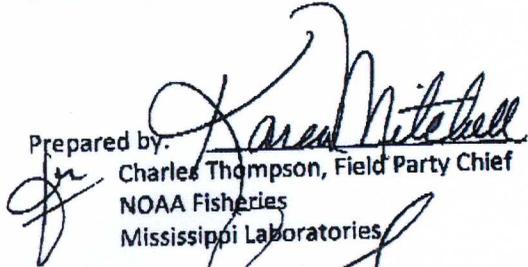


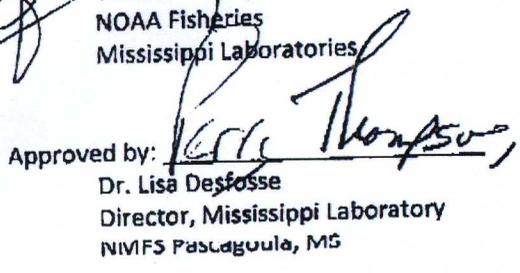
NOAA Fisheries Service
Mississippi Laboratories
Southeast Fisheries Science Center
3209 Frederic St.
Pascagoula, MS 39567

Cruise Amendment

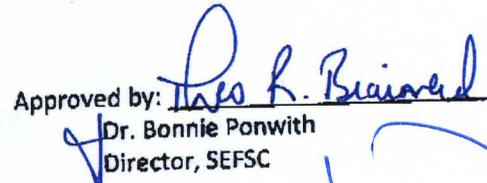
Date Submitted: July 14, 2010
Platform: NOAA Ship PISCES
Cruise Number: PI 10-03 (4)
Project Title: ME70 Workshop/Sub-Plume Survey at the Wellhead
Cruise Dates: July 14-19, 2010

Prepared by: 
Charles Thompson, Field Party Chief
NOAA Fisheries
Mississippi Laboratories

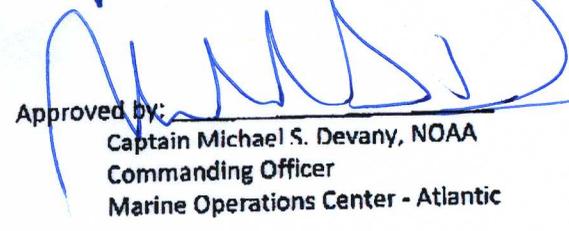
Date: 7/14/10

Approved by: 
Dr. Lisa Desfosse
Director, Mississippi Laboratory
NIMFS Pascagoula, MS

Date: 7/14/10

Approved by: 
Dr. Bonnie Ponwith
Director, SEFSC

Date: 07/14/10

Approved by: 
Captain Michael S. Devany, NOAA
Commanding Officer
Marine Operations Center - Atlantic

Date: 07/14/10

Amendments to PISCES cruise plan 7/14/2010

Leg 3: 7/14/2010 – 7/19/2010 (ME70 workshop, 5 sea-days)

Plan to depart Pascagoula 2000 on 14 July and return to Pascagoula 1200 on 19 July.

Expect arrival at site of Deepwater Horizon approx. 0400 on 15 July.

Upon arrival, will commence survey of the area within approximately 1500m of the well. The objective is to use PISCES SONARs (Simrad EK60 and ME70) to observe oil flow from the well and within the immediate vicinity of the well before, during, and after pressure tests being performed on the well cap. Casts to collect water samples and measure CTD profiles will be conducted to aid in ground truthing and interpretation of the acoustic data. This activity is expected to continue for approximately 48 hours.

Survey track lines and CTD cast locations will be determined after an engineering plan for the site and coordinates of fixed surface platforms can be provided.

After completion of tests at the well site, Multibeam Sonar Workshop will proceed as previously planned using time remaining until return to Pascagoula.

Updated List of Participants

	<u>Name</u>	<u>Title</u>	<u>Sex</u>	<u>Organization</u>	<u>Citizenship</u>	<u>Watch</u>
1	Charles Thompson	Field Party Chief	M	NMFS-SSC, MS	USA	1
2	Todd Kellison	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
3	Warren Mitchell	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
4	Mike Jech	Fishery Biologist	M	NMFS-Wood Hole, MA	USA	1
5	Joe Godlewski	Electronic Engineer	M	NMFS-Wood Hole, MA	USA	1
6	David Demer	Acoustic Engineer	M	NMFS-La Jolla, CA	USA	1
7	Randy Cutter	Oceanographer	M	NMFS-La Jolla, CA	USA	1
8	Sarah Steinessen	Fishery Biologist	F	NMFS-Seattle, WA	USA	1
9	Reka Domokos	Oceanographer	F	NMFS-Honolulu, HI	USA	1
10	David Millington	Acoustics Specialist	M	Myriax	Australia	1
11	Tom Weber	Acoustics Specialist	M	University of New Hampshire CCOM	USA	1
12	NoID	Water sampling	?	NRDA	USA	
13	NoID	Data management	?	NRDA	USA	
14	NoID	?	?	Entrix	USA	
15	NoID	Industrial Hygienist	?	?	USA	

U S DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
PO Drawer 1207
Pascagoula, MS 39568-1207

JUN 4 2010

CRUISE INSTRUCTIONS
NOAA Ship *Pisces* Cruise PC-10-0~~7~~³
SEAMAP Reef Fish Survey
And
ME70 Multibeam Sonar Workshop

Requested by:



Paul Felts, Field Party Chief

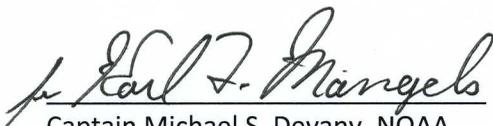


Dr. Lisa Desfosse
Director, Mississippi Laboratories

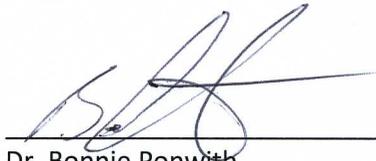
Date 4/27/2010

Date 5/12/10

Approved by:



Captain Michael S. Devany, NOAA
Commanding Officer, MOC-A



Dr. Bonnie Ponwith
Director, SEFSC

Date 6-4-10

Date 5-20-10

I. Overview

- A. Cruise Period: June 14, – July 24, 2010
- B. Operating Area: The area of operation is the shelf waters of the Gulf of Mexico from south Texas (26°50' N, 96°40' W) to Florida Panhandle (29°20' N, 86°00' W).
- C. Summary of Objectives:
NOAA Ship *Pisces* will conduct the annual SEAMAP offshore reef fish survey and will be used as a platform for training NMFS personnel on the use of the Simrad ME70 multibeam sonar. Bottom longline sampling will be conducted at night as time allows.
- D. Participating Institutions: NOAA/NMFS/NEFSC/NWFSC/AFSC/PIFSC/SEFSC Mississippi Laboratory; Simrad, Norway; French Institute of Marine Research (IFREMER), France
- E. Personnel (Science Party)

Leg 1: 6/14/2010 – 7/2/2010 (19 sea-days)

Name	Title	Sex	Organization	Citizenship	Watch
Paul Felts	Field Party Chief	M	NMFS-Pascagoula, MS	USA	1
Chris Gledhill	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	1
Jim Johnson	Electronics Tech.	M	NMFS-Stennis, MS	USA	2
Zeb Schobernd	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	1
Lisa Jones	Fishery Biologist	F	NMFS-Pascagoula, MS	USA	2
Kristin Hannan	Fishery Biologist	F	IAP-Pascagoula, MS	USA	2
Allison Odom	Fishery Biologist	F	IAP-Pascagoula, MS	USA	2
Scientist	Fishery Biologist			USA	2
Melinda Storey	Teacher at Sea	F	Mountain Brook Elementary Birmingham, AL	USA	1
Volunteer	Biologist			USA	2

Leg 2: 7/7/2010 – 7/13/2010 (7 sea-days)

Name	Title	Sex	Organization	Citizenship	Watch
Kevin Rademacher	Field Party Chief	M	NMFS-Pascagoula, MS	USA	1
Joseph Salisbury	Fishery Biologist	M	IAP-Pascagoula, MS	USA	1
Brandi Noble	Fishery Biologist	M	IAP-Pascagoula, MS	USA	1
Jeneane Davis	Electronics Tech.	M	IAP-Stennis, MS	USA	2
Mike Felts	Fishery Biologist	F	IAP-Pascagoula, MS	USA	1
Mark Grace	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	2
William Driggers	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	2
Walter Ingram	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	2
Christian Jones	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	2
Volunteer	Biologist			USA	2
Volunteer	Biologist			USA	2

Leg 3: 7/15/2010 – 7/19/2010 (ME70 workshop, 5 sea-days)

Name	Title	Sex	Organization	Citizenship	Watch
Charles Thompson	Field Party Chief	M	NMFS-Stennis, MS	USA	1
Todd Kellison	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
Warren Mitchell	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
Mike Jech	Fishery Biologist	M	NMFS-Wood Hole, MA	USA	1
Joe Godlewski	Fishery Biologist	M	NMFS-Wood Hole, MA	USA	1
David Demer	Fishery Biologist	M	NMFS-La Jolla, CA	USA	1
Randy Cutter	Fishery Biologist	M	NMFS-La Jolla, CA	USA	1
Sarah Steinessen	Fishery Biologist	F	Seattle, WA	USA	1
Reka Dmokos	Fishery Biologist	M	Honolulu, HI	USA	1
Scientist	Fishery Biologist	M		USA	1

Tom Webber	Acoustic Scientist	M	U. New Hampshire	USA	1
Scientist	Acoustic Scientist	M	IFREMER	France	1
Scientist	Acoustic Scientist	M	IFREMER	France	1

Leg 4: 7/20/2010 – 7/24/2010 (5 sea-days)

Name	Title	Sex	Organization	Citizenship	Watch
Brandi Noble	Field Party Chief	M	IAP-Pascagoula, MS	USA	1
Zeb Schobernd	Fishery Biologist	M	NMFS-Pascagoula, MS	USA	1
Jeneane Davis	Electronics Tech.	M	IAP-Stennis, MS	USA	2
Mike Felts	Fishery Biologist	F	IAP-Pascagoula, MS	USA	1

. Administrative

1. Points of Contacts:

Field Party Chief: Paul Felts, NMFS, 3209 Frederic St., Pascagoula, MS 39567. 228-549-1635; Paul.Felts@noaa.gov

Field Party Chief alternate: Christopher Gledhill, NMFS, 3209 Frederic St., Pascagoula, MS 39567; 228-549-1663; Christopher.T.Gledhill@noaa.gov

Ops Officer/alternate

2. Diplomatic Clearances

Clearances will be obtained for foreign scientists from France and Norway.

3. Licenses and Permits

This cruise will be conducted under the following permits:

Florida State Permit	Southeast NMFS Regional Permit
Alabama State Permit	Sea Turtle Permit
Mississippi State Permit	Marine Mammal Permit
Louisiana State Permit	NOAA Flower Garden National Marine Sanctuary
Texas State Permit	

II. Operations

A. Cruise Plan/Itinerary

<u>Leg</u>	<u>Date</u>	<u>Depart/Arrive (Location)</u>	<u>Sea Days</u>
Leg 1	06/14/2010	Depart Pascagoula, MS	
	07/02/2010	Arrive Pascagoula, MS	19
Leg 2	07/07/2010	Depart Pascagoula, MS	
	07/13/2010	Arrive Pascagoula, MS	7
Leg 3	07/15/2010	Depart Pascagoula, MS	5
	07/19/2010	Arrive Pascagoula, MS	
Leg 4	07/20/2010	Depart Pascagoula, MS	5
	07/24/2010	Arrive Pascagoula, MS	

B. Staging and Destaging

Staging and Destaging will be conducted in Pascagoula, MS.

C. Operations to be Conducted

NOAA Ship *Pisces* will conduct the annual SEAMAP offshore reef fish survey and a workshop on the ME70 multibeam sonar. The survey of reef fish will be conducted on the continental shelf and shelf-edge of the Gulf of Mexico. Stereo cameras, fish traps, and bandit reels will be used during daylight hours with sites selected using stratified random sampling. Stereo cameras will be deployed no earlier than 1 hour after sunrise, with the last gear retrieval 1 hour prior to sunset. The camera array will be baited and soak on the sea bed for 40 min. A CTD cast will be conducted at each sample location.

Two sites each day will be randomly selected for sampling with chevron fish traps. The cameras will be deployed and retrieved first followed by the fish trap. Fish traps will be baited and soak on the sea bed for 1 hour. A bandit reel will be deployed at 2 to 8 of the camera sites after retrieval of the cameras, and soak on the bottom for 10 min. The vessel is requested to station-keep during the 10 min soak. One electric (12V) bandit reel will be mounted on the starboard side of the vessel. The bandit reel holds 202.4 m of 1.6 mm (1/16 in) stainless steel wire as the mainline. The detachable bandit gear section (backbone) attaches to the terminal end of the main line on the starboard and port reels.

The backbone is constructed of 10 sections of 1.6 mm (1/16 in) stainless steel mainline in 0.61 m (2 ft) sections, each connected with 6/0 Rosco three-way swivels. Ten gangions are constructed of 30 cm (12 in) 45.36 kg (100 lb) test monofilament line, a circle hook (size 11/0), a 2/0 black anodized swivel snap, and attached to the backbone at the three-way swivels. A 5-kg weight is placed at the terminal end of the backbone to insure stability and fishing throughout the water column. Sampling protocol may be altered by the Chief Scientist or Watch Leader in order to optimize survey effort.

Bathymetric surveys will be conducted at night using the Simrad ME70 multibeam sonar at banks located off of the south Texas coast. Survey tracks within Block 33W, 53W, 62W and 82W will be provided.

Bottom longlines will be deployed at night if time permits and no mapping is conducted. Stations will be selected in close proximity to the reef fish day stations. Longline gear will comprise of a one-nautical-mile length of 1000-lb test (4.0 mm) mainline, with hyflyers (strobe light equipped) to mark distal ends and mid set. One hundred #15/0 steel circle hooks will be used with Atlantic mackerel for bait. A hydraulic longline reel with an independent hydraulic system will be used to deploy and retrieve the mainline. The bottom longline soak time will be 1 hour, as determined from the time the last hyflyer is deployed until the first hyflyer is retrieved to mark the beginning of the gear haul back. Weather resistant lap top computers will be used to monitor SCS/FSCS related gear and biological events. To facilitate measurements of large sharks and teleosts a fish sling will be deployed with the ship's forward articulating crane or captures will be brought alongside for identification, size estimation and tagging. A CTD cast will be conducted at each sample location. Sampling protocol may be altered by the Chief Scientist or Watch Leader in order to optimize survey effort.

Each of NOAA's new class of Fisheries Survey Vessels (FSVs) is being outfitted with a multibeam echosounder, specifically the Simrad ME70. The sonars on *Oscar Dyson* and *Henry B. Bigelow* are now operational and will soon be installed on the *Bell S. Shimada*. *Pisces* ME70 is still in the process of being tested and will continue to be in shakedown during this cruise. Although multibeam sonar has been used for many years in hydrographic surveys, fisheries research is a relatively new application of multibeam sonar technology. The ME70 is a newly developed, highly sophisticated, and complex instrument, the first multibeam echosounder developed specifically for fisheries research. The National Marine Fisheries Service Advanced Sampling Technology Working Group (ASTWG) previously funded a workshop in which two NOAA Fisheries scientists met with scientists from the French Institute of Marine Research (IFREMER) to discuss current issues with development and operation of the ME70 and plan for possible research collaboration in the future. The results are detailed in the ASTWG FY07 Annual Report. The ME70 workshop will bring together ME70 experts, experienced users, and potential users from each Fisheries Science Center to explore ME70 capabilities and gain working knowledge of its configuration and operation parameters. The workshop will take place aboard NOAA Ship *Pisces* both at sea and dockside in Pascagoula, MS. Participants from each of NOAA's Fishery Science Centers will be invited as well as representatives from Simrad in Norway and IFREMER in France who were instrumental in the development and testing of the first ME70 produced.

- D. Dive Plan: N/A
- E. Applicable Restrictions: N/A

III. Equipment

A. Equipment and Capabilities Provided by the Ship

1. Hydrographic winch for deploying CTD to a depth of 500 m.
2. Hydraulic pot hauler.
3. Two SBE9+ CTDs with calibrated sensors.
 - a. one Digiquartz depth sensor
 - b. two SBE 3 Premium temperature sensors.
 - c. two SBE 4 conductivity sensors (items b. and c. connected with TC ducts).
 - d. two SBE 43 dissolved oxygen sensors.
 - e. two SBE 5T pumps.
 - f. one WetStar fluorometer.
 - g. one Biospherical PAR sensor (model QSP 2001 if available).
 - h. one SBE water sampler.
4. Freezer space for frozen squid and biological sample.
5. SCS
6. WiFi for deck longline laptop computers
7. Forward articulating crane.
8. Simrad ME70 Multibeam sonar.
9. Simrad EK60 scientific echosounder (18 kHz, 38 kHz, 120 kHz, 200 kHz).
9. Power supply for bandit reels at side-sampling station.

B. Equipment and Capabilities Provided by the Scientists

1. Stereo camera array with buoy retrieval system
2. (4) Stereo cameras and underwater housings
3. External 2TB fathom drives (6) for stereo data storage
4. Specialized computer systems for stereo data downloads
5. Digital camera array with buoy retrieval system (backup array)
6. Digital cameras with Gates underwater housings
7. (4) TDR (Temp/Depth Recorder) with associated software and pen reader.
8. (2) Chevron Traps
9. (4) High-Flyers
10. (8) Poly Floats
11. (2) Norwegian balls.
12. Buoy line (1/2") for sets of video arrays and fish traps at depths of 5-75 fm
13. Spare weights for camera array, shock cord, materials for trap repair, and magnesium releases for buoy retrieval system
14. One large/small capacity motion compensating scale
15. 300 lb. squid bait and 300 lb. mackerel longline bait.

16. 12V Electric Bandit Reels (3), two mounted at side sampling station.
17. Longline reel, longline gear, buoys, longline components.
18. Biological sampling equipment, tagging poles, line cutters
19. Hook timers and TDRs (temperature-depth recorders)
20. Fish sling and remote electronic scale

IV. Hazardous Materials

A. Policy and Compliance

The Field Party Chief is responsible for complying with MOCDOC 15, Fleet Environmental Compliance #07, Hazardous Material and Hazardous Waste Management Requirements for Visiting Scientists, released July 2002. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

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 the anticipated quantity brought aboard, MSDS and appropriate neutralizing agents, buffers, and/or absorbents in amounts adequate to address spills of a size equal to the amount of chemical brought aboard. The amount of hazardous material arriving and leaving the vessel shall be accounted for by the Field Party Chief.

B. Radioactive Isotopes: N/A

C. Inventory: 5 gallons ethanol; 1 gallon formalin; Triton X

V. Additional Projects

A. Supplementary (“Piggyback”) Projects: N/A

B. NOAA Fleet Ancillary Projects: N/A

VI. Disposition of Data and Reports

A. Data Responsibilities

The ship is requested to provide all SCS data at the end of the cruise.

B. Pre and Post Cruise Meeting

Pre-Cruise Meeting: On the ship prior to departure, the Field Party Chief will conduct a meeting of the scientific party to train them in sample collection and inform them of cruise objectives. Some vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship’s Operations Officer.

Post-Cruise Meeting: Upon completion of the cruise, a meeting will normally be held at 0830 (unless prior alternate arrangements are made) and attended by the ship’s officers, the Field Party Chief and members of the scientific party, the Vessel Coordinator and the Port Captain to review the cruise. Concerns regarding safety, efficiency, and suggestions for improvements for future

cruises should be discussed. Minutes of the post-cruise meeting will be distributed to all participants by email, and to the Commanding Officer and Chief of Operations, Marine Operations Center.

C. Ship Operation Evaluation Report

Within seven days of the completion of the cruise, a Ship Operation Evaluation form is to be completed by the Field Party Chief as well as by the Commanding Officer. The preferred method of transmittal of this form is via email to OMAO.Customer.Satisfaction@noaa.gov . If email is not an option, a hard copy may be forwarded to:

Director, NOAA Marine and Aviation Operations
NOAA Office of Marine and Aviation Operations
8403 Colesville Road, Suite 500
Silver Spring, MD 20910

VII. Miscellaneous

A. Meals and Berthing

Meals and berthing are required for 5-15 scientists. Meals will be served 3 times daily beginning 1 hour before scheduled departure, extending throughout the cruise, and ending 2 hours after the termination of the cruise. 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 survey (e.g., Field Party Chief is allergic to fin fish).

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Field Party Chief at least 7 calendar days in advance. The Field Party Chief and Commanding Officer 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 Field Party Chief and Operations Officer are 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 Field Party Chief is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the cruise and at its conclusion prior to departing the ship. A pre-departure inspection of all scientific berthing and laboratory spaces will be conducted by the Operations Officer and Field Party Chief.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The Field Party Chief will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Field Party Chief 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 Commanding Officer. 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 7, 1999 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, Revised: 08/08) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Field Party Chief or the NOAA website at http://www.oma.noaa.gov/medical/NHSQ_Final_wi_Instructions_fill.pdf. The completed form should be sent to the Regional Director of Health Services at Marine Operations Center. The participant can mail, fax, or scan the form into an email using the contact information below. The NHSQ should reach the Health Services Office no later than four weeks prior to the cruise to allow time for the participant to obtain and submit additional information that health services might require before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of the NHSQ. Be sure to include proof of tuberculosis (TB) testing, sign and date the 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.

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

At least two days prior to departure, the Field Party Chief must provide a listing of emergency contacts to the Operations Officer for all members of the scientific party, with the following information: name, address, relationship to member, and telephone number.

C. Shipboard Safety

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs, or crocs) outside of private berthing areas is not permitted. Hard hats are also required when working with suspended loads. Work vests are required when working with any gear near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

D. Communications

A progress report on operations prepared by the Field Party Chief may be relayed to the program office. Sometimes it is necessary for the Field Party Chief to communicate with another vessel,

aircraft, or shore facility. Through various modes of communication, the ship is able to maintain contact with the Marine Operations Center on an as needed basis. These methods will be made available to the Field Party Chief upon request, in order to conduct official business. Due to a new directive from Marine Operations Center, the ship must charge the science party for all calls made on the cell or sky-cell telephone. INMARSAT, Sky Cell and cellular communication costs shall be reimbursed to the ship for telephone calls made by all scientific personnel. Currently, Sky Cell and cellular telephone services are about \$0.89 per minute and INMARSAT Mini-M is around \$1.68 per minute for voice. These charges will be assessed against the program after the ship receives the bill. There is generally a three-month delay receiving the bill for review. The Field Party Chief will be required to keep a log of all calls made by the science party.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *NMAO Fleet IT Security Policy* 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 these requirements prior to boarding the ship is preferable.

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

F. Foreign National Guests Access to OMAO Facilities and Platforms

All foreign national access to the vessel shall be in accordance with NAO 207-12 and RADM De Bow's March 16, 2006 memo (<http://deemedexports.noaa.gov>). National Marine Fisheries Service personnel will use the Foreign National Registration System (FRNS) to submit requests for access to NOAA facilities and ships. The Departmental Sponsor/NOAA (DSN) is responsible for obtaining clearances and export licenses and for providing escorts required by the NAO. DSNs should consult with their designated NMFS Deemed Exports point of contact to assist with the process (<http://deemedexports.noaa.gov/contacts.html>).

The following are basic requirements. Full compliance with NAO 207-12 is required.

Responsibilities of the Field Party Chief:

1. Provide the Commanding Officer with the e-mail generated by the FRNS granting approval for the foreign national guest's visit. This e-mail will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
2. Escorts – The Field Party Chief is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer.

3. Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.
4. Export Control - *The NEFSC currently neither possesses nor utilizes technologies that are subject to Export Administration Regulations (EAR).*

The Commanding Officer and the Field Party Chief will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written NMAO approval and compliance with export and sanction regulations.
3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
4. Ensure receipt from the Field Party Chief or the DSN of the FRNS e-mail granting approval for the foreign national guest's visit.
5. Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.
6. Export Control - 8 weeks in advance of the cruise, provide the Field Party Chief with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Field Party Chief of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Field Party Chief can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Field Party Chief will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.
7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.

Responsibilities of the Foreign National Sponsor:

1. Export Control - The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
2. The DSN of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen, NOAA (or DOC) employee. According to DOC/OSY, this requirement cannot be altered.

3. Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National Guest) as required by NAO 207-12 Section 5.03.h.

Appendix 1.

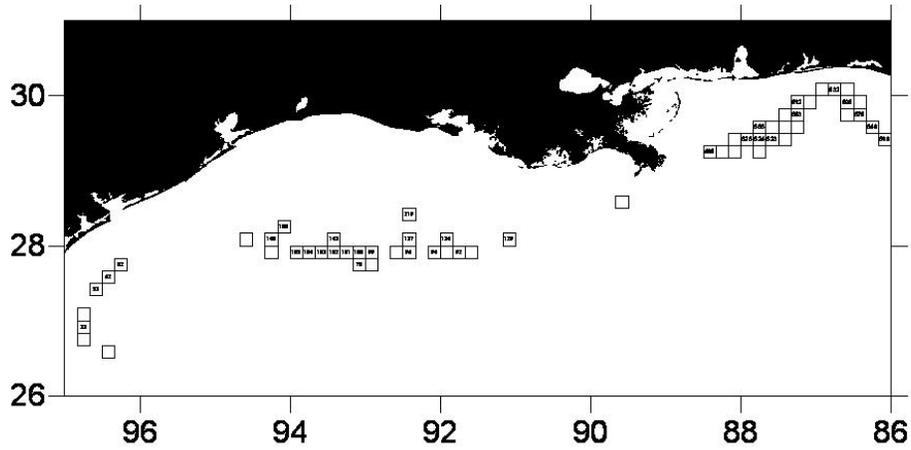


Figure 1: SEAMAP 2010 Reef Fish Survey sample area.

Appendix 2: List of sample stations.

Longitude W	Latitude N	Block	Site	Lat D	Lat M	Lon D	Lon M
-96.778336562800	26.874998520300	33	1	26	52.500	-96	46.700
-96.778336562800	26.876667325800	33	2	26	52.600	-96	46.700
-96.778336562800	26.878336139200	33	3	26	52.700	-96	46.700
-96.776667757300	26.874998520300	33	4	26	52.500	-96	46.600
-96.776667757300	26.876667325800	33	5	26	52.600	-96	46.600
-96.774998951800	26.874998520300	33	7	26	52.500	-96	46.500
-96.774998951800	26.876667325800	33	8	26	52.600	-96	46.500
-96.774998951800	26.878336139200	33	9	26	52.700	-96	46.500
-96.773330138500	26.876667325800	33	10	26	52.600	-96	46.400
-96.773330138500	26.878336139200	33	11	26	52.700	-96	46.400
-96.525004110800	27.438340857400	53	4	27	26.300	-96	31.500
-96.521672516800	27.438340857400	53	6	27	26.300	-96	31.300
-96.521672516800	27.440006649900	53	10	27	26.400	-96	31.300
-96.528335704900	27.443338244000	53	17	27	26.600	-96	31.700
-96.525004110800	27.443338244000	53	19	27	26.600	-96	31.500
-96.523338309300	27.443338244000	53	20	27	26.600	-96	31.400
-96.521672516800	27.443338244000	53	21	27	26.600	-96	31.300
-96.526669903300	27.445004036500	53	24	27	26.700	-96	31.600
-96.523338309300	27.445004036500	53	26	27	26.700	-96	31.400
-96.520006724300	27.445004036500	53	28	27	26.700	-96	31.200
-96.481675452900	27.576678204500	62	20	27	34.601	-96	28.901
-96.480045690600	27.573346265400	62	23	27	34.401	-96	28.803
-96.480009469800	27.544988508700	62	26	27	32.699	-96	28.801
-96.480009469800	27.576678204500	62	33	27	34.601	-96	28.801
-96.478343500200	27.541656569700	62	37	27	32.499	-96	28.701
-96.478343500200	27.543322539200	62	38	27	32.599	-96	28.701
-96.478343500200	27.575012235000	62	47	27	34.501	-96	28.701
-96.473345577900	27.548320461200	62	91	27	32.899	-96	28.401
-96.468347669100	27.539990600100	62	108	27	32.399	-96	28.101
-96.463349746800	27.539990600100	62	118	27	32.399	-96	27.801
-96.268399439100	27.671657434000	82	4	27	40.299	-96	16.104
-96.268399439100	27.674962599200	82	11	27	40.498	-96	16.104
-96.240116719700	27.741585138300	82	18	27	44.495	-96	14.407
-96.241674866000	27.741679583200	82	21	27	44.501	-96	14.500
-96.236717126300	27.741679583200	82	23	27	44.501	-96	14.203
-96.238369717600	27.743332157300	82	27	27	44.600	-96	14.302
-96.235017338200	27.744937517500	82	34	27	44.696	-96	14.101
-96.231712172700	27.745031945400	82	37	27	44.702	-96	13.903
-96.234970124200	27.746637305600	82	38	27	44.798	-96	14.098
-96.231617744800	27.748337110700	82	48	27	44.900	-96	13.897

-94.307114489100	28.159282152200	148	2	28	9.557	-94	18.427
-94.306945182800	28.165170083300	148	3	28	9.910	-94	18.417
-94.305007623200	28.163477068900	148	7	28	9.809	-94	18.300
-94.304029436000	28.159507889300	148	9	28	9.570	-94	18.242
-94.300003825500	28.168142267600	148	15	28	10.089	-94	18.000
-94.298329619000	28.168123452800	148	17	28	10.087	-94	17.900
-94.296655419400	28.175459846300	148	21	28	10.528	-94	17.799
-94.295000027700	28.166656175400	148	23	28	9.999	-94	17.700
-94.295000027700	28.168330375000	148	24	28	10.100	-94	17.700
-94.293325821300	28.168330375000	148	27	28	10.100	-94	17.600
-94.289394264400	28.166957151400	148	29	28	10.017	-94	17.364
-94.288867551400	28.170832277200	148	30	28	10.250	-94	17.332
-94.136669375600	28.318356124000	188	16	28	19.101	-94	8.200
-94.138364564000	28.319990771200	188	22	28	19.199	-94	8.302
-94.136669375600	28.323290344700	188	40	28	19.397	-94	8.200
-94.141664137400	28.324985533100	188	60	28	19.499	-94	8.500
-94.148323817100	28.326680730000	188	71	28	19.601	-94	8.899
-94.151653661200	28.328345647800	188	80	28	19.701	-94	9.099
-94.146658899300	28.328345647800	188	82	28	19.701	-94	8.800
-94.138334293400	28.331645221300	188	108	28	19.899	-94	8.300
-94.148323817100	28.331675491900	188	113	28	19.901	-94	8.899
-94.146658899300	28.331675491900	188	114	28	19.901	-94	8.800
-93.868348202900	27.851666915700	105	135	27	51.100	-93	52.101
-93.865006915500	27.878309327400	105	220	27	52.699	-93	51.900
-93.863336266000	27.846654978100	105	231	27	50.799	-93	51.800
-93.861709591100	27.866570839600	105	263	27	51.994	-93	51.703
-93.851685705700	27.851622952800	105	493	27	51.097	-93	51.101
-93.850015067800	27.864988115700	105	550	27	51.899	-93	51.001
-93.848344418300	27.841687003500	105	575	27	50.501	-93	50.901
-93.848344418300	27.844940365400	105	578	27	50.696	-93	50.901
-93.848344418300	27.856678853300	105	588	27	51.401	-93	50.901
-93.846673768800	27.846654978100	105	634	27	50.799	-93	50.800
-93.821194389200	27.835808759800	104	3	27	50.149	-93	49.272
-93.831646677100	27.836653390000	104	6	27	50.199	-93	49.899
-93.831646677100	27.844994116400	104	47	27	50.700	-93	49.899
-93.794219025200	27.850642575400	104	106	27	51.039	-93	47.653
-93.833335937400	27.858349822100	104	190	27	51.501	-93	50.000
-93.819980231500	27.863312027900	104	275	27	51.799	-93	49.199
-93.793268805700	27.894985645100	104	710	27	53.699	-93	47.596
-93.783397195800	27.896727693000	104	743	27	53.804	-93	47.004
-93.808313772000	27.900000624400	104	789	27	54.000	-93	48.499
-93.818396546400	27.905068405400	104	877	27	54.304	-93	49.104
-93.618323170500	27.890007066700	103	25	27	53.400	-93	37.099
-93.618323170500	27.898326849300	103	76	27	53.900	-93	37.099

-93.633341627100	27.914997025300	103	380	27	54.900	-93	38.000
-93.623339515500	27.914997025300	103	386	27	54.900	-93	37.400
-93.586665117000	27.929984904200	103	716	27	55.799	-93	35.200
-93.591650883700	27.941669313400	103	922	27	56.500	-93	35.499
-93.614989138700	27.943321032000	103	933	27	56.599	-93	36.899
-93.610003372100	27.949989112200	103	1032	27	56.999	-93	36.600
-93.598318947200	27.953323144100	103	1087	27	57.199	-93	35.899
-93.603335308500	27.958339489300	103	1150	27	57.500	-93	36.200
-93.603335308500	27.963325256200	103	1204	27	57.800	-93	36.200
-93.616671435700	27.966659288100	103	1237	27	58.000	-93	37.000
-93.430020667500	27.879996968400	102	201	27	52.800	-93	25.801
-93.436645544100	27.914986169700	102	477	27	54.899	-93	26.199
-93.390025984400	27.916654656300	102	507	27	54.999	-93	23.402
-93.411667277400	27.924997107100	102	651	27	55.500	-93	24.700
-93.441095962500	27.844097468000	102	793	27	50.646	-93	26.466
-93.446672031500	27.853304472900	102	834	27	51.198	-93	26.800
-93.399988612900	27.881681959300	102	1004	27	52.901	-93	23.999
-93.433358613900	27.889246392600	102	1021	27	53.355	-93	26.002
-93.359356738100	27.897588896400	102	1040	27	53.855	-93	21.561
-93.364998647200	27.923426761500	102	1172	27	55.406	-93	21.900
-93.471668588400	28.002482521300	143	1	28	0.149	-93	28.300
-93.474999710300	28.003928101900	143	3	28	0.236	-93	28.500
-93.498348930100	28.004996570900	143	6	28	0.300	-93	29.901
-93.489204086200	28.014361411600	143	23	28	0.862	-93	29.352
-93.496651952900	28.133338745200	143	84	28	8.000	-93	29.799
-93.491686702900	28.135004306100	143	98	28	8.100	-93	29.501
-93.490021141900	28.136669850400	143	113	28	8.200	-93	29.401
-93.488324164700	28.138366844300	143	133	28	8.302	-93	29.299
-93.491655269900	28.141666533200	143	149	28	8.500	-93	29.499
-93.493352263800	28.144997638400	143	169	28	8.700	-93	29.601
-93.307441208800	27.862232579700	101	25	27	51.734	-93	18.446
-93.298300621200	27.871653329200	101	96	27	52.299	-93	17.898
-93.284992504900	27.878342426100	101	198	27	52.701	-93	17.100
-93.308316742600	27.879988423600	101	210	27	52.799	-93	18.499
-93.284992504900	27.884996474900	101	295	27	53.100	-93	17.100
-93.309997769500	27.885031504500	101	301	27	53.102	-93	18.600
-93.284992504900	27.893296539800	101	429	27	53.598	-93	17.100
-93.283346507500	27.893331569300	101	445	27	53.600	-93	17.001
-93.296654623700	27.901666663700	101	581	27	54.100	-93	17.799
-93.304989718200	27.913468863500	101	674	27	54.808	-93	18.299
-93.076657405100	27.846626893600	100	26	27	50.798	-93	4.599
-93.075003782100	27.843301049400	100	40	27	50.598	-93	4.500
-93.070004910400	27.854970036200	100	101	27	51.298	-93	4.200
-93.068332278600	27.836630339600	100	109	27	50.198	-93	4.100

-93.068332278600	27.851625185400	100	118	27	51.098	-93	4.100
-93.066659661600	27.854970036200	100	137	27	51.298	-93	4.000
-93.063333406900	27.844973482200	100	163	27	50.698	-93	3.800
-93.063333406900	27.851625185400	100	168	27	51.098	-93	3.800
-93.058334535200	27.853297603400	100	227	27	51.198	-93	3.500
-93.056661903400	27.834938900200	100	230	27	50.096	-93	3.400
-93.070005159800	27.796649553800	70	82	27	47.799	-93	4.200
-93.081664825200	27.798330419200	70	114	27	47.900	-93	4.900
-93.076664783100	27.798330419200	70	116	27	47.900	-93	4.600
-93.064983847900	27.801670865500	70	175	27	48.100	-93	3.899
-93.063324252300	27.805011311900	70	236	27	48.301	-93	3.799
-93.065005117700	27.813330530500	70	364	27	48.800	-93	3.900
-93.056685913400	27.818351842300	70	455	27	49.101	-93	3.401
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-93.046664559300	27.821671018900	70	498	27	49.300	-93	2.800
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-92.921652427400	27.851677131800	99	5	27	51.101	-92	55.299
-92.919988226600	27.850085282400	99	10	27	51.005	-92	55.199
-92.918360194800	27.854897012800	99	14	27	51.294	-92	55.102
-92.908338794500	27.839919180200	99	20	27	50.395	-92	54.500
-92.906638411400	27.838291148500	99	23	27	50.297	-92	54.398
-92.903346192300	27.839991531500	99	26	27	50.399	-92	54.201
-92.891696760200	27.836626947800	99	43	27	50.198	-92	53.502
-92.890032559400	27.834962747200	99	45	27	50.098	-92	53.402
-92.880011159100	27.843283763800	99	56	27	50.597	-92	52.801
-92.876682744200	27.843283763800	99	59	27	50.597	-92	52.601
-92.471711444700	28.349125205700	219	3	28	20.948	-92	28.303
-92.463781816100	28.336333941400	219	9	28	20.180	-92	27.827
-92.461657803200	28.333407523000	219	11	28	20.004	-92	27.699
-92.460005789400	28.325477876700	219	13	28	19.529	-92	27.600
-92.454530562700	28.348700392800	219	23	28	20.922	-92	27.272
-92.453680954200	28.342375574200	219	26	28	20.543	-92	27.221
-92.451698551300	28.336711533800	219	31	28	20.203	-92	27.102
-92.450896146000	28.334021132100	219	33	28	20.041	-92	27.054
-92.448347337400	28.337277939500	219	38	28	20.237	-92	26.901
-92.444996123600	28.343319572400	219	41	28	20.599	-92	26.700
-92.458339046700	28.043334701500	137	55	28	2.600	-92	27.500
-92.441669801000	28.060003946000	137	240	28	3.600	-92	26.500
-92.453252872400	28.035011375400	137	748	28	2.101	-92	27.195
-92.470029296000	28.046738769300	137	916	28	2.804	-92	28.202
-92.434988891900	28.051698873900	137	983	28	3.102	-92	26.099
-92.474989414800	28.063349371000	137	1075	28	3.801	-92	28.499
-92.474989414800	28.074999868100	137	1238	28	4.500	-92	28.499
-92.476681240700	28.074999868100	137	1241	28	4.500	-92	28.601

-92.478334604400	28.076653245500	137	1263	28	4.599	-92	28.700
-92.446611970700	28.008322848700	137	1300	28	0.499	-92	26.797
-92.373304748700	27.894988302400	96	26	27	53.699	-92	22.398
-92.383320292200	27.898344860000	96	36	27	53.901	-92	22.999
-92.383320292200	27.926659044200	96	140	27	55.600	-92	22.999
-92.376661306400	27.926659044200	96	143	27	55.600	-92	22.600
-92.366649838300	27.961654416000	96	425	27	57.699	-92	21.999
-92.376680658000	27.963349758700	96	441	27	57.801	-92	22.601
-92.386664373800	27.964998022500	96	459	27	57.900	-92	23.200
-92.374985290300	27.964998022500	96	465	27	57.900	-92	22.499
-92.381672503400	27.968341629100	96	503	27	58.100	-92	22.900
-92.391656219200	27.991699745900	96	836	27	59.502	-92	23.499
-92.373304748700	27.894988302400	96	26	27	53.699	-92	22.398
-92.383320292200	27.898344860000	96	36	27	53.901	-92	22.999
-92.383320292200	27.926659044200	96	140	27	55.600	-92	22.999
-92.376661306400	27.926659044200	96	143	27	55.600	-92	22.600
-92.366649838300	27.961654416000	96	425	27	57.699	-92	21.999
-92.376680658000	27.963349758700	96	441	27	57.801	-92	22.601
-92.386664373800	27.964998022500	96	459	27	57.900	-92	23.200
-92.374985290300	27.964998022500	96	465	27	57.900	-92	22.499
-92.381672503400	27.968341629100	96	503	27	58.100	-92	22.900
-92.391656219200	27.991699745900	96	836	27	59.502	-92	23.499
-92.016641965300	27.926659664500	94	12	27	55.600	-92	0.999
-92.028287592000	27.929966413500	94	53	27	55.798	-92	1.697
-92.038317108200	27.933322590100	94	112	27	55.999	-92	2.299
-92.033321869800	27.933322590100	94	114	27	55.999	-92	1.999
-92.018333821800	27.943325788900	94	304	27	56.600	-92	1.100
-92.051702814100	27.948425411500	94	409	27	56.906	-92	3.102
-92.001667685700	27.953325476900	94	490	27	57.200	-92	0.100
-92.041634271900	27.956659762600	94	533	27	57.400	-92	2.498
-92.013301849900	27.965011205000	94	640	27	57.901	-92	0.798
-92.009945660300	27.965050230900	94	647	27	57.903	-92	0.597
-91.991699835900	28.073270488400	134	13	28	4.396	-91	59.502
-91.996678614700	28.076652309000	134	41	28	4.599	-91	59.801
-91.988349329400	28.076683622500	134	47	28	4.601	-91	59.301
-91.991668522400	28.078374522000	134	56	28	4.702	-91	59.500
-91.998369524800	28.079971491600	134	60	28	4.798	-91	59.902
-91.984967520000	28.084918968300	134	96	28	5.095	-91	59.098
-91.988380642900	28.085044222500	134	106	28	5.103	-91	59.303
-91.998338211200	28.086672505600	134	109	28	5.200	-91	59.900
-91.989977612300	28.088332091600	134	128	28	5.300	-91	59.399
-91.983339237000	28.091651285100	134	152	28	5.499	-91	59.000
-91.829952567800	27.856631047000	92	34	27	51.398	-91	49.797
-91.818385881000	27.851681574600	92	141	27	51.101	-91	49.103

-91.813328843800	27.851681574600	92	199	27	51.101	-91	48.800
-91.811661073100	27.836671810300	92	207	27	50.200	-91	48.700
-91.811661073100	27.850013832600	92	212	27	51.001	-91	48.700
-91.809993331100	27.853349345300	92	227	27	51.201	-91	48.600
-91.808271777900	27.838393363400	92	245	27	50.304	-91	48.496
-91.803322305600	27.846678319800	92	284	27	50.801	-91	48.199
-91.796651280200	27.848346061900	92	330	27	50.901	-91	47.799
-91.713317416000	27.998390123200	92	455	27	59.903	-91	42.799
-91.034981050400	28.090009392800	129	46	28	5.401	-91	2.099
-91.031679479000	28.101672074600	129	82	28	6.100	-91	1.901
-91.024990571600	28.096655402000	129	139	28	5.799	-91	1.499
-91.015000108700	28.099999855700	129	252	28	6.000	-91	0.900
-91.013327889800	28.084992720200	129	265	28	5.100	-91	0.800
-91.013327889800	28.088337173900	129	267	28	5.300	-91	0.800
-91.013327889800	28.108318099700	129	279	28	6.499	-91	0.800
-91.011655670900	28.106645880800	129	301	28	6.399	-91	0.699
-91.006681864700	28.096655402000	129	357	28	5.799	-91	0.401
-91.006681864700	28.106645880800	129	363	28	6.399	-91	0.401
-88.444987028300	29.233343165100	498	4	29	14.001	-88	26.699
-88.443329516300	29.235000677200	498	11	29	14.100	-88	26.600
-88.440014492500	29.226654952300	498	21	29	13.599	-88	26.401
-88.440014492500	29.228341535900	498	22	29	13.700	-88	26.401
-88.438327887400	29.226654952300	498	30	29	13.599	-88	26.300
-88.435012863500	29.229999047900	498	45	29	13.800	-88	26.101
-88.433326280000	29.229999047900	498	51	29	13.800	-88	26.000
-88.431668768000	29.231656559900	498	58	29	13.899	-88	25.900
-88.338324724900	29.251663012200	498	65	29	15.100	-88	20.299
-88.338324724900	29.253291452600	498	66	29	15.197	-88	20.299
-87.989992091200	29.398941372200	525	2	29	23.936	-87	59.400
-87.988320856400	29.397960420800	525	3	29	23.878	-87	59.299
-87.983343511700	29.391675149800	525	8	29	23.501	-87	59.001
-87.948320326300	29.418705496000	525	39	29	25.122	-87	56.899
-87.940000511900	29.419432112900	525	45	29	25.166	-87	56.400
-87.888337671500	29.420958013800	525	76	29	25.257	-87	53.300
-87.866648004900	29.421430322800	525	84	29	25.286	-87	51.999
-87.854985720900	29.422883556700	525	93	29	25.373	-87	51.299
-87.847864832500	29.384372593900	525	100	29	23.062	-87	50.872
-87.840017327100	29.424809099600	525	102	29	25.489	-87	50.401
-87.764446903700	29.339474460600	524	20	29	20.368	-87	45.867
-87.807670230400	29.339543616400	524	21	29	20.373	-87	48.460
-87.747572528000	29.355311498800	524	89	29	21.319	-87	44.854
-87.744667907700	29.358700210100	524	95	29	21.522	-87	44.680
-87.683290809600	29.383458527200	524	105	29	23.008	-87	40.997
-87.793354671000	29.393278857100	524	117	29	23.597	-87	47.601

-87.781736239400	29.453307404700	524	195	29	27.198	-87	46.904
-87.668318232300	29.458321315800	524	211	29	27.499	-87	40.099
-87.673262987500	29.463369792500	524	242	29	27.802	-87	40.396
-87.783361439200	29.470043493800	524	252	29	28.203	-87	47.002
-87.655103863700	29.463361845600	523	14	29	27.802	-87	39.306
-87.646720961500	29.463361845600	523	21	29	27.802	-87	38.803
-87.615077345300	29.463210800000	523	50	29	27.793	-87	36.905
-87.610168440500	29.453392964100	523	54	29	27.204	-87	36.610
-87.591665611600	29.451655965400	523	66	29	27.099	-87	35.500
-87.590004135700	29.443273062900	523	69	29	26.596	-87	35.400
-87.583282683400	29.441762606700	523	78	29	26.506	-87	34.997
-87.533287309900	29.439874562300	523	111	29	26.392	-87	31.997
-87.504891122600	29.476502607300	523	171	29	28.590	-87	30.293
-87.503305169500	29.473255178300	523	174	29	28.395	-87	30.198
-87.764876931200	29.523315709900	555	12	29	31.399	-87	45.893
-87.733288517500	29.529999949400	555	40	29	31.800	-87	43.997
-87.728167530900	29.533234248100	555	48	29	31.994	-87	43.690
-87.726765996000	29.526657820400	555	49	29	31.599	-87	43.606
-87.721645009400	29.528382790800	555	64	29	31.703	-87	43.299
-87.713343630300	29.536738094900	555	78	29	32.204	-87	42.801
-87.708060926000	29.536792000800	555	86	29	32.208	-87	42.484
-87.693237006800	29.536738094900	555	106	29	32.204	-87	41.594
-87.673292101100	29.553394778600	555	127	29	33.204	-87	40.398
-87.670003896700	29.553448684500	555	135	29	33.207	-87	40.200
-87.764876931200	29.523315709900	555	12	29	31.399	-87	45.893
-87.733288517500	29.529999949400	555	40	29	31.800	-87	43.997
-87.728167530900	29.533234248100	555	48	29	31.994	-87	43.690
-87.726765996000	29.526657820400	555	49	29	31.599	-87	43.606
-87.721645009400	29.528382790800	555	64	29	31.703	-87	43.299
-87.713343630300	29.536738094900	555	78	29	32.204	-87	42.801
-87.708060926000	29.536792000800	555	86	29	32.208	-87	42.484
-87.693237006800	29.536738094900	555	106	29	32.204	-87	41.594
-87.673292101100	29.553394778600	555	127	29	33.204	-87	40.398
-87.670003896700	29.553448684500	555	135	29	33.207	-87	40.200
-87.321644703600	29.700001756000	583	42	29	42.0001	-87	19.2987
-87.313312043100	29.763382497700	583	110	29	45.8029	-87	18.7987
-87.313377651000	29.768303354800	583	118	29	46.0982	-87	18.8027
-87.314624273300	29.786641796400	583	179	29	47.1985	-87	18.8775
-87.285853621100	29.791726673400	583	208	29	47.5036	-87	17.1512
-87.267712026400	29.793268555000	583	216	29	47.5961	-87	16.0627
-87.288281234000	29.804980214300	583	335	29	48.2988	-87	17.2969
-87.271648717000	29.805045822300	583	345	29	48.3027	-87	16.2989
-87.235004660100	29.806620507900	583	366	29	48.3972	-87	14.1003
-87.255016176300	29.809933875400	583	397	29	48.596	-87	15.301

-87.326524893500	29.845051464500	612	4	29	50.703	-87	19.591
-87.323351736800	29.846544713400	612	9	29	50.793	-87	19.401
-87.304934992300	29.866641365700	612	25	29	51.998	-87	18.296
-87.296722112200	29.873423195000	612	40	29	52.405	-87	17.803
-87.288384814300	29.848286840800	612	54	29	50.897	-87	17.303
-87.286642686900	29.884933671000	612	59	29	53.096	-87	17.199
-87.278118730300	29.854882011300	612	82	29	51.293	-87	16.687
-87.275007793100	29.864961457900	612	94	29	51.898	-87	16.500
-87.268474820800	29.855006450500	612	103	29	51.300	-87	16.108
-87.193376834800	29.920025011200	612	232	29	55.202	-87	11.603
-86.638354289700	29.995008103700	608	49	29	59.700	-86	38.301
-86.638277536400	29.988369041900	608	52	29	59.302	-86	38.297
-86.611682925100	29.893349865600	608	181	29	53.601	-86	36.701
-86.608344199200	29.973402373600	608	228	29	58.404	-86	36.501
-86.604967109900	29.953331681700	608	288	29	57.200	-86	36.298
-86.599978229200	29.896650228000	608	342	29	53.799	-86	35.999
-86.596677866700	29.985068679500	608	369	29	59.104	-86	35.801
-86.581749587900	29.959970743500	608	472	29	57.598	-86	34.905
-86.541684956400	29.998154933300	608	642	29	59.889	-86	32.501
-86.501697104500	29.995046467200	608	690	29	59.703	-86	30.102
-86.351479856800	29.708334002600	578	41	29	42.500	-86	21.089
-86.365009119500	29.791640159600	578	135	29	47.498	-86	21.901
-86.370016018800	29.795013592000	578	192	29	47.701	-86	22.201
-86.370016018800	29.809998757000	578	193	29	48.600	-86	22.201
-86.395004562600	29.811648429300	578	271	29	48.699	-86	23.700
-86.415007020300	29.811632198500	578	384	29	48.698	-86	24.900
-86.441639424900	29.798244992700	578	435	29	47.895	-86	26.498
-86.474947678300	29.823350454900	578	574	29	49.401	-86	28.497
-86.476723177100	29.804956349600	578	597	29	48.297	-86	28.603
-86.493306275100	29.816674606000	578	672	29	49.000	-86	29.598

Amendments to PISCES cruise plan 7/14/2010

Leg 3: 7/14/2010 – 7/19/2010 (ME70 workshop, 5 sea-days)

Plan to depart Pascagoula 2000 on 14 July and return to Pascagoula 1200 on 19 July.

Expect arrival at site of Deepwater Horizon approx. 0400 on 15 July.

Upon arrival, will commence survey of the area within approximately 1500m of the well. The objective is to use PISCES SONARs (Simrad EK60 and ME70) to observe oil flow from the well and within the immediate vicinity of the well before, during, and after pressure tests being performed on the well cap. Casts to collect water samples and measure CTD profiles will be conducted to aid in ground truthing and interpretation of the acoustic data. This activity is expected to continue for approximately 48 hours.

Survey track lines and CTD cast locations will be determined after an engineering plan for the site and coordinates of fixed surface platforms can be provided.

After completion of tests at the well site, Multibeam Sonar Workshop will proceed as previously planned using time remaining until return to Pascagoula.

Updated List of Participants

	<u>Name</u>	<u>Title</u>	<u>Sex</u>	<u>Organization</u>	<u>Citizenship</u>	<u>Watch</u>
1	Charles Thompson	Field Party Chief	M	NMFS-SSC, MS	USA	1
2	Todd Kellison	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
3	Warren Mitchell	Fishery Biologist	M	NMFS-Beaufort, NC	USA	1
4	Mike Jech	Fishery Biologist	M	NMFS-Wood Hole, MA	USA	1
5	Joe Godlewski	Electronic Engineer	M	NMFS-Wood Hole, MA	USA	1
6	David Demer	Acoustic Engineer	M	NMFS-La Jolla, CA	USA	1
7	Randy Cutter	Oceanographer	M	NMFS-La Jolla, CA	USA	1
8	Sarah Steinessen	Fishery Biologist	F	NMFS-Seattle, WA	USA	1
9	Reka Domokos	Oceanographer	F	NMFS-Honolulu, HI	USA	1
10	David Millington	Acoustics Specialist	M	Myriax	Australia	1
11	Tom Weber	Acoustics Specialist	M	University of New Hampshire CCOM	USA	1
12	NoID	Water sampling	?	NRDA	USA	
13	NoID	Data management	?	NRDA	USA	
14	NoID	?	?	Entrix	USA	
15	NoID	Industrial Hygienist	?	?	USA	