



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: Commander Peter Fischel, NOAA
Commanding Officer, NOAA Ship *Pisces*

FROM: Captain Anne K. Lynch, NOAA *Anne K Lynch CAPT NOAA*
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for PC-14-02
Southeast Fishery – Independent Survey (SEFIS)

Attached is the final Project Instruction for PC-14-02, Southeast Fishery – Independent Survey (SEFIS), which is scheduled aboard NOAA Ship *Pisces* during the period of 28 June to 8 August 2014. Of the 39 DAS scheduled for this project, 39 days are funded by a Line Office Allocation. Please note the following transit legs not included in the project instruction's itinerary:

DEP: 6/28/2014	Sat	Tampa, FL	PC-14-02 Leg 1 transit
ARR: 7/2/2014	Wed	Morehead City, NC	SEFIS
DEP: 8/3/2014	Sun	Morehead City, NC	PC-14-02 Leg 4 transit
ARR: 8/8/2014	Fri	Pascagoula, MS	SEFIS

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.

Attachment
cc:
MOA1



U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center

**101 Pivers Island
Rd. ⁺
Project Instructions**

Date Submitted: 06/17/2014 
Platform: NOAA Ship PISCES
Cruise Number: PC-14-02
Project Title: Southeast Fishery-Independent Survey (SEFIS)
Cruise Dates: 06/28/2014  - 08/08/2014 

Prepared by: SCHOBERND.ZEBU Digitally signed by
SCHOBERND.ZEBU/LON.H.1388143920
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=CONTRACTOR,
cn=SCHOBERND.ZEBU/LON.H.1388143920
Date: 2014.06.17 11:50:07 -0400
LON.H.1388143920
Field Party Chief **Date:** 06/17/2014 

Approved by: HOHN.ALETA.A. Digitally signed by
HOHN.ALETA.A.DR.1365837976
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=OTHER,
cn=HOHN.ALETA.A.DR.1365837976
Date: 2014.06.17 12:20:31 -0400
DR.1365837976
Lab Director **Date:** 06/17/2014 

Approved by: Theo R. Brainerd Digitally signed by Theo R. Brainerd
DN: cn=Theo R. Brainerd, o=NOAA/NMFS,
ou=SEFSC, email=theo.brainerd@noaa.gov,
c=US
Date: 2014.06.17 14:08:43 -0400
Dr. Bonnie Ponwith
Director, SEFSC **Date:** 06/17/2014 

Approved by: 
Captain Anne K. Lynch, NOAA
Commanding Officer
Marine Operations Center - Atlantic **Date:** 6/26/2014 

I. Overview

A. Brief Summary and Project Period

The SouthEast Fishery-Independent Survey (SEFIS) conducts applied fishery-independent sampling with chevron fish traps and attached underwater video cameras. The project period is June 28 – August 8, 2014.

B. Days at Sea (DAS)

Of the ³⁹~~36~~ DAS scheduled for this project, 0 DAS are funded by an OMAO allocation, ³⁹~~0~~ 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. 7/24

C. Operating Area

The area of operation is southeast US continental shelf waters ranging from Cape Hatteras, NC (35°30' N, 75°19' W) to St. Lucie Inlet, FL (27°00' N, 75°59' W) (Figure 1). Operations will predominantly focus on waters in Onslow Bay, NC, and Long Bay, SC (between Cape Lookout, NC, and Cape Romain, SC) in waters 18–100 m deep (Figure 2).

D. Summary of Objectives

NOAA Ship *Pisces* will conduct applied fishery-independent sampling research focusing on:

1. Assessment of spatial variability in distribution and abundance of species within the snapper-grouper complex.
2. Comparative analysis of fish traps, video cameras, and acoustics.
3. Bathymetric data collection (for subsequent habitat mapping) over hardbottom habitats.
4. Collect environmental and water quality information using Conductivity-Temperature-Depth sensor (CTD) casts and expendable bathythermographs (XBTs).
5. Periodic hook-and-line sampling for additional life history and diet samples.

E. Participating Institutions

NOAA/NMFS/SEFSC
NOAA/NOS/OCS/HSD/AHB
NOAA/NOS/NCCOS/CCFHR/AERRB
NOAA/NOS/NCCOS/CCMA
South Carolina Department of Natural Resources
University of North Carolina Institute of Marine Science
The College of Charleston
NOAA Teacher-at-sea Program

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

Name (Last, First)	Title	Leg	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Bacheler, Nathan	Chief Scientist, FPC	1	July 5	July 18	M	NMFS	USA
Berrane, David	Investigator	1	July 5	July 18	M	NMFS	USA
Hoke, David	Investigator	1	July 4	July 18	M	NMFS	USA
Kracker, Laura	Investigator	1	July 4	July 18	F	NOS	USA
Kroll, Ian	Investigator	1	July 5	July 18	M	UNC	USA
Meyer, David	Investigator	1	July 5	July 18	M	NMFS	USA
Mitchell, Warren	Investigator	1	July 5	July 18	M	NMFS	USA
Schobernd, Christina	Investigator	1	July 5	July 18	F	NMFS	USA
Wilson, Matthew	Investigator	1	July 4	July 18	M	NOS	USA
McMahon, Kevin	Teacher-at-sea	1	July 4	July 18	M		USA
Berrane, David	Investigator	2	July 20	August 2	M	NMFS	USA
Ebert, Erik	Investigator	2	July 20	August 2	M	NOS	USA
Gardner, Chris	Investigator	2	July 19	August 2	M	NMFS	USA
Glasgow, Dawn	Investigator	2	July 19	August 2	F	SCDNR	USA
Harter, Stacey	Investigator	2	July 19	August 2	F	NMFS	USA
Hefron, Christina	Investigator	2	July 19	August 2	F	COC	USA
Hoke, David	Investigator	2	July 19	August 2	M	NMFS	USA
Schobernd, Zeb	Chief Scientist, FPC	2	July 20	August 2	M	NMFS	USA
Teer, Bradford	Investigator	2	July 20	August 2	M	NMFS	USA
Eaton, Mary	Investigator	2	July 19	August 2	F	COC	USA
Mesanovic, Emina	Teacher-at-sea	2	July 19	August 2	F		USA

G. Administrative

1. Points of Contacts:

Chief Scientist/Field Party Chief (FPC): Nate Bacheler, NMFS SEFSC, 101 Pivers Island Road, Beaufort, NC 28516, 252.838.0825
(nate.bacheler@noaa.gov)

Chief Scientist / FPC: Zeb Schobernd, NMFS SEFSC, 101 Pivers Island Road, Beaufort, NC 28516, 252.728.8736 (zeb.schobernd@noaa.gov)

Chief Scientist / FPC alternate: Todd Kellison, NMFS SEFSC, 101 Pivers Island Road, Beaufort, NC 28516, 252.838.0810 (todd.kellison@noaa.gov)

Operations Officer: LT Kyle Byers, NOAA Ship *Pisces*, 151 Watts Ave, Pascagoula, MS 39567; 301.713.7774 (Ops.Pisces@noaa.gov)

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

This project will be conducted under the NMFS Southeast Region Scientific Research Permit (U.S.) on June 29, 2010 to G. Todd Kellison.

II. Operations

The 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:

Operations will focus on continental shelf and shelf-break waters in North and South Carolina, 18–100 m deep. Leg 1 will take place on July 5–18, 2014 (14 DAS), and leg 2 will take place July 20–August 2, 2014 (14 DAS).

B. Staging and Destaging:

Staging and de-staging will be conducted at the Port of Morehead City, NC. Mobilization will take place on July 1-3, and demobilization will take place on August 2 at the Port of Morehead City, NC.

C. Operations to be conducted:

Vessel operations will occur over a 24-hour workday. Typically, multibeam (ME70) and XBT data collection operations will be carried out at night, and all other operations (trapping with attached underwater video and CTD) during the day, with the exception of split-beam (EK60) surveys, which may occur during both day and night. Crew members will be required on deck during the day (from 0730 to approximately 1700 each day, but perhaps as late as 1900 on some evenings) for deployment and recovery of fish traps and other gear. Both legs will focus on trap and video camera deployments coupled with acoustics (EK60 and ME70).

Generally, the specific trap sampling locations on hardbottom habitat will be determined from the previous night's multibeam mapping efforts. Specific GPS points will be provided to the bridge each morning (0630 – 0730), and **trap sampling will commence at approximately 0745 each morning.** We expect that six traps will be deployed off the stern of the *Pisces* (down the stern ramp while the vessel is traveling at approximately 3 kt) over the course of approximately 30 min, one trap being deployed at a time and no closer than 200 m from another trap. After a group of six traps are deployed in an area, a single CTD cast will be conducted, and then traps will be retrieved after each trap has soaked for approximately 90 min. Trap retrieval will take place at the side sampling station using the pot hauler, and then the scientists will move traps to the back deck for another deployment. Typically two to four trap sets (set = 6 simultaneously deployed traps) will be conducted each day.

If there is only a single survey tech available for this research cruise, we request that they work a modified day shift (1200 to 2000) to assist with CTD casts and EK60 data collection during the day, and assist with the commencement of ME70, ADCP, and other technical nighttime operations. The science party can be trained to operate the CTD during the morning hours (0800 to 1200). If two survey techs are available, we request that the senior survey tech work the night shift (1800 to 0200) and the junior survey tech to work the day shift (0800 to 1600).

a. Multibeam Sonar Mapping: Mapping surveys will be conducted primarily at night using the Simrad ME70 multibeam sonar unit. Instead of conducting CTD casts during overnight mapping, the scientific party plans to bring XBTs that can be used to profile water temperature without the need to stop mapping operations or stop the ship, to increase overnight efficiency. **The science party plans on using the cabled XBT hand launcher located at the side sampling station, XBT software program resident in the Dry Lab, and computer network connectivity between the Dry and Acoustics Labs.** If the XBT system malfunctions, the science party would request vessel crew assistance with 1-2 CTD casts during the overnight hours (1800 – 0730). We have been previously advised that vessel crew shift changes are an appropriate time for such efforts, and would plan on that unless advised otherwise.

Mapping survey staff anticipates requesting 2-6 patch tests during PC1403 (anticipated maximum of three during each leg). At least one attempt is requested at the site of a successful 2012 *Pisces* patch test, over the tanker wreck “Papoose”. Additionally, at least two efforts are requested to achieve successful GPS Azimuth Measurement Subsystem (GAMS) calibration for *Pisces*’ Applanix Pos MV. We would seek vessel pilot assistance in the planning for these operations.

b. Fisheries Acoustic Surveys: Split-beam acoustic surveys using the *Pisces* Simrad EK60 scientific echosounder (18 kHz, 38 kHz, 120 kHz, 200 kHz) will be conducted during the day while other gear (trap-camera units) is also deployed, for the purpose of comparative gear sampling, as well as at night. The science party is familiar with EK60 operation and will be capable of self-operation following orientation to the vessel’s computer network and data storage procedures.

c. Trap-camera arrays: Baited chevron traps mounted with two high-definition video cameras will be utilized for (1) hardbottom reef fish community assessments, (2) reef fish biological sample collection (i.e., otoliths and gonads), and (3) comparative gear sampling (cameras versus traps versus split-beam sonar). We plan to deploy and retrieve up to 24 traps per day (sunrise to sunset); six traps will be deployed and retrieved in a set, and two to four sets will be sampled in a day. Individual trap soak time will be 90 min. A hydraulic pot hauler will be required for trap retrieval, and traps will be deployed off the stern, down the trawl ramp. **The science party requests that the grate over the trawl ramp be removed for our cruise.**

d. Drop-cameras (weighted video cameras with tether line to deck; max weight = 100 lb) may be used to collect fish and habitat data. A hydraulic pot hauler or winch will be required for camera retrieval.

e. Hook-and-line fishing gear for collection of reef fish for otoliths, gonad, and diet collection. Reels will be hand cranked and will not require power.

f. CTD Operations: CTD casts will typically be performed in conjunction with trap-camera operations during daytime operations, generally one CTD cast for each deployment of six traps/one set (i.e., 2-4 CTD casts during the day). Instead of conducting CTD casts during overnight mapping, the scientific party has acquired XBTs that can be used to profile water temperature without the need to stop mapping operations or stop the ship, to increase overnight efficiency.

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 operations while at sea the CO will confer with the FPC as to when dives will occur, in an attempt to minimize impact on scientific work.

E. Applicable Restrictions

Conditions that preclude normal operations are rough seas (> 8') and major equipment failure.

III. Equipment

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

1. Scientific computer system (SCS). The scientists will work with the ET and/or survey tech to derive depth and GPS sensors in the ship's SCS configuration file to provide true depth in meters and latitude/longitude coordinates in decimal degrees for SCS events. **The SEFIS program is familiar with acquiring data from the SCS system, and will be bringing SCS event templates to the vessel for 2014 testing, implementation on the ship's network and incorporation in daily operations.**

2. Hydraulic pot hauler

3. Seabird CTD (max depth = 100 m) with sensors to collect the following variables [units]:

- a. Pressure [psi]
- b. Temperature [ITS-90, deg C]
- c. Salinity [PSU]
- d. Depth [salt water, m]

- e. DO [mg/l]
 - f. Beam Transmission [%]
 - g. Beam Attenuation [1/m]
 - h. PAR/Irradiance [micro einsteins/square cm/second]
 - i. Fluorescence [mg/m³]
 - j. Backscatter
4. Winch to deploy and retrieve CTD
 5. ME70 multibeam mapping system. **The science staff requests hard copies of the most recent calibration reports, changes to related instrumentation, and updated ship survey documents, where available. Additionally, we request the establishment of a direct network connection between science staff NOAA laptop computers and the ME70 file storage location. In 2012, ME70 raw data were written to an external hard drive connected to the ME70 server.** Thereafter, ST Mike Allen arranged for a cabled Ethernet connection linking the ME70 server and a NOAA Beaufort laptop computer (via a 'workgroup'), enabling immediate file transfer to data processing computers. In 2013, ME70 raw data were written to Pisces network storage, then copied and hand carried to science staff NOAA laptops via external hard drive. This resulted in occasional data corruptions. A cabled method of direct file transfer would be optimal.
 6. Simrad EK-series fisheries acoustic system (18, 38, 120, and 200 kHz)
 7. Survey technician and technical support to operate multibeam and fisheries acoustic systems
 8. Freezer space to store up to 80 (50 lb) boxes of menhaden for bait (note that the walk-in freezer in the *Pisces* wet lab accommodated this amount of bait in 2013 quite easily).
 9. Dry Storage Area for the scientific party's supplies
 10. Space in the walk-in refrigerator in the wet lab for tissue sample storage and storage of up to 15 (2' x 3' x 1') bins of fish collected during the day to be worked up during the night.
 11. Wet Lab and Dry Lab work space
 12. Small Storage Space for Hazardous Chemicals in dry lab or wet lab
 13. Handheld radios (N=2) outfitted with speaker mics for communication between bridge, deck, and dry lab, and acoustics lab. The science staff will bring two additional Icom IC-M73 VHF Marine Transceivers, and requests ET support to load the NOAA custom VHF frequency "F1".
 14. Cabled XBT hand launcher located at the side sampling station, and XBT software program.

15. ADCP and support from survey tech on its use, so that traps are never deployed in water with currents greater than 2 kt. Science staff request hard copies of the most recent calibration reports, where available.
16. Seasave software with .CON files for calibrated CTD sensors.
17. GPS feed via hardwired serial port for one laptop computer in the Acoustics Lab, and another GPS feed via serial port available in the Dry Lab. GPS feeds were provided in 2011- 2013, so we hope that they are still available for use.

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

1. Permits for conducting otherwise prohibited activities in appropriate waters (already in hand).
2. Chevron traps (N = 11; approximately 4' wide, 6' long, and 2' high, weighing approximately 70 lb each)
3. Buoys, float balls, and lengths of buoy line.
4. Bait (up to 80 boxes, to be stored in walk-in freezer)
5. HD camera equipment, underwater housings, and related accessories (transported in two plastic totes, each approximately 150 lb).
6. Scales for weighing fish
7. Coolers and several large ice bins (~ 5' x 5' x 5')
8. Computers (6 laptops and 2 desktops) to download and edit HD video and process acoustic data
9. Fishing rods and reels (N = 4) for opportunistic hook-and-line sampling for diet analysis and/or biological samples
10. Portable hard drives, digital media (discs)
11. Fish sampling equipment and supplies (knives, scalpels, jars, bags, labels)
12. Aluminum foil, Ziploc bags, sharpie markers
13. Other miscellaneous sampling supplies (small tools, hardware, tape, etc.)
14. XBTs
15. Icom IC-M73 VHF Marine Transceivers (n=2)

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. Overboard discharge of hazardous materials is not permitted aboard NOAA ships.

B. Inventory

Common Name of Material	Qty	Notes	Trained Individual	Spill control
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Common Name of Material	Qty	Notes	Trained Individual	Spill control
Formaldehyde solution (11%)	4 x 2-L	Alkalinity; double stored in coolers and individual 2-L containers	David Berrane, Nate Bacheler, Zeb Schobernd	T
Formaldehyde solution (100%)	2 x 0.6-L	Alkalinity; double stored in coolers and individual 1-L containers	David Berrane, Nate Bacheler, Zeb Schobernd	T

C. Chemical safety and spill response procedures

F: Formalin/Formaldehyde

1. Precaution – all personnel handling chemicals will wear the appropriate PPE. All personnel are trained in handling chemicals.
 2. Prevention – all chemicals will be secured before the survey departs. All personnel will be aware of the location of all chemicals. A MSDS for all chemicals brought aboard will be given to the ship before sailing.
 3. Response – If a spill occurs scientists will immediately leave the area and alert the bridge. Scientists will defer to the ship’s spill plan for a cleanup. Kitty litter and formalin neutralizing agent will be on board for potential spill cleanups.
- Ventilate area of leak or spill. Remove all sources of ignition.
 - Wear appropriate personal protective equipment.
 - Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible.
 - Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container.
 - Do not use combustible materials, such as saw dust.

Inventory of Spill Kit supplies

Product Name	Amount	Chemicals it is useful against	Amount it can clean up
Safetec FSC 1 carbamidic compound and polyacrylate polymer. Kit also includes nitrile gloves, vented goggles, scoop/scrapper, respirator, wiper pads, gown, and 4 × 30-gal bags	13 x 11 oz	Formalin/formaldehyde solution	14.0 L of 11% formaldehyde solution

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 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 conducting a meeting no earlier than 24 hrs before or no later than seven 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, vessel coordinator, 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 Chief Scientist. The form is available at <http://www.oma.noaa.gov/fleeteval.html> and provides a "Submit" button at the end.

The Customer Satisfaction Survey is one of the primary methods OMAO and Marine Operations (MO) utilize to improve ship customer service. Information submitted through the form is automatically input into a spreadsheet accessible to OMAO and MO management for use in preparing quarterly briefings. Marine Operations Centers (MOC) address concerns and praise with the applicable ship. Following the quarterly briefings the data are briefed to the Deputy Director of OMAO.

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 of the scientific party taking into consideration the current make-up of the ship's complement. 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.

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, Revised: 02 JAN 2012) 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/~noaaforms/eforms/nf57-10-01.pdf>. The completed form should be sent to the Regional Director of Health Services at Marine Operations Center. The participant can mail, fax, or scan and send via secure e-mail the form using the contact information below; participants should take precautions to protect their Personally Identifiable Information (PII) and medical information. 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 might require before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of the NHSQ. Be sure to include proof of tuberculosis (TB) testing, sign and date the form, and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

Contact information:

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

Prior to departure, the FPC must provide 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 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 it must be arranged at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *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

Foreign National access to the NOAA ship or Federal Facilities is not required for this project.

IX. Appendix 1



Figure 1: Possible operating areas of PC-14-03 cruise in southeast US continental shelf waters (18 – 100 m deep).

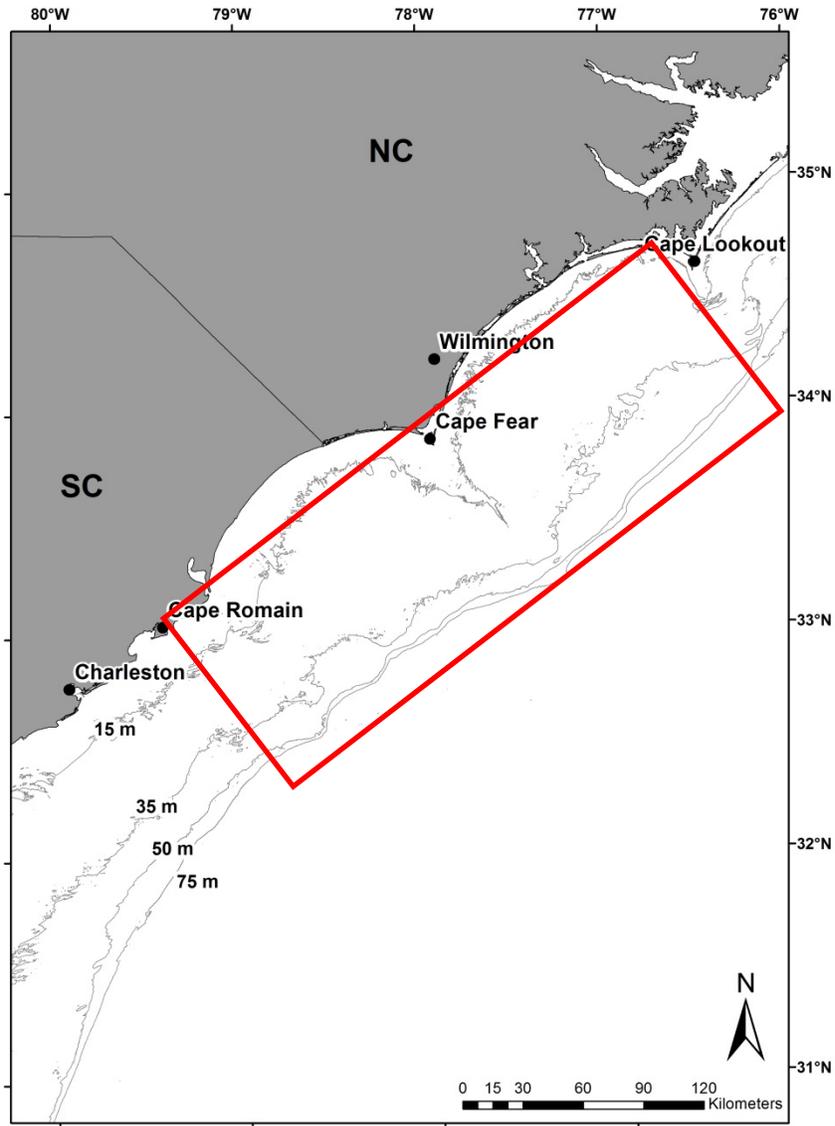


Figure 2. Red box indicates probable focal area of PC-14-03 cruise (continental shelf waters off southern North Carolina and northern South Carolina in approximately 18 – 100 m deep).