



Ocean Class AGOR Program Program Status

21 October 2014

| | | |
|---------------------|------------------------------------|----------------------------------|
| <i>Prepared For</i> | <i>Mike Prince (CTR)</i> | <i>Chris MacDonald</i> |
| <i>UNOLS Annual</i> | <i>Research Facilities (321RF)</i> | <i>Assistant Program Manager</i> |
| <i>Meeting</i> | <i>Office of Naval Research</i> | <i>PMS-325 (PEO-Ships)</i> |



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Ocean Class AGOR Quad Chart



Key Characteristics:

- | | |
|-------------------------------|--|
| • Hull Material | Steel; Aluminum pilothouse |
| • Length | 238 ft |
| • Beam (Max) | 50 ft |
| • Draft | 15 ft |
| • Displacement | 3043 LT (Full Load) |
| • Sustained Speed | 12 kts |
| • Range | 10,545 nm |
| • Endurance | 40 days |
| • Propulsion | 4 x 1044 kW Diesels, 2 x 879 kW Electric Propulsion Motors, 2 x Controllable Pitch Propellers, Bow & Stern Thrusters |
| • Accommodations | 20 crew, 24 science berths |
| • ABS Classed/ABS Designed to | ABS ✕A1 Circle E, ✕AMS and ✕ACCU, NIBS, Ice Class D0, USCG COI |

Mission: Integrated, interdisciplinary, general purpose oceanographic research in coastal and deep ocean areas. Oceanographic sampling and data collection of surface, mid-water, sea floor, and sub-bottom parameters.

Quantity: Two (2)

User: Woods Hole Oceanographic Institution (AGOR 27),
Scripps Institution of Oceanography (AGOR 28)

Ship Names: R/V *Neil Armstrong* (AGOR 27)
R/V *Sally Ride* (AGOR 28)

Builder: Dakota Creek Industries, Inc.

Contract: FFP

Contract Value: \$151.8M

ROM Unit Cost: \$76.4 M (lead), \$71.6M (follow)

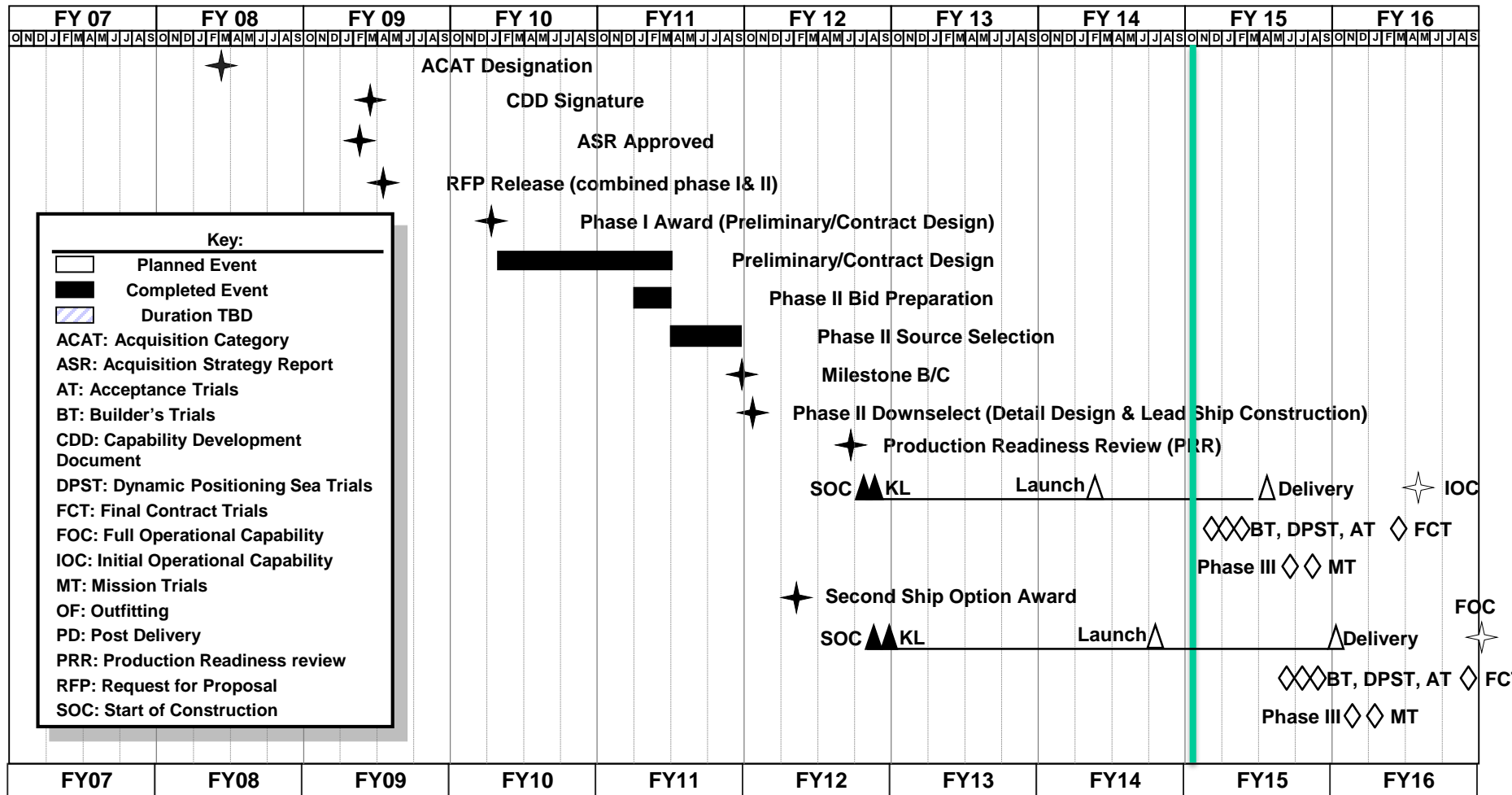
Key Events:

Date:

- | | |
|------------------------------------|--------------|
| • Phase I Contract Award | Jan 10 |
| • Milestone B/C | Sep 11 |
| • Phase II Contract Award | Oct 11 |
| • Follow Ship Award | Feb 12 |
| • Start Construction (Lead Ship) | Jun 12 |
| • Start Construction (Follow Ship) | Jul 12 |
| • Launch 1 st Ship | Feb 22, 2014 |
| • Launch 2 nd Ship | Aug 4, 2014 |
| • Delivery (Lead Ship) | ~Apr 15 |
| • Delivery (Follow Ship) | ~Oct 15 |



Ocean Class AGOR Acquisition Schedule



* July 2002 – started work on Science Mission Requirements with workshop in Salt Lake City



- AGOR 27 - Contract delivery is Jan 2015, however this is not achievable.
Current projections are:
 - Testing Reported ~ 20% complete (all successful)
 - Builder's Trials: start Dec 2014
 - Acceptance Trials (INSURV): Feb 2015
 - Delivery: Apr 2015
- AGOR 28 - Contract delivery is Apr 2015, however this is not achievable.
Current projections are:
 - Testing – just getting started
 - Builder's Trials: start May 2014
 - Acceptance Trials (INSURV): Jul 2015
 - Delivery: Oct 2015



- R/V *Neil Armstrong* successfully launched early on Feb. 22, 2014
 - Christening by Mrs. Carol Armstrong on Saturday March 29, 2014
- R/V *Sally Ride* successfully launched early on August 4, 2014
 - Christening by Dr. Tam O'Shaughnessy on Saturday August 9, 2014
- R/V *Neil Armstrong* Production Status:
 - Commissioning and testing of systems and equipment are well underway, but remain somewhat behind schedule. Builder's Dock Trials are currently scheduled to begin the second week of December.
 - Cable pulling and connection work is ongoing at a rapid pace in order to be ready for commissioning and testing.
 - The Main Crane has been installed. All major equipment has been landed with the exception of the portable crane.
- R/V *Sally Ride* Production Status:
 - Electricians are pulling cable, piping is being run, followed by joiner work where installations are complete.
 - Progress remains slower than desired as focus is on completing installations and testing on *Armstrong*.



R/V NEIL ARMSTRONG – March 29, 2014



R/V SALLY RIDE – Aug 9, 2014





- Shortly after Delivery the following mission equipment systems will be installed at Dakota Creek under the supervision of WHOI and SIO
 - Multi-Beam Swath Mapping System: Deep Water - Kongsberg EM-122 12 kHz 1° x 2°
 - Multi-Beam Swath Mapping System: Mid Water – Kongsberg EM-710 0.5° x 1°
 - Acoustic Doppler Current Profilers: 38 kHz, 75 kHz or 150 kHz & 300 kHz
 - Sub Bottom and Single Beam Profiler: Knudsen Chirp 3260, 16 Massa TR-1075 3.5 kHz transducer array; and one 12 kHz Single beam transducer
 - Attitude, Heading, Reference System (AHRS): Applanix PosMV 320, or IXSEA HYDRIN (or equal)
 - Sea Surface Sound Velocity System: Kongsberg SSVS, Seabird Thermosalinograph (or equal)
 - Flow Thru Seawater Instrumentation (piping and pumps by shipyard)
 - Broadband Satellite Communications System – TBD – Fleet Broadband, HiSeas Net, Global Express, other?
 - Acoustic Navigation and Tracking system – Kongsberg HiPap or Sonardyne
 - Fisheries Echosounder System – Kongsberg EK60/80
 - (5 frequencies: 18, 38, 120, 200 & 333 kHz)
 - Local Area Network servers, printers, plotters, etc.



Launch with Synchro-Lift

R/V NEIL ARMSTRONG Launch – Feb 2014



R/V SALLY RIDE Launch – Aug 2014



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Both Vessels Alongside for Outfitting, Testing and Trials





R/V NEIL ARMSTRONG Galley, Mess Deck and Staterooms Taking Shape



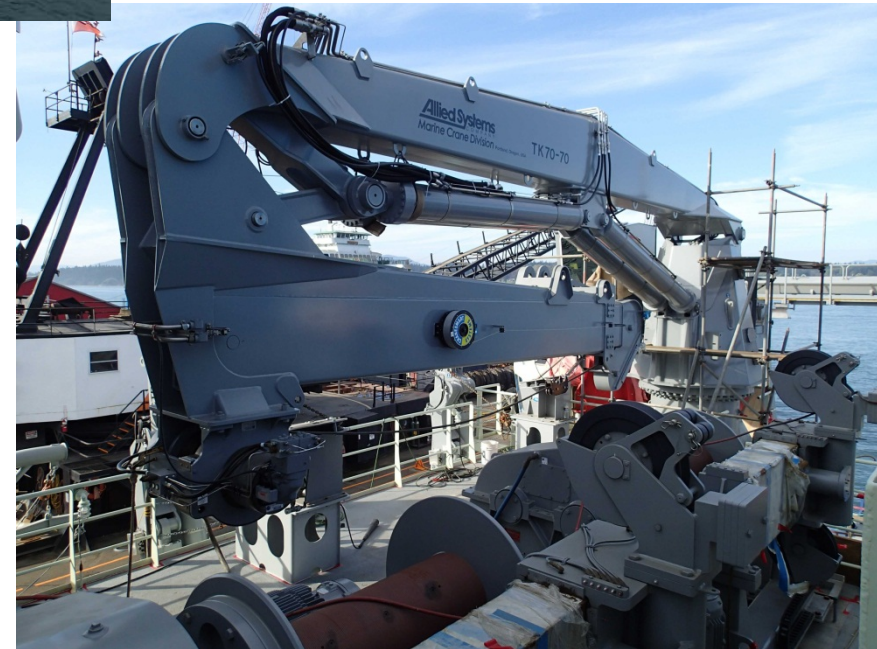


**R/V NEIL
ARMSTRONG
Outfitting
Continues at a
steady pace**





**Allied
A-Frame
30K Dynamic
Working Load**



Allied TK70 Main Crane – 10K lbs @ 70ft in SS4



Deck Machinery



Markey Hydro/CTD Winches



Handling System FAT - Allied



Markey Traction Winch being installed



Work Boat



Controllable Pitch Props being assembled



FBB & Sat TV
antennas



Mast Under Construction



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Guemes Channel and Mt. Baker





Photos courtesy of Operator's On Site Reps and Lyn Carroll (SUPSHIP Bath)



Gary McGrath
Chief Engineer
Woods Hole Oceanographic Institution



Paul Bueren
Chief Engineer
Scripps Institution of Oceanography



Ocean Class AGOR

Compliments!

