



USCGC HEALY (WAGB 20)

Service Life Extension Program (SLEP)

Information Brief for Arctic Icebreaker Coordinating Committee (AICC) Winter Meeting

CG-9323 | PM: Mr. Kenneth King; APM: Thomas Hummer

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Agenda

- Program Overview
- Key Stakeholders
- Notional Milestone Schedule
- Notional Worklist



Program Overview



Capabilities

- The Coast Guard's current polar icebreaking capability consists of two polar icebreakers: POLAR STAR and HEALY
- Polar icebreakers provide access and presence to national strategic objectives in the Arctic and Antarctic
- HEALY provides unique support of the nation's strategic science efforts through partnerships with the Office of Naval Research (ONR) and National Science Foundation (NSF)



Program Overview



Need

- HEALY will reach its **estimated** end of service life in 2029 based on Ship Structure and Machinery Evaluation Board (SSMEB)

– SSMEB from 2019 stated:

"In conclusion, obsolescence hampers HEALY's deck and engineering systems; there are unresolved operational risks that require major engineering changes; and maintenance and repair costs data suggest actual expenditures will reach 200% of budget targets by FY2025. HEALY's remaining service life is less than 10 years due to the non-availability of parts and technical support to maintain and repair 12 mission critical and 14 mission essential systems."

- Targeted mission degraders: Propulsion plant support systems, Piping, Structure, Auxiliary systems, MPCMS integration, communications, and CGOne & NSF connectivity improvements, etc.

Key Stakeholders



- Sponsor: CAPT Driscoll (CG-751)
- Program Manager: Mr. King (CG-9323)
- Ass't PM: Mr. Hummer (CG-9323)
- Support Manager: CAPT Lowry (CG-45)
- Other Stakeholder Offices:
 - SFLC-ESD-ISVS
 - SFLC-LREPL
 - CG Yard
 - CG-6 (BOD-TAB)
 - CG-5P
 - CG-821
 - CG-933
 - CG-924
 - National Science Foundation (NSF)

Notional Work List



WI #	Title	WI #	Title
1	Vital Alarm System (VAS)	21	Ventilation
2	Weight and Moment Tracking / Incline & Stability	22	Heating System
3	Electrical Load Analysis	23	Air Conditioning (Hot & Chilled Water System)
4	Selected Record Drawings	24	Steam Piping and Reducing Stations
5	Heat Load Analysis	25	Main Motor Lube Oil Service System
6	Sound Survey	26	Main Diesel Generator Pre-Heating
7	MPCMS Intigration (HEALY MMA IPP Support Contract cost)	27	Uptakes and Intakes
8	Auxiliary Boilers	28	Climate Control Chambers
9	Polar Science Data Network Infrastructure	29	Anchor Handling and Stowage
10	CGOne Network Infrastructure	30	Ice Radar
11	Auxiliary Diesel Generator-Electrical	31	Closed Circuit Television System (CCTV)
12	Auxiliary Diesel Engine-Mechanical	32	Aloft Conning Station
13	Piping	33	WIFCOM
14	Auxiliary Sea Water System (ASW)	34	Science Sea Water System
15	Main Sea Water System (MSW)	35	Meteorological Equipment
16	Sea Chests and Sea Bay	36	Crew Berthing
17	Polar Science Network-Underway Connectivity	37	Warping Capstan
18	CGOne Network - Internet / Underway Connectivity	38	Fuel Oil Service System
19	Sub Bottom Profiler	39	Fuel Oil Purifiers
20	RF Communications	40	Oily Water Separator

Notional Work List (cont.)



WI #	Title	WI #	Title
41	Steering Control System	61	Sound Powered Phone System
42	Rudders	62	Main Motor Housings
43	Sanitary Systems	63	1MC - General Announcing System
44	Propulsion Diesel Engines	64	Hydraulic Power Units
45	Cranes	65	Multi-Beam Sonar System
46	Bridge Reconfiguration	66	Boat Davit
47	Closures	67	Potable Water Pumps and Accumulator
48	Aft Conning Station	68	Main Diesel Generator Jacket Water and Lube Oil Coolers
49	6MC - Exterior Communications	69	Depth Sounder System
50	Topside Crane Radios	70	Bus Transfer Switches
51	Galley Equipment	71	60 Hz to 400 Hz Frequency Converters
52	Firemain System	72	Science Labs
53	Aqueous Film Forming Foam (AFFF)	73	Aviation Gantry Crane
54	Over-the-Side Weight Handling	74	Lube Oil Fill, Transfer and Purification
55	Aviation Maintenance Support Equipment and Shops	75	Distilled Water Service System
56	Starting Air System	76	Incinerator
57	Evaporators	77	Fuel Oil Transfer and Fill System
58	Motor Control Centers	78	Aviation Turbine Wash-down
59	Oceanographic and Trawl Core Winches	79	Dial Phones
60	Aft Uncontaminated Water Tank	80	Alarm, Safety and Warning System

Notional Work List (cont.)



WI #	Title
81	Maneuvering System (Bow Thruster)
82	Elevators, including dumbwaiters, monorails, hoists, and J-Davits
83	Gyrocompass System
84	Science Hoists, Monorails, and Gantries
85	Hydraulic Oil Transfer/Service/Drain Pumps
86	Hydraulic Oil Purifier System
87	Propulsion Cycloconverters & Cyclotransformers
88	Backup Generator
89	Ships Service Air System
90	Replenishment at Sea and Fueling at Sea Systems
91	Brominators and Main-Line Chlorinator Analyzer
92	Entertainment and Training System
93	Deck Sockets
94	TALON Landing Grid
95	Laboratory Fume Hoods
96	18/21MC-Bridge and Captains Command Communications
97	Pager System
98	UltraLow Laboratory Freezers
99	Aviation Fuel Systems



Questions/Discussion

