UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Marine and Aviation Operations
Marine Operations Center
439 W. York Street
Norfolk, VA 23510-1114

MEMORANDUM FOR: Commander Peter Fischel, NOAA
Commanding Officer, NOAA Ship *Pisces*

FROM: Captain Anne K. Lynch, NOAA
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for PC-14-03
Mississippi Canyon 252 Oil Spill; NRDA Sampling Plan

Attached is the final Project Instruction for PC-14-03, Mississippi Canyon 252 Oil Spill; NRDA Sampling Plan, which is scheduled aboard NOAA Ship *Pisces* during the period of 22 August to 11 September 2014. Of the 21 DAS scheduled for this project, 21 days are Program Funded.

This project is estimated to exhibit a Medium Operational Tempo. Acknowledge receipt of these instructions via e-mail to **OpsMgr.MOA@noaa.gov** at Marine Operations Center-Atlantic.

Attachment
cc:
MOA1

Project Instructions

Date Submitted:	July 16, 2014
Platform:	NOAA Ship *Pisces*
Project Number:	PC-14-03
Project Title:	Mississippi Canyon 252 Oil Spill; NRDA Sampling Plan; Addendum to the Assessment of Impacts from the Deepwater Horizon Oil Spill on Red Crabs
Project Dates:	August 22 - September 11, 2014

Prepared by: Harriet Perry Dated: July 16, 2014
Harriet Perry (GCRL)
Field Party Chief
Gulf Coast Research Laboratory

Approved by: Robert W. Pickle Dated: July 18, 2004
NRDA/IEC Name
Title
Affiliation (Program or Lab)

Approved by: Anne K. Lynch Dated: 8/14/2014
CAPT Anne K. Lynch, NOAA
Commanding Officer
Marine Operations Center - Atlantic

I. Overview

A. Brief Summary and Project Period

The study is a cooperative effort to identify potential impacts from the Deepwater Horizon (DWH) oil spill on deepwater benthic red crab (*Chaceon quinquedens*) communities in support of the Natural Resource Damage Assessment (NRDA) injury-assessment process. Commercially available Fathom's Plus® traps will be fished 75m apart on 490m of anchored ground line buoyed at a two to one scope. Hepatopancreas and egg tissue samples will be removed from the red crabs for hydrocarbon, metals, and histological analyses. The project period will extend from August 22 to September 11, 2014.

B. Days at Sea (DAS)

Of the 21 DAS scheduled for this project, 0 DAS are funded by an OMAO allocation, 0 DAS are funded by a Line Office Allocation, 21 DAS are Program Funded, and 0 DAS are Other Agency funded. This project is estimated to exhibit a medium Operational Tempo.

C. Operating Area

North-central Gulf of Mexico and Gulf waters off southern Florida. Station locations are shown in Figure 1 and Table 1.

D. Summary of Objectives

1. Take bottom CTD casts at each station for temperature, salinity, dissolved oxygen
2. Deploy and retrieve trap lines at each station
3. Remove samples of hepatopancreas and eggs for chemical and histological analyses
4. Photo-document deployment/retrieval activities and laboratory procedures

E. Participating Institutions

Gulf Coast Research Laboratory (GCRL); Mississippi Department of Environmental Quality; NOAA, National Marine Fisheries Service, Northwest Fisheries Science Center, Seattle Laboratory

F. Personnel/Science Party: name, title, gender, affiliation, and nationality

Name (Last, First)	Title	Leg	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Anderson, Evan	Biologist		8-22-14	9-11-14	M	GCRL	American
Beaugez, Paul	Gear Specialist		8-22-14	9-11-14	M	GCRL	American

Crochet, Greg	Aquaculture Specialist		8-22-14	9-11-14	M	GCRL	American
Graham, Darcie	Biologist		8-22-14	9-11-14	F	GCRL	American
Hendon, Read	Biologist		8-22-14	9-11-14	M	GCRL	American
Howard, Pete	Biologist		8-22-14	9-11-14	M	MDEQ	American
Johnson, Don	Oceanographer		8-22-14	9-11-14	M	GCRL	American
Perry, Harriet	Biologist-FPC		8-22-14	9-11-14	F	GCRL	American
Sol, Sean	Biologist		8-22-14	9-11-14	M	NOAA/NMFS	American
Viskup, Barbara	Biologist		8-22-14	9-11-14	F	MDEQ	American
Willis, Mary J.	Biologist		8-22-14	9-11-14	F	NOAA/NMFS	American
Garcia, Ana	Procurer		8-22-14	9-11-14	F	Dade-Moeller	American
Bach, Nick	Data Manager		8-22-14	9-11-14	M	Dade-Moeller	American
Riekenberg, Jessica	Data Manager		8-22-14	9-11-14	F	Dade-Moeller	American

GCRL – Gulf Coast Research Laboratory
MDEQ – Mississippi Department of Environmental Quality
NOAA/NMFS - Northwest Fisheries Science Center, Seattle Laboratory

G. Administrative

1. Points of Contacts:
   Harriet Perry, 1108 Calhoun Street, Ocean Springs, MS; 228-806-1431; harriet.perry@usm.edu FPC
   Darcie Graham, 1617 Cook Street, Ocean Springs, MS; 228-233-6030; Darcie.graham@usm.edu Alternate FPC
2. Diplomatic Clearances
   None Required.

3. Licenses and Permits
   None Required.

II. Operations

The Field Party Chief (FPC) is responsible for ensuring the scientific staff are trained in planned operations and are knowledgeable of project objectives and priorities. The Commanding Officer (CO) is responsible for ensuring all operations conform to the ship's accepted practices and procedures.

A. Project Itinerary:
   Depart Pascagoula August 22, 2014
   Return Pascagoula September 11, 2014

B. Staging and Destaging: PASCAGOULA/PASCAGOULA

C. Operations to be conducted:

A bottom CTD cast will be made at each station. Trap lines (7 traps per line) will be set at each station, soak time will range from 18-24 hours. Thirty two stations will be sampled with the number of trap lines set ranging from 2 to 3 based on proximity of stations to each other. Red crabs will be dissected and tissues removed for chemical and histological analyses.

D. Dive Plan

All dives are to be conducted in accordance with the requirements and regulations of the NOAA Diving Program (http://www.ndc.noaa.gov/dr.html) and require the approval of the ship's CO.

Scientific dives are not planned for this project. If the ship must conduct dive ops while at sea the CO will confer with the FPC as to when the dive ops will occur so the dive will have the least impact on the scientific work.

E. Applicable Restrictions

Deployment and retrieval of traps and CTD casts are subject to weather conditions, equipment failure, and unforeseen circumstances.

III. Equipment

A. Equipment and Capabilities provided by the ship

CTD with sensors for temperature, salinity and dissolved oxygen; net reel for deployment and retrieval of traps, scale for weighing tissues, fume hoods for chemical storage; walk-in freezer for bait and samples; storage area for non-chemical supplies; refrigerator for samples; wet lab for processing crabs; deck area aft for de-contaminating traps

B. Equipment and Capabilities provided by the scientists

Traps, line and ground tackle; hi-flyers and buoys; refrigerated seawater systems; approximately 40 boxes of frozen bait will be brought onboard; all materials for dissection, preservation and storage of tissues.

IV. Hazardous Materials

A. Policy and Compliance

The FPC is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO procedure that supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and quantity,

MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and chemical safety and spill response procedures. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

Per OMAO procedure, the scientific party will include with their project instructions and provide to the CO of the respective ship 30 days before departure:

- List of chemicals by name with anticipated quantity
- List of spill response materials, including neutralizing agents, buffers, and absorbents
- Chemical safety and spill response procedures, such as excerpts of the program's Chemical Hygiene Plan or SOPs relevant for shipboard laboratories

Upon embarkation and prior to loading hazardous materials aboard the vessel, the scientific party will provide to the CO or their designee:

- An inventory list showing actual amount of hazardous material brought aboard
- An MSDS for each material
- Confirmation that neutralizing agents and spill equipment were brought aboard sufficient to contain and cleanup all of the hazardous material brought aboard by the program
- Confirmation that chemical safety and spill response procedures were brought aboard

Upon departure from the ship, scientific parties will provide the CO or their designee an inventory showing that all chemicals were removed from the vessel. The CO's designee will maintain a log to track scientific party hazardous materials. MSDS will be made available to the ship's complement, in compliance with Hazard Communication Laws.

Scientific parties are expected to manage and respond to spills of scientific hazardous materials. Overboard discharge of hazardous materials is not permitted aboard NOAA ships.

B. Inventory

Common Name of Material	**Qty**	**Notes**	**Trained Individual**	**Spill control**
Propanol	8 x 4L	Aliphatic alcohol	Barbara Viskup	A
Ethyl alcohol	8 x 4L	Alcohol	Barbara Viskup	A
Davidson's Fixative	6 x 1L	Mixture with formalin & alcohol	Barbara Viskup	B

C. Chemical safety and spill response procedures

1. Precaution – all personnel handling chemicals will wear the appropriate PPE. All personnel are trained in handling chemicals.

2. Prevention – all chemicals will be secured before the survey departs. All personnel will be aware of the location of all chemicals. A MSDS for all chemicals brought aboard will be given to the ship before sailing.

3. Response – if a spill occurs scientists will immediately leave the area and alert the bridge. Scientists will defer to the ship's spill plan for a cleanup. Kitty litter and formalin neutralizing agent will be on board for potential spill cleanups.

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

V. Additional Projects

A. Supplementary ("Piggyback") Projects

No Supplementary Projects are planned

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

VI. Disposition of Data and Reports

Disposition of data gathered aboard NOAA ships will conform to NAO 216-101 *Ocean Data Acquisitions* and NAO 212-15 *Management of Environmental Data and Information.* To guide the implementation of these NAOs, NOAA's Environmental Data Management Committee (EDMC) provides the *NOAA Data Documentation Procedural Directive* (data documentation) and *NOAA Data Management Planning Procedural Directive* (preparation of Data Management Plans). OMAO is developing procedures and allocating resources to manage OMAO data and Programs are encouraged to do the same for their Project data.

A. Data Classifications: *Under Development*

a. OMAO Data

b. Program Data

B. Responsibilities: *Under Development*

VII. Meetings, Vessel Familiarization, and Project Evaluations

A. Pre-Project Meeting: The FPC and CO will conduct a meeting of pertinent members of the scientific party and ship's crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all concerns. This meeting shall be conducted before the beginning of the project with sufficient time to allow for

preparation of the ship and project personnel. The ship's Operations Officer usually is delegated to assist the FPC in arranging this meeting.

B. Vessel Familiarization Meeting: The CO is responsible for ensuring scientific personnel are familiarized with applicable sections of the standing orders and vessel protocols, e.g., meals, watches, etiquette, drills, etc. A vessel familiarization meeting shall be conducted in the first 24 hours of the project's start and is normally presented by the ship's Operations Officer.

C. Post-Project Meeting: The CO is responsible for conducting a meeting no earlier than 24 hrs before or no later than 7 days after the completion of a project to discuss the overall success and short comings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, vessel coordinator, FPC, and members of the scientific party and is normally arranged by the Operations Officer and FPC.

D. Project Evaluation Report

Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Chief Scientist. The form is available at http://www.omao.noaa.gov/fleeteval.html and provides a "Submit" button at the end of the form. Submitted form data is deposited into a spreadsheet used by OMAO management to analyze the information. Though the complete form is not shared with the ships, specific concerns and praises are followed up on while not divulging the identity of the evaluator.

VIII. Miscellaneous

A. Meals and Berthing

The ship will provide meals for the scientists listed above. Meals will be served 3 times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the project.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the FPC. The FPC and CO will work together on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The FPC is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The FPC is also responsible for the cleanliness of

the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The FPC will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the FPC to ensure that the entire scientific party has a mechanism in place to provide lodging and food and to be reimbursed for these costs in the event that the ship becomes uninhabitable and/or the galley is closed during any part of the scheduled project.

All persons boarding NOAA vessels give implied consent to comply with all safety and security policies and regulations which are administered by the CO. All spaces and equipment on the vessel are subject to inspection or search at any time. All personnel must comply with OMAO's Drug and Alcohol Policy dated May 17, 2000 which forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, NF 57-10-01 (3-14)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Chief Scientist or the NOAA website http://www.corporateservices.noaa.gov/noaaforms/eforms/nf57-10-01.pdf.

All NHSQs submitted after March 1, 2014 must be accompanied by NOAA Form (NF) 57-10-02 - Tuberculosis Screening Document in compliance with OMAO Policy 1008 (Tuberculosis Protection Program).

The completed forms should be sent to the Regional Director of Health Services at the applicable Marine Operations Center. The NHSQ and Tuberculosis Screening Document should reach the Health Services Office no later than 4 weeks prior to the start of the project to allow time for the participant to obtain and submit additional information should health services require it, before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of either form. Ensure to fully complete each form and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

The participant can mail, fax, or email the forms to the contact information below. Participants should take precautions to protect their Personally Identifiable Information (PII) and medical information and ensure all correspondence adheres to DOC guidance (http://ocio.os.doc.gov/ITPolicyandPrograms/IT_Privacy/PROD01_008240).

The only secure email process approved by NOAA is Accellion Secure File Transfer which requires the sender to setup an account. Accellion's Web Users Guide is a valuable aid in using this service, however to reduce cost the DOC contract doesn't provide for automatically issuing full functioning accounts. To receive access to a "Send Tab", after your Accellion account has been established send an email from the associated email account to accellionAlerts@doc.gov requesting access to the "Send Tab" function. They will notify you via email usually within 1 business day of your approval. The 'Send Tab" function will be accessible for 30 days.

Contact information:

Regional Director of Health Services
Marine Operations Center – Atlantic
439 W. York Street
Norfolk, VA 23510
Telephone 757-441-6320
Fax 757-441-3760
E-mail MOA.Health.Services@noaa.gov
Prior to departure, the FPC must provide an electronic listing of emergency contacts to the Executive Officer for all members of the scientific party, with the following information: contact name, address, relationship to member, and telephone number.

C. Shipboard Safety

Hard hats are required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. At the discretion of the ship's CO, safety shoes (i.e. steel or composite toe protection) may be required to participate in any work dealing with suspended loads, including CTD deployment and recovery. The ship does not provide safety-toed shoes/boots. The ship's Operations Officer should be consulted by the FPC to ensure members of the scientific party report aboard with the proper attire.

D. Communications

A progress report on operations prepared by the FPC may be relayed to the program office. Sometimes it is necessary for the FPC to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the FPC. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessel staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to the scientific party. If increased bandwidth is being considered, program accounting is required and it must be arranged at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *OMAO Fleet IT Security Policy* 1.1 (November 4, 2005) prior to establishing a direct connection to the NOAA WAN. Requirements include, but are not limited to:

(1) Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
(2) Installation of the latest critical operating system security patches.
(3) No external public Internet Service Provider (ISP) connections.

Completion of the above requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

Foreign National access to the NOAA ship or Federal Facilities is not required for this project.

VIII. Appendices Station coordinates (Table 1) and locations (Figure 1) follow below.

Table 1. List of 2014 Proposed Sampling Locations, 39 Station-Sites[1].

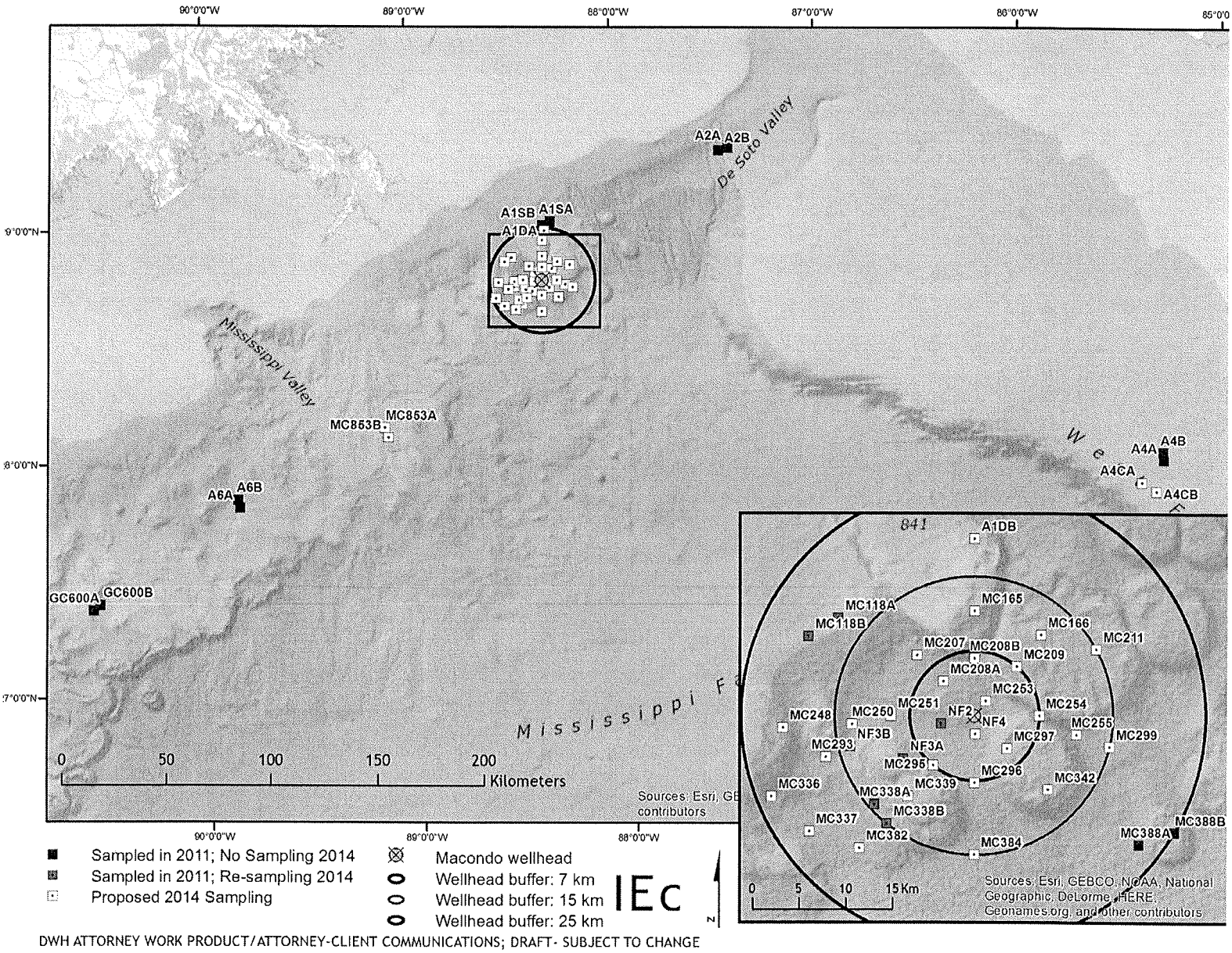
Station-Site ID	*Latitude*	*Longitude*	*Distance from Wellhead (km)*	*Sampled During 2011*	*Estimated Depth (m)*	*Prioritization level*
MC253	28.75190	-88.35280	2.0	No	1524.5	Primary
NF4	28.72010	-88.36610	2.0	No	1604.1	Primary
NF1	28.74390	-88.38700	2.2	Yes	1440.6	Primary
NF2	28.73170	-88.40340	3.7	Yes	1495.6	Primary
MC208A	28.77240	-88.39910	5.0	No	1410.1	Primary
MC297	28.70480	-88.33160	5.0	No	1494.5	Primary
MC208B	28.79380	-88.36380	6.2	No	1440.7	Primary
MC209	28.78400	-88.31690	7.0	No	1267.3	Primary
MC254	28.73570	-88.29450	7.0	No	1501.5	Primary
MC295	28.69130	-88.41380	7.0	No	1511.1	Primary
MC296	28.67280	-88.36880	7.3	No	1671.8	Primary
NF3A	28.69890	-88.44620	9.0	Yes	1293.5	Primary
MC207	28.79880	-88.42690	9.0	No	1327	Primary
MC251	28.74110	-88.45780	9.0	No	1467.1	Secondary
MC165	28.83950	-88.36150	11.3	No	1021.4	Primary
MC166	28.81370	-88.28920	11.3	No	1267.6	Primary
MC255	28.71600	-88.25370	11.3	No	1702.4	Primary
MC339	28.66250	-88.44260	11.3	No	1350.4	Primary
MC342	28.66350	-88.28800	11.3	No	1550.4	Primary
MC250	28.73420	-88.50030	13.2	No	1381.9	Primary
NF3B	28.71240	-88.50310	13.7	Yes	1291	Primary
MC338A	28.65570	-88.47970	14.4	Yes	1497.6	Primary
MC211	28.79790	-88.22850	15.0	No	1317.1	Secondary
MC299	28.70290	-88.21810	15.0	No	1785.1	Secondary
MC338B	28.63660	-88.46700	15.0	Yes	1571.7	Primary
MC384	28.60320	-88.37250	15.0	No	1824.7	Secondary
MC293	28.70340	-88.53000	16.5	No	1346.4	Primary
MC118A	28.83790	-88.51140	18.0	Yes	934.7	Primary
MC382	28.61380	-88.49750	18.9	No	1669.8	Primary
A1DB	28.90910	-88.35840	19.0	No	979.3	Primary
MC118B	28.82090	-88.54430	19.7	Yes	930.2	Primary
MC248	28.73320	-88.57560	20.0	No	1088.8	Primary

[1] Station-site locations are approximate, exact locations will depend on sea conditions, presence of pipelines (based on the institutional knowledge and experience of the crew), or sampling arrays in the vicinity of the set.

MC337	28.63170	-88.55130	21.6	No	1603.1	Primary
MC336	28.66700	-88.59080	23.4	No	1401.5	Primary
A1DA	28.94820	-88.34700	23.4	Yes	1053.2	Primary
MC853A	28.12810	-89.14450	102.1	Yes	1089.8	Primary
MC853B	28.08510	-89.12890	104.2	Yes	1105.2	Primary
A4CA	27.74990	-85.52460	300.8	Yes	880	Primary
A4CB	27.70770	-85.45800	302.0	No	833.5	Primary

Depths are estimated based on previous samples from the 2011 Red Crab Cruise Work Plan, or based on ArcGIS bathymetry layer.

Figure 1. Location of stations.



DWH ATTORNEY WORK PRODUCT/ATTORNEY-CLIENT COMMUNICATIONS; DRAFT- SUBJECT TO CHANGE