

# UNOLS Arctic Icebreaker Coordinating Committee

**25 March 1999**  
**Avondale Industries, Inc.**  
**Avondale, LA**

**26 March 1999**  
**Ramada Inn, Conference Room**  
**2713 N. Causeway Boulevard**  
**Metairie, LA**

## APPENDICES

- I. Attendees
- II. Agenda
- III. Science Systems Testing Presentation
- IV. NOPP Presentation
- V. Logistics Manager Announcement

**INTRODUCTION** - The Arctic Icebreaker Coordinating Committee (AICC) met in the Conference Room, U.S. Coast Guard Offices, Avondale Industries Inc., Avondale, LA at 0800, 25 March 1999. The meeting was brought to order by AICC Chair Jim Swift. Attendees are included as *Appendix I*. The agenda, *Appendix II*, was followed except as noted herein. Jim introduced the AICC members and guests of the AICC.

Captain Gregg Johnson welcomed the group to Avondale and discussed several personnel changes scheduled. CDR Ian Grunther has received orders as Commanding Officer of a new Coast Guard cutter and will be departing TEAM HEALY. Capt. Johnson will be departing on medical leave for two-three months starting in April. Capt. Jeff Gamble will be filling in during Capt. Johnson's absence. CDR Eric Jewess will be retiring this summer.

HEALY delivery has been delayed until October 1999 (estimated). This is a result of delays in equipment and sensor testing. The change will cause a rescheduling of the post delivery trials. With the new schedule the ship will conduct ice trials in the eastern Arctic and will not transit to its homeport until after completion of both ice and science trials.

**Review of Construction** - CDR Ian Grunther followed with a more detailed tentative schedule adjusted for the delays.

- 2 Aug dock trial
- 13 Aug River run
- 23 Aug Sea Trial
- 29 Oct delivery
- 10 Dec fitting out
- 21 Jan warm water tests
- 21 Feb depart for eastern arctic trials

HEALY is considered 93% toward contract completion. Almost all systems are aboard. After completion of the warm water testing the ship will likely make a public relations visit to Baltimore and proceed with ice and science testing keeping to the earlier schedule.

The Science Data Network (SDN) backbone is in place. SeaBeam testing is underway and bridge components are installed. Science winches have been installed but are behind in testing. The lab outfitting

will be completed just prior to delivery. The science refrigerators, freezer and climate control chamber are installed but not yet operating. Most systems are undergoing some form of testing and grooming at this time. Most furniture, fixtures, decking and bulkheads are in place.

CDR Grunther's request of the AICC:

1. Continued guidance and outstanding support,
2. Understanding for the current constraints as it is in everyone's interest to get the ship delivered,
3. From the AICC tour, if there are items of concern, consensus and prioritization of items and recommended fixes.

The two Post Shakedown Availabilities (PSA) may be opportunities to make improvements. The ship should be completed with PSA II by October 2000. PacArea may have use for the ship until it is ready for science in Jan 2001.

The following is a list of *Issues of Interest*:

1. SeaBeam
2. CalComPlotter, what do we want to do? Needs work to make it operational, where best placed to use.
3. Wire lead to starboard A-frame (flight deck issues)
4. Sheaves for winch wire (need another sheave and block)
5. Coring equipment for stern delivery system. J. Broda has built a bucket and other parts. Avondale will test the overall system.
6. Outfit of the labs (Sam Neihardt has a computer model of the lab to arrange)
7. Science interface with SDN (what image scientist will see)
8. 15 meter core over the fantail. Will lose a van slot, arrangement maximized length of core to be used from fantail.

**Ship's Tour** - The Committee spent nearly three hours touring the ship with competent Coast Guard SHIPSUP guides. After the tour (and lunch) the Committee provided comments and concerns of the tour. A list of these comments is not included in these minutes but can be made available by contacting the UNOLS Office.

## **Discussion of Test and Trials**

John Freitag, RVTEC Chair, provided the Committee with a summary of the science systems testing plans for HEALY. John's power point presentation is included as *Appendix III*.

**Warm Water Phase I** - The warm water testing is now tentatively scheduled for 21 January to 3 February 2000 operating out of San Juan, Puerto Rico. Ten persons have been designated to provide testing of the SeaBeam, ADCP, SDN, CTD, Bathy 2000, coring and winch systems. David Taylor labs will be conducting hull and machinery acoustic noise tests during the same period. The Committee recommended that the test memo for coring be changed to include the taking of mud. It also was recommended that the winch testing include a full-depth test of wire deployment including a dredge or dead weight.

**Transit Phase II** - Little or no science system testing will be done during this phase.

**Level Ice trial, Phase III** - The Committee recommended that a person be added to this testing period for bathymetry and SDN testing. Teachers and or wildlife observers might be appropriate for this phase.

**Science Systems Testing, Phase IV** - This phase remains scheduled for late April and early May 2000 and will be planned for four one-week legs. Because of the change to the eastern Arctic the AICC needs to evaluate logistic requirements for personnel transfer as well as bottom and ice conditions for this area.

The Committee suggested that the towing test be conducted with a trawl or a rock dredge vice a MOCNESS. If possible, teachers should be included on this phase.

The Committee discussed the need to develop a process by which test evaluation reports are developed and routed through the system. Also discussed was the visit to Baltimore. NSF and USCG will discuss planning for this public relations visit. The AICC can assist by providing posters for labs and persons to explain Arctic research projects. The Committee completed the discussion with the status of science participation on the test cruises.

**NOPP and CORE Arctic interests** (Dr. Cynthia Decker Associate Director of NOPP and also a CORE Staff member) - Cynthia Decker provided the Committee with a discussion of the National Oceans Partnership Program (NOPP). Her view graphs are included as *Appendix IV*. Cynthia's presentation reviewed the history of NOPP and samples of the programs funded through that program. She discussed the NOPP funding that went to the UNOLS Fleet for NAVOCEANO programs. The single Arctic project funded by NOPP is an AUV program by Jim Bellingham.

The open session of the AICC meeting concluded and a closed meeting followed. The Committee discussed Science of Opportunity (SOO) issues and other matters pertaining to HEALY.

## **DAY TWO - 26 March 1999**

### **REPORTS**

**UNOLS** - Bob Knox, UNOLS Chair, provided a report of current UNOLS activities. WHOI and Scripps had responded to a NOAA proposal for work on their AMLAR project in southern waters near Antarctica. The probability of the proposed being successful in getting the work done does not look good. Science Mission Requirements for Alpha Helix's replacement have been approved by the UNOLS Council. If money becomes available to construct a new ship to replace ALPHA HELIX, this is the kind of vessel the community would want. The ship planning has included NOAA and the mission requirements provide for an ice-strengthened ship capable of doing both fisheries research and general oceanography. Bob presented a view graph depicting the life cycle of the ships in the national research fleets including UNOLS, Navy, NOAA and other. The graph projected out to 2015 reflecting the number of retirements and the potential reduction in the number of research vessels. Bob warned that replacement efforts would require coordinated planning.

KNORR is scheduled for a very short operating year in 1999. Several intermediate ships will have less than full schedules. Bob explained that despite the light schedule, attention must soon be given to vessel replacements due to the aging fleet. There is a need for a plan to project where we need to be and how we get there. Various agencies are involved and need to develop integrated plans. Bob will be writing a letter to Federal Oceanographic Fleet Coordinating Committee (FOFCC) to encourage planning and to offer UNOLS support.

Jack Bash followed with a report on the progress of the UNOLS Office change over. Only one proposal was received to compete for hosting the UNOLS Office. That proposal is currently under review. The results of this review should be known shortly. The office will turn over on 1 May 2000. Concern was expressed by the Committee that Jack will be departing before the science systems testing for HEALY has been completed. It was suggested that provisions be made so that Jack can remain active in the testing program through its completion.

**NSF** - Tom Pyle provided the NSF report with a very positive outlook on funding for Arctic programs. Funds have been made available for a fiber optic link to Thule. An environmental observatory in Greenland is a possibility. The Arctic Science Section of OPP is looking for an Arctic Research Support and Logistic Manager. This new person will report to Tom. The closing date for the position is May '99. The announcement is included as *Appendix V*. The NSF/USCG MOA is about to be signed.

HEALY funding will not eat into traditional ocean science funding at NSF/OPP. Funds will be available for good proposals. Deadline for proposals will be the same as other ocean science programs at NSF. Decisions will be out by next August for funded programs in 2000. Expeditionary planning will be important for developing cohesive programs. The Arctic Section is working on the question of equipment upgrades and new equipment needs. How are they to be handled and who decides what needs to be replaced?

Tom was questioned about how technical support will be handled. Should technical support, over and above that provided by HEALY, be part of the proposals and come out of science budgets? Oceans Science is shifting technical support over from the research budget to the technician support budget. Tom replied that this procedure will likely be adopted by OPP for HEALY projects. Investigators will benefit from guidelines as to how the technical support will work. Tom will send out a letter as to how this will be handled.

AICC has been modeled after DESSC for expeditionary planning. The Committee's responsibility is to pull together a critical mass to give direction for scientists in writing proposals but in no way be meant to influence agency funding decisions. ADM Hull recommended a five-year running plan as a way to develop expeditionary planning. The roles of OAI and AICC were questioned with respect to expeditionary planning. OAI should be a player in science planning where the AICC role is with the USCG and HEALY logistics. AICC planning must also include other agencies such as NOAA, NASA and international participants.

To advance expeditionary planning and to keep the community at large informed, the AICC plans to continue its involvement with the UNOLS booth at AGU and will conduct a town meeting on the day before AGU. Participation in some form will also be necessary at ASLO in San Antonio for 2000. An AICC representative will also be needed for the next OAI meeting on 19-20 October in Virginia Beach.

**Arctic Research Commission** - Garry Brass provided an update on the activities of the Arctic Research Commission. SSN Hawkbill sailed last Thursday on the last scheduled SCICEX program. It is not clear where the program will go in future. There is a possibility of a cruise in 2000. NSF has funded a study to develop capital and operating costs for a SSN operating for science. A steering committee is to meet 7 April to provide the contractor, Rand Corporation, study direction. SSN 686 L Mendel Rivers has nearly ten years in reactor core life remaining and could be a candidate. AICC could look at a joint HEALY/SSN program to do interesting science. A SSN provides an opportunity for synoptic study of the Arctic. The two platforms, HEALY and a SSN, complement each other for science programs.

**ARVOC** - Vernon Asper provided a report on the Antarctic Research Vessel Oversight Committee (ARVOC). The two research vessels, PALMER and GOULD are operating and doing fine. The PALMER contract is expiring in the next couple of years. An announcement is out to re-bid the contract. The NSF contract with ASA is also in the process of being re-bid. The results of this process should be known later this year. GOULD's hydraulic power problem caused by trapped air bubbles has been resolved. The AICC will be represented at ARVOC meetings when possible. Both committees have similar concerns and need to keep in contact.

**OCEANS STUDY BOARD** - Dan Lubin and George Dupree attended the recent Oceans Studies Board meeting. Both Dan and George provided a presentation about the SOO and HEALY. George explained that the Coast Guard would be seeking \$20,000. as reimbursement for the daily operating cost for HEALY.

**U.S. COAST GUARD** - George Dupree provided a summary of the operational activities of the USCG icebreakers. POLAR SEA is in Hong Kong and will return to Seattle in May. POLAR STAR will operate in the Arctic in August. Glenn Cota is scheduled to be the chief scientist for this SOO program that should last about one month. POLAR SEA will be going into the shipyard for about six months. The Coast Guard plans for the ships to keep alternating the polar class ships with six months of a year in the yard and a year operating although consideration is also being given to possibly completing the work sooner, i.e., in bigger chunks.

The specific language in the Arctic Research Policy Act states the USCG can only charge incremental costs for ship use. If full reimbursement were to become necessary this act would need to be changed. The Coast Guard position is to continue with the incremental charge procedure. The Coast Guard is working on a replacement for MACKINAW in the Great Lakes. The new ship is likely to have dual use as icebreaker and buoy tender.

The Coast Guard's mission for breaking into Thule remains. Presently the Canadians have been picking up the mission but this may not always be possible.

The Polar Research Board of the National Research Council is commissioning a study "A Vision for U.S. Research in the Arctic".

Capt. Jeff Garrett followed with a report on HEALY crew training which is well underway. Marine Science Technicians (MSTs) have been sent to UNOLS vessels. The feedback from both ships and technicians has been great. The MSTs have been through radiation and HAZMAT training. With delivery of HEALY in October the ship will have four weeks of shakedown, three weeks warm water operations, two weeks transit, six weeks ice trials and four weeks of science trials. The ship will be ready for science in 2001 as originally scheduled. Crew familiarization of the ship is receiving a high priority.

**Science of Opportunity 1999 Review and Schedule** - A general discussion was held on the 1999 SOO cruise on POLAR STAR. Glen Cota is to be the Chief Scientist for this cruise. The AICC summary report for the SOO was drafted by Jim Swift and routed through the Committee. The UNOLS Office will mail out the report to all cruise participants. This report ends AICC involvement with the 1999 SOO.

The Committee discussed the liability issues associated with being a Chief Scientist and the liability of the ship's Captain. Because the Coast Guard Icebreakers are government owned and "public vessels" the liability concerns are different from the "private vessels" operated in the UNOLS Fleet. Glen Cota is planning to develop guidelines for SOO Chief Scientists.

It was decided that the 2000 Ship Of Opportunity cruise announcement will be published in September 1999.

**General Discussion and Announcements** - Tom Pyle announced that the contract for the Arctic Logistic Support provider, currently at the University of Nebraska, will be re-competed. An announcement is out for science logistics proposals in three areas: repositories, instruments and long term environmental observatories. A coordinated system for repositories with the Antarctic program is under consideration.

The Committee discussed the release of data after the science systems testing program. All data coming out of the science testing program are public. A plan and data policy is needed. Further discussion on this matter will be included in the next AICC meeting. The Committee will need to review the USCG policy on data.

**Teacher Outreach** - In the absence of Fae Korsmo, Kelly Falkner, OSU, discussed the issue of teachers' involvement in the HEALY science testing cruises. Committee members believe that it is important to have teacher participation if possible. Kelly indicated that she would write a proposal to NSF requesting funding for teacher participation.

**Minutes** - The minutes of the 18-20 November, 1998 AICC meeting were approved as written.

**UNOLS Tech Rep at HEALY Homeport** - Dan Schwartz, Marine Superintendent, and Andy Heiberg, both of the University of Washington, attended the meeting to learn about the process of support for HEALY. George White, U of WA, will be working with the science system testing. Andy Heiberg has considerable experience in off ship support particularly in the Arctic. This includes cold weather clothing, equipment as well as logistics for crew rotation, air operations, and finding runways. After discussion of the needs and possible options Dan and Andy agreed they would consider submitting a proposal to provide support for Arctic operations to supplement Coast Guard support.

**SeaBeam/SCAMP/SCICEX** - Dr. Bernie Coakley, Tulane University, provided the Committee with a comprehensive report on working from a nuclear submarine in the Arctic. Bernie was very impressed with the submarine's ability to cover large areas and collect valuable scientific data. The most recent cruise was equipped with a SeaMarc and chirp sounder that provided details of the bottom topography and stratigraphy never before seen. Joint submarine/HEALY operations would be very valuable.

**Next Meeting** - It was decided that the next meeting would be held in the fall on the east-coast, possibly Virginia Beach, in association with the OAI meeting. Firm plans would be worked out via email.

**Adjourn** - The Committee adjourned at 1330 hours.