



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: LCDR Lindsay Kurelja, NOAA
Commanding Officer, NOAA Ship *Gordon Gunter*

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



SUBJECT: Project Instruction for GU-17-03
GoMMAPPS – Summer 2017

Attached is the final Project Instruction for GU-17-03, GoMMAPPS – Summer 2017, which is scheduled aboard NOAA Ship *Gordon Gunter* during the period of July 1 – August 25, 2017. Of the 50 DAS scheduled for this project, 50 DAS are Program 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 at Marine Operations Center-Atlantic.




U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
75 Virginia Beach Drive
Key Biscayne, FL 33149

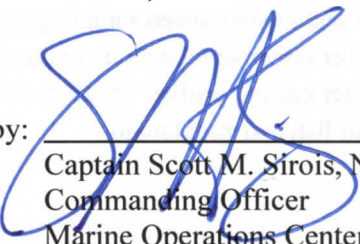

Project Instructions

Date Submitted: 05/29/2017
Platform: NOAA Ship GORDON GUNTER
Cruise Number: GUI7-03
Project Title: GoMMAPPS - Summer 2017
Cruise Dates: 07/02/2017  08/25/2017 

Prepared by: *Anthony Martinez*
Field Party Chief
Date: 06/01/2017

Approved by: BRAINERD.THEOPHIL Digitally signed by BRAINERD.THEOPHILUS R.DR.1365819285 Date: 2017.06.09 10:40:12 -0400
US.R.DR.1365819285
Lab Director
Date: _____ 

Approved by: BRAINERD.THEOPHIL Digitally signed by BRAINERD.THEOPHILUS R.DR.1365819285 Date: 2017.06.09 10:39:06 -0400
US.R.DR.1365819285
Dr. Bonnie Ponwith
Director, SEFSC
Date: _____ 

Approved by: 
Captain Scott M. Sirois, NOAA
Commanding Officer
Marine Operations Center - Atlantic
Date: 6/23/17 

I. Overview

A. Brief Summary and Project Period

The primary objective of this cruise will be to conduct a dual team visual and acoustic line transect survey of oceanic waters of the US Gulf of Mexico. The primary survey area will be conducted in waters 100 m and deeper, out to the US EEZ boundary in the Gulf of Mexico. Secondary objectives will include plankton sampling and active acoustic surveying during night hours, cetacean tissue biopsy sampling and the recovery and redeployment of deep water autonomous acoustic recorders. The project will commence in Miami, FL on 1 July 2017 and conclude in Pascagoula, MS on 25 August 2017. At least two full business days will be required immediately prior to and after the project period to MOB and DEMOB the project.

B. Days at Sea (DAS)

Of the 50 DAS scheduled for this project, 0 DAS are funded by an OMAO allocation, 50 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

Surveys will be conducted in the oceanic waters (> 100m) of the U.S. Gulf of Mexico along prescribed tracklines in a “double saw-tooth” configuration. A total of 7,480 km of survey effort are planned. Tracklines are nominally spaced at 120km and oriented to be perpendicular to bathymetry in four defined strata (Figure 1).

D. Summary of Objectives

1. Conduct dual team visual line transect surveys to estimate the abundance and spatial distribution of cetacean stocks in U.S. Gulf of Mexico waters
2. Conduct passive acoustic surveys simultaneous with visual surveys to provide supplemental information on cetacean abundance and spatial distribution
3. Collect tissue samples (biopsies) of select cetaceans from the bow of *Gordon Gunter* and in select cases from *R3* (scientific small boat).
4. Collect data on distribution and abundance of seabirds and other marine life
5. Collect plankton samples throughout the night using towed sampling equipment
6. Periodic collection of oceanographic and environmental data including scientific echosounders (EK60) and acoustic Doppler current profiler (ADCP) data to quantify acoustic backscatter due to small fish and zooplankton

7. Collect vertical profiles of hydrographic parameters (e.g., temperature, salinity, oxygen concentration) using CTD and XBTs
8. Deploy and recover acoustic drifter buoy
9. Recover and redeploy acoustic moorings

E. Participating Institutions

The Southeast Fisheries Science Center (SEFSC), Marine Mammal Program is the primary institution conducting this survey. This survey is funded through an interagency agreement (IA) with the U.S. Department of Interior, Bureau of Ocean Energy Management (BOEM) under the Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS) IA. GoMMAPPS is a collaboration between the SEFSC, USFWS, USGS, and BOEM.

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

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Martinez, Anthony	FPC	6/28/17	8/28/17	M	SEFSC	US
Wicker, Jesse	Observer	6/28/17	8/28/17	M	CIMAS	US
Dias, Laura	Observer	6/28/17	8/28/17	F	CIMAS	US
Maielo, Matthew	Observer	6/28/17	7/18/17	M	SEFSC	US
Ternus, Katrina	Observer	6/28/17	8/28/17	F	IAP	US
Soldevilla, Melissa	Observer	6/28/17	7/18/17	F	SEFSC	US
Privoznik, Sarah	Observer	6/28/17	7/18/17	F	CIMAS	US
Malca, Estrella	Observer	7/20//17	8/6/17	F	CMAS	US
Shiroza, Akihiro	Observer	8/8/17	8/26/17	M	CIMAS	JP
Srinivasan , Mridula	Observer	6/29/17	7/18/17	F	NOAA	US
Sinclair, Carrie	Observer	7/20/17	8/6/17	F	SEFSC	US
Ronje, Errol	Observer	8/8/17	8/25/17	M	IAP	US
TBA	Observer	6/29/17	8/26/17	X	USFWS	US
TBA	Observer	6/29/17	8/26/17	X	USFWS	US
TBA	Observer	6/29/17	8/26/17	X	IAP	US
TBA	Observer	6/29/17	8/26/17	X	IAP	US
TBA	Observer	6/29/17	8/26/17	X	IAP	US

TBA	Observer	6/29/17	8/26/17	X	IAP	US
TBA	Observer	6/29/17	8/26/17	X	IAP	US
TBA	Observer	6/29/17	8/26/17	X	IAP	US

G. Administrative

1. Points of Contacts

Field Party Chief

Anthony Martinez

SEFSC, Protected Resources and Biodiversity Division

Miami, FL

Email: Anthony.Martinez@noaa.gov

Phone: 305-323-4305

Program Manager

Dr. Jenny Litz

SEFSC, Protected Resources and Biodiversity Division

Miami, FL

Email: Jenny.Litz@noaa.gov

Phone: 305-361-4224/305-582-0371

Ship's Operations Officer

LTJG Elizabeth Mackie

NOAA Ship Gordon Gunter

151 Watts Ave

Pascagoula, MS 39567

Ops.gordon.gunter@noaa.gov

VOIP: 301-713-7784

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

This project will be conducted under the MMPA research permit #14450-04, issued by the National Marine Fisheries Service to Dr. Bonnie Ponwith of the Southeast Fisheries Science Center. The FPC is an authorized co-investigator under this permit.

II. Operations

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

A. Project Itinerary:

Date	Location	Days At Sea
DEP: 1 Jul 2017	Miami, FL	17
ARR: 17 Jul 2017	Pascagoula, MS	
DEP: 21 Jul 2017	Pascagoula, MS	16
ARR: 05 Aug 2016	Pascagoula, MS	
DEP: 09 Aug 2016	Pascagoula, MS	17
ARR: 25 Aug 2017	Pascagoula, MS	

B. Staging and De-staging:

The needed scientific equipment will be staged pierside in Miami, FL. Loading and setup will commence two business days prior to the departure, scheduled so that all systems will be in place and tested alongside prior to sailing. Engineering support may be required prior to sailing in order to make all relevant connections and perform system checks for the acoustics winch on the back deck after it has been loaded and secured. The ship’s ET will need to be available 48 hours prior to departure to facilitate the set-up of computers and other systems. De-staging of all scientific equipment will be completed within two days, not including the return day, after arrival in Pascagoula, MS. Staging and de-staging evolutions will require deck force support to operate the ship’s cranes during regular business hours on loading and off-loading days.

C. Operations to be conducted (including mitigation measures):

Visual Survey

The visual surveys for cetaceans will be conducted by two independent teams of observers, one stationed on the flying bridge and the other on the bridge wings, and will consist of two observers per team, using the 25x150mm “bigeye” binoculars. A central data recorder (the über) will record pertinent data for each team using the VisSurvey data acquisition program which will operate on a laptop. This central data collection computer, stationed in a designated lab space, will be connected to the ship’s network via ethernet cable. The computer should be given appropriate permissions on the network to allow it to receive Scientific Computing System (SCS) messages and send messages over the network. 120 volt (v), 12v (10 amp minimum) and two Ethernet connections are required at the uber station. Each external observer station will require 12v power of sufficient amperage to operate a standard marine type VHF radio. The observer teams and central recorder will communicate via radio. Observers may take photographs from the bow and other locations to document cetaceans sightings

Visual observers for seabirds will be stationed on the flying bridge as well.

Environmental Sampling

Environmental data will be collected from the suite of instruments integrated into the SCS, which will be in operation continuously after leaving port. The SCS system will be managed by the ship’s ET and a complete copy of these data will be provided to the FPC at the conclusion of each leg. The central data recorder stations in the bridge/lab will require both standard and customized SCS sentences over the ship’s computer network. These customized sentences have already been set up by SEFSC scientists on a previous cruise and should be sent over the network continuously throughout the survey. The continuous-flow thermosalinograph/fluorometer system will operate 24 h/day or at the discretion of the FPC. The ADCP and EK60 Scientific echosounder will be secured during daylight acoustic survey effort and the settings will be determined by the FPC. The ADCP and EK-60 will be operated at night during night transects. The data from these systems will be recorded directly to the individual systems hard drive and backed up to the ship’s network servers throughout the survey. The science party will then copy this data to portable hard disks at the conclusion of each leg. XBTs will be deployed overboard at select locations. The bridge will be notified prior to deployment of XBTs. At least one CTD cast (maximum depth 500m) will be conducted daily with the scheduled cast prior to deploying the towed acoustic array each day, operations allowing.

Possibly once during the survey, the Simrad EK60 will need to be calibrated. This operation involves suspending a metal sphere beneath the transducers. The sphere is attached to spectra

line suspended from down-rigger reels attached at three predetermined points on the vessel frame. The calibration operation will take place when there are both calm seas and limited current and wind. *Gunter* will essentially sit dead in the water (engines all-stop and MSD secured) for a period of 8-12 hours during the calibration period although there may be requests made by the calibration team to make heading changes during this time. The MSD system will need to be secured during the course of this evolution.

Biopsy Sampling

A variety of biopsy rifles, crossbows, and various dart heads will be used for collecting tissue samples from *Gunter's* bow or scientific small boat. A fiberglass (or similar non-corrosive material) storage box (deck box) of adequate size will be mounted on the foredeck in order to provide a weather resistant storage space on the bow for biopsy and attendant biopsy equipment. This will allow safe yet rapid access by biopsy personnel that have the appropriate training and experience and have been designated as such by the FPC. During biopsy collection from *Gunter's* bow, the vessel may be asked to turn/accelerate/decelerate to maintain contact with a targeted group of cetaceans. These communications will be directed by the flying bridge or biopsy personnel on the bow.

Biopsy tissue samples will be used for genetic analysis, stable isotope analysis, and contaminant analysis. Genetic samples will be stored in small vials of 20% DMSO at room temperature or in a refrigerator. Samples for stable isotopes must be stored at -20° C and those for contaminants must be stored at -80°C both shortly after collection and during the duration of the cruise. A liquid nitrogen storage tank may be carried on board *Gunter* to recharge a portable container for use aboard the scientific small boat for sample storage while away from *Gunter*. The small -80° C freezer stationed in the ship's lab and the -20° C chest freezer in the wet lab will be used for sample storage.

Scientific freezers are meant only for the storage of scientific samples. Any other items to be placed in these freezers will have to be approved by the FPC.

Plankton Sampling

The plankton sampling effort will utilize an adaptive sampling methodology dependent on the trackline completed each day. Operations will utilize a Neuston net, towed in a "yo-yo" pattern from the surface to 10m (referred to as "S10 net"). S10 tows will be performed using the ship's winch and the J-Frame. This winch should be spooled with .322 conducting cable and terminated with an electrical connection compatible with an SBE 39 temperature/pressure recorder. The associated block (non-metered) must have a shiv diameter large enough as to not damage the wire as it passes through the block under tension (this block should be mounted aft of the metered

CTD block). The SBE 39 temperature/pressure recorder will be furnished by the science party.

Small-boat Operations

To service various project objectives, scientific small boat operations may be requested. The FPC will provide *Gunter* a list of qualified Small Boat Operators (SBO's) along with their small boat credentials. We request the CO then issue a certification letter to those SBO's who are qualified to operate a small boat at sea from *Gunter*. No SBO will be allowed to operate a small boat from the ship without the approval by the CO. Small boat operations may be required at any time, usually during daylight hours. The FPC will communicate the need to launch the scientific small boat to the bridge at least 20 min prior to the intended launch. Prior to launching the small boat (*R3*), a safety brief will be conducted with at least the following personnel present: the CO and/or their designee, the Chief Bosun, the Operator In Charge (OIC), and the FPC to discuss the operations of the day. A debrief may be held with the same personnel at the end of the day to discuss the day's operations. Fueling of the small boat while at sea will be the ship's responsibility and will be carried out as requested or needed for the following day's operations.

The timing and location of small boat deployments will be variable and will depend upon weather conditions, the presence of cetaceans in the area, and other operational constraints. Generally, the scientific small boat will operate in the vicinity of cetaceans for several hours and may remain deployed for up to the safe working limits as defined by STCW regulations. *Gunter* may continue to engage in other facets of the mission or be tasked to support *R3*'s efforts. *R3* will operate some distance away from *Gunter* (mission dependent) but remain in contact via VHF radio and/or Iridium phone. All embarked scientists will adhere to NOAA small boat policy as applicable.

Passive Acoustic Monitoring

Acoustic monitoring will be conducted using a towed hydrophone array that will be towed 200-400m behind the vessel at depths of 10-100m below the surface. The array will interface with a suite of electronics inside the ship and scientists will monitor the array(s) at all times. Signal processing equipment, recording equipment and data collection computers will be stationed in the Dry Lab. A team of operators will rotate through watches to support acoustic monitoring. Data collection will be accomplished by a computer connected to the ship's network to allow it to both receive SCS signals and send messages over the network. Please note, operating astern propulsion while an array is in the water should only occur in cases of extreme emergency as there would be a great likelihood of destroying the array or having it foul the ship's screws. No fishing activities will be conducted during periods when a towed hydrophone array is deployed or when other scientific operations are occurring.

Sonobuoys will be deployed at select sites to monitor and localize low frequency emissions from whales. A pair of sonobuoy receiver antennas will be mounted on the ship's main mast along with pre-amps that will then transfer received sonobuoy data to the dry lab via coax cable. In the dry lab, signals will be monitored, recorded and interpreted. Clean 12-volt power will need to be ship supplied and installed 144 and 168 Mhz pre-amps located on the mast and coax cable runs from pre-amps to the lab spaces will be provided and installed by the ship. Tuned antenna and pre-amp installation will occur prior to departure.

Autonomous Acoustic Mooring Servicing

At least 2 autonomous acoustic moorings will be serviced during the cruise. These moorings are of the 'HARP' variety. We will depart Miami with a pair of freshly serviced HARPs that will then replace two exhausted HARPs in the western Dry Tortugas and DeSoto Canyon areas. The exhausted HARPs will be remotely released via an acoustic transponder and will be recovered aboard ship. The replacement HARPs will then be dropped in the same locations.

Mitigation Measure for Protected Species

HARP1 - 25° 32.360' N, 84° 37.743' W

HARP2 - 29° 02.865' N, 86° 05.875' W

The SEFSC will initiate a process for its FPC (Chief Scientist), Scientific Watch Leaders and vessel officers to communicate with each other about their experiences with protected species interactions during research work with the goal of improving decision-making regarding avoidance of adverse interactions. As noted in the Status Quo Alternative description of mitigation measures, there are many situations where professional judgment is used to decide the best course of action for avoiding protected species interactions before and during the time research gear is in the water. The intent of this mitigation measure would be to draw on the collective experience of people who have been making those decisions, provide a forum for the exchange of information about what went right and what went wrong, and try to determine if there are any rules-of-thumb or key factors to consider that would help in future decisions regarding avoidance practices. The SEFSC would coordinate not only among its staff but also with those from other fisheries science centers with similar experience.

The SEFSC deploys a wide variety of gear to sample the marine environment during all of their research cruises, such as towed hydrophone arrays, plankton nets, oceanographic sampling devices, video cameras, and ROVs. These types of gear are not considered to pose any risk to protected species because of their small size, slow deployment speeds, and/or structural details of the gear and are therefore not subject to specific mitigation measures. However, the officer on watch and crew monitor for any unusual circumstances that may arise at a sampling site and use their professional judgment and discretion to avoid any potential risks to protected species during deployment of all research equipment.

D. Dive Plan

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

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

E. Applicable Restrictions

Conditions which preclude normal operations: Foul weather, such as high winds and/or sea states, large swells (> 8'), lightning in close proximity, and/or approaching tropical systems may curtail or terminate operations for a period of time. The loss of key equipment (e.g., CTD winch) or illness among key personnel may also alter daily operational plans. Contingency actions will be developed by the FPC in conjunction with the CO.

III. Equipment

- A. Equipment and Capabilities provided by the ship (itemized)
 - 1. Bigeye mounting plates on deck of flying bridge and bridge wings.
 - 2. Mounts for pedestal chairs on flying bridge.
 - 3. 115v AC and 12v DC power to the flying bridge, bridge wings, main mast pre-amps and bow (for CCTV system)
 - 4. Weather-resistant workstation on the flying bridge at center observer position
 - 5. F1/F2 capable VHF radios in all lab spaces
 - 6. Flying bridge and bridge wing canopy
 - 7. R3 boat cradle and safe deployment & retrieval capability.
 - 8. Gasoline storage for small boats (> 100 gallons, optional)
 - 9. Flow through fluoro-thermosalinograph system
 - 10. Standard SCS configuration with custom SCS sentences
 - 11. Network connections for central data recorder & acoustic survey computers with link to SCS and in lab spaces.
 - 12. SCS slave monitor on flying bridge
 - 13. Decluttered Wet Lab, Dry Lab and Chem Lab spaces for scientific equipment setup and storage
 - 14. RDI Ocean Surveyor ADCP & equipment
 - 15. Scientific Echosounder (EK60) operational at 18 kHz, 38 kHz, 120 kHz, and 200 kHz frequencies

16. Functional XBT deployment and data acquisition system
17. Two networked computers in dry-lab for acoustic data collection, XBT data acquisition, and sighting data-entry support
18. -80°C Freezer (marine mammal program unit installed on *Gunter*)
19. Clean and unoccupied -20°C chest freezer in wet lab
20. Power connections for passive acoustic array winch on fantail

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

1. 25x 150 bigeye binoculars (5)
2. Adjustable bigeye stands (4 + spares)
3. Pedestal chairs
4. GPS receivers and antennas
5. Handheld VHF radios
6. Mounted VHF radio
7. Laptop computers for central recorder and acoustics
8. Camera and video equipment
9. Biopsy collection gear
10. Satellite tags and delivery equipment
11. 7-m chase boat (*R3*)
12. XBTs (12 boxes)
13. Acoustic recording equipment
14. Sonobuoys and receivers
15. Triton-X (1L)
16. Towed hydrophone array (multiple)
17. Computers and equipment required to monitor and record array signals
18. Winch or deployment/recovery reel for hydrophone array
19. Moored buoy recovery and deployment equipment
20. Two neuston frames
21. Two boxes/crates with three neuston nets
22. Four buckets for sample collection
23. Ten boxes of 12 units each of 16 oz. EMPTY glass jars w/ lids
24. Five boxes of 12 units each of 32 oz. EMPTY glass jars w/ lids
25. One 55 gallon drum of ethanol (HAZMAT)
26. Two overpacks for 55 gallon ethanol drums (with spill response kit)
27. One empty 55 gal. drum for disposal of waste ethanol
28. Two plastic 5 gal. carboy EMPTY
29. Two black plastic trunk with gear (3'x3'x5'), can be strapped on deck

30. Three Rubbermaid bins with equipment

IV. Hazardous Materials

A. Policy and Compliance

The FPC is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO procedure that supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and quantity, MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and chemical safety and spill response procedures. . Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

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

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

If the spill is severe enough to require a respirator the scientific party will act as support.
Overboard discharge of hazardous materials is not permitted aboard NOAA ships.

B. Chemical Inventory

Common Name of Material	Qty	Notes	Trained Individual	Spill control
Dimethyl Sulphoxide	200 x 5ml	Stored in chem lab	Laura Dias	I
Ethanol	2 x 2L, 1 x 55gal drum	Stored in ships chemical locker, drum stored in designated area on deck	Laura Dias	II

C. Chemical safety and spill response procedures

I: DMSO

- Personal Precautions: In case of mist formation use a respirator or Self-Contained Breathing Apparatus (SCBA) and gloves.
- Environmental Precautions: If a spill or leak occurs, immediately consult your environmental supervisor. Remove ignition sources. Ventilate the area. Do not breathe the vapor or get liquid in eyes or on skin/clothing.
- Spill Clean-up Methods: Dilute and flush to wastewater treatment or absorb with inert material.
- Recommended Decontamination Facilities: Eye bath, water washing facilities

II: Ethanol

- General: Use proper personal protective equipment (gloves, eye pro, respirator).
- Spills/Leaks: Absorb spill with inert material (e.g. sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

E. Inventory (itemized) of Radioactive Materials

Not applicable

V. Additional Projects

A. Supplementary (“Piggyback”) Projects

No Supplementary Projects are planned.

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

VI. Disposition of Data and Reports

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

A. Data Classifications: *Under Development*

a. OMAO Data

b. Program Data

B. Responsibilities: *Under Development*

VII. Meetings, Vessel Familiarization, and Project Evaluations

A. Pre-Project Meeting

The FPC and CO will conduct a meeting of pertinent members of the scientific party and ship’s crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all concerns. This meeting shall be conducted before the

beginning of the project with sufficient time to allow for preparation of the ship and project personnel. The ship's Operations Officer usually is delegated to assist the FPC in arranging this meeting.

B. Vessel Familiarization Meeting

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

C. Post-Project Meeting

The CO is responsible for 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 FPC, and members of the scientific party and is normally arranged by the Operations Officer and FPC.

D. Project Evaluation Report

Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the FPC. The form is available at <https://www.oma.noaa.gov/connect/oma-website-customer-satisfaction-survey> 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 three times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically

meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the project.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the FPC. The FPC and CO will work together on a detailed berthing plan to accommodate the gender mix and shift requirements of the scientific party taking into consideration the current makeup of the ship's complement. Every reasonable effort will be made to minimize or ideally, eliminate staterooms shared between ship's crew and the science party. The FPC is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The FPC is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship. The CO will ensure that all scientific berthing spaces and heads are tidy and sanitized prior to the arrival of the oncoming science party. The CO will also ensure project spaces and laboratories are clean, uncluttered and available for oncoming science gear. Public heads should be maintained in a sanitary and tidy state throughout the project period.

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

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

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, NF 57-10-01 (3-16)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the FPC or the NOAA website <http://www.corporateservices.noaa.gov/noaforms/eforms/nf57-10-01.pdf>.

All NHSQs submitted after March 1, 2014 must be accompanied by [Tuberculosis Screening Form](#) in compliance with [NOAA 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 four 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](#) .

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

Contact information:

Regional Director of Health Services
Marine Operations Center – Atlantic
439 W. York Street
Norfolk, VA 23510
Telephone 757-441-6320
Fax 757-441-3760
Email MOA.Health.Services@noaa.gov

Prior to departure, the FPC must provide an electronic listing of emergency contacts to the Executive Officer for all members of the scientific party, with the following information: contact name, address, relationship to member, and telephone number.

C. Shipboard Safety

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

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

D. Communications

A progress report on operations prepared by the FPC may be relayed to the program office. Sometimes it is necessary for the FPC to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the FPC. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via 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 FPC:

1. Provide the CO 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 FPC 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 CO and the FPC 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 CO:

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 FPC 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 FPC 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 FPC of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the FPC can take steps to prevent unlicensed export of Program controlled technology. The CO and the FPC 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

Figure 1. Depiction of proposed tracklines for GU17-03

