Project Instructions

Date Submitted: April 16, 2015

Platform: NOAA Ship *Hi'ialakai*

Project Number: HA-15-02 (OMAO)

Project Title: Hawaiian monk seal population assessment

Project Dates: May 18, 2015 to June 8, 2015

Prepared by: _____ Dated: _____
Jessica Lopez Bohlander
Chief Scientist
Hawaiian monk seal research program/ Pacific Islands Fisheries Science Center

Approved by: _____ Dated: _____
Michael P. Seki, Ph.D
Science Director
Pacific Islands Fisheries Science Center

Approved by: _____ Dated: _____
CDR Matthew J. Wingate, NOAA
Commanding Officer
Marine Operations Center – Pacific Islands

I. Overview

A. Brief Summary and Project Period

B. Days at Sea (DAS)

Of the 22 DAS scheduled for this project, 22 DAS are funded by an OMAO allocation. This project is estimated to exhibit a high Operational Tempo.

C. Operating Area (See Appendix 1)

The operating area includes the main Hawaiian Islands (MHI) and Papahanaumokuakea Marine National Monument from the island of Hawaii to Kure Atoll with Hawaiian monk seal surveys and/or camp deployments at Ni'ihau Island, Nihoa Island, Necker Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll. If Hawaiian monk seal rehabilitation candidates are found, the project will conclude with the collection of juvenile seals from a site in the Northwestern Hawaiian Islands (NWHI) and transport to a rehabilitation facility in Kona on Hawaii Island.

D. Summary of Objectives

The main objectives for HA-15-02 are:

1. Deploy Hawaiian monk seal camps at French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef and Kure Atoll.
2. Conduct monk seal surveys at Ni'ihau, Midway Atoll, and opportunistically at Nihoa, and Necker Islands.
3. Perform opportunistic health assessment and sampling of seals at all sites visited.
4. Translocate Hawaiian monk seals from NWHI populations for rehabilitation at a facility in Kona on the island of Hawaii.
5. Deliver supplies to Kure Atoll for the Department of Forestry and Wildlife (DOFAW), Department of Land and Natural Resources (DLNR), State of Hawaii.
6. Set up a collaborative project with Sustainable Coastlines Hawaii for marine debris cleanup and monitoring during the field season.

E. Participating Institutions

Hawaiian monk seal research program of the Protected Species Division of the NOAA Pacific Islands Fisheries Science Center (HMSRP/PSD/PIFSC); Joint Institute for Marine and Atmospheric Research (JIMAR), Sustainable Coastlines Hawaii (SCH), The Marine Mammal Center (TMMC).

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

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Barbieri, Michelle	Veterinarian	5/18/15	6/7/15*	F	NOAA	USA
Barcina, Keelan	Biological Research	5/18/15	5/21/15	M	JIMAR	USA

	Technician					
Becker, Brenda	Biologist	5/18/15 5/31/15	5/25/15 6/8/15	F	NOAA	USA
Bohlander, Jessica	Field Research Supervisor /Chief Scientist	5/18/15	6/8/15	F	JIMAR	USA
Burns, Michael	Biological Research Technician	5/18/15	6/3/15	M	JIMAR	USA
Callan, Sarah	Biological Research Technician	5/18/15	5/24/15	F	JIMAR	USA
Cate, Jenipher	Biological Research Technician	5/18/15	5/25/15	F	JIMAR	USA
Cook, Ben	Biological Research Technician	5/18/15	5/24/15	M	JIMAR	USA
Farry, Shawn	Biological Research Technician	5/18/15	5/21/15	M	JIMAR	USA
Giuseffi, Louise	Biological Science Technician	5/18/15 6/3/15	5/21/15 6/8/15	F	NOAA	USA
Gosliner, Emma	Biological Research Technician	5/18/15	5/21/15	F	JIMAR	USA
Harris, Jacob	Biological Research Technician	5/18/15	5/26/15	M	JIMAR	USA
Hess, Megan	Biological Research Technician	5/18/15	5/26/15	F	JIMAR	USA
Leach, Lauri	Biological Research Technician	5/18/15	5/29/15	F	JIMAR	USA
McAtee, Carrie	Biological Research Technician	5/18/15	5/24/15	F	JIMAR	USA
Matsuoka, Koa	Biological Research Technician	5/18/15	5/21/15	M	JIMAR	USA
Nimz, Ilana	Biological Research Technician	5/18/15	5/29/15	F	JIMAR	USA
Picaro, Kahi	Collaborator	5/18/15	6/8/15	M	SCH	USA
Roberts, Darren	Biological Research Technician	5/18/15	5/26/15	M	JIMAR	USA
Ronco, Hope	Biological Research Technician	5/18/15	5/25/15	F	JIMAR	USA
Sullivan, Mark	Biologist	5/18/15	6/8/15	M	JIMAR	USA
Wickham, Deborah	Veterinary Technician	5/18/15	6/7/15*	F	TMMC	USA

*Note: Barbieri and Wickham will only disembark on 6/7 in Kona if seals are on board to be transported to Kona monk seal hospita. Otherwise they will disembark on 6/8 in Honolulu with other remaining personnel.

G. Administrative

1. Points of Contacts:

Jessica Lopez Bohlander, Chief Scientist
Field Research Supervisor, HMSRP, PSD
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
808-725-5743 (office), 808-226-1969 (cell)
Jessica.Lopez@noaa.gov

Mark Sullivan, Operations Lead
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
808-725-5727 (office), 808-256-5830 (cell)
Mark.Sullivan@noaa.gov

LT Faith O. Knighton
Operations Officer, Hi'ialakai
1897 Ranger Loop, Building 184
Honolulu, HI 96818
Ops.hiialakai@noaa.gov
In-port: 808-725-5780
At Sea: 808-684-3235

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

This project will be conducted under the Scientific Research and Enhancement Permit (U.S.) No. 10137-07 issued on July 11, 2012 per the Endangered Species Act and Marine Mammal Protection Act by NMFS Office of Protected Resources to the PIFSC; Conservation and Management Permit PMNM-2015-001 issued by the Papahānaumokuākea Marine National Monument (PMNM) to the PMNM CoTrustees (NOAA, USFWS, and the State of Hawaii); and Conservation and Management Permit PMNM-2015-001 issued by PMNM to Commanding Officer, R/V *Hi'ialakai*.

II. Operations

The following plans can be considered only a guide as to how the Chief Scientist intends the surveys to progress without being able to predict the weather, operational and scheduling problems, and equipment failures. In particular, it should be noted that the amount of time required at each of the working areas is approximate and may be altered, based on weather or the progress of the survey.

The Chief Scientist is responsible for ensuring the scientific staff are trained in planned operations and are knowledgeable of project objectives and priorities. The Commanding Officer is responsible for ensuring all operations conform to the ship's accepted practices and procedures.

A. Project Itinerary:

18 May **Pearl Harbor**: Embark Bohlander, Barieri, Sullivan, Giuseffi, Wickham, Pacarro, Becker, Farry, Burns, Matsuoka, Barcina, Gosliner, McAtee, Cook, Callan, Ronco, Cate, Roberts, Hess, Harris, Nimz, Leach. Depart Ford Island, Pearl Harbor en route to Ni'ihau Island.

19 May	**Ni'ihau Island:** Launch small boat to transport personnel to shore to conduct monk seal survey. Second survey team conduct survey of Lehua rock. Recover shore team. Depart Ni'ihau en route to French Frigate Shoals. Fill 120 water jugs en route.
20 May	**Transit**
21 May	**French Frigate Shoals:** Disembark Farry, Matsuoka, Barcina, Giuseffi, and Gosliner and deploy additional day personnel to assist in camp set up. Offload equipment and supplies including 1 17-ft Boston Whaler, 1 6-m RHIB, 10 55-gal drums of gasoline, 12 bins frozen bait, 15 propane tanks, and 120 5-gal water jugs.
22 May	**French Frigate Shoals:** Continue offloading equipment and supplies. When complete, recover shore personnel. Depart en route to Laysan Island. Fill 100 water jugs en route.
23 May	**Transit**
24 May	**Laysan Island:** Disembark McAtee, Cook, and Callan and deploy additional personnel to assist with camp set up and seal sampling. Offload equipment and supplies including 5 pallet tubs, buckets, and 100 5-gal water jugs. Recover shore personnel. Depart Laysan Island en route to Lisianski Island. Fill 70 water jugs en route.
25 May	**Lisianski Island:** Disembark Ronco, Cate, and Becker and deploy additional personnel to assist with camp set up and seal sampling. Offload equipment and supplies including 5 pallet tubs, buckets, and 70 5-gal water jugs. Recover shore personnel. Depart Lisianski en route to Pearl and Hermes Reef. Fill 100 6-gallon water jugs en route.
26 May	**Pearl and Hermes Reef:** Disembark Roberts, Hess, and Harris and deploy additional personnel to assist with camp set up. Offload equipment and supplies including one 5-meter inflatable boat, one 5.5-meter RHIB, 5 pallet tubs, buckets, 100 5-gal water jugs, and 5 55-gallon drums of gasoline. Recover shore personnel. Depart en route to Midway Atoll. Fill 25 water jugs en route.
27 May	**Midway Atoll:** Arrive Midway cargo pier. Deploy shore team to sample seals and survey at Eastern, Spit, and Sand Islands. Load 2 seal cages, 1 chest freezer, and 16 55-gallon drums of gasoline (previously staged at Midway). Possible collection of monk seal translocation candidates.
28 May	**Midway Atoll:** Continue sampling and surveying monk seals at Eastern, Spit, and Sand Islands. Recover shore personnel. Depart en route to Kure Atoll.

29 May **Kure Atoll:** Arrive Kure Atoll. Disembark Nimz and Leach and deploy additional personnel to assist with camp set up and seal sampling. Offload NMFS and DLNR gear including 3 pallet tubs and 1 chest freezer. Fill 50 water jugs from island. Recover previously collected marine debris from shore as time and space allows. Possible collection of monk seal translocation candidates. Recover shore personnel. Depart en route to Pearl and Hermes Reef.

30 May **Pearl and Hermes Reef:** Arrive Pearl and Hermes Reef. Deploy shore team to sample seals. Possible collection of monk seal translocation candidates. Offload 5 drums gasoline. Recover shore personnel. Depart en route to Lisianski Island.

31 May **Lisisanski Island:** Arrive Lisianski Island. Deploy shore team to retag and sample seals. Possible collection of monk seal translocation candidates. Recover shore personnel and embark Becker. Depart en route to site Laysan Island.

1 June **Laysan Island:** Arrive Laysan Island. Deploy shore team to retag and sample seals. Possible collection of monk seal translocation candidates. Recover shore personnel. Depart en route to French Frigate Shoals.

2 June **Transit**

3 June **French Frigate Shoals:** Arrive French Frigate Shoals. Disembark Burns. Embark Giuseffi. Offload 11 drums gasoline. Deploy shore team to retag and sample seals. Possible collection of monk seal translocation candidates. Recover shore personnel. Depart en route to Necker Island.

4 June **Necker Island**: Arrive Necker Island. Deploy 3 personnel to conduct monk seal survey. Recover shore team. Depart en route to Kona.

5-6 June **Transit**

7 June **Kona:** If rehab seals were collected at any site, they will be taken to Kona. Arrive Honokohau Harbor. Deploy small boat and seal team with juvenile seals to meet seal team on shore. Disembark Barbieri, and Wickham. Depart en route to Pearl Harbor.

8 June **Pearl Harbor:** Arrive Kilo Pier Offload 20' container and load dive chamber. Transit to Ford Island, Pearl Harbor. Disembark Bohlander, Sullivan, Pacarro, Becker, and Giuseffi. End of Project.

Note: The return (eastbound) itinerary is assuming that monk seal translocation candidates will be present and collected at some sites. If that is not the case, the ship will not go to Kona and the extra time will be used to do additional surveys and sampling at a site or sites decided

upon by the chief scientist, operations lead, commanding officer, and operations officer. In addition to the sites already included in the itinerary, this may include Nihoa Island.

B. Staging and Destaging:

Staging Plan – On 3 May, load 20ft container at Kilo pier. ON 5 May, load 10ft container at F pier onto fantail. On 11 May, 0800, begin loading all other supplies and equipment including six (6) boats, 885 gallons of gasoline, 12 empty fuel drums, ~20 pallet tubs, ~3 cages of propane cylinders and 36 nitrogen dewars w/liquid nitrogen. Continue loading large supplies and equipment 12 May. Scientists continue loading hand-carried gear 13-15 May.

Destaging Plan - On 8 June, arrive Kilo pier to offload 20ft container and load dive chamber. On 8-9 June, ship's crane and operator support will be needed to offload scientific gear and equipment onto the pier, including 10ft container, 2 boats, seal cages, and propane cages.

The Chief Scientist and Operations Lead will coordinate staging and destaging operations with the *Hi'ialakai* Operations Officer.

C. Operations to be conducted:

The Chief Scientist has the authority to revise or alter the technical portion of the instructions as work progresses, provided that, after consultation with the Commanding Officer, it is ascertained that the proposed changes will not (1) jeopardize the safety of personnel or the ship, (2) exceed the overall time allotted for the project, (3) result in undue additional expenses, and (4) alter the general intent of the project instructions. In addition, the Chief Scientist must notify the Office of the Science Director of the Pacific Islands Fisheries Science Center at the earliest opportunity prior to making (1) deviations from the general project track or area of operations noted in the project instructions, (2) changes or additions of research operations to those specified in the project instructions, or (3) port calls not specifically identified in the project instructions.

<u>Hawaiian monk seal field camp deployment</u>

HMSRP teams will be establishing field camps at French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, and Kure Atoll. The project will also transport supplies for DLNR at Kure Atoll. All field gear, including pallet tubs, buckets, pelican cases, fuel drums, propane cylinders, and nitrogen dewars will be transferred from r/v *Hi'ialakai* to shore using small boats.

Hawaiian monk seal surveys will be conducted at Midway Atoll, Nihoa, Necker, and Ni'ihau Islands by HMSRP scientists. Personnel will be transferred to shore for surveys using small boats.

<u>Hawaiian monk seal translocations</u>

Up to six Juvenile Seals will be translocated from a yet undetermined NWHI site to Kona. The collection site will be determined by field teams that are deployed on the westbound leg and will not be confirmed until all camps have been deployed. The existence of candidates at Midway will be determined once staff is on site at Midway. Small boats will be used to move seals to and from islands and the ship in stretcher nets. Once on board the ship, the seals will be held in cages on the aft deck. While seals are on deck, limited access will be allowed to maintain quarantine around seals. Seals will be monitored by scientists 24 hrs while on the ship. Chief scientist and operations lead will meet with commanding officer and operations officer to determine if changes need to be made to the return leg itinerary based on existence and locations of monk seal rehabilitation candidates.

Marine Debris collection and monitoring project set up

HMSRP will be collaborating with Sustainable Coastlines Hawaii during this project to set up a marine debris collection and monitoring protocol for the HMSRP field camps. This will involve training for HMSRP personnel on site as well as small-scale clean up at Laysan, Island, Lisianski Island, and Pearl and Hermes Reef, during camp set up and on extra survey and sampling days, as time allows.

CTDs:

Shipboard CTD casts will be conducted only opportunistically when time allows during transits between islands. CTDs will be conducted to a depth of 500m at ten permanent CTD cast stations at Nihoa, Necker, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll to examine oceanographic conditions and water quality. This will include complete rosette with instruments, niskin, and water samples. Chief scientist will work with the operations officer and navigation officer to determine the best times to conduct opportunistic CTD casts at these permanent CTD locations based on projected itinerary and ship speeds. It is preferred that CTD casts are done on the westbound leg when possible. CTD casts are a low priority compared with other project objectives.

Small Boat Operations

Per OMAO Supplement to the NOAA Small Boat Standards and Procedures Manual, March 2010, Section 4.03a2, a program certified Operator in Charge (OIC) must "earn the full confidence of both the Commanding Officer (CO) and Designated Examiner (DE) and has successfully completed the shipboard training requirements." As part of any OIC evaluation, it is understood that a small boat OIC will be designated to accompany and evaluate an OIC-in-training. This may limit the number of small boats the ship can deploy during this evaluation period, but every effort will be made to limit any impact to operations. An OIC-in-training is not guaranteed to be qualified by the CO and DE during a project.

Small boat deployment and recovery operations from a ship at sea are inherently dangerous. Experience levels of all personnel involved and environmental conditions

are limiting factors regarding the decision to proceed with said operations. Proficiency levels of deck officers, deck department, or small boat crews may impact operations. All small boat crewmembers must have the full confidence of the CO and DE. At any time, the CO may call for a halt to boat deployment and recovery operations. If indicated, a Safety Stand Down, extra training or practice may be required to begin operations again. This is especially true when the ship has been in port or when program personnel have not been aboard for an extended period of time, as well as when boat operations are called for within 48 hours of departure.

Per the *Hi'ialakai* Working Rules for Small Boat Safety, Section 9.5g, regarding Crew Fatigue, "working aboard a small boat can be tiring; therefore, common sense shall prevail. No one shall work more than 10 consecutive hours on any small boat. Boat crews shall ensure that they receive proper rest, hydration, and sun protection while aboard small boats."

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 Commanding Officer.

Dives are not planned for this project.

E. Applicable Restrictions

Conditions which preclude normal operations: Poor weather conditions, equipment failure, safety concerns, and/or unforeseen circumstances, may alter or prohibit operations as planned. At these times, the Chief Scientist, Operations Lead, and Commanding Officer will determine the appropriate plan of action.

1. "Take" of Protected Species
    a. Under the Marine Mammal Protection Act and Endangered Species Act 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, kill or collect." The ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An incidental take is one that 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 project, 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. Photos of the incidentally caught animal should be taken to properly identify the species, but the process of taking the photos must not contribute to the further injury of the animal. These photos are for the purposes of

internal NMFS verification only, and must not be shared outside of PIFSC or the Office of Protected Resources (i.e., do not post the photos on the internet).

c. PIFSC has developed mitigation measures for our fisheries and ecosystem research projects 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.

III. Equipment

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

Equipment: To successfully meet the project objectives, the scientific compliment aboard will need the ship to provide the items listed below. Prior to sailing, the ship's crew will inspect these items to ensure they are in proper working order for the project:

Deck Crane

J Frame

CTD Equipment

Small boats capable of transporting equipment and gear from ship to shore

Handheld VHF radios for ship's small boats

Global Positioning System units for small boats

Storage of up to 900 gallons non-ethanol gasoline

Scientific Computer System

Adequate fresh water for gear wash down and filling up to 500 6-gallon water jugs

Iridium phone

Scientific freezer for storage of bait, specimens, and equipment.

Freezer space for storage of up to 12 100qt coolers frozen food.

Capabilities: It is requested that the ship provide the following:

1. Permission for Scientists to set up gear seven days prior to departure, as well as assistance from the ship's Deck Department in craning and staging large gear during loading.
2. An experienced survey technician is requested to conduct day and nighttime shipboard CTDs operations.

3. Small boats and coxswain support will be needed for transfer of personnel and equipment to islands.

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

1000 lbs bait
~1200 5gal buckets – stored in 20ft and 10ft container
4 freezers in pallet tubs
1 pallet plastic tables and cot boards
~ 25 pelican cases (various sizes)
2 rack tent poles
22 large pallet tubs field gear (4 ft by 4 ft)
5 5gal buckets refrigerated food
14 80 qt.coolers frozen food
30 36 liter nitrogen dewars
10 12v deep cycle batteries (in pallet tubs)
5 Honda generators
14 empty 55 gallon drums for gasoline
900 gallons non-ethanol gasoline
16 55-gallon drums gasoline (previously staged on Midway)
1 18ft RHIB (PHR)
1 5 meter inflatable boat (PHR)
1 6 meter RHIB (FFS)
1 17 ft Boston Whaler boat (FFS)
1 19ft Safeboat (for transporting gear to shore)
1 17ft Zodiac inflatable (for transporting gear to shore)
5 seal cages

IV. Hazardous Materials

A. Policy and Compliance

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

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

- List of chemicals by name with anticipated quantity
- List of spill response materials, including neutralizing agents, buffers, and absorbents

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

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

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

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

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

B. Inventory

Common Name of Material	**Qty**	**Notes**	**Trained Individual**	**Spill control**
Gasoline	1700 gal	900 from Honolulu. 800 from Midway	Ship's engineers	G
Propane	34 cylinders	Various sizes	Lopez, Sullivan,	P
Formaldehyde (37%)	5 gallons		Lopez,Sullivan,	F
Isopropyl Alcohol (91%)	20 pints		Lopez, Sullivan,	AL
Liquid Nitrogen	1020 liters	In 34L dewars	Lopez,Sullivan,	LN
Betadine	2.5 gallons		Lopez, Sullivan,	B
DMSO	250 2ml vials 120 5ml vials		Lopez,Sullivan,	DMSO
Roundup	10 2 gallon jugs	DLNR	Lopez	R
SAF fixative	100 10ml vials		Lopez, Sullivan,	F
Clorox Bleach	5 gallons		Lopez,Sullivan,	BL
12 v batteries	10		Lopez, Sullivan,	A
Magnum .44 Caliber Shells	22 rounds	Store in secured area	Sullivan, Farry	

C. Chemical safety and spill response procedures

A: ACID

- Wear appropriate protective equipment and clothing during clean-up. Keep upwind. Keep out of low areas.
- Ventilate closed spaces before entering them.
- Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
- **Large Spills**: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.
- **Small Spills**: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
- Never return spills in original containers for re-use.
- Neutralize spill area and washings with soda ash or lime. Collect in a non-combustible container for prompt disposal.
- J. T. Baker NEUTRASORB® acid neutralizers are recommended for spills of this product.

AL: Alcohols

- Extinguish smoking lamp. Remove all sources of ignition.
- Wear appropriate PPE and clothing during clean up
- Ventilate closed spaces before entering them.
- Use absorbent socks to surround spills or divert fluid flow.
- Use vermiculite or kitty litter to soak up and absorb fluid.
- Do not use combustible materials such as saw dust.
- Use absorbent pads/diapers to wipe up the spill or a dustpan to sweep up vermiculite/kitty litter.
- Place used absorbents in plastic bag or pail.
- Clean surface thoroughly to remove residual contamination
- Bags containing used absorbents will be properly disposed of once the ship returns to port.

B: Betadine:

- Use absorbent material and dispose in a proper waste disposal container.
- Finish by spreading water on contaminated surface and use absorbent material to dispose of cleaning water.

BL: Bleach:

- Control spill. Containerize liquid and use absorbents on residual liquid; dispose appropriately.
- Wash area and let dry.
- Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.

DMSO:

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

F: Formalin/Formaldehyde/Fixatives

- 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.

G: Gasoline

- Evacuate nonessential personnel and remove or secure all ignition sources.
- Carefully contain and stop the source of the spill, if safe to do so. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material.
- Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation.

LN: Liquid nitrogen

- Wear appropriate PPE (closed-toed shoes, cryogloves, goggles, long-sleeved and long-legged clothes are of particular importance.
- Ventilate area.
- Contain spill where safe to do so.
- Nitrogen is more harmful in its liquid state than in gaseous state, in a well-ventilated area. Minimally handle or interfere with the spilled LN, and allow it to sublimate off after restricting personnel access to the contained spill area under will maintained ventilation.

P: Propane

- Evacuate the immediate area.
- Eliminate any possible source of ignition and provide maximum ventilation.
- Shut off source of propane if possible.

R: Roundup

- Small quantities: Flush spill area with water.
- Large quantities: absorb in earth, sand or absorbent material. Collect in containers for disposal. Flush residues with small quantities of water.

Inventory of Spill Kit supplies

Product Name	Amount	Chemicals it is useful against	Amount it can clean up
Absorbent Pads and socks	18	A, AL, B, BL, DM, F, G	6 gal
Dust pan	1 set	A, AL, B, BL, DM, F, G	n/a
Goggles	3 pair	All	n/a

Absorbent material for Roundup (DLNR)		R	20 gal
Loose absorbent	40 lb	A, AL, B, BL, DM, F, G	12 gal
Nitrile Gloves	6 pair	All	n/a
Plastic bags	5	All	

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

E. Inventory (itemized) of Radioactive Materials

N/A

V. Additional Projects

A. Supplementary ("Piggyback") Projects

This project will transfer personnel and supplies to Laysan Island for ABC and to Kure Atoll for DLNR. See appendix for cooperating agencies' cargo.

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

VI. Disposition of Data and Reports

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

A. Data Classifications: *Under Development*
   a. OMAO Data
   b. Program Data

B. Responsibilities: *Under Development*

VII. Meetings, Vessel Familiarization, and Project Evaluations

A. Pre-Project Meeting: The Chief Scientist and Commanding Officer will conduct a meeting of pertinent members of the scientific party and ship's crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all concerns. This meeting shall be conducted before the beginning of the project

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

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

C. Post-Project Meeting: The Commanding Officer is responsible for conducted a meeting no earlier than 24 hrs before or 7 days after the completion of a project to discuss the overall success and short comings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, the Chief Scientist, and members of the scientific party and is normally arranged by the Operations Officer and Chief Scientist.

D. Project Evaluation Report: Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Chief Scientist. The form is available at http://www.omao.noaa.gov/fleeteval.html and provides a "Submit" button at the end. Submitted form data is deposited into a spreadsheet used by OMAO management to analyze the information. Though the complete form is not shared with the ships', specific concerns and praises are followed up on while not divulging the identity of the evaluator.

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 3 times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day

and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the project.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Chief Scientist. The Chief Scientist and Commanding Officer will work together on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The Chief Scientist is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The Chief Scientist is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship.

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

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

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, NF 57-10-01 (3-14)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Chief Scientist or the NOAA website http://www.corporateservices.noaa.gov/noaaforms/eforms/nf57-10-01.pdf.

All NHSQs submitted after March 1, 2014 must be accompanied by NOAA Form (NF) 57-10-02 - Tuberculosis Screening Document in compliance with OMAO Policy 1008 (Tuberculosis Protection Program).

The completed forms should be sent to the Regional Director of Health Services at the applicable Marine Operations Center. The NHSQ and Tuberculosis Screening Document should reach the Health Services Office no later than 4 weeks prior to the start of the project to allow time for the participant to obtain and submit additional information should health services require it, before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of either form. Ensure to fully complete each form and indicate the ship or ships the participant will be sailing on. The

participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

The participant can mail, fax, or email the forms to the contact information below. Participants should take precautions to protect their Personally Identifiable Information (PII) and medical information and ensure all correspondence adheres to DOC guidance (http://ocio.os.doc.gov/ITPolicyandPrograms/IT_Privacy/PROD01_008240).

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

Contact information: Include only the Pacific OR Atlantic Office as applicable.

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

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

C. Shipboard Safety

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

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

D. Communications

A progress report on operations prepared by the Chief Scientist may be relayed to the program office. Sometimes it is necessary for the Chief Scientist to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Chief Scientist. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessels staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to the scientific party. If increased bandwidth is being considered, program accounting is required and it must be arranged at least 30 days in advance.

E. IT Security

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

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

Completion of the above requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

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

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

Full compliance with NAO 207-12 is required.

Responsibilities of the Chief Scientist:

1. Provide the Commanding Officer with the e-mail generated by the Servicing Security Office granting approval for the foreign national guest's visit. (For NMFS-sponsored guests, this e-mail will be transmitted by FNRS.) 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 Security Office. Template Date: 14JAN2014
4. Export Control - Ensure that approved controls are in place for any technologies that are subject to Export Administration Regulations (EAR).

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

Responsibilities of the Commanding Officer:

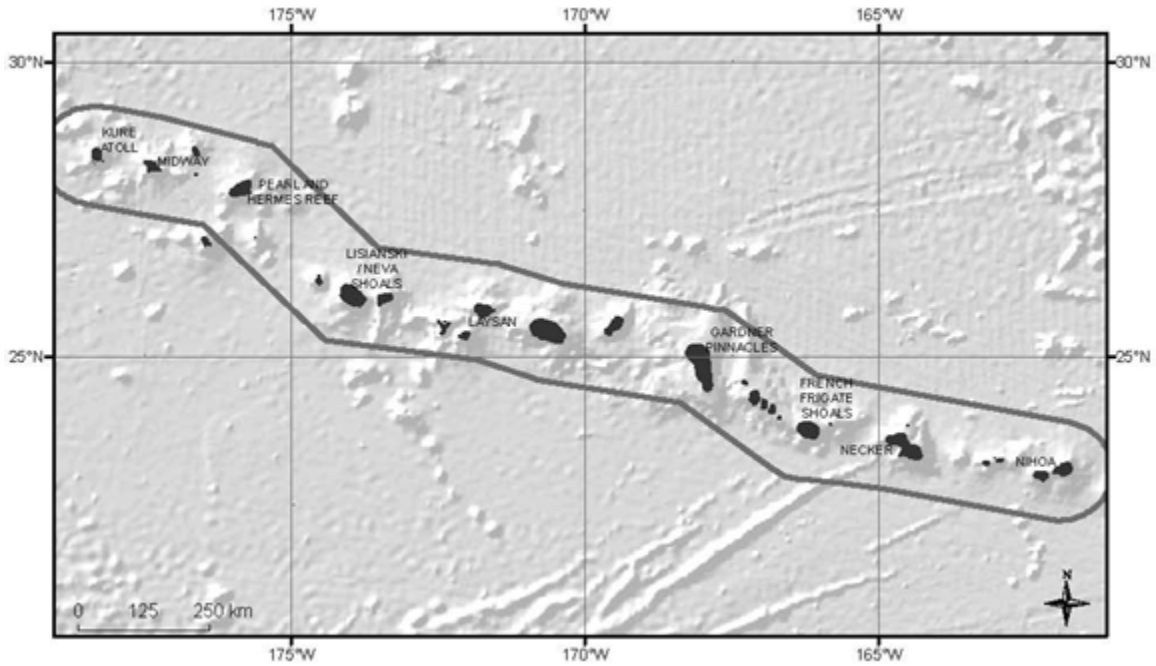
1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written approval from the Director of the Office of Marine and Aviation Operations and compliance with export and sanction regulations.
3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
4. Ensure receipt from the Chief Scientist or the DSN of the FNRS or Servicing Security Office e-mail granting approval for the foreign national guest's visit.
5. Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.
6. Export Control - 8 weeks in advance of the project, provide the Chief Scientist with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.
7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the Servicing Security Office.

Responsibilities of the Foreign National Sponsor:

1. Export Control - The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
2. The DSN of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen and a NOAA or DOC employee. According to DOC/OSY, this requirement cannot be altered.
3. Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National

VIII. Appendices

Appendix 1: Operating Area for HA 15-02.



Appendix 2: Cargo list

Attached file

Appendix 3: Opportunistic CTD cast locations

Site	Location
Nihoa CTD	22° 32.000'N 162° 00.000'W
Necker CTD	23° 11.099'N 164° 42.562'W
FFS CTD	23° 34.000'N 166° 18.000'W
Gardner Pinnacles CTD	24° 08.000'N 167° 40.000'W
Maro Reef CTD	25° 00.000'N 170° 00.000'W
Laysan CTD	25° 34.000'N 171° 32.000'W
Lisianski CTD	25° 50.000'N 173° 40.000'W

PHR CTD	27° 40.000'N 175° 49.700'W
Midway CTD	28° 06.001'N 177 ° 21.300'W
Kure CTD	28° 12.000'N 178° 20.001'W