




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: Master David Nelson
Commanding Officer, NOAA Ship *Oregon II*

FROM: 
Captain Anita L. Lopez, NOAA
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for R2-13-04
Red Snapper/Shark Bottom Longline

Attached is the final Project Instruction for R2-13-04, Red Snapper/Shark Bottom Longline, which is scheduled aboard NOAA Ship *Oregon II* during the period of July 26 – September 29, 2013. Of the 60 DAS scheduled for this project, 60 DAS are based funded days by OMAO in support of NMFS. This project is estimated to exhibit a High Operational Tempo. Acknowledge receipt of these instructions via e-mail to OpsMgr.MOA@noaa.gov at Marine Operations Center-Atlantic.

Attachment

cc:
MOA1



U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
3209 Frederic St.
Pascagoula, MS 39567

Project Instructions

Date Submitted: 05/05/2013

Platform: NOAA Ship OREGON II

Cruise Number: R2-13-04 (305)

Project Title: Red Snapper/Shark Bottom Longline

Cruise Dates: 07/26/2013 - 09/29/2013

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Director, SEFSC
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Date: 07/18/2013

Approved by: 
Captain Anita L. Lopez, NOAA
Commanding Officer
Marine Operations Center - Atlantic

Date: 17 Jul 13

PROJECT INSTRUCTIONS
NOAA Ship *Oregon II* Cruise R2-13-04 (305)

I. Overview

- A. Project Period: July 26 to September 29, 2013
- B. Service Level Agreement: Of the 60 DAS scheduled for this project, 60 are funded by the program.
- C. Operating Area: The U.S. Atlantic from Cape Hatteras, NC (35.15 N) to West Palm Beach, FL (26.40 N), and the U.S. northern Gulf of Mexico (GOM) from southwest Florida (25 N) to Brownsville, TX (26 N) (Figure 1.)

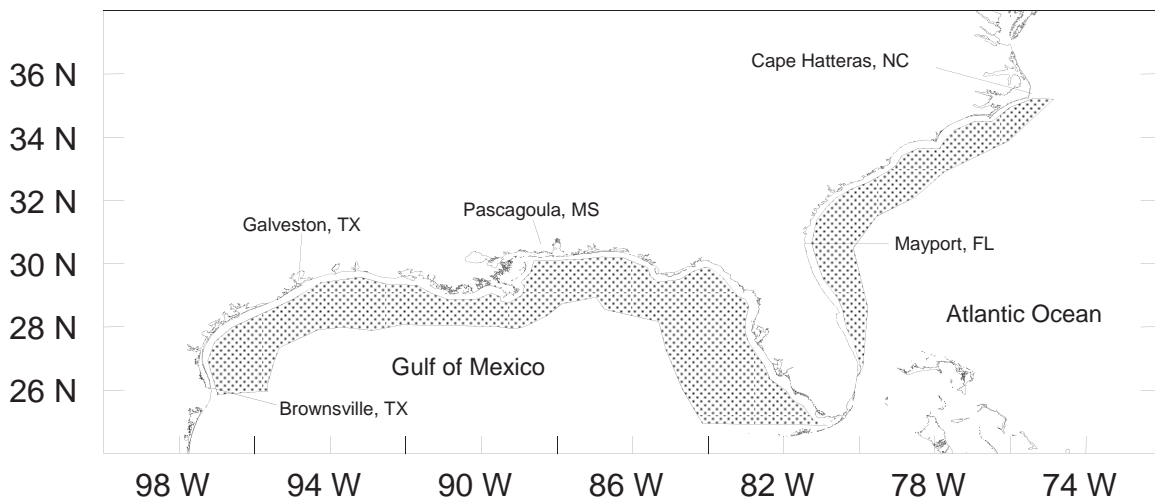


Figure 1. Survey area for bottom longline cruise, NOAA Ship *Oregon II* (Atlantic Ocean and northern Gulf of Mexico), cruise R2-13-04(305)

- D. Summary of Objectives:
1. Sample the U.S. Atlantic and northern GOM for data concerning the distribution and abundance of shark and red snapper populations in order to aid in stock assessments.
 2. Collect morphological measurements and biological samples to facilitate life history studies.
 3. Provide tagging opportunities for coastal teleosts and sharks.
 4. Conduct CTD casts to profile water column temperature, salinity, conductivity, transmissivity, dissolved oxygen concentrations and fluorometry.
- E. Participating Institutions:
1. NOAA Fisheries Service, Mississippi Laboratories
 2. NOAA Fisheries Service, Panama City Laboratory
 3. University of South Alabama
 4. Xavier University
 5. Texas State Parks and Wildlife
- F. Scientific Party (other participant names will be made available prior to the survey):

LEG I (July 26 – August 8, 2013)

<u>Name</u>	<u>Title</u>	<u>Affiliation</u>	<u>Gender</u>	<u>Nationality</u>
Kristin Hannan	FPC	IAP/NMFS/MS Labs	F	U.S.
Lisa Jones		NMFS/MS Labs	F	U.S.
Christian Jones		NMFS/MS Labs	M	U.S.
Michael Hendon		NMFS/MS Labs	M	U.S.

LEG II (August 10 – August 25, 2013)

<u>Name</u>	<u>Title</u>	<u>Affiliation</u>	<u>Gender</u>	<u>Nationality</u>
Kristin Hannan	FPC	IAP/MS Labs	F	U.S.
Lisa Jones		NMFS/MS Labs	F	U.S.
Eric Hoffmayer		NMFS/MS Labs	M	U.S.
Amy Schmitt		IAP/MS Labs	F	U.S.

LEG III (August 30 - September 13, 2013)

<u>Name</u>	<u>Title</u>	<u>Affiliation</u>	<u>Gender</u>	<u>Nationality</u>
Kristin Hannan	FPC	IAP/MS Labs	F	U.S.
William Driggers		NMFS/MS Labs	M	U.S.
Lisa Jones		NMFS/MS Labs	F	U.S.
Amy Schmitt		IAP/MS Labs	F	U.S.

LEG IV (September 15 – September 29, 2013)

<u>Name</u>	<u>Title</u>	<u>Affiliation</u>	<u>Gender</u>	<u>Nationality</u>
Lisa Jones	FPC	NMFS/MS Labs	F	U.S.
William Driggers		NMFS/MS Labs	M	U.S.
Matt Campbell		NMFS/MS Labs	M	U.S.
Christian Jones		NMFS/MS Labs	M	U.S.

G. Administrative:

1. Points of Contact:

a) Field Party Chief: Lisa M Jones, MS Labs, 3209 Frederic St., Pascagoula, MS 39567, 228-549-1610, Lisa.M.Jones@noaa.gov (Legs 3 & 4)

Kristin Hannan, MS Labs, 3209 Frederic St., Pascagoula, MS 39567
228-549-1683, Kristin.Hannan@noaa.gov (Legs 1 & 2)

b) OPS Officer: LT Matt Griffin or Brian Adornato, NOAA Ship *Oregon II*, 151 Watts Ave, Pascagoula, MS 39567, (228) 762-6422,
OPS.Oregon@noaa.gov

2. Diplomatic Clearances: N/A

3. Licenses and Permits:

This project will be conducted under the following permits/licenses:

- a) HMS permit
- b) Southeast NMFS Regional Permit
- c) Sea Turtle permit
- d) North Carolina state permit
- e) South Carolina state permit
- f) Georgia state permit
- g) Florida state permit

- h) Alabama state permit
- i) Mississippi state permit
- j) Louisiana state permit
- k) Texas state permit

II. Operations

A. Project Itinerary:

<u>Leg</u>	<u>Dates</u>	<u>Location</u>	<u>Days</u>
I	July 26, 2013 August 8, 2013	Depart Pascagoula, MS Arrive Mayport Naval Station, Mayport, FL	14
II	August 10, 2013 August 25, 2013	Depart Mayport Naval Station, Mayport, FL Arrive Pascagoula, MS	16
III	August 30, 2013 September 13, 2013	Depart Pascagoula, MS Arrive Galveston, TX	15
IV	September 15, 2013 September 29, 2013	Depart Galveston, TX Arrive Pascagoula, MS	15

B. Staging and Destaging: Pascagoula/Pascagoula, MS

C. Operations to be conducted:

General: NOAA Ship *Oregon II* will depart Pascagoula, MS, on July 26, 2013, and steam to the U.S. Atlantic coast to begin survey operations offshore of West Palm Beach, FL. Operations will continue to work northward along the continental shelf to Cape Hatteras, NC, fishing in water depths from 9–186 m. After the Atlantic coast work is complete, survey operations will move into the GOM, starting in the Dry Tortugas, FL and continuing to Brownsville, TX, over the remaining 3 legs. Fishing will again be conducted along the continental shelf but in water depths from 9–366 m. The survey will require 24 h operations with 2 scientific watches; 12 am – 12pm, 12pm – 12am. Before departure, the FPC will provide pre-selected bottom longline stations to the ship; stations are randomly selected by stratified- random sampling with proportional allocation. Strata are defined by water depth with stratum size determined by continental shelf area within 60 n mi zones. The ship's OPS officer will determine the most efficient track for completing the specified stations. In some instances pre-selected stations may need to be moved and/or dropped to avoid obstacles (ex. shipping lanes, rigs), bad conditions (ex. high current, bottom features) or to make sure that sampling areas are adequately sampled in the allotted sea days/leg. In these cases the FPC, OOD and/or captain will work together to make decisions, striving to keep proportional allocation of stations.

Longline deployment: At each station, prior to deploying gear, it is requested that the ship monitor bottom topography and current to determine any potential problems with gear retrieval. If the bottom appears prohibitive or the current is too high for safe gear deployment, the FPC/watch leader can make the decision to either move the station within 0.5 n mi, or if suitable conditions are not found, to drop the station and continue to the next station. A drift test can be conducted prior to gear deployment to determine the best direction to set gear based on

oceanographic conditions; longline sets are best conducted into the wind or seas, generally at a speed of 4–5 kt.

Longline gear will consist of the following:

1. One (1) n mi of mainline (4mm diameter, 1000 lb test)
2. 2 highflyers
3. 3 weights (5-10kg)
4. 100 baited gangions, consisting of a snap, 3.7m of 3mm monofilament, and a #15/0 circle hook, baited with Atlantic mackerel (*Scomber scomberus*).

One nautical mile is defined as the distance between the first and last weights, with gangions attached to the mainline at relatively uniform distances determined by relaying 1/10 n mi intervals via radio from the bridge to the deck crew. Longline gear will soak for one hour, defined as the time from deployment of the last highflyer to retrieval of the first highflyer. We request that longline retrieval or haul back be conducted in the same direction as gear was deployed, starting retrieval with the first highflyer deployed. If the direction of the haul back needs to be changed due to weather conditions or gear complications, we request that the bridge notify the watch leader and notate the change in the bridge log.

Order of longline gear deployment:

1. The first highflyer is attached to the mainline and deployed.
2. As the vessel steams forward enough mainline is deployed to create a “buoy line” with at least a 3:1 mainline scope ratio based on the bottom depth. This ratio is to ensure gear will not be pulled up by the highflyer and will be fishing on the bottom. For deep water sets the ship’s GPS can be used to determine when an adequate amount of mainline has been deployed, otherwise line lengths are estimated by the gear set crew.
3. Once the correct amount of buoy line is deployed the first bottom weight is attached.
4. Fifty gangions are attached, followed by the mid-weight and then the remaining 50 gangions.
5. The final weight is attached and the buoy line for the last highflyer is created by deploying enough mainline for a 3:1 scope ratio.
6. The set is completed by cutting the mainline and attaching the final highflyer.

Longline Retrieval: During haul back all catch, when possible, will be brought on board and identified, measured, weighed, and released if not retained for specific sampling. In addition some animals, prior to release, will be tagged and/or have non-lethal samples taken. Landed organisms should be handled in a manner which will serve to minimize additional stress and harm. Retained specimens will be examined for identification clarification, tissue/hard parts sampling, and/or determination of sex/maturity state. To facilitate measurements of large sharks and teleosts, it is requested that the provided fish sling be deployed with the ship’s crane to bring animals up to the deck level to be sampled. If this is not possible we request that the haul back be paused so that captures can be brought alongside the vessel for identification, size estimation and if possible, tagging.

CTD casts: The CTD can be deployed before the set, during the soak, or after the haul back, though in most cases it will be conducted during the longline soak time after the vessel has moved back into position near the first highflyer. The CTD should be submerged at the surface to a depth that will minimize jerking due to wave action, and held at this depth for 3 min so the instrument package can equilibrate to ambient temperature. The unit will then be lowered at maximum winch rate to within 1 m of the bottom. It will then be retrieved to the surface, again at maximum rate, and returned on deck. At least once a week a water sample will be taken during a CTD cast. During these casts, the CTD protocol will be as described with the exception that the CTD unit will be held at depth for 1 min, a water sample collected, and then retrieved. This water

sample will be used to measure dissolved oxygen using the handheld HACH DO meter to check the accuracy of the CTD DO sensors.

Modification to field operations: FPC is authorized to alter the project instructions after consulting with the Commanding Officer. Sampling protocol may be altered by the FPC or Watch Leader in order to optimize survey effort.

D. Dive Plan – N/A

E. Applicable Restrictions – N/A

III. Equipment

A. Equipment and Capabilities Provided by the Ship:

1. Freezer space for frozen bait (175 boxes, 4100 lbs) and biological samples
2. Hydrographic winch for deploying CTD
3. 2 Seabird SBE-911+ CTD's
 - a. Both the primary and secondary CTD's should have the following suite of sensors (x2) installed and calibrated as recently as possible and not exceeding 365 days:
 - i. 1 Digiquartz depth sensor
 - ii. 1 SBE3 Premium Temperature sensors
 - iii. 1 SBE4 Conductivity sensors (items ii and iii connected with TC ducts)
 - iv. 1 SBE 43 Dissolved Oxygen sensors
 - v. 1 SBE5T pumps
 - vi. 1 Wetlabs C-star transmissometer
 - vii. 1 Wetlabs WetStar pumped fluorometer
 - viii. 1 "Y" air bleeder valve; should be checked to ensure it is not clogged
 - ix. Proper plumbing with tubing checked to ensure it meets Seabird's recommended method, is free from cracks and holes, and has proper red end caps for storage during transit times
4. Forward deck crane
5. Hydraulic hoses, connectors and controller valve to operate longline reel
6. SCS version 4.5.1.1063, with data ports at starboard cutaway deck and stern, or, preferably, working WiFi
7. Hand-held radios for communication between the bridge, deck and scientific party

B. Equipment and Capabilities Provided by the Scientists:

1. 2 longline reels with 1000 lb test (4 mm) mainline
2. Independent hydraulic unit with power box, hoses and controller valve
3. 1-25 lb spool of mainline (1000 lb test, 4 mm)
4. 1-25lb spool of gangion monofilament (3 mm)
5. 9 longline weights
6. 4 inflatable polyball floats with tethers
7. 6 extendable highflyer buoys
8. 3 hook tubs
9. Tackle box
 - a. 1000, #15/0 non-offset circle hooks (type Mustad #39960D)
 - b. 250 Gangion snaps 148-8/0 swivel
 - c. crimps/sleeves for gangions (Momoi A- 3.5 ID single Al)
 - d. 3 crimpers
 - e. 4 monofilament blocks

- f. reflective tape
- g. strobes and batteries for highflyers
- 10. Stern deck sampling tables
- 11. Forward deck box with lid
- 12. Fish landing sling and remote electronic dynamometer
- 13. Turtle release kit and dip nets
- 14. 2 extendable tagging poles
- 15. 2 extendable line cutters
- 16. Biological sampling equipment
 - a. chisels
 - b. dykes
 - c. knives
 - d. biopsy punches
 - e. hypodermic needles (for blood)
 - f. centrifuge
- 17. 4100 lbs frozen bait (Atlantic mackerel, *Scomber scomberus*)
- 18. Deck bait box (for defrosting)
- 19. Weatherproof laptop computers
- 20. Handheld Orion 3 star D.O. meter and equipment box
- 21. Small plankton net
- 22. 55 gal, Ethanol
- 23. 10 gal, Formalin
- 24. 5 gal, Triton ® X-100

IV. Hazardous Materials

A. Policy and Compliance:

The FPC 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 FPC.

B. Radioactive Isotopes: N/A

C. Inventory

- 1. 55 gal Ethanol
- 2. 10 gal Formalin
- 3. 5 gal concentrated Triton ® X-100

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: It is requested that the bridge maintain a hard copy log with station information (station number, location, depth for 1st/last highflyer deployed and retrieved) in the event information is lost or missing from SCS longline events. At the start of each leg it is asked that the ship's ET Department start two (2) socket send messages from SCS ("LL_Pri.ssm" and "LL_WXData.ssm"), as the program SELLIT requires these to pull information from SCS, and left up for the duration of the leg. Documentation on how to run Socket Send Messages is contained in the SCS Documentation. It is also requested that at the end of each survey leg that the ship's ET Department provide the FPC with copies of SCS folders, "EventData" and SCS "Datalog", as well as the raw data files associated with the SBE 9-11 CTD casts on CD or DVD. The ET Department is also asked to collect and archive the SCS "Datalog" in the following manner:
1. The contents of the Primary SCS "EventData" folder be emptied prior to the start of the survey but not be erased between legs of the survey. All other "Datalog" folders should be emptied in accordance to the guideline specified in the SCS Documentation.
 2. The Automatic Logger Control on the Logger Control form of SCS should be set to "Enable Logging for Auto Start/Stop" each time acquisition (ACQ) is started. The time value should be set to the default of 0 Hours, 0 Minutes, 0 Seconds GMT.
 3. The raw data files, *.RAW in the "Datalog" folder may be deleted between legs if space for logging is needed provided the data have been backed up to CD.
 4. The entire "Datalog" should be backed up to the Backup SCS server for the duration of the cruise at least once per hour. Prior to sailing, the current SCS software on the primary SCS server will be mirrored on the backup SCS server. Thus, the same version of the executables for SCS along with all templates, events, real-time displays, gauges, and sensor.scf configuration files should be present on the Backup SCS server in the event of a Primary SCS system failure.
 5. Prior to sailing, the lab's Shipboard Systems Specialist will be provided with copies of all calibration data for each sensor installed on the ship associated with the primary and secondary SBE 9-11 profiler.

The FPC is responsible for submission of a ROSCOP II form (NOAA, Form 2423) to the National Oceanographic Data Center within 30 days after cruise termination.

- B. Pre and Post Cruise Meeting Pre-Cruise Meeting:
1. **Pre-Cruise meeting**: The FPC, Operations Officer and Commanding Officer will have a pre-cruise meeting regarding performance metrics and tracking prior to the start of R2-13-04. On the ship prior to departure, the FPC will conduct a meeting of the scientific party to train them in sample collection and inform them of cruise objectives. Safety information and other vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship's Operations Officer.
 2. **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 FPC 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 FPC. 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 up to 12 scientists. Meals will be served 3 times daily, for the duration of the each survey leg, beginning 1 hour before scheduled departure, and ending 2 hours after the termination of each leg. 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 7 days prior to the survey.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the FPC. The FPC 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 ship is responsible for ensuring that scientific party berthing is clean and in order at the beginning of the survey and that adequate storage is provided for the stowing of personal effects. The FPC is responsible for ensuring the scientific berthing spaces are returned in a condition which meets or exceeds that 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 cruise 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 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: 02 JAN 2012) 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>. 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

Prior to departure, the FPC must provide a listing of emergency contacts to the Executive 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) outside of private berthing areas is not permitted. 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.
- 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 modes of communication, 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 vessels 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 *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.
 - 4. 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: N/A