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

JUN 25 2013

MEMORANDUM FOR: Lieutenant Commander Jeffrey Taylor, NOAA
Commanding Officer, NOAA Ship *Gordon Gunter*

FROM: Captain Anita L. Lopez, NOAA
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for GU-13-03
NOAA – Living Marine Resources Cooperative Science Center (LMRCSC), Scientific and Educational Cruise

Attached is the final Project Instruction for GU-13-03, LMRCSC Science and Educational Cruise, which is scheduled aboard NOAA Ship *Gordon Gunter* during the period of 29 June – 09 July, 2013. Of the 11 DAS scheduled for this project, 11 DAS are base funded by OMAO in support of NMFS and 0 DAS are program funded. 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

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543-1026

Final Project Instructions

JUN 25 2013

Date Submitted: 20 June 2013

Platform: NOAA Ship *Gordon Gunter*

Project Number: GU-13-03

Project Title: NOAA LMRCSC Scientific and Educational Cruise

Project Dates: June 29 - July 9, 2013

Approved by: _____ Date: 6/20/2013

William A. Karp, Ph.D.
Science and Research Director
Northeast Fisheries Science Center

Approved by: _____ Date: 24JUN13

Captain Anita L. Lopez, NOAA
Commanding Officer
Marine Operations Center - Atlantic

20 June 2013

MASTER

NOAA Ship ***Gordon Gunter***

CRUISE INSTRUCTIONS: NOAA LMRCSC Scientific and Educational Cruise

Cruise Period: On or about 29 June through 9 July 2013

Area of Operation: coastal and shelf waters off New Jersey to South Carolina (Appendix - Figure 1)

Objectives: The purpose of this cruise is to provide at sea experience to scientific personnel, graduate and undergraduate students of the NOAA-Living Marine Resources Cooperative Science Center (NOAA/LMRCSC) based at the University of Maryland Eastern Shore (UMES) and to collect data that is not otherwise available from NEFSC survey cruises in support of stock assessment and habitat studies. This includes collection of biological data on deep sea red crab and monkfish stocks (all or partly located beyond the depth range of standard surveys) and collection of benthic grab samples in support of development of habitat suitability studies for stocks of black sea bass, a poorly-assessed stock utilizing untrawlable habitats off the Delmarva coast associated with impending wind energy development.

Two shallow water (<60 m depth) areas will be trawled off the Delmarva and New Jersey coasts, respectively, as part of the monkfish investigation. In addition, sediments from a suite of 13 stations in the Maryland Ops area will be sampled for sediment texture and benthic infaunal analysis from water depths in the 16-40 m range.

In each of eight deepwater areas on the continental slope between New Jersey and South Carolina three trawls spanning depths from 300 to 800 m will be performed for both monkfish and deep sea red crabs following a brief scouting survey with sonar to assess trawlability. One CTD cast and a 4-seam winter flat net trawl will be conducted at each station. Grab samples for sediment analysis will be made in support of monkfish habitat assessment *if monkfish are caught*. Samples collected from the shallow water and deep water trawls will be subject to the following analysis:

1) **Monkfish Study** The objectives of this study are to: 1) Determine concentrations of organic contaminants, e.g. PCBs, DDTs, chlordanes and PBDE flame retardants, in monkfish muscle, liver and gonads and sediment samples collected from each site; 2) Determine reproductive stages of monkfish collected from each site; 3) Determine abundance and distribution of monkfish stocks ; 4) Compare abundance and distribution of monkfish stocks with environmental factors (e.g. temperature, depth) and 5) Compare concentrations of contaminants in monkfish tissue samples with those found in the sediment samples from each site.

2) **Deep Sea Red Crab Study**. We plan to investigate reproduction, fecundity, size and age at maturity, and stock structure for deep sea red crabs. Specific objectives of this project are to:

- Determine the size at 50% sexual maturity (SM_{50}) for male and female red crabs;
- Estimate the size-specific fecundity of female crabs and the stages of embryo development;
- Determine embryo development stage, molt status, and reproductive conditions;
- Estimate spermathecal contents as an index sperm availability and competition;
- Determine if annual growth bands are present in eyestalks;
- Determine if there is evidence for multiple genetic stocks;
- Sample blood for the presence of the *Hematodinium* parasite that affects other crab and lobster fisheries;
- Collect muscle tissue for enzyme analysis

3) **Educational Objective.** Scientific participants will include 10-12 graduate students, 1 NEFSC Scientist, and 2 UMES Faculty. Inclusion of students in this work will fulfill the educational objective of the cruise.

4) **Delmarva Benthic Habitat Objective**. The plan for this objective is to obtain 13 triplicate sets of grab samples from a grid of stations within Bureau of Ocean Energy Management (BOEM) Maryland Wind Energy Area (MD WEA) for purposes of defining sediment texture (grain size distribution) and benthic infauna at those sites. This information will be utilized for ground-truthing a visual survey of the same sites a month later to define the character and ecological vulnerability of bottom habitats in advance of siting decisions for wind power development.

Itinerary (Planned):

28 June: Load scientific equipment, embark scientific personnel
29 June: Depart Atlantic Marine Operations Center, Norfolk, VA.
30 June: Arrive at first station, begin cruise activities.
09 July: Arrive Atlantic Marine Operations Center, Norfolk, VA, off-load scientific equipment, samples, and debark scientific personnel.

Operational Plan:

Trawl Station Locations and Naming: Ten locations have been selected (Fig. 1, Table 1) for the monkfish and deep sea red crab work. The number of trawls taken at the two shallow water sites (F and MH) will be determined by the Chief Scientist upon arrival, but should not exceed three. At each of the eight deep water areas (HC, BW, SN, NH, LO, CH, FE and HA) we plan to sample 3 trawl stations (total 24 stations); one at a reasonably constant depth of 300 m, one at 500 m, and one at 800m. The GIS positions in Table 1 provide an approximate guide for those locations, but the bridge crew may move these as need to find a clear path for trawling and maintain bottom depth of ±50 m if at all possible. All stations have alphanumeric designations indicating the geographic area, e.g. HC and the trawl number starting from shallowest to deepest, e.g. HC-1 (300 m), HC-2 (500m), HC-3 (800m). Additional numbers may be added if a trawl fails for any reason and the Chief Scientist decided to do it over. Numbers can also be added to shallow area designators, e.g. F-1, F-2, MH-1, MH-2, etc., if multiple trawls are taken at those sites.

At each trawl station a vertical CTD cast will be made and a trawl will be made using a 4-seam winter flat net otter trawl fitted with headrope floats suitable for 900 m depth. Trawls will be made

for 30 min. (between setting and haulback) at 2.5-2.7 kt and using the standard NEFSC trawl wire scope tables and employing ITI sensors, unless otherwise specified by the Chief Scientist. Fish and crab processing procedures, including sorting, counting, weighing, and measuring will conform to protocols established by the Northeast Fisheries Science Center. Recording will be done manually (not via FSCS). Station positions and a station location figure including site locations and tentative cruise track are provided in Table 1 and Figure 1. This track is designed to minimize steaming time, given anticipated weather and working conditions and thus maximize completion of cruise objectives. A schedule of activities (assuming no heavy weather, mechanical failures, or personnel emergencies) is provided in Fig. 3. It is recognized that this cruise track and schedule may have to be altered in consultation between the ship's CO and the Chief Scientist as conditions warrant. With ideal conditions sampling can be completed in 11 days. A highest reasonable cruising speed (assumed 10 kt.) is requested to improve the potential to complete all cruise missions. During the cruise, five types of sampling will be conducted:

1. Water column S-T (CTD) profile:
   a. **Setup** – CTD is mounted on an oceanographic EM cable with a 10 kg weight beneath and is wired to a CTD station with dedicated computer and a separate monitor showing ship's SCS data output (UTC date and time, fathometer, GPS position, surface temperature and salinity at a minimum) located in ship's dry lab or other suitable dry location. Operating personnel includes ship's hydrographic winch operator, one or more ship's deck crew and/or scientists with proper safety gear to handle the instrument on deck at the launch site, and one CTD operator (ship' survey tech or scientific crew) at the computer in the dry location to monitor instrument operations. All three stations (winch, deck, and computer) should be in voice contact with one another and the bridge, preferably with hand-held radios.
   b. **Procedure** - Ship comes to full stop. CTD is turned on by member of the deck crew. Winch operator swings CTD over the side and into the water and stops the winch with CTD just beneath the water's surface to allow for temperature equilibration, until instructed to start the descent by the CTD operator. Descent and ascent rate may be specified by the operator, otherwise the winch operator will use standard default rates used for NOAA CTDs. The descent is stopped on signal from the CTD operator as the instrument approaches 5 or 10 m above the bottom, depending on sea conditions and resulting magnitude of ship's roll. The winch operator probably has a "wire out" indicator, but not depth readout, so he can not make that judgment without some additional information. The bridge may be able to help in this case if there is no real-time depth recording or scientific recorder. A signal is then given to the winch operator to bring the CTD back on board. He brings it back to the surface and swings it onto the deck, and the CTD handler then downloads data (if not taken in real time), turns off and secures the instrument and hydro wire, and insures that the bridge knows that the CTD is completed.
2. Shallow water trawling: Trawling will be conducted in the vicinities of each identified station (Fig. 1, Table 1) using the 4-seam winter trawl net. Each tow will be preceded by a CTD cast. The number of tows conducted will be at the discretion of the Chief Scientist. Each sampling tow will use a standard scope ratio, tow along the depth contour (aiming for constant depth during the tow) at a speed of 2.5-2.8 kt for 30 minutes of bottom contact time using the standard NEFSC scope table to determine the proper amount of wire out.

3. Deep water trawling: Trawling will be conducted in the vicinities of each identified station (Fig. 1, Table 1) using the 4-seam winter trawl net suitable for depths up to 900 m. Each tow will be preceded by a CTD cast. One tow will be conducted at each of the following depths (following contours as much as possible): 250 m, 500 m, and 800 m. It is expected that depths during the tows will vary from the nominal depth by as much as ± 50 m. Sonar reconnaissance of the station vicinity prior to trawling is desirable in order to find a suitable heading for the tow so as to remain near the proper depth and to avoid snags. Exact tow locations will be determined in consultation with the Chief Scientist. Each sampling tow will use a standard scope ratio, tow along the depth contour (aiming for constant depth during the tow) at a speed of 2.5-2.8 kt for 30 minutes of bottom contact time.

4. Grab sampling: A modified Van Veen sampler will be used for sampling sediments for grain size analysis, benthic infaunal analysis, and sediment organic contaminants.
   a. **Maryland Ops area**: Three replicate grabs for grain size and benthic infaunal analysis will be taken at each of the 13 Maryland Ops area stations (Fig. 2: 16 to 40 m depth range). It is desirable to take the sample within ~35 m (= ~0.02 min. = ~0.0003 deg. Lat/Lon) of the selected sampling point (Table 2) if at all possible. If this proves too difficult or time-consuming, this requirement may be relaxed in consultation with the Chief Scientist. The grab sampler will be cocked and lowered over the side and sent down to the bottom a the fastest speed allowable by the winch till it hits the bottom, then will be brought back up and lowered onto its wooden stand. The lids on top of the Van Veen buckets will be opened and the sample will then be inspected for adequacy of the sample. *If the sample is adequate as judged by the Chief Scientist or his designee*, this information needs to be passed to the bridge so that they can get to reposition to the same site or get underway for the next station as soon as possible. The grab will be recorded and a photo of its surface will be taken by a member of the scientific crew, then a 3 cm (1 **3/16**") diameter plastic core tube will be used to take a subsample of at least 5 cm (2") depth for grain size analysis. That tube will then be capped on top, carefully removed from the grab, capped on the bottom, recorded, labeled, and stored upright in a refrigerator. The rest of the sample should be dropped into a pan under the grab sampler stand by opening the grab jaws. The grab sampler jaws may be washed out with a small quantity of clean salt water (not to exceed the receiving pan's capacity) with a squeeze bottle to wash any remaining sample from the inside of the jaws into the receiving pan if necessary. The sample in the pan with any wash water should then be removed for sieving. More thorough washing of the grab with water from a hose will be done if needed once the pan is removed. The grab can be re-cocked at this point. *If the sample is deemed inadequate upon inspection*, it should be dumped into a pan without subsampling for grain size and immediately discarded over the side so that another grab can be conducted immediately, before the ship drifts too far from the initial sampling point. Repositioning the ship will undoubtedly be necessary in order to take subsequent replicate grabs at the same station.
   b. **Trawl Stations**: The Van Veen sampler should be thoroughly cleaned and decontaminated prior to starting (see below) prior to starting trawl station grab sampling. High precision positioning will probably not be possible at the depths at which these samples will be taken (350 – 800 m), so it is requested that these samples be taken within 1 nmi (= 1.0 min. =~0.017 deg Lat/Lon) from any point in the trawl track. One grab will be taken for organic contaminant analysis at each of the trawl stations at which monkfish are caught *at the discretion of the chief scientist or his designee*. The operation of the Van

Veen sampler will be essentially the same as above up to the point where a subsample is taken. Again, the bridge should be informed immediately if the sample is adequate so that the ship can prepare to get underway (or not) as soon as possible. The subsample will be taken with a decontaminated metal scoop from the surface of the whole grab sample, instead of with a plastic core tube, by a member of the scientific crew. The grab jaws can then be opened and the remaining sample dropped into a pan under the stand and discarded overboard. At this point the grab can be thoroughly hosed down inside and out to remove all traces of sediment. In cases of the two shallow water sites (F and MH), it may also be necessary to wash down the grab sampler with ethanol or other solvents to decontaminate it in preparation for the next trawl station sample. If solvent washing is performed, ethanol washings cannot be allowed to run onto the deck or into the water. Instead, they should be captured in a pan under the grab stand for collection and storage as hazardous waste until they can be removed from the ship and disposed of properly ashore after the cruise.

5. Underway electronic sampling: Along the entire cruise track precision depth (EK60, all frequencies), ADCP and GPS data will be logged using the ship's Scientific Computer System (SCS).

On board laboratory methods for each of the studies are as follows:

1) Deep and Shallow water trawling: These evolutions will be conducted using a 4-seam winter flat net (otter trawl). Catches will be sorted and subsampled for desired species; bycatch species and excess catches of desired species will be returned to the water following weighing and measuring. Desired species will include monkfish and deep sea red crabs and possibly other species of interest. CTD casts will be done prior to trawl events unless otherwise specified by the Chief Scientist.

2) Monkfish Research: For each monkfish sample, total length (TL), body weight, and the weights of muscle, liver, and gonads will be recorded. Each stomach will be removed and the contents weighed. If contents are identifiable, it will be enumerated, measured and recorded on data sheet; if not, it will be placed in a labeled Ziploc bag and frozen. In addition, monkfish found in stomachs should be sexed (if possible) and frozen. All food habits data would be entered on data sheet provided.
   - Total length, gender, maturity stage
   - Weights (body weight, liver, gonads, gut contents)
   - Histology (liver and gonads)
   - label contents (location)
   - tissues (muscle, liver, gonads) for contaminants study
   - pictures (gonads, subsample of monkfish)

3) Red crab sampling:
   - All crabs will be placed in baskets but NOT sexed (it's never accurate). All baskets will be weighed, and crabs from 4-5 baskets will be sampled, while the others will be discarded.
     - Before discarding, baskets will be examined for extremely small or large crabs and those set aside.
   - Sampled Crabs: 200-300 crabs from each tow will be examined as follows:

- All crabs in sampled baskets will be sexed and measured for measured for carapace length (L), carapace width with spines (W), chela length (CL), chela height (CH, males only) and width of the 3rd abdominal segment (AW, females only).
- For females additional measurements include egg conditions [Orange (new) or brown (eyed)], clutch fullness (0-5), and vaginal condition (open/closed).

- Crab Dissections: A subsample of 30-50 crabs will be held in live tanks until dissection.
  - Sections will be removed of the testes and *vasa deferentia* from males, the ovaries and spermathecae from females, and heart and hepatopancreas from all crabs.
  - From 5-10 females in each 5 mm category will be sampled for fecundity by removing the abdomens including all pleopods, and storing in 10% formalin in a pre-filled container.
  - Small samples of eggs will be placed in Bouins solution for staining, then rinsed and stored in 70% Ethanol.
  - Hemolymph (500 µl) will be collected, and stored in prepared vials
  - Muscle and Heart tissue will be collected and stored in liquid Nitrogen.

4) Other trawled species of interest: specimens of interest from trawl collections other than monkfish and deep sea red crabs may be retained for photography and/or preservation in 10% buffered formalin in glass jars.

5) Grab sample processing:
Grab samples in pans will receive initial processing on board *Gordon Gunter*. They will be washed through one or more 1 mm geological sieve(s) with salt water from garden hoses. Material passing the sieves (primarily silt and fine sand) will be washed over the side. Material retained in the sieves will be preserved in 10% borate-buffered formalin with rose Bengal dye in one or more plastic jars following hand removal of large stones and shells to reduce volume. A waterproof paper label will be put inside the jar(s) as well as marking the jars on the outside to identify the samples. These operations are best performed on the weather deck rather than in a wet lab if at all possible.

Samples and Hazardous materials handling

The scientific crew will provide a full inventory of all hazardous materials brought on board *Gunter Gordon* and removed at the end of the cruise.

Hazardous materials will be stored on board in accordance with NOAA vessel regulations, including the storage of all alcohol and other flammable reagents (e.g. washdown solvents), alcohol-preserved samples, and hazardous waste (e.g. grab sample sovent washings) in fire-proof metal cabinets.

Because of their large volume, it is recommended to store plastic jars containing benthic samples in boxes secured to the weather deck, covered by a tarpaulin to keep them dry, to avoid personnel contact with formaldehyde fumes in enclosed or partially enclosed spaces.

Grab sample sediment cores for grain size analysis (MD OPS area) will be stored frozen at -20° C; sediment samples for organic contaminant analysis (Trawl Stations) will be refrigerated or frozen.

Data Record Needs: Complete continuous records are requested for ship's sensors as well as event logs for each of the sampling events, e.g. each trawl and grab sampler deployment. Continuous records desired include GPS, water quality and weather sensors, and EK60 raw data (all frequencies) and ADCP data. Ship's motion sensors must be operating and data provided to provide input for correction of raw data from the EK60. Archiving of hydrographic data from the CTD will be the responsibility of the scientific crew. A template for the event log format desired is attached as Appendix C. Recording of catches will be conducted on manual log sheets by the scientific crew rather than via FSCS.

Protected Resources:

North Atlantic right whale protection: The vessel will adhere to right whale protection regulations. Information on Seasonal Management Area (SMA) and Dynamic Management Area (DMA) regulations and information for protecting right whales from collisions with vessels are provided through the NOAA Protected Resources website (http://www.nmfs.noaa.gov/pr/shipstrike/), Right Whale Sighting Advisory System (SAS) website (http://www.nefsc.noaa.gov/psb/surveys/), the U.S. Coast Guard's "Notices To Mariners" and NOAA weather radio.

Mariners are urged to use caution and proceed at safe speeds in areas where right whales occur. U.S. Law (50 CFR 224.105) prohibits operating vessels 65 feet (19.8 meters) or greater in excess of 10 knots in Seasonal Management Areas (SMAs) along the U.S. east coast. Mariners are also requested to route around voluntary speed restriction zones, Dynamic Management Areas (DMAs) or transit through them at 10 knots or less. Approaching within 500 yards of right whales is prohibited, unless the Chief Scientist is in possession of an ESA/MMPA permit allowing such approaches.

Whale sightings: Sightings of right whales, or dead or entangled whales of any species, are extremely valuable and reports are urgently requested. Please report all right whale sightings north of the Virginia – North Carolina border to 978-585-8473; right whale sightings south of that border should be reported to 904-237-4220. Right whale sightings in any location may be reported to the U.S. Coast Guard via VHF channel 16. Protocols for reporting sightings are described in the Guide to Reporting Whale Sightings placard. The placard is available online (http://www.nero.noaa.gov/whaletrp/plan/disent/Guide%20to%20reporting%20Whale%20Sightings%20FINAL%20complete_8.7.07.pdf) and laminated copies will be provided by the Protected Species Branch. It is requested that this placard be kept on the bridge for quick reference and to facilitate rapid reporting (via satellite phone if necessary). Opportunistic sightings of other marine mammal species that are live and well may be reported using the Platforms of Opportunity (POP) forms and protocols.

Endangered Species Act and Marine Mammal Protection Act reporting requirements: This reporting is required and is in addition to the reports in the above two sections. If the ship has an

interaction with a whale, dolphin, porpoise, marine turtle, or seal (e.g., collision with a whale or bycatch of a sea turtle), the NMFS Northeast Regional Office must be notified within 24 hours of the interaction. If an interaction with any of those species occurs or if the vessel's company notices an animal that is entangled, injured, in distress, or dead, they should contact the Northeast Regional Office's 24-hour hotline at **978-281-9351** to report the incident and receive further instructions.

IT Security: Any computer that will be hooked into the ship's network must be scanned by NEFSC's Data Management Support Staff for viruses before being brought aboard the vessel. 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.

Foreign National Access and Deemed Export Controls:

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). The foreign national's sponsor is responsible for obtaining clearances and export licenses required and for providing for required escorts by the NAO. Programs sponsoring foreign nationals should consult with their designated line office personnel to assist with the process (http://deemedexports.noaa.gov/contacts.html).

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

Responsibilities of the Chief Scientist: Ensure the following is provided to the Commanding Officer before any foreign national will be allowed on board for any reason:

1. Provide the Commanding Officer with the e-mail generated by the FRNS granting approval for the foreign national guest's visit. This e-mail will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
2. Escorts – The Chief Scientist is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer.
3. Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.
4. Export Control - *The NEFSC currently neither possesses nor utilizes technologies that are subject to Export Administration Regulations (EAR).*

The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written NMAO 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 of the NOAA Foreign National List spreadsheet for each foreign national in the scientific party.

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 cruise, provide the Chief Scientist with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.
7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing 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 Departmental Sponsor/NOAA 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, 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 Guest) as required by NAO 207-12 Section 5.03.h.

Equipment and Supplies List: Equipment and supplies will be provided by either the LMRCSC or NEFSC listed as attached in Appendix B, Table 3.

Disposition of Data and Samples: All hand-written sample logs and electronic SCS records and raw CTD files will be retained by the Coastal Ecology Branch (CEB), Environmental Processes Division (EPD), J.J. Howard Laboratory. CTD water column profile data and Oceanography Station Operations Logs will be delivered to the Oceanography Branch of the NEFSC at the Woods Hole Laboratory. Copies of the Oceanography Station Operations Logs will be delivered to the Fisheries Oceanography Branch in Narragansett by the Chief Scientist. Basic catch data for red crabs, monkfish, and all other species recorded will be retained by CEB, EPD at J.J. Howard Laboratory. Specific biological data for red crabs and monkfish and preserved tissue samples will be retained by cruise participant faculty at the University of Maryland Eastern Shore. Refrigerated sediment grain size samples and preserved benthic infauna samples will be retained by CEB, EPD at the J.J. Howard Laboratory.

ROSCOP 3 forms (IOC SC-90/WS-23) will be completed and forwarded to NODC, Washington, DC. A cruise report, and a completed Ship Operations Evaluation Form, will be submitted to the NEFSC Vessel Coordinator within 20 days following completion of the cruise.

Communications: Routine communications will be conducted between *Gordon Gunter* and NEFSC, Woods Hole via e-mail. Voice communications are available (cellular phone, Iridium, INMARSAT M, INMARSAT B) if needed.

Hazardous Material: The Chief Scientist is responsible for complying with MOCDOC 15, Fleet Environmental Compliance #07, Hazardous Material and Hazardous Waste Management Requirements for Visiting Scientists, released July 2002. Details regarding those requirements will be provided by the Chief of Operations, Marine Operations Center – Atlantic upon request and may be reached at 757-441-6842.

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, and/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 amount of hazardous material arriving and leaving the vessel shall be accounted for by the Chief Scientist.

Medical Clearances: NOAA Fleet Medical Policy requires all personnel embarking on NOAA vessels to furnish a completed copy of the NOAA Health Services Questionnaire (NHSQ) to the Health Services Office of the Marine Operations Center. This form should be submitted 30 days in advance of sailing, but no later than 7 days in advance of sailing. The Chief Scientist is responsible for the timely submission of NHSQs for scientific personnel to the Health Services Office.

Miscellaneous:

Watches: Vessel operations will be conducted 24 hours per day. The scientific watch schedule will be 12 hours-on and 12 hours-off; noon to midnight and midnight to noon.

Meals: A scientific complement of up to 14 persons will be provided meals during the period beginning one hour before scheduled departure time until 2 hours after the termination of the cruise.

Pre-Cruise Meeting: Prior to departure the Chief Scientist will conduct a meeting of the scientific party to train them in sample collection and inform them of cruise objectives. Vessel related information including safety, meals, watches, etiquette, will be presented by the ship's Operations Officer.

Post-Cruise Meeting: A formal post-cruise meeting will be held aboard the vessel upon completion of the cruise. The Master, Port Captain, Scientific Vessel Coordinator, Chief Scientist, Branch Chief and whoever else is detailed will attend. The Port Captain will be responsible for the disposition of the minutes of the meeting.

Personnel List (Scientific):

Berth	Name	Role	Affiliation	Stateroom
1	Dr. Rich Langton	NOAA Chief Scientist	NEFSC, J.J. Howard	01-20-1-L
2	Dr. Bradley Stevens	UMES co-Chief Scientist	UMES	TBD
3	Imam Syuhada[1]	Graduate Student	URI	01-24-1-L
4	Kristin Lycett	Graduate Student	UMES	01-42-2-L
5	Evan Lindsay	Graduate Student	UMES	01-24-1-L
6	Efeturi Oghenekaro[1]	Graduate Student	UMES	01-34-2-L
7	Derrick Alcott	Graduate Student	UMES	01-34-1-L
8	Aicha Toure	Graduate Student	UMES	02-34-2-L
9	Kahil Simmons	Graduate Student	UMES	01-39-1-L
10	LaTrisha Allen	Graduate Student	UMES	01-34-2-L
11	Scott VanSant	Graduate Student	UMES	TBD
12	Shadesha Green	Graduate Student	UMES	01-42-2-L
13	Jaime Belanger	Graduate Student	UMES	01-39-1-L
14	Omorose Aighewe	Graduate Student	UMES	01-19-2-L

[1]Foreign National

All NOAA Scientists will have proper travel orders when assigned to a NOAA ship. The Chief Scientist will ensure that all non-NOAA or non-Federal scientists aboard will also have proper orders or the means to support themselves in the event that the ship becomes uninhabitable and/or the galley is closed during a port call during any part of the scheduled project.

A copy of the Scientific Research Permit is included as Appendix E and this cruise will not be operating in foreign waters.

APPENDIX A: FIGURES

Figure 1. Cruise track with transect stations. Operations areas in order of their proposed visitation: F – the Fingers, MH – the Mud Hole, HC1-3 - Hudson Canyon, BW1-3 - Baltimore-Washington Intercanyon, SN1-3 - South of Norfolk Canyon, NH1-3 - Nags Head, LO1-3 - Cape Lookout 1-3, CH – Charleston, FE1-3 Cape Fear, HA1-3 Hatteras. See Table 1 for exact positions.

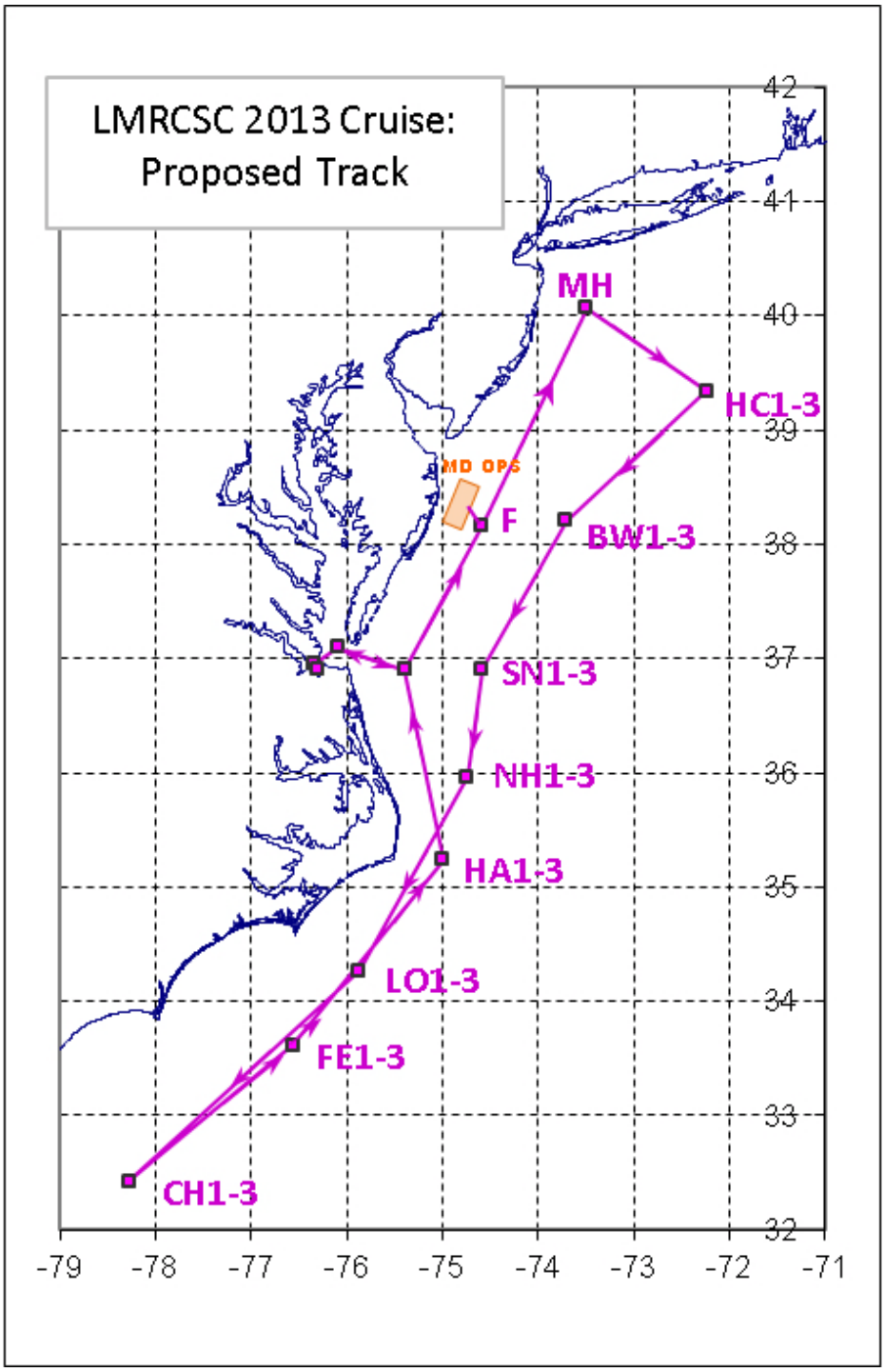


Figure 2. Maryland Ops Area Detail. Bureau of Ocean Energy Management (BOEM) Maryland Wind Energy Area (MD WEA) lease area blocks and sub-blocks are in green. The grab sampling grid for this cruise (red lines), including sites (red dots), are labeled A-M in red. Smaller red labels identify north-south (NS1-4) and east-west (EW1-5) grid lines at 3.0 statute mile intervals.

BOEM Maryland Wind Energy Area (MD WEA) with sampling grid

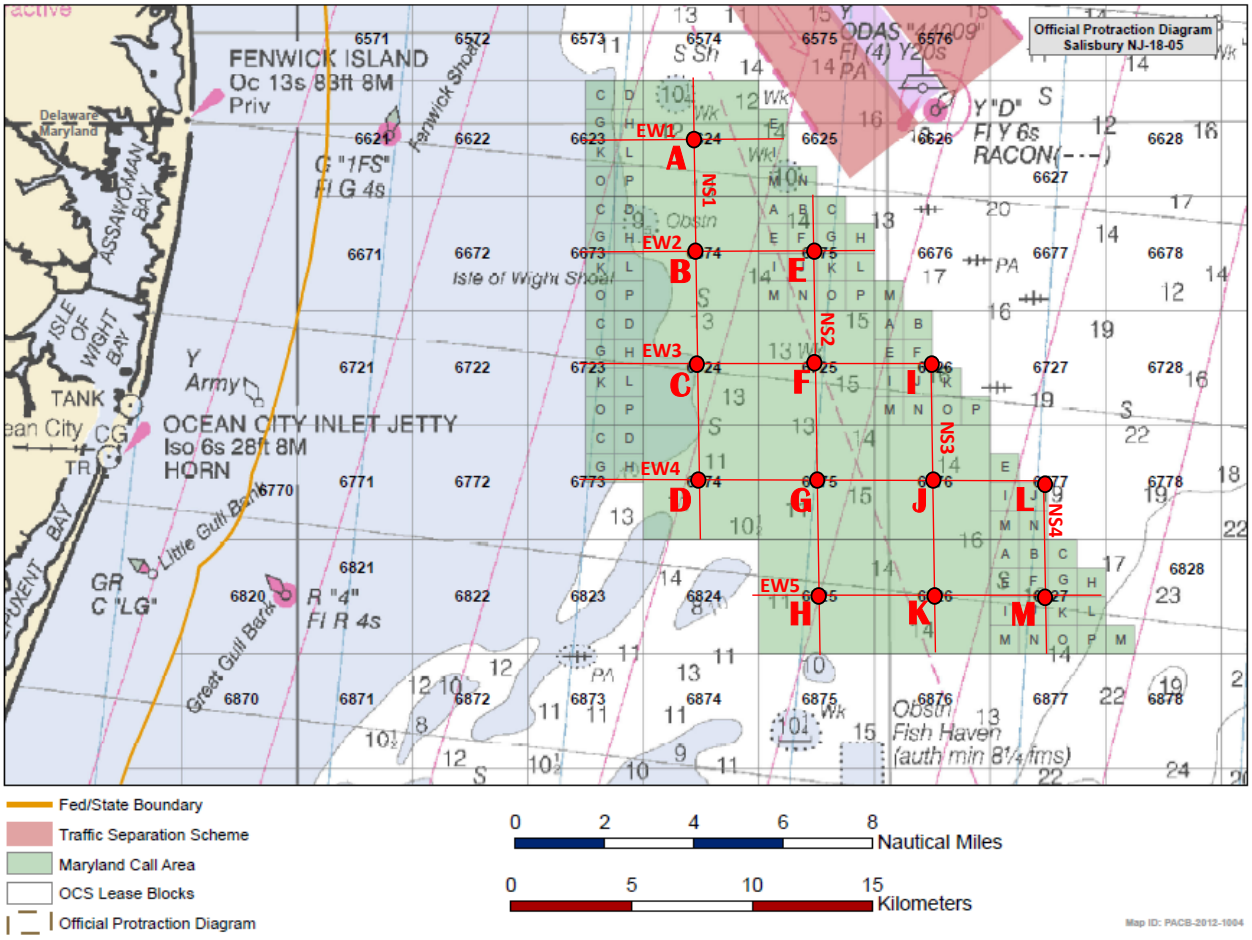
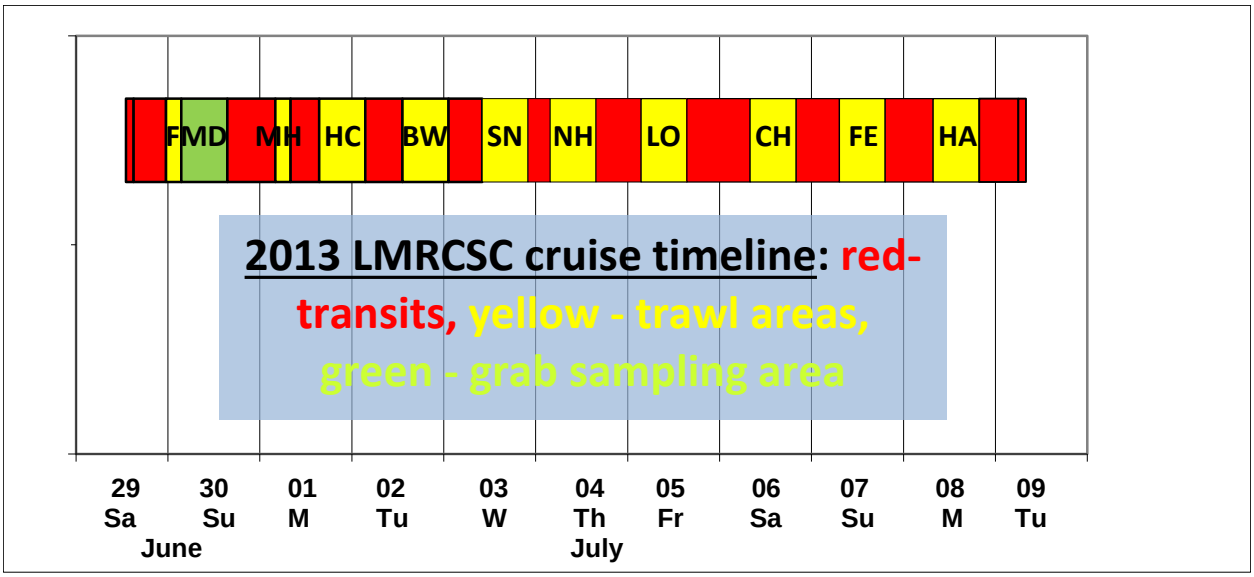


Figure 3. Time schedule for conduct of cruise activities. Operations areas are abbreviated as in Fig. 1 and Table 1. Departure time from Norfolk is assumed to be 11:00 AM on 29 June, and arrival time at 8:00 AM on 9 July. Transit time calculations assume 10.0 kt., deepwater trawl transects are estimated at 12 hours for the three trawls combined with scouting, repositioning, and station CTD casts included (based on the conduct of similar operations in 2012).



Activity	Start Date	Start Time	Duration	End Date	End Time
Transit Norfolk to off VA	**29-Jun**	**13:00**	2:00	29-Jun	15:00
Transit to F	29-Jun	15:00	8:30	29-Jun	23:30
Sampling trawl stations at F	29-Jun	23:30	4:00	30-Jun	3:30
Maryland Ops Area grab sampling	30-Jun	3:30	12:00	30-Jun	15:30
Transit to MH	30-Jun	15:30	12:30	1-Jul	4:00
Sampling trawl stations at MH	1-Jul	4:00	4:00	1-Jul	8:00
Transit to HC1 (Hudson Canyon)	1-Jul	8:00	7:30	1-Jul	15:30
sampling 3 HC stations	1-Jul	15:30	12:00	2-Jul	3:30
Transit to BW 1 (Baltimore-Washington inter Can)	1-Jul	3:30	9:45	1-Jul	13:15
sampling 3 BW stations	1-Jul	13:15	12:00	2-Jul	1:15
Transit to SN 1 (S. Norfolk Can)	2-Jul	1:15	8:45	2-Jul	10:00
sampling 3 SN stations	2-Jul	10:00	12:00	2-Jul	22:00
Transit to NH 1 (Nags Head)	2-Jul	22:00	5:45	3-Jul	3:45
sampling 3 NH stations	3-Jul	3:45	12:00	3-Jul	15:45
Transit to LO 1 (Point Lookout)	3-Jul	15:45	11:45	4-Jul	3:30
sampling 3 LO stations	4-Jul	3:30	12:00	4-Jul	15:30
Transit to CH 1 (Charleston Bump)	4-Jul	15:30	16:30	5-Jul	8:00
sampling 3 CH stations	5-Jul	8:00	12:00	5-Jul	20:00
Transit to FE 1 (Cape Fear)	5-Jul	20:00	11:15	6-Jul	7:15
sampling 3 FE stations	6-Jul	7:15	12:00	6-Jul	19:15
Transit to HA 1 (Cape Hatteras)	6-Jul	19:15	12:30	7-Jul	7:45
sampling 3 HA stations	7-Jul	7:45	12:00	7-Jul	19:45
Transit to off VA	7-Jul	19:45	10:15	8-Jul	6:00
Transit to Norfolk	8-Jul	6:00	2:00	8-Jul	8:00

APPENDIX B. TABLES

Table 1. GPS Locations for sampling sites from areas depicted in Figure 1, with sampling gear (CTD, 4SWF = 4-seam winter flat net). This sampling mode will be conducted during day or night as dictated by station arrival time. A Van Veen bottom grab may be added at any one of these at the discretion of the Chief Scientist.

Transect Name	Station	Trawl#	Station Name	Target Depth (m)	Latitude (ddmm.mmm)	Longitude (ddmm.mmm)	Sampling*
Fingers	F	1	F-1	none	38°10´00´´N	74-35.00 W	CTD, 4SWF
Mudhole	MH	2	MH-1	none	40-04.00 N	73-30.00 W	CTD, 4SWF
HudCan	HC-1	3	HC-1	250	39-20.5400-N	072-14.3100-W	CTD, 4SWF
HudCan	HC-2	4	HC-2	500	39-20.4600-N	072-10.4600-W	CTD, 4SWF
HudCan	HC-3	5	HC-3	800	39-20.3219-N	072-07.2873-W	CTD, 4SWF
BaltWash	BW-1	6	BW-1	250	38-12.1100-N	073-42.4700-W	CTD, 4SWF
BaltWash	BW-2	7	BW-2	500	38-10.5000-N	073-40.2500-W	CTD, 4SWF
BaltWash	BW-3	8	BW-3	800	38-07.5700-N	073-41.6800-W	CTD, 4SWF
SNorfolk	SN-1	9	SN-3	250	36-54.8000-N	074-35.2500-W	CTD, 4SWF
SNorfolk	SN-2	10	SN-2	500	36-54.6500-N	074-36.6300-W	CTD, 4SWF
SNorfolk	SN-3	11	SN-1	800	36-54.6000-N	074-37.8400-W	CTD, 4SWF
NagsHead	NH-1	12	NH-3	250	35-57.9578-N	074-44.4028-W	CTD, 4SWF
NagsHead	NH-2	13	NH-2	500	35-57.9194-N	074-46.1846-W	CTD, 4SWF
NagsHead	NH-3	14	NH-1	800	35-57.8663-N	074-47.5720-W	CTD, 4SWF
Lookout	LO-1	15	LO-1	250	34-16.2908-N	075-52.2803-W	CTD, 4SWF
Lookout	LO-2	16	LO-2	500	34-15.1694-N	075-49.1322-W	CTD, 4SWF
Lookout	LO-3	17	LO-3	800	34-14.3368-N	075-47.0632-W	CTD, 4SWF
Charleston	CH-1	18	CH-1	250	32-25.5759-N	078-16.7473-W	CTD, 4SWF
Charleston	CH-2	19	CH-2	500	32-14.6454-N	078-01.2998-W	CTD, 4SWF
Charleston	CH-3	20	CH-3	800	31-55.7953-N	077-37.7037-W	CTD, 4SWF
Fear	FE-1	21	FE-1	250	33-37.0750-N	076-33.9685-W	CTD, 4SWF
Fear	FE-2	22	FE-2	500	33-31.5573-N	076-18.9140-W	CTD, 4SWF
Fear	FE-3	23	FE-3	800	33-27.0541-N	076-07.7315-W	CTD, 4SWF
Hatteras	HA-1	24	HA-1	250	35-14.0551-N	074-59.7515-W	CTD, 4SWF
Hatteras	HA-2	25	HA-2	500	35-13.3651-N	074-58.5223-W	CTD, 4SWF
Hatteras	HA-3	26	HA-3	800	35-12.3647-N	074-56.9339-W	CTD, 4SWF
* Note: Van Veen grab sampling may also be requested at trawl station depending upon catch results							

Table 2. Grab sampling sites in the Maryland Ops area (Fig. 2). All are within the water depth range of 16 to 40 m.

3-mile grid sites	N Lat (ddmm.mmm)	W Lon (ddmm.mmm)
A	3826.70	7448.45
B	3824.10	7448.45
C	3821.50	7448.46
D	3818.91	7448.47
E	3824.09	7445.15
F	3821.50	7445.16
G	3818.90	7445.17
H	3816.31	7445.18
I	3821.49	7441.87
J	3818.89	7441.88
K	3816.30	7441.89
L	3818.89	7438.59
M	3816.29	7438.60

Table 3. Equipment and Supply List: The following sampling and scientific equipment will be placed aboard the NOAA ship *Gordon Gunter* prior to departure:

No.	ITEM	QUANTITY	FURNISHED BY
1	4-seam winter flat otter trawl nets	1	NEFSC, Woods Hole, ESB
2	450 kg polyvalent trawl doors	2	NEFSC, Woods Hole, ESB
3	Trawl wires	ample	NEFSC, Woods Hole, ESB
4	Mending twine		
	#54 braided nylon	ample	NEFSC, Woods Hole, ESB
	#1020 braided nylon liner twine	ample	NEFSC, Woods Hole, ESB
	#120 braided nylon cod end twine	ample	NEFSC, Woods Hole, ESB
5	Spare trawl and liner sections	1	NEFSC, Woods Hole, ESB
6	Chain backstraps and idlers		NEFSC, Woods Hole, ESG
7	Marel electronic scales		
	small (countertop model w/calib wt)	3	NEFSC, Woods Hole, ESB
	large (deck model w/calib wt)	1	
8	Fish measuring boards, manual	2	NEFSC, Woods Hole, ESB
9	Fish baskets, 1.5 bushel	ample	NEFSC, Woods Hole, ESB
10	Plastic 5 gal buckets	ample	NEFSC, Woods Hole, ESB
11	Fish shovels	4	NEFSC, J.J. Howard Lab
12	ITI acoustic depth sensors for deep trawl	2	NEFSC, Woods Hole, ESB
13	Gloves	ample	LMRCSC, Princess Anne, MD
	Rubberized fish	ample	LMRCSC, Princess Anne, MD
	Cotton	ample	LMRCSC, Princess Anne, MD
14	Polyethylene specimen bags	ample	LMRCSC, Princess Anne, MD
15	Specimen jars (glass 16-32 oz)	ample	NEFSC J.J. Howard Lab
	Specimen jars (glass 4 – 16 oz)	ample	LMRCSC, Princess Anne, MD
16	Clerical supplies	ample	
	Trawl logs	ample	NEFSC J.J. Howard Lab
	Length Tally Sheets	ample	NEFSC J.J. Howard Lab
	Internal Labels	ample	NEFSC J.J. Howard Lab
	Other Field Data Sheets	ample	LMRCSC, Princess Anne, MD
17	Formalin neutralizer	ample	NEFSC J.J. Howard Lab
18	Formalin respirator	ample	NEFSC J.J. Howard Lab
19	Cleaning Supplies	ample	
	Deck brushes	ample	NEFSC J.J. Howard Lab
	Long handles for deck brushes	ample	NEFSC J.J. Howard Lab
	Hand Brushes	ample	NEFSC J.J. Howard Lab
	Sponges	ample	NEFSC J.J. Howard Lab
20	Seabird 19 Profiler (CTD)	1	NOAA ship *Gordon Gunter*
21	Young-modified Van Veen grab sampler	1	NEFSC J.J. Howard Lab
22	Van Veen wooden deck stand	1	NEFSC J.J. Howard Lab
23	Plastic pans for sediments	ample	NEFSC J.J. Howard Lab
24	1 mm sieves	4	NEFSC J.J. Howard Lab
25	Sediment sample jars (plastic 2-4 qt)	ample	NEFSC J.J. Howard Lab

APPENDIX C. DATA REQUIREMENTS

Desired event log file (LMRCSC Event_XXX.HDR) template.

CruiseId=DE-04-15
Vessel=Delaware II
Station=1
GearType=Beam Trawl
WireOut=000
BridgeComments=A
SwellHeight=1
SwellDirection=050
WaveHeight=1
WeatherCode=01-Partly Cloudy
StartTrawlTime=11/02/2004-06:44:54
StopTrawlTime=11/02/2004-07:13:53
StartLatitude=4040.8089N
StartLongitude=06902.6756
StopLatitude=4040.7059N
StopLongitude=06902.3712
StartTrawlDepth= 71.10
StopTrawlDepth= 69.30
StartCOG=100
StopCOG=111
StartSOG=00.3
StopSOG=00.7
StartHeading=267.0
StopHeading=246.7
TrueWindSpeed=015.46
TrueWindDirection=009.79
AirTemp=010.8
Barometer=1024.6
MinDepth=68.700000
MaxDepth=71.900000
AvgDepth=70.125287
MinSOG=0.300000
MaxSOG=0.700000
AvgSOG=0.514368
Duration=28.98
Distance=0.253
TrackLineLength=0.264

APPENDIX D. Trawl depth scope table.
APPENDIX E. Scientific Research Permit.

BIGELOW SCOPE TABLE
February 2010

DEPTH	RATIO	WIRE OUT	
15		60	4:1
16		64	
17		68	
18		72	
19		76	
20		80	
21		84	
22		88	
23		92	
24		96	
25		100	
26		104	
27		108	
28		112	
29		116	
30		120	
31		124	
32		128	
33		132	
34		136	
35		137	hold+1
36		138	hold+2
37		139	3.75:1
38		143	
39		146	
40		150	
41		154	
42		158	
43		161	
44		165	
45		165	hold
46		166	hold+1
47		167	hold+2
48		168	3.5:1
49		172	
50		175	
51		179	
52		182	
53		186	
54		189	
55		193	
56		196	
57		200	
58		203	
59		207	
60		210	
61		214	
62		217	

DEPTH	RATIO	WIRE OUT	
63		217	hold
64		218	hold+1
65		219	hold+2
66		220	hold+3
67		221	hold+4
68		221	3.25:1
69		221	hold
70		222	hold+1
71		222	hold+1
72		223	hold+2
73		223	hold+2
74		224	hold+3
75		225	3:1
76		225	hold
77		225	hold
78		226	hold+1
79		226	hold+1
80		227	hold+2
81		227	hold+2
82		228	hold+3
83		228	2.75:1
84		229	hold+1
85		229	hold+1
86		230	hold+2
87		230	hold+2
88		231	hold+3
89		231	hold+3
90		232	hold+4
91		232	hold+4
92		233	hold+5
93	2.5:1	233	2.5:1
94		235	
95		238	
96		240	
97		243	
98		245	
99		248	
100		250	
101		253	
102		255	
103		258	
104		260	
105		263	
106		265	
107		268	
108		270	
109		273	
110		275	

DEPTH	RATIO	WIRE OUT
111	2.5:1	278
112		280
113		283
114		285
115		288
116		290
117		293
118		295
119		298
120		300
121		303
122		305
123		308
124		310
125		313
126		315
127		318
128		320
129		323
130		325
131		328
132		330
133		333
134		335
135		338
136		340
137		343
138		345
139		348
140		350
141		353
142		355
143		358
144		360
145		363
146		365
147		368
148		370
149		373
150		375
151		378
152		380
153		383
154		385
155		388
156		390
157	HOLD	390
158	HOLD	391
159	HOLD	391
160	HOLD	392

DEPTH	RATIO	WIRE OUT
161	HOLD	392
162		393
163		393
164		394
165		394
166		395
167		395
168		396
169		396
170		397
171		397
172		398
173		398
174		399
175		399
176		400
177		400
178		402
179		404
180	2.25:1	405
181		407
182		410
183		412
184		414
185		416
186		419
187		421
188		423
189		425
190		428
191		430
192		432
193		434
194		437
195		439
196		441
197		443
198		446
199		448
200		450
201		452
202		455
203		457
204		459
205		461
206		464
207		466
208		468
209		470
210		473

DEPTH	RATIO	WIRE OUT
211	2.25:1	475
212		477
213		479
214		482
215		484
216		486
217		488
218		491
219		493
220		495
221		497
222		500
223		502
224		504
225		506
226		509
227		511
228		513
229		515
230		518
231		520
232		522
233		524
234		527
235		529
236		531
237		533
238		536
239		538
240		540
241		542
242		545
243		547
244		549
245		551
246		554
247		556
248		558
249		560
250		563
251		565
252		567
253		569
254		572
255		574
256		576
257		578
258		581
259		583
260		585

DEPTH	RATIO	WIRE OUT
261	2.25:1	587
262		590
263		592
264		594
265		596
266		599
267		601
268		603
269		605
270		608
271		610
272		612
273		614
274		617
275		619
276		621
277		623
278		626
279		628
280		630
281		632
282		635
283		637
284		639
285		641
286		644
287		646
288		648
289		650
290		653
291		655
292		657
293		659
294		662
295		664
296		666
297		668
298		671
299		673
300		675
301		677
302		680
303		682
304		684
305		686
306		689
307		691
308		693
309		695
310		698

DEPTH	RATIO	WIRE OUT
311	2.25:1	700
312		702
313		704
314		707
315		709
316		711
317		713
318		716
319		718
320		720
321		722
322		725
323		727
324		729
325		731
326		734
327		736
328		738
329		740
330		743
331		745
332		747
333		749
334		752
335		754
336		756
337		758
338		761
339		763
340		765
341		767
342		770
343		772
344		774
345		776
346		779
347		781
348		783
349		785
350		788
351		790
352		792
353		794
354		797
355		799
356		801
357		803
358		806
359		808
360		810

DEPTH	RATIO	WIRE OUT
361	2.25:1	812
362		815
363		817
364		819
365		821
366		824
367		826
368		828
369		830
370		833
371		835
372		837
373		839
374		842
375		844
376		846
377		848
378		851
379		853
380		855
381		857
382		860
383		862
384		864
385		866
386		869
387		871
388		873
389		875
390		878
391		880
392		882
393		884
394		887
395		889
396		891
397		893
398		896
399		898
400		900
401		902
402		905
403		907
404		909
405		911
406		914
407		916
408		918
409		920
410		923

DEPTH	RATIO	WIRE OUT
411	2.25:1	925
412		927
413		929
414		932
415		934
416		936
417		938
418		941
419		943
420		945
421		947
422		950
423		952
424		954
425		956
426		959
427		961
428		963
429		965
430		968
431		970
432		972
433		974
434		977
435		979
436		981
437		983
438		986
439		988
440		990
441		992
442		995
443		997
444		999
445		1001
446		1004
447		1006
448		1008
449		1010
450		1013
451		1015
452		1017
453		1019
454		1022
455		1024
456		1026
457		1028
458		1031
459		1033
460		1035

DEPTH	RATIO	WIRE OUT
461	2.25:1	1037
462		1040
463		1042
464		1044
465		1046
466		1049
467		1051
468		1053
469		1055
470		1058
471		1060
472		1062
473		1064
474		1067
475		1069
476		1071
477		1073
478		1076
479		1078
480		1080
481		1082
482		1085
483		1087
484		1089
485		1091
486		1094
487		1096
488		1098
489		1100
490		1103
491		1105
492		1107
493		1109
494		1112
495		1114
496		1116
497		1118
498		1121
499		1123
500		1125
501		1127
502		1130
503		1132
504		1134
505		1136
506		1139
507		1141
508		1143
509		1145
510		1148

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930

SCIENTIFIC RESEARCH PERMIT

Research Coordinator: Nathan Keith
Scientific Vessel Coordinator
NOAA NMFS NEFSC
166 Water Street
Woods Hole, MA 02543
(508) 495-2083

Date of Issuance: May 17, 2013
Study Period: April 29, 2013 – July 15, 2013
Research Vessel: NOAA Research Vessel *Gordon Gunter*

Pursuant to 50 CFR 600.745, this Scientific Research Permit (SRP) acknowledges that the above vessel is conducting scientific research as described in the attached cruise descriptions. Accordingly, under 16 U.S.C. 1801, *et seq*., the above vessel is exempt from Federal fishing regulations implemented under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

2013 Research Vessel Activities:

Northern Right Whale Survey and Biology (April 29 – May 31);
Ecosystem Monitoring Survey (June 5 – June 24); and
Living Marine Resources Cooperative Science Center Research (June 29 – July 9).

This SRP is for the scientific research activities conducted in accordance with the above-listed research activities; it is separate and distinct from any permit required by any other applicable law. In order to facilitate identification of your activities as scientific research, you should carry a copy of the vessel's cruise instructions and this SRP on board the research vessel during all planned scientific research activities. Generally, activities conducted in accordance with a scientific research plan and permitted by this SRP are exempt from Federal fishing regulations implemented under the Magnuson-Stevens Act. However, this SRP does not acknowledge activities conducted outside the scope of the cruise instructions, which may not be considered scientific research and may be subject to applicable Federal fishing laws and regulations, or other applicable law.

Acknowledged by:

George H. Darcy
Assistant Regional Administrator
for Sustainable Fisheries