



**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

September 23, 2016

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-16-08  
VIIRS Ocean Color Cal/Val Cruise

Attached is the final Project Instruction for NF-16-08 VIIRS Ocean Color Cal/Val Cruise, which is scheduled aboard NOAA Ship *Nancy Foster* during the period of October 3 to October 21, 2016. Of the 14 DAS scheduled for this project, 14 days are funded by an OMAO 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 ENVIRONMENTAL SATELLITE, DATA  
AND INFORMATION SERVICE

College Park, MD 20740

*Final BS*  
~~Draft~~ Project Instructions

**Date Submitted:** Initial draft: 1 August 2016 ; Rev 8 September 2016

**Platform:** NOAA Ship *Nancy Foster*

**Project Number:** NF-16-08 (OMAO)  
VIIRS\_OC\_03 (NESDIS/STAR/JPSS)

**Project Title:** VIIRS Ocean Color Cal/Val Cruise

**Project Dates:** October 03, 2016 to October 21, 2016

Prepared by: *MO* Dated: *9/15/16*  
Michael Ondrusek, Chief Scientist  
Affiliation (Program or Lab): NOAA/NESDIS/STAR

Approved by: *for Menghua Wang* Dated: *Sept 15, 2016*  
Program Director Name: Menghua Wang  
Title: MEBC Branch Chief, Affiliation (Program or Lab): NOAA/NESDIS/STAR

Approved by: *MB* Dated: *9/15/16*  
Lab Director Name: Michael Kalb  
Title: Acting Director, Center for Satellite Applications and Research  
Affiliation (Program or Lab): NOAA/NESDIS/STAR

Approved by: *SS* Dated: *9/23/16*  
Captain Scott M. Sirois, NOAA  
Commanding Officer  
Marine Operations Center - Atlantic



## I. Overview

### A. Brief Summary and Project Period

The purpose of this cruise is to collect in situ optical data for validation of JPSS VIIRS satellite ocean color radiometry and derived products. Project period is 3 to 21 October, 2016. This 18 day period includes 4 days staging and 14 days at sea.

### B. Days at Sea (DAS)

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

### C. Operating Area (include optional map/figure showing op area)

Western Atlantic along the U.S. Southeastern Coast, cross-shelf, through Gulf Stream, out to blue water. Operations will also be conducted in Bahamian Waters centered around the Grand Bahamas and in the Tongue of the Ocean. Plan includes sampling transient features present in the region at the time of the cruise. Cruise begins and ends in Charleston, SC, US. Tentative waypoints (Table 1) and cruise track (Fig. 1) are shown below. Cruise track will be adjusted to maximize characterization of processes and features present during time of cruise. In addition, one of the issues with our work is that we need cloud free skies to maximize our work. We will be working with the crew in making adjustments to the cruise track daily.

Table 1: Tentative stations, waypoints.

FOSTER 2016 Oct 5- 19

Bottom measurements					
station	latitude	Longitude	station	lat	Long
1	32.534967°	-79.897084°			
2	31.281526°	-80.850658°			
3	30.803946°	-79.393492°			
4	30.486655°	-78.181939°			
5	29.689195°	-75.781805°			
6	28.992935°	-75.568653°			
7	27.689149°	-75.516492°			
8	26.329551°	-76.504354°			
9	23.989345°	-77.244371°	9A	23.981430°	-77.129643°
10	23.639742°	-76.923760°			
11	23.734319°	-77.284803°	11A	23.785471°	-77.465690°
12	25.386884°	-77.651326°	12A	25.436698°	-77.772478°
13	26.088304°	-78.474551°	13A	25.784586°	-78.573697°
14	27.377462°	-79.330715°	14A	27.217034°	-78.988267°
15	27.986363°	-79.007308°			

16	31.471779°	-76.951709°			
17	31.940558°	-77.764498°			
18	32.459112°	-78.754317°			



Figure 1. Tentative cruise track as of 1 August 2016.

#### D. Summary of Objectives

Observe and measure inherent and apparent optical properties of water masses for three primary objectives: 1) JPSS VIIRS ocean color satellite validation; 2) Inter-calibration and inter-comparison of validation techniques and measurements; and 3) optical characterization of ocean variability (i.e. coastal, near-shore, cross-shelf, eddies, fronts, filaments, blue water).

#### E. Participating Institutions (with abbreviations for use in part F chart).

NOAA/NESDIS/STAR (NOAA)

University of Southern Mississippi (USM)

Naval Research Laboratory, Stennis Space Center (NRL)

University of Massachusetts, Boston (UMB)

University of South Florida (USF)

City University of New York, Long Island; CREST (CCNY)

Oregon State University (OSU)

Lamont-Doherty Earth Observatory, Columbia University (LDEO)

Harbor Branch Oceanographic Institute (HBOI)

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

	<b>Name (Last, First)</b>	<b>Title</b>	<b>Date Aboard</b>	<b>Date Disembark</b>	<b>Gender</b>	<b>Affiliation</b>	<b>Nationality</b>
1	Arnone, Robert	Professor	03 Oct 2016	21 Oct 2016	M	USM & NRL- Stennis	USA
2	GOES Joaquim	Researcher	03 Oct 2016	21 Oct 2016	M	IDEO	USA
3	Goode, Wesley	Researcher	03 Oct 2016	21 Oct 2016	M	NRL	USA
4	el Habashi, Ahmed	PhD Student	03 Oct 2016	21 Oct 2016	M	CCNY	USA
5	Ladner, Sherwin	Researcher	03 Oct 2016	21 Oct 2016	M	NRL	USA
6	Lalovic, Ivan	Researcher	3-Oct-16	21-Oct-16	M	OSU	USA (Naturalized)
7	Lin, Junfang	PostDoc	03 Oct 2016	21 Oct 2016	M	UMB	China
8	Ondrusek, Michael	Chief Scientist	03 Oct 2016	21 Oct 2016	M	NOAA	USA
9	Ottaviani, Matteo	Researcher	03 Oct 2016	21 Oct 2016	M	CCNY	Italy, US permanent resident, green card
10	Stengel, Eric	Researcher	03 Oct 2016	21 Oct 2016	M	NOAA	USA
11	Sun,	Researcher	3-Oct-16	21-Oct-16	M	USF	USA



	Shaojie	r					
12	Stockley, Nicole	Researcher	3-Oct-16	21-Oct-16	F	HBOI	USA
13	Ziffoli, Laura	PostDoc	3-Oct-16	21-Oct-16	F	UMB	Argentina
14							
15							

## **G. Administrative**

### **1. Points of Contacts:**

Chief Scientist:

Michael Ondrusek

[Michael.ondrusek@noaa.gov](mailto:Michael.ondrusek@noaa.gov)

Office telephone: 301-683-3374

Alternate telephone: Cell: 202-230-2405

Room #3742 NCWCP

MEBC Branch Chief:

Menghua Wang

[Menghua.wang@noaa.gov](mailto:Menghua.wang@noaa.gov)

Office telephone: 301-683-3325

Alternate telephone:

Room #3228 NCWCP

Alternate Contact:

Veronica Lance

[Veronica.lance@noaa.gov](mailto:Veronica.lance@noaa.gov)

Office telephone: 301-683-3319

Alternate telephone: Personal Cell: 609-805-1823

Room #3242 NCWCP

Mailing address for NCWCP:

5830 University Research Ct.

College Park, MD 20740

NOAA Ship *Nancy Foster* Operations Officer

LT Linh Nguyen

[Ops.nancy.foster@noaa.gov](mailto:Ops.nancy.foster@noaa.gov)

Ship cell: 843-991-6326

1050 Register St., North Charleston, SC 29405

### **2. Diplomatic Clearances**

This project involves Marine Scientific Research in waters under the jurisdiction of The Bahamas. The diplomatic clearance request was filed on July 29<sup>th</sup> with the help of Wendy Bradfield-Smith.

### **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:**

3 Oct. -5 Oct.. Load onto ship; secure equipment;  
5 –18 Oct. 14 days at Sea; Depart 0800 or as early as possible on 5 Oct. Stations during daylight hours; underway, flowthrough sampling at night.  
19-Oct.. Unload; disembark

**B. Staging and Destaging:**

- 1) We request normal ship's crane ops be available for assistance in loading onto and off of the ship; no unusually large or exceptionally heavy equipment (i.e. no equipment vans) is planned,
- 2) We request that the ship's seawater flowthrough system be clean and thoroughly flushed prior to cruise. The ship's normal protocol described last year will be acceptable. "Our flow through piping is not cleaned with any chemical or mechanical means; it is teflon coated piping. We regularly flush the flow-through bath and instruments with fresh water after every project and routinely rinse the instruments with Triton."

**C. Operations to be Conducted:**

We will be conducting 3 to 10 optical stations per day during daylight hours. During each station we will be deploying multiple profiling, floating, and above-water optical sensors. In addition, the ships rosette will be deployed at each station for water column characterization and water collection. Between stations and at night, the ship will be collecting data underway through the flowthrough system. ADCP and meteorological observations will be collected throughout the cruise.

**D. Dive Plan**

Dives are not planned for this project.

**E. Applicable Restrictions**

Conditions which preclude normal operations:

Objective 1 in section I.D above, VIIRS Validation, requires clear sky conditions and sea conditions that permit deployment of instruments overboard. When possible, planned cruise tracks may be altered to reach clear sky conditions. In the event that clear sky conditions are not achievable, objectives 2 and 3 in section I.D. can still be pursued. In the event that conditions are too rough to deploy any instruments, we will sample from the ships flow through system while attempting to alter tracks to improve conditions.

**III. Equipment**

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



Wet lab with fresh water and sinks

Dry lab with power

Refrigerators and freezers for storing samples

Clean power for running electronic equipment

Oceanographic CTD Rosette package, well rinsed Niskin bottles (ship has 12 x 5L bottles, we will use this full setup) and standard ship's (calibrated, maintained) instruments. Pursuant to communications with ship, we understand that the "normal" instrumentation on the CTD package includes the following: (installed on the SBE-9: two temperature, two conductivity, two DO, one pH, one Seapoint SCF (chlorophyll), one Seapoint turbidity). We will require a profiling PAR sensor, which will be provided by "science" and can be added to one of the "science" optical packages.

Equipment and operator(s) to deploy CTD package and other over-the-side equipment packages. Access to flow-through seawater system for underway sampling with any inline (calibrated, data collection maintained) instruments Conductivity, pressure, temperature, PAR sensor, fluorometer, transmissometer, etc., exact details to be discussed with ship technician. We will plan to add instruments that the ship does not carry. NOTE: depending on the arrangement of the intake we may need to install a de-bubbler in the line. This is a detail to be discussed with ship.

Permission to mount 2 temporary masts in the forward/bow area for above water optical measurements. This equipment has been deployed on the *Nancy Foster* during the Nov. 2014 and Dec. 2015 cruise and worked well. Photographs available, exact details to be discussed with ship.

ADCP running, data collection maintained

Meteorological observations running, data collection maintained

Communications bandwidth to support daily downloads of satellite imagery estimated to be about 5-10 megabytes daily.

Small boat use for some shallow water optical measurements in the Bahamas. One boat will suffice. We will have 2 people on board with small equipment packages approximately the size of two coolers. All small operations will be daylight hours only. We plan on two days of small boat ops but there is an option for a third in the waypoint schedule (Station 14).

**B. Equipment and Capabilities provided by the scientists (itemized).**

**Instruments by deployment mode**

**Floating optical packages – tethered buoys**

HTSRB

SBA

fiber optic hyper OCR

NURADS

**above water (on deck)**

ASD

GER  
HyperSAS  
Spectral Evolution

**Profiling optical packages (over the side)**

Hyperpros (4, intercomparisons)  
AC9  
Backscatter/Fluorometer  
FRRF  
C- OPS and BB7  
BB9 and DH4

**Water samples/Rosette Collection/Lab Processing**

Filtration Rigs (3)  
Benchtop fluorometer  
Benchtop CDOM waveguide  
Benchtop FRRF

**Flow Through (in line instruments)**

AC9 (2 – 1xfiltered; 1x unfiltered)  
Fluorometer  
ACS  
ALF  
Flow Cam  
De-bubblers will be needed  
LSST

**Atmospheric (on deck)**

Microtops  
Above water PAR sensor  
Other optical reference sensors on bow-mounted mast

**Other**

DI-water system for instrument calibrations

**IV. Hazardous Materials**

**A. Policy and Compliance**

The Chief Scientist is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO

procedure that supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and quantity, MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and chemical safety and spill response procedures. . Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

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

- List of chemicals by name with anticipated quantity
- List of spill response materials, including neutralizing agents, buffers, and absorbents
- Chemical safety and spill response procedures, such as excerpts of the program's Chemical Hygiene Plan or SOPs relevant for shipboard laboratories
- For bulk quantities of chemicals in excess of 50 gallons total or in containers larger than 10 gallons each, notify ship's Operations Officer regarding quantity, packaging and chemical to verify safe stowage is available as soon as chemical quantities are known.

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

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

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

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

#### B. Inventory

Common Name of Material	Qty	Notes	Trained Individual	Spill control
Acetone (90%)	4 x 4 l	Stored in Ships chemical locker with small amounts (~1L) in lab.	Michael Ondrusek	A
Lugol's Iodide solution	100ml		Joaquim Goes, Michael Ondrusek	B
Glutaraldehyde	100ml		Joaquim	C

			Goes, Michael Ondrusek	
Liquid Nitrogen	30-40L	~10l x 3 dewars	Michael Ondrusek	D

#### C. Chemical safety and spill response procedures

##### **A: Acetone 90%**

##### **Eye Contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

##### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

##### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

##### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

##### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

##### **Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

##### **Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined

areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### **B. Glutaraldehyde 50%**

#### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

#### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

#### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

#### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

#### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

#### **Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

#### **Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** n/a (100 ml)

### **C: Lugol's Iodine Solution**

#### **First Aid**

##### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 on MSDS

Indication of any immediate medical attention and special treatment needed

**Small spill**

: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** n/a (100ml)

**D. Liquid Nitrogen****INHALATION:**

Remove to fresh air.

If not breathing, give artificial respiration.

If breathing is difficult, qualified personnel may give oxygen.

Call a physician.

**SKIN CONTACT:**

For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C).

In case of massive exposure, remove clothing while showering with warm water. Call a physician.

**SWALLOWING:**

An unlikely route of exposure.

This product is a gas at normal temperature and pressure.

**EYE CONTACT:**

Immediately flush eyes thoroughly with warm water for at least 15 minutes.

Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly.

See a physician, preferably an ophthalmologist, immediately.

**NOTES TO PHYSICIAN:**

There is no specific antidote.

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**



**WARNING!**

Extremely cold liquid and gas under pressure.

Personal Precautions.

Asphyxiant.

Lack of oxygen can kill.

Evacuate all personnel from  
danger area

Use self-contained breathing apparatus  
and protective clothing  
where needed.

Liquid causes severe frostbite, a burn-like injury.

Shut off flow if you can do so without risk.

Avoid contact with spilled liquid and allow it to evaporate.

Ventilate area of leak or  
move container to a well-ventilated area.

Test for sufficient oxygen, especially in confined  
spaces, before allowing reentry.

Environmental Precautions.

Prevent waste from contaminating the surrounding environment.

Discard any product, residue, disposable container, or liner in an environmentally  
acceptable

manner, in full compliance with federal, state, and local regulations.

If necessary, call your local  
supplier for assistance.

**Inventory of Spill Kit supplies**

Product Name	Amount	Chemicals it is useful against	Amount it can clean up
n/a			

**D. Radioactive Materials**

No Radioactive Isotopes are planned for this project.

**V. Additional Projects****A. Supplementary ("Piggyback") Projects**

No Supplementary Projects are planned.

**B. NOAA Fleet Ancillary Projects**

No NOAA Fleet Ancillary Projects are planned.

## **VI. Disposition of Data and Reports**

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

### **A. Data Classifications: *Under Development***

#### **a. OMAO Data**

#### **b. Program Data**

### **B. Responsibilities: *Under Development***

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

A. **Pre-Project Meeting:** The 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 short comings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, 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 any work dealing with suspended loads, including CTD deployment and recovery. The ship does not provide safety-toed shoes/boots. The ship's Operations Officer should be consulted by the 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.

Foreign National access must be sought not only for access to the ship involved in the project but also for any Federal Facility access (NOAA Marine Operations Centers, NOAA port offices, USCG Bases) that foreign nationals might have to traverse to gain access to and from the ship. The following are basic requirements.

Full compliance with NAO 207-12 is required.

Foreign Guest Requests have been submitted through both NOAA and FLETC.

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. Escorts – 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. Export Control - Ensure that approved 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