



Arctic Icebreaker Coordinating Committee

21 January 1998
Avondale Shipyard, Avondale, LA
22 January 1998
Ramada Limited, Metairie, LA

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21 January 1998

Introduction - The AICC Committee met at the Avondale Shipyard at 0830. A list of attendees is included as [Appendix I. Appendix II](#) includes the agenda for this two day meeting. Captain Greg Johnson opened the meeting by welcoming the AICC to the Avondale Shipyard. CDR. Ian Grunther followed with an information brief on HEALY ([Appendix III](#)).

HEALY is presently scheduled for delivery 26 Feb. 1999. After fitting out and crew training the ship expects to depart for sea trials 31 May 1999. Ice trials are scheduled for 4 1/2 months. The Post Shakedown Availability is scheduled for Nov. 1999 with the ship ready for science operations early in 2000. The yard has advised the Coast Guard that in order to meet the delivery date no additional work will be authorized.

Nine of the thirteen AICC "wish list" items will be accommodated by the end of the fitting out availability. These are listed in [Appendix III](#). The remaining four will be considered for the Post Shakedown Availability. The ship will have a 12 meter core capability when it departs from Avondale. A 30 meter core capability is under design and will be installed after delivery.

It was pointed out that science oversight of the SeaBeam installation should start as soon as possible. Since the hardware has already been delivered it will not be possible to witness the factory tests. Ian will investigate if in-yard and builder's trials oversight of the SeaBeam system would be possible.

The Coast Guard is developing a Science User Manual and a Cruise Planning Guide. All three icebreakers will have common documents. It was pointed out that new international ISM rules will require changes to the way UNOLS will be operating their ships on international voyages. Although the Coast Guard is not governed by these rules, it was suggested that they be reviewed and implemented where reasonable or practicable. The Committee was divided into small groups and given a three-plus hour tour of HEALY.

LCDR Al Gaiser reported on science systems testing and the planned ice trials ([Appendix IV](#)). A meeting is scheduled for 3-4 February at CRREL in Hanover, NH to discuss time-tables and contingency planning for the delivery cruise and these trials. The meeting goals are to identify all tests to be performed, develop a test matrix and establish both equipment and personnel requirements for these trials/tests. A follow-on meeting is scheduled for April in Panama City, FL. This meeting will review contingency plans, review test memos, test equipment procedures and test equipment installations that will require dry-docking. A third meeting will be held in June in Baltimore, MD to develop further mission planning and publish the test plans.

John Freitag, URI, has been working with the RVTEC and has developed the list of 11 science systems that are to be tested. The community has responded enthusiastically in signing up to conduct these tests with at least eight institutions being assigned various tasks. User scientists will be added to the testing program.

Tour Review - The Committee had an open discussion about the ship tour. All were impressed with progress made to date and particularly with respect to the changes made as a result of earlier discussions between the AICC and the Coast Guard. Members of the Committee were concerned with the visibility from the bridge. As configured, wire angles will be difficult to see and the after work areas will only be observed through TV monitors. The large towing bits on the after deck occupy prime space and will cause significant difficulty with some fantail operations and the loading and placing of cargo vans. The Coast Guard explained that the location of these bits was non-negotiable. Concern was expressed as to the location of the gravimeter. It was not in the most central and most stable space on the ship. It was pointed out that the block arrangement will likely cause difficulty when wire slacks. The horizontally mounted blocks have no provision to restrain the wire when not under tension. Because of the ship's size it was felt that TV monitors would be needed in the staterooms that can be tuned to work areas. This would permit scientists to observe the progress of a project and ascertain when the next evolution was to take place. Lights (port holes) are needed in the hatches leading to the science deck areas. Some two foot tie-down bolt sockets are missing from the fantail area. The door from the wet lab to the analytical lab should be mounted to open in the reverse direction. Concern was expressed about the potential noise level. This had been a problem on UNOLS' AGORs. The Committee also asked that an EMI survey be made.

Coring - The ship will be delivered with the capability to take a 12 meter core. The Coast Guard has been working with Jim Broda at WHOI to develop the capability for a 30 meter core. Coring is planned for both the starboard side and off the stern. The starboard side will be used for the longer 30 meter core. Considerable discussion followed. Concern was expressed that the starboard deployment would occupy important space for other operations. Could the area be cleared quickly to permit multiple disciplinary work? If coring were done off the stern it would free up the starboard work area. Committee members advised the Coast Guard that while cores longer than ca. 20 meters must be taken from the starboard side (due to deck layout considerations), that on multi-disciplinary cruises the preferred site for coring would be the fantail via the stern A-frame, and that the Coast Guard should plan accordingly. All considered the need for a 30 meter core as necessary but the design for deploying such a core needs to be well scrutinized. The Committee requested that they get to see the WHOI design for comment. A 30 meter core capability will not be available until after PSA. The Coast Guard at this time does not have plans to have coring equipment as part of the ship's gear.

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The second day of the meeting was held in the conference room of the Ramada Limited. The meeting opened at 0800 and followed the agenda, [Appendix II](#).

REPORTS:

University-National Oceanographic Laboratory System (UNOLS) - Jack Bash presented the UNOLS Report. ENDEAVOR will be laid-up for the entire year of 1998 and both EWING and MELVILLE will have reduced schedules.

These lay-ups are the result of insufficient funded science projects. NAVO has provided over \$7M in funding for 1997 and 1998 which has saved yet other lay-ups. The NAVO funding for 1999 is problematical and if not available could result in the lay up of four or five ships in out years. The UNOLS Fleet Improvement Committee (FIC) is currently working on the Mission Requirements for an ALPHA HELIX replacement. These requirements will address ship design needs for fish research. A joint venture with NOAA is under consideration. UNOLS is planning a Town Meeting at the San Diego AGU/ASLO meeting in February. This is intended to update the sea going community on UNOLS activities and to solicit comments and recommendations for improvements to UNOLS.

University of Hawaii has been selected for the operator of the new SWATH that is to be built with the \$45M appropriated by Congress. This ship will replace MOANA WAVE. A backlog of deep submergence cruises has developed as both ALVIN and the ROVs are fully utilized. Jack expressed a need for the Arctic community to develop an expeditionary planning strategy similar to that of the deep submergence group.

National Science Foundation (NSF) - Tom Pyle provided the NSF report. Science planning is going on in the Western Arctic Shelf Basin. This will be work with Russia. The Greenland ice cap work has been successfully completed. SHEBA is underway as well as the SCICEX with the nuclear submarine. A workshop is planned in October for SCICEX 2000.

The outlook is good for the 1999 NSF budget for Arctic science. NSF management is looking for improvements in Arctic logistics. The National Science Board has directed a study into the competition of NSF facilities. The study is to be completed in about six months. Rita Colwell has been named Deputy Director of NSF. Bob Corell has been renamed Asst. Director of NSF of Geosciences for an additional two years. Lisa added that funding is coming for clathrate expeditionary planning.

Antarctic Research Vessel Oversight Committee (ARVOC) - Lisa Clough attended the recent ARVOC meeting and reported that both PALMER and GOULD will be returning to Louisiana for their overhaul periods. This will open science of opportunity cruises on the transits both north and south.

Research Vessel Technical Enhancement Committee (RVTEC) - John Freitag, Chair, further discussed the plans for science system planning for HEALY. USCG Marine Science Technicians (MST) have been on several UNOLS cruises for training purposes. This effort seems to be going well.

Old Business - The Committee expressed its concern with the clearance procedure issue and would like to see the USCG use the UNOLS model. In this model the operator works closely with the scientists and monitors the progress of each request. Phil McGillivray indicated that the Coast Guard would follow this model. The Coast Guard will also use the UNOLS ship scheduling forms found on the UNOLS Office web homepage.

POLAR SEA, POLAR STAR Schedules - POLAR SEA is scheduled to visit Otaru and Haikado in Japan then Petropavlovsk in Russia for oil spill training. It will be in Nome 3 June to pick up scientists for a Ship of Opportunity (SOO) ice edge cruise. The ship will proceed to the Chuckchi Sea and possibly go into Pt. Barrow. A NASA ROV and Autonomous Aircraft will be on the ship. The ship will return to Nome on 29 June.

POLAR STAR also will be going into the Arctic from 16 July to 14 August. It may go to the Canadian Basin then be available for SHEBA. The ship can off-load SHEBA equipment and personnel doing science on the return trip.

Phil McGillivray reported that POLAR STAR has been fitted with a continuous helo tracking system, a bathy-2000 (for both POLAR SEA and POLAR STAR) and 30 liter Nisken bottles. Pumps have been upgraded on the through-hull sea water system. Two vans are groomed and available. Manual winch controls are being replaced. Inmarsat-B has been

installed on POLAR SEA

A discussion followed as whether or not POLAR STAR should be promoted as an SOO because of its potential commitments for SHEBA. It was decided that an SOO announcement would be sent out but carefully worded because of limited time available. (subsequent to the meeting the availability of time on POLAR STAR was reduced by other commitments such that no SOO announcement would be sent).

Science Systems Testing - John Freitag provided a packet of information concerning the developing plans for science system testing. Eleven science systems were identified. Technical support groups from eight different UNOLS institutions were assigned the various tasks. A one to two page proposal for each of these test requirements was included. These proposals briefly outlined what tests were to be performed and the rough cost of developing the test plans and executing the at-sea testing. All proposals came in a different format. It was suggested that the format presented by U. of Washington should be used for all proposals. John will go back to each of the interested technical groups and request updated proposals. No conflict between technical groups is evident.

Technical Representation on Icebreakers - The Committee discussed with the Coast Guard the level of technician support necessary for Arctic scientific cruises. The Committee was concerned that normal rotation for MSTs does not provide the level of experience and training needed to support a science mission. The Coast Guard's position is that outside support from UNOLS technicians may be necessary, however, MSTs are trained to perform the technical assistance mission and can be provided specialized training to bolster their knowledge on specific equipment and systems. The Coast Guard is reluctant to displace uniformed personnel with civilians. Several MSTs have gone to sea on UNOLS vessels to learn the systems and become acquainted with the culture. Funding for schools and training can be made available to increase the MSTs current knowledge. Efforts will be made to ensure well trained technicians on each science cruise. In addition to the MSTs, the ship will have electronic technicians (ETs) as well as bos'n personnel. It was suggested that a liaison be arranged between a UNOLS institution technical group to provide timely support for training, cruise preparation and possibly cruise support. The Coast Guard has funds for such an effort and will pursue the procedures necessary to set up this type arrangement. It was further suggested that hiring a "person-year" would be more effective than providing funds for an individual technician allowing for multiple disciplines to be accommodated

Other Issues - The Committee discussed membership issues. Tom Weingartner has resigned from the AICC and will need to be replaced. In addition, two members' terms expire in the fall. These members are Dan Lubin and Lisa Clough, both are eligible for a second term. Geographical and discipline distribution of the candidates were considered.

Expeditionary planning was discussed. It was suggested that the DEep Submergence Science Committee (DESSC) model be considered by having a conference to focus on advanced planning and naming "heroes" for different geographical areas to champion interest from the community.

The next meeting is to be held in the fall of 1998 after HEALY becomes near operational.

Appendix I.

ATTENDANCE AICC - January 21-22, 1998

NAME	AFFILIATION	E-MAIL
John Bash	UNOLS	unols@gso.uri.edu
Garry Brass	USARC	g.brass@arctic.gov

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Joseph Coburn	WHOI	jcoburn@whoi.edu
George DuPree	USCG	gdupree@comdt.uscg.mil
Kelly Falkner	OSU	kfalkner@oce.orst.edu
John Freitag	URI/RVTEC	jfreitag@gso.uri.edu
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Jim Swift	SIO	jswift@ucsd.edu
Dave Vaughn	HEALY	dvaughn@comdt.uscg.mil

Appendix II.

Dear AICC Members and Correspondents:

Here is an update on AICC business for our meeting next week.

Day 0. Tuesday, 20 January, 1998

Those of us who arrive in time for dinner can meet in the hotel (Ramada Limited, 2713 N. Causeway Blvd) lobby at 1900 to go out to dinner together. We will try to leave a note at the desk regarding where we go - if need be by phoning from the restaurant - so that late arrivals will know where to find (or avoid) us. This will not be an official AICC function but will help us catch up to speed on recent events.

Day 1. Wednesday, 21 January; at the Avondale shipyard

0800-0815 Welcome (CAPT Johnson)

0815-0945 Schedule Milestone Review (CDR Grunther)

Review of AICC top ten status

Report on Coring

Science User Manual

Chief Scientist User Manual

0945-1000 Break

1000-1200 Ship Tour (LCDR Reicks)

1200-1215 Discussion resulting/continued from Ship Tour

Quick review/setting of post lunch agenda

1215-1345 Lunch

1345-1500 Discussion on Test and Trials (LCDR Gaiser)

1500-1630 Reserved time for AICC topics of interest not covered

Note: Please wear clothes and shoes suitable for touring a "ship-in-progress" in a drydock.

Note: There will be special focus on the science systems testing program. The AICC meeting occurs shortly before a major meeting on the test programs, and so we must discuss/resolve several issues which will be brought to us by the Coast Guard team, Jack Bash, and John Freitag.

(over)
Day 2. Thursday, 22 January; at the Ramada Limited (2713 N. Causeway Blvd)

1. Reports

Reports from UNOLS & Council
Reports from NSF (and other support agencies)
Report from ARVOC meeting
Report from RVTECH

2. Polar-class science systems & schedules

Update on items of interest to AICC.

3. Science of Opportunity cruises

Science-of-opportunity 1998 review & schedule
AICC schedule for 1999 science-of-opportunity
Information flow between AICC and USCG

4. Other operations business

USCG participation on UNOLS cruises
Progress of moving USCG ship scheduling to UNOLS format
UNOLS Tech Rep at HEALY home port
All other business not directly related to HEALY construction/outfitting

5. Committee business

Review of AICC liaisons (aiccplus mail list)
Membership:
Replacement for Tom Weingartner
Any members due for rotation?
Next meeting location and date.

Appendix III.

Available from UNOLS Office.

Appendix IV.

ICE TRIAL NEAR TERM TIME LINE

