



**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

March 13, 2017

MEMORANDUM FOR: Captain Donn Pratt, NOAA  
Master, NOAA Ship *Nancy Foster*

FROM: Captain Scott M. Sirois, NOAA  
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for NF-17-02  
Mapping Essential Fish habitat in the US Caribbean to inform MPA  
Management

Attached is the final Project Instruction for NF-17-02, Mapping Essential Fish habitat in the US Caribbean to inform MPA Management Project, which is scheduled aboard NOAA Ship *Nancy Foster* during the period of March 29 to April 9, 2017. Of the 12 DAS scheduled for this project, 14 days are funded by a Line Office Allocation. This project is estimated to exhibit a Medium Operational Tempo. Acknowledge receipt of these instructions via e-mail to [OpsMgr.MOA@noaa.gov](mailto:OpsMgr.MOA@noaa.gov) at Marine Operations Center-Atlantic.





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
National Centers for Coastal Ocean Science  
Silver Spring, Maryland 20910

### FINAL Project Instructions

FEB 28 2017

Date Submitted:

Platform: NOAA Ship *Nancy Foster*

Project Number: NF-17-02 (OMAO)

Project Title: Mapping Essential Fish habitat in the US Caribbean to Inform MPA Management

Project Dates: March 29, 2017 to April 9, 2017

Prepared by:

T.A. Battista

Dated:

2/22/17

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Approved by:

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Dated:

2/22/2017

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Dated:

02/28/17

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Scott M. Sirois

Dated:

3/22/17

Captain Scott M. Sirois, NOAA  
Commanding Officer  
Marine Operations Center - Atlantic



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## I. Overview

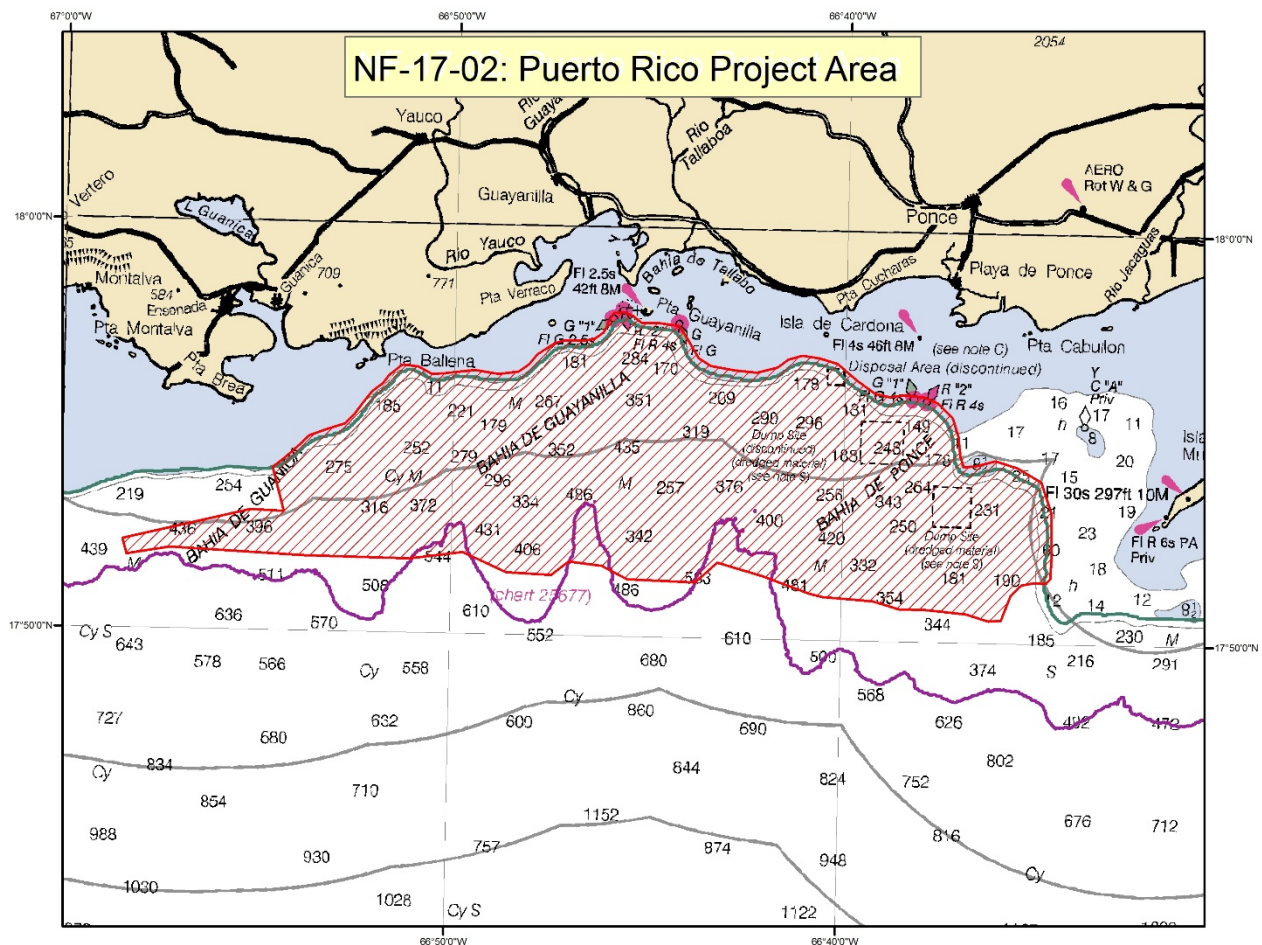
### A. Brief Summary and Project Period

The Center for Coastal Monitoring and Assessment (CCMA) will be conducting the twelfth year of an ongoing scientific research mission onboard NOAA Ship *Nancy Foster* funded by NOAA's Coral Reef Conservation Program. The purpose of the cruise will be to collect swath bathymetry, acoustical backscatter, ROV optical validation, fishery acoustics, and Slocum Glider deployments within coastal waters of Puerto Rico.

### B. Days at Sea (DAS)

Of the 12 DAS scheduled for this project, 0 DAS are funded by an OMAO allocation, 14 DAS are funded by a Line Office Allocation, 0 DAS are Program Funded, and 0 DAS are Other Agency funded. This project is estimated to exhibit a Medium Operational Tempo.

### C. Operating Area



D. Summary of Objectives

Scientists will collect high resolution multibeam and acoustic fisheries data in mid-water depths *approximately* 10 to 1,500 meters so as to continue to characterize seafloor habitats within all U.S. States, Territories, and Commonwealths. The objective of this project is to collect a multibeam bathymetry dataset with 100% seafloor ensonification, along with multibeam backscatter suitable for seafloor characterization. Fishery acoustics data will be collected to characterize broad-scale fish abundance, biomass, and utilization patterns, as well as to locate and document fish spawning aggregations. Multibeam data will be collected to conform to IHO Order 1 (<100m) and Order 2 (>100m) accuracy standards. The strategies developed for each survey area will take into account the minimum depths, general bathymetry, and time allotment. The delineation and identification of seafloor habitats will be assisted by the use of a moderate-depth Remotely Operated Vehicle (ROV). The vehicle has video and frame camera capability to depths of 300 meters and will be used for transect sampling within areas mapped during this mission.

E. Participating Institutions

NOAA (NCCOS, OCS, OCM), University of North Carolina at Wilmington-NURC, Solmar Hydro, and students from academic institutions.

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

| Name (Last, First) | Title         | Date Aboard | Date Disembark | Gender | Affiliation | Nationality             |
|--------------------|---------------|-------------|----------------|--------|-------------|-------------------------|
| Battista, Tim      | Oceanographer | 3/27/17     | 4/10/17        | Male   | NOAA        | U.S.                    |
| Ebert, Eric        | Fishery Sci   | 3/28/17     | 4/10/17        | Male   | NOAA        | U.S.                    |
| Guthrie, Brendan   | Student       | 3/28/17     | 4/10/17        | Male   | Student     | U.S.                    |
| Horn, Lance        | ROV Operator  | 3/27/17     | 4/10/17        | Male   | Contractor  | U.S.                    |
| Husted, Rachel     | Physical Sci. | 3/27/17     | 4/10/17        | Female | NOAA        | U.S.                    |
| Ligon, Alex        | Physical Sci. | 3/28/17     | 4/10/17        | Male   | NOAA        | U.S.                    |
| Mabrouk, Ayman     | Physical Sci. | 3/28/17     | 4/10/17        | Male   | NOAA        | Egypt                   |
| Sautter, Will      | Physical Sci. | 3/28/17     | 4/10/17        | Male   | NOAA        | U.S.                    |
| Scott, Alec        | Student       | 3/28/17     | 4/10/17        | Male   | Student     | U.S.                    |
| Stecher, Mike      | Hydrographer  | 3/28/17     | 4/10/17        | Male   | Contractor  | U.S.                    |
| Taylor, Chris      | Fishery Sci   | 3/28/17     | 4/10/17        | Male   | NOAA        | U.S.                    |
| Wagner, Daniel     | Biologist     | 3/28/17     | 4/10/17        | Male   | NOAA        | Germany<br>(green-card) |
| White, Jason       | ROV Operator  | 3/27/17     | 4/10/17        | Male   | Contractor  | U.S.                    |

G. Administrative

1. Points of Contacts:

Chief Scientist, Tim Battista, 1305 East West Hwy, Silver Spring, MD 20910,  
240-533-0379, tim.battista@noaa.gov

*Nancy Foster* Operations Officer, LT Linh Nguyen, 1050 Register St., North Charleston, SC 29405, 843-991-6326, ops.nancy.foster@noaa.gov

NAVO Glider Operations, Jerry Townsend, N633 Physical Oceanography Support Branch Bldg 1032 RM 1032 Stennis Space Center, MS 39522-5001, 228-688-5439, jerry.townsend@navy.mil

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

None Required.

## **II. Operations**

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

A. Project Itinerary

Actual survey and ground truthing locations will be made available to the Operations Officer during the daily operations meeting. Fisheries acoustics via the Simrad EK60 Suite will occur during all shifts (MBES Survey and Ground Truthing). Glider deployment and retrieval locations will be determined in consultation with Operations Officer. \*Standby ROV operations are defined as - the deployment of the ROV at any time during the time noted in Section II.C with advanced (24 hours) communication of intention and approval from the ship Command. Standby operations could include day and night time ROV deployment, operations, and recovery. ROV operations during standby are intended to provide visual observations of fish aggregations if and when detected during fishery acoustic surveys.

B. Staging and Destaging

ROV and AUV gear will have been loaded on the vessel in Charleston before departing for Puerto Rico (07MAR2017). ROV equipment will be offloaded 10APR2017 in San Juan, PR.

C. Operations to be Conducted

**27 March (Monday)**

Arrival Day

**28 March (Tuesday)**

Staging day

**29 March (Wednesday)**

*Transit* (0900-1000) - Transit to Puerto Rico operation area (PR).

*Survey* (1000-2400) - MBES and Fishery Acoustics (FA) PR area.

**30 March (Thursday) to 7 April (Friday)**

*Survey* (2400-0800) - MBES and FA PR area.

*GT* (0800-1600) - Conduct ground truthing of PR with ROV.

*Survey* (1600-2400) - MBES and FA PR area.

\* Additional, targeted fish acoustic surveys and ROV dives may be conducted on any day or time during this duration. Ship command and ROV operators will be provided sufficient advanced planning as to when ROV should remain in “standby” mode and prepared to conduct additional dives. It is possible these additional dives may occur during low-light or darkness conditions.

**8 April (Saturday)**

*Survey* (2400-0800) - MBES and FA PR area.

*GT* (0800-1600) - Conduct ground truthing of PR with ROV.

*Survey* (1600-2400) - MBES and FA PR area.

*Transit* (2100-2400) - Transit to San Juan, PR.

**9 April (Sunday)**

*Transit* (2400-1200) - Transit to San Juan, PR.

**10 April (Monday)**

Destaging/Destaging Day

D. Dive Plan

Dives are not planned for this project.

E. Applicable Restrictions

Conditions which preclude normal operations:

Equipment failure - Mitigation, at sea repair, switch to alternate multibeam or operations.

Poor weather - Mitigation, switch to more protected area or suspend operations.

Safety concerns - Mitigation, discuss at daily safety briefing or with ship command.

**III. Equipment**

A. Equipment and Capabilities provided by the ship (itemized)

1. Hand held radios for communication between bridge and deck.
2. uCTD, and deployable CTD's 2000m (SBE 19).

3. EM 710 and Reson Seabat 7125 Multibeam, and Kongsberg Split-beam EK-60.
  4. Dynamic Positioning System.
- B. Equipment and Capabilities provided by the scientists (itemized)
1. Mohawk ROV.
  2. USBL Underwater tracking system and hydrophone pole.
  3. Five high end laptops or processing computers.
  4. CARIS, ArcGIS, Hypack/Hysweep, and FMGT software.

#### **IV. Hazardous Materials**

A. Policy and Compliance

No Hazardous Materials are being brought aboard the ship for this project.

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 (Section *Under Development* by OMAO)

1. OMAO Data
2. Program Data

B. Responsibilities (Section *Under Development* by OMAO)

We request that the Ship’s data storage be made available during the cruise to store all digital data multibeam and project planning files(~ 3 TB). The science party will transfer

that data from the Ship storage to scientist drives during the mid-cruise in-port and at the end of the cruise. The scientists will be responsible for providing data archives to NGDC and AHB as part of R2R within 12 months of the completion of the cruise. In order for this to be accomplished five scientist Government computers will need network access to the ship's data storage device so that the data can be moved from the acquisition computer to storage, and subsequently accessed by other Government computers tasked with data post-processing. The Chief Scientist will be provided a Full Local Administrative account for each of these computers to assist the Ship's ET in adding them to the Ship's network.

## **VII. Meetings, Vessel Familiarization, and Project Evaluations**

### **A. Pre-Project Meeting**

The Chief Scientist and Commanding Officer 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 Chief Scientist in arranging this meeting.

### **B. Vessel Familiarization Meeting**

The Commanding Officer 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 Commanding Officer is responsible for conducted a meeting no earlier than 24 hrs before or 7 days after the completion of a project to discuss the overall success and shortcomings 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, the Chief Scientist, and members of the scientific party and is normally arranged by the Operations Officer and Chief Scientist.

### **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.oma.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 Chief Scientist. The Chief Scientist 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 Chief Scientist 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 Chief Scientist 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 Chief Scientist will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Chief Scientist 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 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](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](mailto: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  
Email [MOA.Health.Services@noaa.gov](mailto:MOA.Health.Services@noaa.gov)

Prior to departure, the Chief Scientist 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 CO, safety shoes (i.e., steel or composite toe protection) may be required to

participate in 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 Chief Scientist to ensure members of the scientific party report aboard with the proper attire.

D. Communications

A progress report on operations prepared by the Chief Scientist may be relayed to the program office. Sometimes it is necessary for the Chief Scientist to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Chief Scientist. 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 email 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 through the ship's Commanding Officer 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

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 (FNRS) 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 Line Office Deemed Export point of contact to assist with the process.

Full compliance with NAO 207-12 is required.

Responsibilities of the Chief Scientist:

1. Provide the Commanding Officer with the email generated by the Servicing Security Office granting approval for the foreign national guest's visit (For NMFS-sponsored guests, this email will be transmitted by FNRS). This email will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
2. The Chief Scientist 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 Security Office.
4. Ensure that approved export controls are in place for any technologies that are subject to Export Administration Regulations (EAR).

The Commanding Officer and the Chief Scientist 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 approval from the Director of the Office of Marine and Aviation Operations 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 Chief Scientist or the DSN of the FNRS or Servicing Security Office email 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 project, provide the Chief Scientist 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 Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Chief Scientist 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 Security Office.

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 and a 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).

## **VIII. Appendices**

None.

