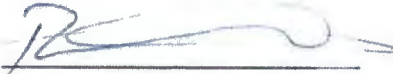


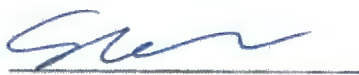


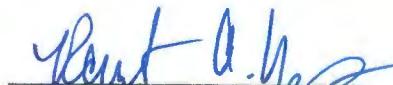
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Pacific Islands Fisheries Science Center
2570 Dole Street • Honolulu, Hawaii 96822-2396
(808) 983-5300 • Fax: (808) 983-2902

Project Instructions

Date Submitted: 7 May 2013
Platform: NOAA Ship *Oscar Elton Sette*
Project Number: SE-13-04
Project Title: Kona Integrated Ecosystem Assessment Survey
Project Dates: 12 – 26 June 2013

Prepared by:  Dated: 7 May 2013
Phoebe Woodworth-Jefcoats
Chief Scientist
Pacific Islands Fisheries Science Center

Approved by:  Dated: May 20, 2013
Samuel G. Pooley, Ph.D.
Science Director
Pacific Islands Fisheries Science Center

Approved by:  Dated: 21 MAY 2013
Commander Robert A. Kamphaus, NOAA
Commanding Officer
Pacific Islands Area Command

I. Overview

A. Brief Summary and Project Period

The Kona IEA survey will gather data on the physical and biological oceanography of the Kona ecosystem, with a particular emphasis on variations in cetacean habitat. The project will span 12 – 26 June 2013 for a total of 15 sea days.

B. Service Level Agreements

All 15 DAS scheduled for this project are funded by OMAO. This project is estimated to exhibit a Moderate to High Operational Tempo.

C. Operating Area

The operation area will be the lee coast of the island of Hawaii (see Appendix 1, Fig. 1).

D. Summary of Objectives

The NOAA Ship *Oscar Elton Sette* will be engaged as support for the Pacific Islands Fisheries Science Center (PIFSC), National Marine fisheries Service (NMFS), NOAA Kona Region Integrated Ecosystem Assessment (IEA) program. The ship will conduct oceanographic operations off the west coast of the island of Hawaii.

The scientific objectives of this cruise are to collect information to describe the physical, chemical, and biological oceanographic environment as well as to observe cetacean activity along the west coast of Hawaii as support for the monitoring component of the NOAA Kona Region IEA. The proposed survey grid will allow comparison of oceanographic features between the Kohala shelf region to the north and the deeper offshore region to the south as well as near-shore and offshore. Operations are proposed as follows:

1. Collect oceanographic data from routine conductivity-temperature-depth (CTD) casts, continuous acoustic Doppler current profiler (ADCP), and thermosalinograph (TSG) measurements along a predefined grid off the west coast of Hawaii.
2. Perform CTD-mounted fluorometer measurements and laboratory determination of nutrients, chlorophyll, and size structure of the phytoplankton and zooplankton community from water samples collected during CTD operations. These data will be used to assess the influence of the physical dynamics on the biological productivity of the region.
3. Monitor biological backscatter during mid-water trawl operations and along predefined transects using the Simrad EK60 echosounder system. This will be used to help characterize the micronekton faunal composition and densities as the forage base for larger pelagic nekton.
4. Conduct stern mid-water trawl operations at select stations, targeting the depths of high sonic scattering layers to better our understanding of echosounder signals collected by the EK60 echosounder.
5. Collect data on cetacean distribution, school size, and school composition with a towed passive acoustic array.
6. Conduct daytime visual surveys for cetaceans to help develop habitat envelope models for the Kona region. These surveys will be conducted from the NOAA Ship *Oscar Elton Sette*.
7. Deploy a University of Hawaii imaging sonar (Didson) to collect high-resolution information on the density of high sonic scattering layers.
8. Deploy a University of Hawaii Seaglider for oceanographic monitoring (tentative).

E. Participating Institutions

The Pacific Islands Fisheries Science Center is leading this project. Individuals from the Hawaiian Islands Humpback Whale National Marine Sanctuary, the University of Hawaii (at Manoa and Hilo), and Duke University will be aboard assisting with scientific operations.

F. Personnel/Science Party

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Woodworth-Jefcoats, Phoebe	Chief Scientist	12 June 13	26 June 13	Female	NMFS	USA
Yoshinaga, Chad	Operations Lead	12 June 13	26 June 13	Male	NMFS	USA
Abecassis, Melanie	Cooperating Scientist	12 June 13	26 June 13	Female	UH JIMAR	France
Chen, Jessica	Visiting Scientist	12 June 13	26 June 13	Female	UH	USA
Copeland, Adrienne	Visiting Scientist	12 June 13	26 June 13	Female	UH	USA
Dunphy-Daly, Meagan	Cooperating Scientist	12 June 13	26 June 13	Female	Duke Univ.	USA
Giorli, Giacomo	Visiting Scientist	12 June 13	26 June 13	Male	UH	Italy
Hoover, Aimee	Cooperating Scientist	12 June 13	26 June 13	Female	UH JIMAR	USA
Martinez, Jonathan	Marine Scientist	12 June 13	26 June 13	Male	NOS	USA
Mooney, Eric	Bio. Science Technician	12 June 13	26 June 13	Male	NMFS	USA
Renick, Adam	Teacher at Sea	12 June 13	26 June 13	Male	TAS	USA
Truong, William	Cooperating Scientist	12 June 13	19 June 13	Male	UH JIMAR	USA
Wren, Johanna	Cooperating Scientist	12 June 13	19 June 13	Female	UH	USA
Carlson, Kaile'a	Cooperating Scientist	13 June 13	25 June 13	Female	UH-Hilo	USA
LeFevre, Jennifer	Cooperating Scientist	13 June 13	25 June 13	Female	UH-Hilo	USA
Bayless, Ali	Cooperating Scientist	19 June 13	26 June 13	Female	UH JIMAR	USA
Rudd, Alexis	Visiting Scientist	19 June 13	26 June 13	Female	UH	USA
Roth, Ethan	Cooperating Scientist	TBD	TBD	Male	UH	USA

G. Administrative

1. Points of Contact:

Phoebe Woodworth-Jefcoats, Chief Scientist
Pacific Islands Fisheries Science Center
2570 Dole Street
Honolulu, HI 96822
Phoebe.Woodworth-Jefcoats@noaa.gov

Chad Yoshinaga, Operations Lead
Pacific Islands Fisheries Science Center
1025 Quincy Ave, Building 130
JBPHH, HI 96860
Chad.Yoshinaga@noaa.gov

Justin Keese, LT/NOAA, Operations Officer
NOAA Ship *Oscar Elton Sette*
1897 Ranger Loop, Building 184
Honolulu, HI 96818
Ops.Sette@noaa.gov

2. Diplomatic Clearances – NA

3. Licenses and Permits

NEPA: This project meets the requirements of NOAA Administrative Order (NAO) Series 216-6, Environmental Review Procedures, Sections 5.05 and 6.03c.3(a) for Categorical Exclusions (CE) for Research Programs. (PIFSC-20130007—Memo for the Record in process)

State of Hawaii: A Scientific Collecting Permit application has been submitted to the Department of Land and Natural Resources because the mid-water Cobb trawl is a regulated type of gear and would be deployed in state waters (stations 1 and 3 only). Permit details will be provided to the ship once they are available.

II. Operations

A. Project Itinerary

Based on a ship speed of 9.5 kts:

12 June 0800: start of cruise. Embark Phoebe Woodworth-Jefcoats, Chad Yoshinaga, Melanie Abecassis, Jessica Chen, Adrienne Copeland, Meagan Dunphy-Daly, Giacomo Giorli, Aimee Hoover, Jonathan Martinez, Eric Mooney, Adam Renick, William Truong, and Johanna Wren. Depart Pearl Harbor and proceed to Station 1 (see Appendix 1, Figure 1).

Based on a ship speed of 4 kts:

13 June Arrive at Station 1. At 0700 begin operations to deploy Seaglider (tentative). After successful deployment, embark Kaile'a Carlson and Jennifer LaFevre via small boat from Honokohau Marina. After embarkation, conduct imaging sonar test cast. Following test cast, commence active acoustic operations. 1800: Commence CTD operations. 2100: Commence trawling operations.

14 June 0300: Commence imaging sonar operations.

14 – 18 June Active acoustic, CTD, trawling, and imaging sonar operations continue.

19 June 0300: Trawling operations complete. 0600: Imaging sonar operations complete. 0830: Active acoustic and CTD operations suspended. Personnel transfer at Honokohau Marina via small boat. Disembark William Truong and Johanna Wren. Embark Alexis Rudd and Ali Bayless. 1300: Resume active acoustic operations and commence passive acoustic and visual observer operations. 1830: Resume CTD operations.

20 – 24 June Active acoustic, passive acoustic, visual observer, and CTD operation continue.

25 June Suspend operations to transfer personnel to Honokohau Marina via small boat. Disembark Kaile'a Carlson and Jennifer LaFevre. After personnel transfer is complete, recover EARS. Upon successful recovery of both EARS, resume operations.

Based on a ship speed of 9.5 kts:

26 June 0000: all operations complete; proceed to Pearl Harbor. Upon arrival at Pearl Harbor, disembark Phoebe Woodworth-Jefcoats, Chad Yoshinaga, Melanie Abecassis, Alexandra Bayless, Jessica Chen, Adrienne Copeland, Meagan Dunphy-Daly, Giacomo Giorli, Aimee Hoover, Jonathan Martinez, Eric Mooney, Adam Renick, and Alexis Rudd. End of cruise.

B. Staging and Destaging

Prior to sailing on 12 June 2013, the ship's crew will inspect the port- and starboard-side J-frames and associated oceanographic winches, conducting cable, DESH-5 winch form CTD operations, the trawl net reel and stern trawl winches, the Netmind net mensuration system, and RD Instruments ACDP and associated computer and software, the thermosalinograph, the flow-through Turner 10-AU fluorometer, the Simrad EK60 echosounder, the Scientific Computing System (SCS), the Global Positioning System (GPS) navigational systems, and the scientific freezer to ensure that they are in proper working order. The SeaBird 9/11+CTD system, carousel rosette water bottle sampler, a full set of Niskin bottles with spare parts, and the SEACAT portable CTD will be installed and inspected to ensure that they are fully operational. Electrical continuity of the J-frame conducting cable, the winch's slip ring assembly, and connections to the electronics laboratory will be confirmed by the Chief Electronic Technician before sailing.

We are requesting a minimum of 2 terabytes of shared network space for scientists to communally store and access oceanographic data collected during the cruise. This could be either accessed through the temporary shared network disk space provided by the ship or by the ability to network an external hard drive provided by the science party into the full or a sandboxed local area network. We also request to make nightly backups of this network drive using external hard drives provided by the science party. This would provide the ability for scientists to store and access one common data set from all science computers on either the complete or a subset of the local area network.

Dates and equipment/personnel needed for loading and offloading of scientific equipment will be provided to the ship no later than 21 days prior to sailing.

C. Operations to be Conducted

This cruise will collect data to gain a better understanding of the characteristics of the oceanography and associated cetacean activity off the leeward coast of Hawaii. It is requested that the Chief Survey Technician be available eight hours per day.

1. Underway Operations

Current velocity will be continuously monitored with an ADCP, while surface temperature, salinity, and chlorophyll-*a* will be monitored with the hull-mounted thermosalinograph and flow-through fluorometer throughout the duration of the cruise.

Active acoustic scattering measurements will be continuously collected with the hull-mounted split beam Simrad EK60 echosounder and the frequencies of 38, 70, 120, and 200 kHz. While active acoustic scattering measurements are being collected, the ship will maintain a speed of approximately 4kts, adjusted as necessary to ensure clean data collection.

A towed hydrophone array will be deployed approximately 300 m behind the vessel while underway. The array will be deployed by the science party when passive acoustic operations (re)commence and retrieved when underway operations are suspended for station operations. During array deployment and recovery, the ship's course and speed must be maintained. The array will be wound onto a hydraulic-powered winch supplied by PIFSC. The winch and hoses will be provided by PIFSC; the ship will provide hydraulic power and connectors. Hookup to a ship-powered hydraulic system will be required. With the exception of the hydraulic winch hookups and safety apparel, all of the necessary equipment will be supplied and operated by the scientific personnel. Ship personnel are needed to secure the acoustic winch to the deck using baxter bolts and then hook the winch to the ship-powered hydraulic system. Acoustics personnel will monitor the array, record sounds made by cetaceans, and localize their positions. The bridge will inform the acousticians of potential hazards, such as fishing gear, with a maximum lead time.

A daily "on-call" watch for cetaceans will be maintained on the flying bridge during daylight hours (approximately 0600 – 1900). When cetaceans are detected with the passive acoustics, the visual observers will aid in locating, and if possible, identifying the cetaceans. Photographs may be taken to assist with post-cruise species identification. Upon sighting a marine mammal school or other feature of interest, the Chief Scientist, Operations Lead, or visual observer on watch may request that the vessel maneuver to approach the school or feature for investigation. When the investigation is complete, the ship will return to the track line. The Commanding Officer will ensure that the flying bridge work area is tobacco smoke-free at all times when cetacean observers are on watch.

2. Station Operations

The cruise will consist of stations along a pre-defined grid. With the exception of the Seaglider deployment and Ecological Acoustic Recorder (EAR) recoveries, all station operations will be conducted from the NOAA Ship *Oscar Elton Sette*.

CTD casts additionally equipped with both a WetLab profiling and Seapoint flow-through fluorometer (for inter-sensor comparison), redundant dissolved oxygen sensors, and a 12-Niskin water bottle carousel rosette sampler will be conducted at all stations along the survey grid (see Appendix 1, Fig. 1). Casts will be conducted at sunrise (approximately 0630) and sunset (approximately 1830) each day, with additional casts as the operational schedule allows. CTD casts will go down to a maximum depth of 1000 meters. Water samples will be collected to sample for nutrients, chlorophyll-*a*, and phytoplankton size structure. All nutrient, chlorophyll-*a*, and phytoplankton size structure samples will be filtered at sea. Chlorophyll-*a* and phytoplankton size structure

samples will be analyzed at sea, post-filtration, while nutrient samples will be stored in the ship's walk-in scientific freezer.

Net sampling of the sound scattering layers will be conducted at selected stations along the survey grid (see Appendix A, Fig. 1) using the dual warp Cobb (Stauffer) trawls. Stern Cobb trawls will be conducted in duplicate at night. Trawls will be conducted at 2100 and 0100 each day of trawling operations. Oblique sampling will be done through the sound scattering layer (approximately 20 – 200m, with target depth determined by active acoustic data). Trawl duration will be approximately 1 h, with net depth monitored using the Northstar Electronics Netmind mensuration system. Bioacoustic data will be collected during all trawl operations. In the event that bioacoustic data cannot be cleanly collected during trawls, an acoustic transect through the station area will be done between the two trawl operations.

Imaging sonar casts will be conducted at selected stations in the survey grid (see Appendix A, Fig. 1). Casts will be conducted from the port-side winch, with depth monitored by the SEACAT portable CTD. Target depth(s) will be determined by active acoustic data. Casts will be to a maximum depth of 1000 m and are tentatively scheduled for 0300 and 1500 each day of imaging sonar operations.

At the start of operations, a University of Hawaii Seaglider will be deployed from the ship's small boat. Ship's personnel will be needed to coxswain the small boat. Members of the science party will deploy the Seaglider. The Seaglider is deployed with a cradle, which two members of the science party will use to slide the glider into the water. Once the Seaglider is deployed the small boat will need to remain at the deployment site for approximately 30 minutes to ensure that the glider is functioning properly. The Seaglider will then remain at sea. In the event of a malfunction, the two members of the science party will use the deployment cradle to slide the Seaglider out of the water. This operation is currently tentative, pending performance during pre-cruise field trials.

On 25 June, two EARs will be retrieved by small boat. Ship's personnel will be required to coxswain the small boat. Members of the science party will recover the EARs.

D. Dive Plan – NA

E. Applicable Restrictions

During acoustic transect operations and while acoustics are being collected while underway, the EK60 acoustics system will be used to monitor bottom depth, and the ES60 and Furuno systems will remain secured to avoid mission-compromising interference. If the EK60 does not provide reliable bottom measurements in shallow, nearshore waters, the ES60 will be turned on to be used as the depth sensor. If the ADCP interferes with the EK60, the ADCP will be secured. Additionally, no activities that produce noise substantial enough to compromise the data gathered by the EK60 acoustic system may be carried out during acoustic data collection. Such activities include, but are not limited to, needle gunning. While underway acoustic transects are conducted, the ship will maintain a speed of 4 kts and adjust speed as necessary to ensure clean data collection.

While the towed hydrophone array is deployed, turning must not exceed 180° and rudder angle must not exceed 3°.

Conditions that preclude normal operations: Conditions that exceed the ship's operating capabilities, such as high winds or seas; equipment failure; safety concerns; and unforeseen circumstances as identified by the Chief Scientist and/or Commanding Officer. Every effort will be made to mitigate the conditions listed above, including but not limited to: moving operations to alternate locations, postponing or reordering operations, or using alternate equipment.

1. "Take" of Protected Species
 - a. Under the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) it is unlawful to take a protected species. The MMPA defines take as "harass, hunt, capture, kill, or collect, or attempt to harass, hunt, capture, or collect". The ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". An incidental take is one that is incidental to, but not the purpose of, otherwise lawful activities.
 - b. In the event of an incidental take of a marine mammal or federally listed threatened or endangered species during the cruise, the chief scientist will report the incident to the PIFSC Director and Deputy Director IMMEDIATELY via IRIDIUM, INMARSAT, and email. Samples should not be collected from any incidentally taken marine mammals, sea turtles, or seabirds.
 - c. PIFSC has developed mitigation measures for our fisheries and ecosystem research cruises to avoid take and comply with the Lecky, Murawski, and Merrick guidance. A copy of these documents is available at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/home/nepa-permits/protected-species-mitigation-measures> and on the ship's bridge.
2. Activities in the Hawaiian Islands Humpback Whale National Marine Sanctuary
 - a. The humpback whale season in Hawaii is November through May.
 - b. Unless otherwise authorized under the MMPA and ESA, it is unlawful to approach, or cause a vessel or other object to approach, within 100 yards of any humpback whale within the Sanctuary.
 - c. Please reference the complete list of prohibited activities and boundary maps at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/hom/nepa-permits/protected-species-mitigation-measures>.

III. Equipment

A. Equipment and Capabilities provided by the ship:
CTD system and heavy-duty cage assembly
12 complete Niskin bottles, with at least enough spare parts to replace 3 bottles
J-frames and blocks for CTD
Stern trawl winches
Oceanographic winches and cables (port and starboard)
SEACAT portable CTD
Deck crane
Thermosalinograph
RD Instruments ADCP and associated computer and software
EK60 echosounder system at the frequencies of 38, 70, 120, and 200 kHz
Turner 10AU flow-through fluorometer
GPS navigational system
Depth sounders and recorders
Scientific freezer, kept between -30° and -20°C at all times
Two-way radios for communications from the electronics lab to the winch operator

Operational Scientific Computing System (SCS)
Navigational equipment and course plotter
Supplies necessary for at least two reterminations of the J-frame conducting cable
A minimum of two terabyte shared network space
Canopy on flying bridge
Small boat, including spare parts, for personnel transfers, EAR recovery, and Seaglider launch
Copy machine
Network access to a printer
Space on the aft deck for the acoustic winch

B. Equipment and Capabilities provided by the scientists (itemized)
Water filtration equipment (vacuum pump, filtering ring, filters, forceps, etc.)
WetLabs profiling and SeaPoint flow-through fluorometers
Redundant dissolved oxygen sensors
Cobb (Stauffer) trawls and bridles
5 ft × 7 ft “V” doors
Northstar Netmind trawl mensuration system
Time-depth recorders for net monitoring
Sample collection jars
Trays and other supplies for sorting tow catches
Sample scale
Turner 10-AU fluorometer
Two laboratory microscopes
All laboratory glassware (e.g., Erlenmeyer flasks, graduated cylinders)
External hard drives (1 – 2 TB) for common data storage and backup
Imaging sonar unit and associated batteries, housing, and frame
Two “big-eye” binocular systems and associated cetacean survey gear
Hydrophone array
Hydraulic winch for hydrophone array
Hansen Coupling Division male LL6-HKP/LL8-HKP ends to quick connect style connectors on
50-ft of hose to hydraulic power supply for acoustic winch
Acoustics recording equipment, including mixer and recording rack, desktop computers (2), and
accessory equipment
Battery bank for hydrophone array

IV. Hazardous Material

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 the anticipated quantity brought aboard, MSDS and appropriate neutralizing agents, buffers, or absorbents in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and a chemical hygiene plan. The Chief of Operations, Marine Operations Center will provide documentation regarding those requirements upon request.

Per FEC 07, the scientific party will include with their project instructions and provide to the CO of the respective ship 60 to 90 days before departure:

- A list of hazardous materials by name and anticipated quantity,
- A list of neutralizing agents, buffers, and/or absorbents required for these hazardous

- materials, if they are spilled,
- A chemical hygiene plan.

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

- An inventory list showing actual amount of hazardous material brought aboard,
- An MSDS for each material,
- Confirmation that neutralizing agent and spill equipment were brought aboard.

Upon departure from the ship, scientific parties will provide the CO or her designee an inventory of hazardous material indicating all material have been used or 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 scientific chemicals is not permitted during projects aboard NOAA ships.

B. Radioactive Isotopes – NA

C. Inventory

Common Name	Concentration	Amount	Notes
Acetone	90%	4 L	
Hydrochloric acid	10%	1 L	
Ethanol	100%	4 L	

This inventory is tentative. A complete HAZMAT inventory and associated MSDS will be sent to the Operations Officer no later than seven days prior to sailing.

V. **Additional Projects**

A. Supplementary (“Piggyback”) Projects

The PIFSC bird, aquatic marine mammal, and fish school sightings log, per Chief Scientist instructions.

B. NOAA Fleet Ancillary Projects

Ancillary tasks will be accomplished in accordance with the NOAA Fleet Standing Ancillary instructions.

VI. **Disposition of Data and Reports**

A. Data Responsibilities

Marine Observations Log: A Marine Observations Log will be maintained during the cruise.

Data Disposition: The Chief Scientist will be considered to be the representative of the NMFS PIFSC Science Director for the purpose of data disposition. A single copy of all data gathered by the vessel will be delivered to the Chief Scientist upon request for forwarding to the Science Director, who in turn will be responsible for distribution of data to other investigators desiring copies.

B. Pre and Post Project Meeting

Pre-Project Meetings: A pre-cruise meeting between the Chief Scientist, the Commanding Officer, the Chief Marine Engineer, and their respective staffs will be held prior to

commencement of operations to identify operational and logical requirements. Additionally, prior to, or soon after departure, the Chief Scientist will conduct a meeting of the scientific party to train them in sample collection and inform them of project objectives. Some vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship's Operations Officer.

Post-Project Meeting: Upon completion of the project, a meeting will normally be held at 0830 (unless prior alternate arrangements are made) and attended by the ship's officers, the Chief Scientist and members of the scientific party to review the project. Concerns regarding safety, efficiency, and suggestions for improvements for future projects should be discussed. Minutes of the post-project meeting will be distributed by email to all participants and the Commanding Officer and Chief of Operations, Marine Operations Center.

C. Ship Operation Evaluation Report

Within seven days of the completion of the project, a Ship Operation Evaluation form is to be completed by the Chief Scientist. The preferred method of transmittal of this form is via email to omao.customer.satisfaction@noaa.gov. If email is not an option, a hard copy may be forwarded to:

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

VII. Miscellaneous

A. Meals and Berthing

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 survey.

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 that 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 7, 1999 that forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

A. Medical Forms and Emergency Contacts

Each participating scientist must complete the NOAA Health Services Questionnaire (NHSQ, Revised: 02 JAN 2012). The NHSQ can be obtained from the Chief Scientist or the NOAA website <http://www.corporateservices.noaa.gov/~noaaforms/eforms/nf57-10-01.pdf>. The completed form should be sent to the Regional Director of Health Services at the Marine Operations Center. The participant can mail, fax, or email the form using the contact information below. The NHSQ should reach the Health Services Office no later than 4 weeks prior to the project to allow time for the participant to obtain and submit additional information that health services may require before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of the NHSQ. Be sure to include proof of tuberculosis (TB) testing, sign and date the form, and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

Contact information:

Regional Director of Health Services
Marine Operations Center – Pacific
2002 SE Marine Science Dr.
Newport, OR 97365
Telephone: 541-867-8822
Fax: 541-867-8856
Email: MOP.Health-Services@noaa.gov

Prior to departure, the Chief Scientist must provide the Executive Officer with an electronic listing of emergency contacts for each member of the scientific party. The contact information must include: contact name, relationship to science party member, and telephone number.

B. Shipboard Safety

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. Protective footwear is required and steel-toed shoes are recommended when participating in any work dealing with suspended loads, including CTD deployments and recoveries. The ship does not provide steel-toed boots. Hard hats are also required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. The ship will provide hard hats and work vests.

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 e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessel 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 must be arranged at least 30 days in advance.

E. IT Security

Any computer that will be connected into the ship's network must comply with *NMAO Fleet IT Security Policy 1.1* (November 4, 2005) prior to establishing a direction connection to the NOAA WAN. Requirements include, but are not limited to:

- (1) Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
- (2) Installation of the latest critical operating system security patches.
- (3) No external public Internet Service Provider (ISP) connections.

Completion of these requirements is required before boarding the ship.

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 three days of embarking.

F. Foreign National Guest Access to OMAO Facilities and Platforms

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

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

Responsibilities of the Chief Scientist:

1. Provide the Commanding Officer with the email generated by the FRNS granting approval for the foreign national guest's visit. 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 for providing 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 a briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.
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 of any controlled technology onboard occurs 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 OMAO approval and compliance with export and sanction regulations.
3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
4. Ensure receipt from the Chief Scientist or the DSN of the FRNS 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 of any controlled technology onboard occurs regardless of ownership.
7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annual or as required by the servicing Regional Security Officer.

Responsibilities of the Foreign National Sponsor:

1. Export Control – The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
2. The DSN of the foreign national will assign as 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 NOAA (or DOC) employee. According to the DOC/OSY, this requirement cannot be altered.
3. Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National Guest).

Appendices

1. Figures

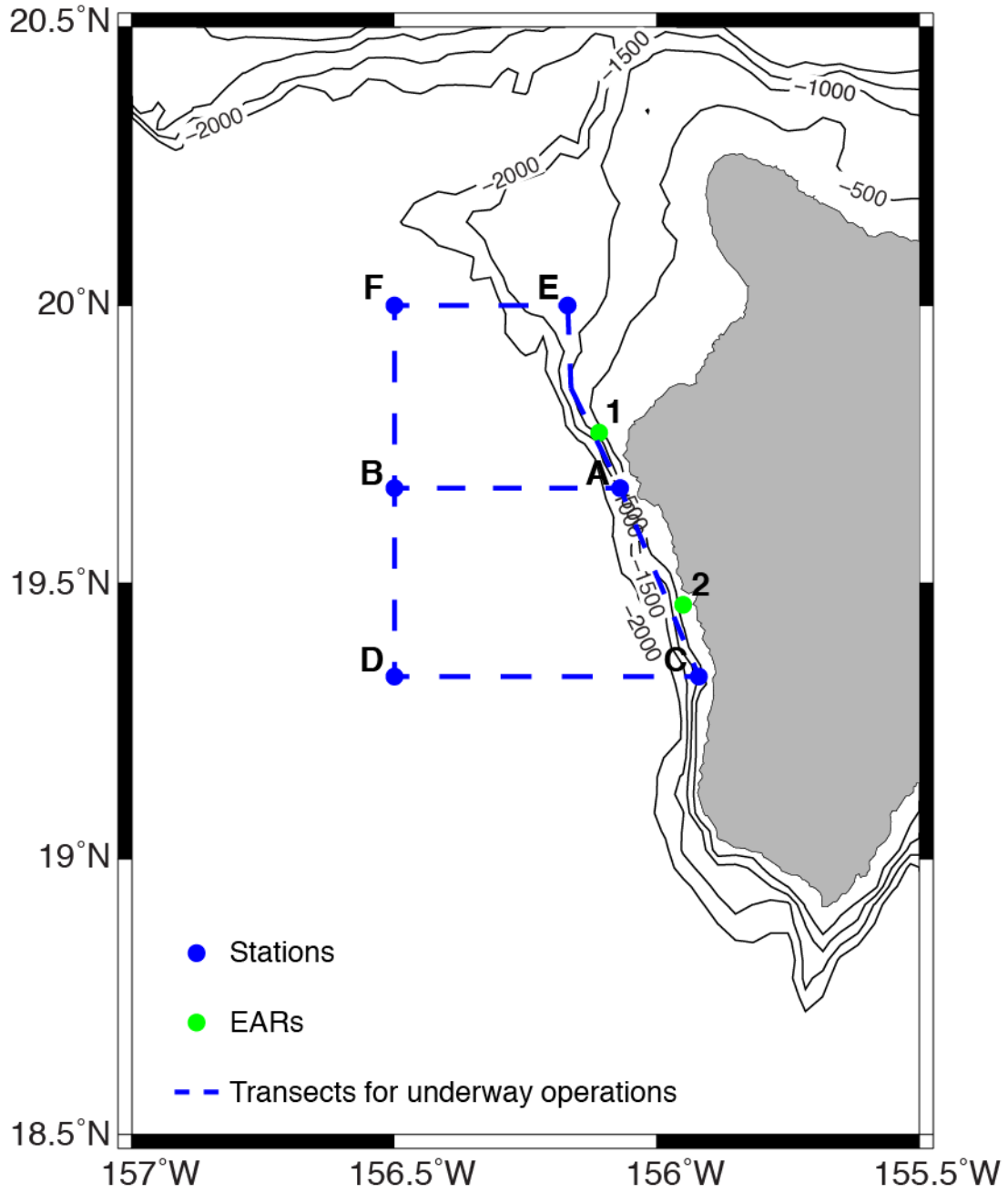


Fig. 1: Area of operations and survey grid for SE-13-04.

2. Station List

Station	Latitude	Longitude	Operation(s)
A	19° 40'N	156° 04'W	Deploy Seaglider, All station operations
B	19° 40'N	156° 30'W	All station operations
C	19° 20'N	155° 55'W	All station operations
D	19°20'N	156° 30'W	All station operations
E	20° 00'N	156° 10'W	All station operations
F	20° 00'N	156° 30'W	All station operations
EAR1	19° 46.392'N	156° 06.389'W	Recover EAR 1
EAR2	19° 27.313'N	155° 56.795'W	Recover EAR 2