 2011**

Originated as a requirement by:

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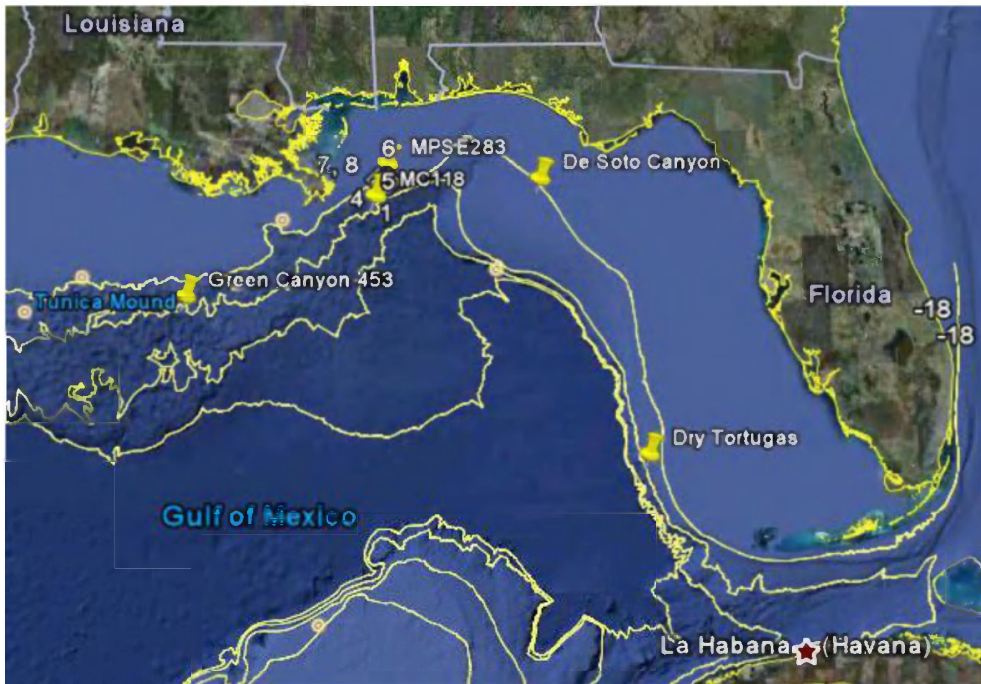
Amended plan by:

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Background and Scope of Work

The following describes the proposed field operations to support a bioacoustics monitoring program. The program is being conducted by the Whale Acoustics Laboratory, Scripps Institution of Oceanography. The following Mission Plan covers both the currently scheduled September and December HARPs servicing missions. In terms of operations and vessel requirements, both missions are identical.

To monitor marine mammals and study ambient ocean noise over long periods, the Scripps Institution of Oceanography, Whale Acoustics Laboratory has developed autonomous acoustic recording devices for marine environments. These devices are commonly referred to as HARPs (High-frequency Acoustic Recording Package). There are currently five HARPs associated with the MC252 Deepwater Horizon Oil Spill and deployed in the Gulf of Mexico (**see figure below**). The purpose of the September effort will be the recovery, refurbishment and redeployment of a recording package used for passive acoustic monitoring of marine mammals at the site north of the Dry Tortugas. An additional recovery effort is scheduled for December, 2011. Whether refurbishment and redeployment will occur during the December effort has not been determined.



HARP Recovery and Redeployment

Vessel Mobilization and Mission

The vessel being utilized for this project will be the M/V Wes Bordelon. Mobilization and demobilization will be in Houma, LA.

Vessel mobilization involves arrival of Scripps personnel and equipment. One to two technicians from the university will accompany the mission in order to provide direction and support for the HARP retrieval, servicing (including battery change), and redeployment. During the vessel mobilization phase of the operation, it is anticipated the CSA senior staff will communicate with Simultaneous Operations (SIMOPS) personnel to establish operational parameters and communications protocols required during the recovery and subsequent redeployment of the HARP units.

Recovery, refurbishment, and redeployment of the HARP at the Northern GOM sites

Phase I: Establish communications with and release the HARP

- 1) The vessel will be taken to a position about one kilometer from where the HARP was previously deployed.
- 2) A transducer will be lowered into the water and connected to an acoustic transceiver. The technician will establish communications with the acoustic release on the instrument and will acquire ranges to help locate the HARP precisely. At that time, the release command will be sent.
- 3) Once released, the rise time for the HARP will be about 20 minutes.

- 4) Visual observers will be posted to help locate the HARP when it reaches the surface.

Phase II: Recover the HARP

- 1) Once the instrument is on the surface and has been located, the vessel will be maneuvered to bring it alongside.
- 2) Boat hooks or a grappling hook will then be attached to the top floats in order to pull them to the large swim step on the stern of the Ultimate Getaway.
- 3) Two people will pull the floats on board and secure them on deck
- 4) Next, the hydrophone will be brought aboard, followed by the second set of floats.
- 5) The data logger pressure case (92lbs in air) will then be pulled aboard by two crew members and secured on deck.
- 6) The next section of the mooring contains a second set of floats, followed by the battery pressure case (117lbs in air). These will be brought aboard, carried to the main deck, and secured.
- 7) Finally, another set of floats and two ORE PORT acoustic release transponders (apx 50lbs in air) will be brought aboard.

Phase III: Redeployment

- 1) Once the instrument's batteries and hard drives have been exchanged and the refurbishment is complete, the mooring will be reassembled and laid out on the swim and main deck for deployment.
- 2) First, three 115lb ballast weight pieces will be carried to the swim step, joined together, shackled to the rest of the mooring, and secured.
- 3) The vessel will be maneuvered to a location approximately 500 meters from the drop site.
- 4) With the vessel making one to two knots of forward motion through the water, the top floats will be deployed by two crew members.
- 5) Each section of the mooring will then be lowered into the water by hand until all but the ballast weights trail slowly behind the boat.
- 6) When the vessel is over the drop site, the ballast weights will be pushed over the stern and the mooring will sink to the seafloor.

Estimated Costs

MARU and HARPS Recovery Mission Cost Table	Units	Unit Cost \$	Quantity	Total
Mobilization Costs	ea	\$20,000	2	\$40,000
Vessel - Dry Tortugas 6 days @ \$15,659 (two events)	ea	\$15,659	12	\$187,908
SCRIPPS	ea	\$10,000	2	\$20,000
			Total Estimated Cost	\$247,908

Approvals

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.

BP Approval:

Joyce Malley Joyce Malley 9/27/2011
Printed Name Signature Date

Federal Trustee Approval:

Jessica White Jessica White 9/15/2011
Printed Name Signature Date
For Lisa DiPinto

Louisiana Approval:

KAROLINA DEBUSSCHE [Signature] 10/25/2011
Printed Name Signature Date
FOR KOLAND GUIDA