

18 October 2007

MEMORANDUM FOR: Chief Scientists

FROM: Amanda Middlemiss, LT/NOAA
Operations Officer, NOAA Ship McArthur II

SUBJECT: Cruise Instructions Format

Introduction:

The purpose of this document is to provide guidance on how to properly create a set of cruise instructions for scientific embarkations aboard the NOAA Ship McArthur II. Accurate, comprehensive, and timely cruise instructions will lead directly to accomplishing the objectives of your laboratory or program. On the other hand, failure to properly provide the information requested may result in unwanted delays or other difficulties in conducting operations or meeting logistical requirements.

Whether this is your first cruise aboard McArthur II or even if you have sailed with us many times, please read this guide closely.

The better your cruise instructions, the easier it will be for us to understand and thus work towards achieving your requirements.

Format for Cruise Instructions for McARTHUR II

0. Cover Page

Date submitted

Platform: NOAA Ship McARTHUR II

Cruise #: M2-FY-XX* (*XX will be a number assigned to you by the M2 Operations Officer)

Project Title:

Cruise Dates:

Signatures:

Lab Signature

_____, Commanding Officer
Marine Operations Center-Pacific
NOAA Office of Marine and Aviation Operations

1. Mission Statement

Include who, what, when, where and why; a brief statement of intent and the critical objectives for success.

Example:

Mission: NWFSC will conduct acoustic and visual observations of marine mammals and conduct sea bird density counts from 05-15 July 2007 along the Washington, Oregon and Canadian coast in order to establish migration patterns of the G-pod Killer Whales.

Intent: While aboard McARTHUR II we will work an established track line using both visual and acoustic means to find G-Pod. Once we have made positive ID, the ship will follow the pod. If conditions permit we will launch one of the small boats to collect biopsy samples and floating residue from predation events.

End State: The mission is successful if we are able to locate and track G-Pod collecting audio, photographic and predation samples. Secondary objectives include locating and documenting other Killer whale pods and sea bird densities, while collecting oceanographic data by CTD, TSG....

1.2 Operating Area.

This should be described using geographical references as well as specific bounds such as Latitude/Longitude boundaries or the radius around a central operating area.

1.3 Participating Institutions

1.4 Personnel

Include full name, D.O.B, sex, passport # if foreign, Nationality, and affiliation using the following format in a MS Excel spreadsheet:

LN, FN, MI, DOB, M/F, Passport #, Nationality, Affiliation

1.4a. Emergency contact information for personnel

1.4b Meals, dietary restrictions

The Chief Scientist is responsible for the cleanliness of the laboratory spaces and storage areas used by the science party, both during the cruise and at its conclusion prior to departing the ship.

In accordance with NC Instruction 5255.0, Controlled Substances aboard NOAA Vessels, dated 06 August 1985, all persons boarding NOAA vessels give implied consent to conform 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.

1.5 Administrative

- a. Primary Point of Contact (POC)
- b. Alternative land based POC
- c. Ship POC – M2 Operations Officer
- d. Teacher at Sea POC, if applicable

2. Operations – describe what will be placed over the side and what will be collected.

Example:

Execution: We will conduct 24 hour operations by maintaining an acoustics listening watch in the dry lab. During day light hours observers will use Big Eye binoculars located at stations on the flying bridge. Observers will be on the flying bridge from sunrise to sunset. After sunset we will conduct CTD casts not to exceed 1000m or 50 m above charted depth at the time of the cast.

2.1 Mobilization: date, time, and equipment needed. Include special considerations such as pier side crane requirements, etc.

2.2 Demob: date and time equipment needed

2.3 Cruise plan:

Include a break down by date, times if available. Include date and time for pre-cruise meeting, orientation meeting (day of departure) daily safety meeting (0750), daily operations meeting (1500), and post cruise meeting (day of arrival). In draft, time line should include a submission of final cruise instructions. It is not feasible to have an hourly breakdown of operations, but the instructions should include a timeline for stations and transit time between them. Let us know what should get accomplished each day.

2.4 Sampling approach: what the ship will need to do

- a. speed, order of operations
- b. crane, winch, a-frame, j-frame operations
- c. ship personnel requirements (numbers on deck, survey, etc, and the time they are required)

2.5 Waypoints: Nobletec, .csv, or .txt format

3. Facilities

3.1 Equipment and capabilities required of the ship

3.2 Equipment and capabilities provided by science party

3.2.a Include a break down of weight by item-include L x W x H and weight of each item. The ship requires these calculations for stability purposes.

4. Disposition of Data and Reports

4.1 Data Responsibilities

Include what is required to be kept by the ship, i.e. electronic MOA, paper MOA, deck logs, weather logs, CTD data, ES 60, etc.

4.2 Ship operation evaluation report

5. Hazardous Materials

5.1 Policy/compliance

All NOAA ships will operate in full compliance with all NOAA hazardous materials (HAZMAT) requirements. The Field Party Chief shall be responsible for complying with MOCDOC 15, Fleet Environmental Compliance #07, Hazardous Material and Hazardous Waste Management Requirements for Visiting Scientists, released July 2002. All hazardous materials and substances needed to carry out the objectives of the embarked science mission, including ancillary tasks, are the direct responsibility of the embarked designated Chief Scientist, whether or not that Chief Scientist is using them directly. The ship's Environmental Compliance Officer will work with the Chief Scientist to ensure that this management policy is properly executed.

Material Safety Data Sheet: All hazardous materials require a Material Safety Data Sheet (MSDS). Copies of all MSDSs shall be forwarded to the ship at least two weeks

prior to sailing. The Chief Scientist shall have copies of each MSDS available when the hazardous materials are loaded aboard. HAZMAT for which the MSDS is not provided will not be loaded aboard.

The Chief Scientist will provide the Commanding Officer with an inventory indicating the amount of each hazardous material brought onboard, and for which the Chief Scientist is responsible. This inventory shall be updated at departure, accounting for the amount of material being removed, as well as the amount consumed in science operations and the amount being removed in the form of waste.

All HAZMAT, except small amounts for ready use, must be stored in the ship's HAZMAT Locker. If science party requirements exceed ship's storage capacity, excess HAZMAT must be stored in dedicated lockers meeting OSHA/NFPA standards to be provided by the science party.

The scientific party, under supervision of the Chief Scientist, shall be prepared to respond fully to emergencies involving spills of any mission HAZMAT. This includes providing properly trained personnel for response, as well as the necessary neutralizing chemicals and clean-up materials. Ship's personnel are not first responders and will act in a support role in the event of a spill. The Chief Scientist shall provide a list of science party members that are properly trained to respond in the event of HAZMAT spills.

The Chief Scientist is directly responsible for the handling, both administrative and physical, of all scientific party hazardous wastes:

- No liquid wastes shall be introduced into the ship's drainage system
- No solid waste material shall be placed in the ship's garbage

The embarking Chief Scientist will work with the departing Chief Scientist and the ship's Environmental Compliance Officer (ECO) to ensure proper tracking of inherited hazardous materials.

5.2 Inventory of hazardous materials

As previously mentioned, all hazardous materials require a Material Safety Data Sheet (MSDS). Copies of all MSDSs shall be forwarded to the ship at least two weeks prior to sailing. The Chief Scientist shall have copies of each MSDS available when the hazardous materials are loaded aboard. HAZMAT for which the MSDS is not provided will not be loaded aboard.

6. Radioactive Isotopes, if applicable

6.1 Policy/compliance

Each scientist working with these materials will be required to wear a lab coat and disposable booties to reduce the likelihood of tracking the substance out of the specified working area. It will be the responsibility of the investigator to conduct pre-cruise tests (for background) and post-cruise wipe tests (regardless of whether a spill occurred or not). Wipe tests should also be conducted in the event of a spill, as well as periodically while underway.

A detailed procedural methodology describing the use of these materials should be provided to the Environmental Compliance Officer (ECO) for review at least one month prior to bringing them aboard. A spill contingency plan should also be provided at the same time. Please note that ship's personnel are not first responders in the event of a spill. A log detailing the type and amount of materials brought aboard and removed from of the ship shall be maintained, along with a record of any spills that occurred. All radioisotope work will be conducted by the Nuclear Regulatory Commission (NRC) or State licensed investigators only, and copies of these licenses

shall be provided to the ECO at least one month prior to bringing any materials on board (Appendix 1).

6.2 Inventory

7. 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:

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. Written notification identifying the NOAA Program individual who is responsible for ensuring compliance with NOAA and export regulations for the foreign national (see Foreign National Sponsor responsibilities below).
2. A copy of the DOC/OSY clearance authorization for access by the foreign national.
3. A copy of Appendix B of NAO 207-12 with NOAA Chief Administrative Officer concurrence endorsement.
4. Written notification that the foreign national has been cleared against the State, Commerce and Treasury departments' Lists to Check.
<http://www.bis.doc.gov/ComplianceAndEnforcement/ListsToCheck.htm>
5. Provide the NOAA Foreign National List spreadsheet for each foreign national in the scientific party.

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. 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.

Export Control - The Chief Scientist is responsible for complying with NAO 207-12 and the development of Technology Access Control Plans for items they bring aboard. The Chief Scientist must notify the Commanding Officer of any export controlled items they bring aboard and any access restrictions associated with these items. 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:

Ensure only those foreign nationals with DOC/OSY clearance are granted access. 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. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur. Ensure receipt from the Chief Scientist of the NOAA Foreign National List spreadsheet for each foreign national in the scientific party.

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.

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.

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

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.

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.

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.

8. Miscellaneous

8.1 Shipboard Safety

CSCI will ensure all members of the Sci party wear close-toed/close-heeled shoes, work vests, hard hats, etc. Scientific staff will follow all shipboard safety measures including participation in all required safety emergency drills; abiding to rules prohibiting the use of alcohol and illegal drugs onboard the ship, or to possession of firearms and other weapons without prior written approval of the XO; abiding to specified smoking restrictions; wearing proper footwear at all times; and adhering to other specified safety regulations when working on deck, such as the proper use of life vests, safety belts, and hard hats when handling equipment on deck or deploying it over the side, or riding in launches. Ship's equipment also is to be operated only by qualified members of the ship's complement. Scientific equipment is to be operated only by qualified scientific staff as well.

8.2 Communications

Large file attachments should be sent to only 1 person shore side with instructions to forward on if necessary.

8.3 Port Agent services and billing

Applicable port agent/billing procedures will be followed.

8.4 Wage Marine Working Hours and Rest Periods

Chief Scientist shall be cognizant of the reduced capability of the ship operating crew to support 24-hour mission activities with a high tempo of deck operations at all hours.

Wage marine employees are subject to negotiated work rules contained in the applicable collective bargaining agreement. Dayworkers' hours of duty are a continuous eight-hour period, beginning no earlier than 0600 and ending no later than 1800. It is not permissible to separate such an employee's workday into several short work periods with interspersed nonwork periods. Dayworkers called out to work between the hours of 0000 and 0600 are entitled to a rest period of one hour for each such hour worked. Such rest periods begin at 0800 and will result in no dayworkers being available to support science operations until the rest period has been observed. Under no circumstances will any wage marine work in excess of 12 hours during a 24 hour period.

All wage marine employees are supervised and assigned work only by the Commanding Officer or designee. Accordingly, the Chief Scientist and the Commanding Officer shall consult regularly to ensure that the shipboard resources available to support the embarked mission are utilized safely, efficiently and with due economy.

9. Background information for cruise if you would like to include it

Tables, Figures and Appendices- include for final cruise instructions. Bring copies with you to ship when you report aboard.

Please limit cruise instructions to 700K (strip documents of all figures) for e-mail transmissions when ship is underway. Cruise instructions should be sent to:

Foo.mcarthur@noaa.gov

Chiefops.mop@noaa.gov

Larry.loewen@noaa.gov