

U.S. Department
of Transportation

**United States
Coast Guard**



Commandant
United States Coast Guard

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Staff Symbol:
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PREPARED STATEMENT
OF
REAR ADMIRAL CLYDE E. ROBBINS
CHIEF, OFFICE OF OPERATIONS
U. S. COAST GUARD
BEFORE THE
HOUSE MERCHANT MARINE AND FISHERIES COMMITTEE
SUBCOMMITTEE ON OCEANOGRAPHY

24 JUNE 1986



Biographical Sketch
U.S. COAST GUARD



**REAR ADMIRAL CLYDE E. ROBBINS
CHIEF, OFFICE OF OPERATIONS
UNITED STATES COAST GUARD**

RADM Clyde E. Robbins became Chief of the Office of Operations at U.S. Coast Guard Headquarters in Washington, D.C. in July 1985. He was Commander, Fourteenth Coast Guard District in Honolulu, Hawaii from 1983 until 1985, following an assignment at Headquarters as Chief of the Special Staff Element for the Commandant.

RADM Robbins was Chief of Staff of the First Coast Guard District in Boston, Mass. in 1981, Chief of Operations for the First District in 1980, and was Chief of Programs Division at Headquarters in Washington from 1977. He was Commanding Officer of Coast Guard Base Galveston, Texas from 1974 to 1976. He also commanded Coast Guard Air Station Washington in Alexandria, Va. from 1971 to 1974 after serving five years at Coast Guard Headquarters.

RADM Robbins served the Coast Guard in a variety of assignments as an aviator stationed in St. Petersburg, Fla., San Francisco, Calif., Canada, and Bermuda. He completed flight training at Naval Air Stations in Pensacola, Fla. and Corpus Christi, Texas after serving a year and a half onboard the Coast Guard Cutter HALF MOON homeported in New York, his first assignment.

He received a Bachelor of Science degree from the U.S. Coast Guard Academy in New London, Conn. in 1954. RADM Robbins is a distinguished graduate of the National War College in Washington.

His awards include two Legion of Merit Medals, the Meritorious Service Medal, the Air Medal, several Coast Guard Commendation Medals, the President's Medal, and the Secretary's Award for Outstanding Achievement in Equal Opportunity.

A native of Columbia Cross Roads, Pennsylvania, RADM Robbins is married to the former Elizabeth P. Byrem of Hohokus, New Jersey. They have two children, Jennifer, now living in Philadelphia, Pa. and James, presently assigned to Coast Guard Air Station St. Petersburg, Fla.

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I AM RADM CLYDE E. ROBBINS, CHIEF, OFFICE OF OPERATIONS OF THE COAST GUARD. IT IS A PLEASURE TO APPEAR BEFORE YOU TODAY TO PROVIDE AN OVERVIEW OF THE COAST GUARD'S ROLE IN THE FEDERAL OCEANOGRAPHIC FLEET.

THE U. S. COAST GUARD'S OCEANOGRAPHIC MISSION

THE U. S. COAST GUARD IS AUTHORIZED TO CONDUCT OCEANOGRAPHIC RESEARCH UNDER A VARIETY OF STATUTES. COLLECTIVELY THESE STATUTES (TAB A OF THE APPENDIX) PROVIDE DIRECTION FOR CONDUCTING OCEANOGRAPHIC RESEARCH IN SUPPORT OF COAST GUARD MISSIONS AND THOSE OF OTHER FEDERAL CIVIL AND DEFENSE AGENCIES IN THE NATIONAL INTEREST. MARINE SCIENCE SUPPORT OF COAST GUARD MISSIONS ENTAILS THE CONDUCT OF THE INTERNATIONAL ICE PATROL, THROUGH THE STUDY AND OBSERVATION OF ICE (PRIMARILY ICEBERGS) AND CURRENT CONDITIONS IN THE NORTH ATLANTIC OCEAN. THE INTERNATIONAL ICE PATROL WAS CONCEIVED AFTER THE TRAGIC SINKING OF THE **RMS TITANIC** IN 1912. EVER SINCE THAT TIME, EXCEPT FOR A FEW YEARS DURING WORLD WAR II, THE U. S. COAST GUARD HAS PROVIDED AN ICE PATROL SERVICE IN THE NORTH ATLANTIC OCEAN TO DETECT, TRACK, AND REPORT ICEBERGS THAT ARE A HAZARD TO TRANSATLANTIC MARINERS. AS AN ITEM OF INTEREST, THE **USCGC EVERGREEN** PARTICIPATED IN THE INITIAL STAGES OF THE SEARCH FOR THE **TITANIC** IN 1979 BY PROVIDING AN OPPORTUNITY FOR THE NATIONAL GEOGRAPHIC SOCIETY TO SEARCH FOR THE PASSENGER LINER WITH AN UNDERSEA CAMERA DURING AN INTERNATIONAL ICE PATROL OCEANOGRAPHIC CRUISE.

CIVILIAN AND MILITARY OCEANOGRAPHERS AT THE INTERNATIONAL ICE PATROL AND THE COAST GUARD RESEARCH AND DEVELOPMENT CENTER PROVIDE THE OPERATIONAL SUPPORT TO THE INTERNATIONAL ICE PATROL AS WELL AS RESEARCH INTO WAYS OF IMPROVING THE DETECTION OF ICEBERGS AND PREDICTING THEIR DRIFT. THE INTERNATIONAL ICE PATROL IS FUNDED BY THE 20 MEMBER NATIONS WHO REIMBURSE THE UNITED STATES GOVERNMENT FOR THIS SERVICE.

OTHER COAST GUARD MISSIONS WHICH RECEIVE MARINE SCIENCE SUPPORT ARE SEARCH AND RESCUE, MARINE ENVIRONMENTAL RESPONSE, AND LAW ENFORCEMENT. OPERATIONAL COMPUTER MODELS ARE USED BY THE COAST GUARD, ALONG WITH HISTORICAL AND REAL TIME ENVIRONMENTAL DATA BASES AND SATELLITE-DERIVED PRODUCTS, TO PREDICT THE DRIFT OF OBJECTS OR SUBSTANCES ON THE SEA SURFACE. THIS INFORMATION IS NEEDED TO PLAN MARITIME RESCUE OPERATIONS, TO RESPOND TO OIL AND HAZARDOUS SUBSTANCE SPILLS, AND TO AID IN PROSECUTING LAW ENFORCEMENT CASES.

SUPPORT TO OTHER FEDERAL AGENCIES INCLUDES THE ROUTINE OBSERVATION AND REPORTING OF OCEANOGRAPHIC PARAMETERS FROM OUR MAJOR CUTTERS AT SEA (EXPENDABLE BATHYTHERMOGRAPHS, OCEAN SOUNDINGS, MARINE MAMMAL SIGHTINGS, ETC.). THESE OBSERVATIONS CONTRIBUTE TO THE NATIONAL DATA BASE AND ARE USED FOR OPERATIONAL ENVIRONMENTAL PREDICTIONS FOR BOTH CIVIL AND DEFENSE APPLICATIONS. A COAST GUARD DETACHMENT AT THE NATIONAL DATA BUOY CENTER AT BAY ST. LOUIS, MS. ASSISTS THE NATIONAL OCEANIC AND

ATMOSPHERIC ADMINISTRATION (NOAA) IN MAINTAINING A NETWORK OF ENVIRONMENTAL AND LARGE NAVIGATIONAL BUOYS FOR AUTOMATICALLY RECORDING AND RELAYING METEOROLOGICAL AND OCEANOGRAPHIC PARAMETERS IMPORTANT TO THIS NATION'S WELL-BEING. THE COAST GUARD'S POLAR ICEBREAKER FLEET IS USED EXTENSIVELY FOR CONDUCTING MARINE RESEARCH IN THE ARCTIC AND THE ANTARCTIC. THESE VALUABLE NATIONAL LABORATORIES ARE PART OF THE FEDERAL OCEANOGRAPHIC FLEET AND CONTRIBUTE TO THE OVERALL CAPABILITY OF THE U. S. FOR PURSUING MARINE RESEARCH ON A GLOBAL BASIS.

THE U. S. COAST GUARD'S OCEANOGRAPHIC EFFORTS SUPPORT NATIONAL GOALS IN OCEANOGRAPHY THROUGH THE DIRECT ASSISTANCE TO ITS OWN OPERATIONAL AND RESEARCH PROGRAMS, AS WELL AS THROUGH THE ROUTINE OBSERVATIONS MADE FOR THE DEPARTMENT OF DEFENSE AND NOAA FROM ITS CUTTERS AT SEA. COAST GUARD FACILITIES ARE USED TO SUPPORT THE OCEANOGRAPHIC MISSIONS OF OTHER AGENCIES, SUCH AS THE DEPLOYMENT OF SATELLITE-TRACKED DRIFTING BUOYS FOR THE **TOGA** (TROPICAL OCEAN-GLOBAL ATMOSPHERE) PROGRAM, OR THE MAKING OF SPECIAL EXPENDABLE BATHYTHERMOGRAPH CASTS AT THE REQUEST OF NOAA TO HELP TO BETTER UNDERSTAND THE EL NINO PHENOMENON, OR BY ASSISTING U. S. NAVY AND NATIONAL SCIENCE FOUNDATION-SUPPORTED SCIENTISTS ABOARD COAST GUARD ICEBREAKERS CONDUCTING RESEARCH IN POLAR REGIONS.

U. S. POLAR ICEBREAKERS

FLEET CHARACTERISTICS

THE U. S. POLAR ICEBREAKERS ARE PART OF THE FEDERAL OCEANOGRAPHIC FLEET. TABLE 1 PROVIDES THE PRESENT COMPOSITION OF THE COAST GUARD ICEBREAKER FLEET IN TERMS OF NUMBER, TYPE OF VESSELS, AND TECHNOLOGICAL CAPABILITIES.

REPLACEMENT POLAR ICEBREAKERS

THE POLAR CLASS ICEBREAKERS, **POLAR STAR** AND **POLAR SEA**, WERE CONSTRUCTED IN THE MID-1970'S AND DESIGNED WITH A 30-YEAR SERVICE LIFE. THEIR ANTICIPATED RETIREMENT DATES ARE: **POLAR STAR** - 2006, **POLAR SEA** - 2008. **USCGC GLACIER**, CONSTRUCTED IN 1954, IS EXPECTED TO BE RETIRED IN 1992. THIS ICEBREAKER IS PRESENTLY BEING EVALUATED TO DETERMINE IF IT IS ECONOMICALLY FEASIBLE TO EXTEND THE VESSEL'S LIFE BEYOND 1992. THE WIND CLASS ICEBREAKERS, **WESTWIND** AND **NORTHWIND**, WERE CONSTRUCTED IN THE MID-1940'S AND RE-ENGINEED IN THE MID-1970'S WITH THE INTENTION OF EXTENDING THEIR SERVICE LIFE TO THE MID-1980'S. **WESTWIND** IS PRESENTLY IN A ONE YEAR MAJOR MAINTENANCE AVAILABILITY TO EXTEND THE ICEBREAKER'S SERVICE LIFE TO 1993. **NORTHWIND** PRESENTLY HAS A LIFE EXPECTANCY OF 1990; HOWEVER, **NORTHWIND** IS SCHEDULED TO COMMENCE A NINE-MONTH MAJOR MAINTENANCE AVAILABILITY DURING THE FALL OF 1987 WHICH WILL EXTEND THAT VESSEL'S SERVICE LIFE TO 1994.

THE COAST GUARD AUTHORIZATION ACT OF 1984 (P.L. 98-557) DIRECTS THE PREPARATION OF DESIGN AND CONSTRUCTION PLANS FOR THE PURCHASE OF AT LEAST TWO POLAR-CAPABLE ICEBREAKERS TO BE OPERATIONAL DURING FY 1990. AN ACQUISITION PAPER FOR TWO POLAR ICEBREAKERS HAS BEEN APPROVED BY THE DEPARTMENT OF TRANSPORTATION (DOT) AUTHORIZING THE COAST GUARD TO PROCEED THROUGH THE CONTRACT DESIGN STAGE OF THE PROGRAM.

THE POLAR ICEBREAKER USER COUNCIL, COMPOSED OF REPRESENTATIVES FROM FEDERAL USER AGENCIES (NATIONAL SCIENCE FOUNDATION (NSF), DEPARTMENT OF DEFENSE (DOD), MARITIME ADMINISTRATION (MARAD), AND THE COAST GUARD (USCG)), HAVE PROVIDED THEIR ICEBREAKER USER REQUIREMENTS THROUGH THE YEAR 2000 SO THAT THE NEEDED OPERATIONAL CAPABILITIES COULD BE INCORPORATED INTO THE CONCEPTUAL DESIGN OF THE REPLACEMENT POLAR ICEBREAKERS. EXTENSIVE CONSULTATION WITH POLAR SCIENTISTS FROM FEDERAL AND ACADEMIC INSTITUTIONS HAS ENSURED THAT THE REQUIREMENTS FOR POLAR MARINE SCIENCE ARE AN INTEGRAL PART OF THE DESIGN. A WORKING GROUP OF THE NATIONAL RESEARCH COUNCIL'S POLAR RESEARCH BOARD WAS FORMED TO ADVISE THE COAST GUARD ON THE SCIENCE REQUIREMENTS FOR THE NEW ICEBREAKERS AND CONTINUES TO PROVIDE ITS COUNSEL.

A CONCEPTUAL DESIGN WAS COMPLETED IN SEPTEMBER 1985, WHICH REFLECTS THE ICEBREAKER USER REQUIREMENTS AND RESULTS IN A SHIP CAPABLE OF MEETING ITS MISSION NEEDS WITH ENHANCED SCIENCE SUPPORT CAPABILITY.

THE PRELIMINARY DESIGN STAGE BEGAN IN SEPTEMBER 1985. THE ICEBREAKER USER COUNCIL AND PREVIOUS COMMANDING OFFICERS OF POLAR ICEBREAKERS HAVE REVIEWED THE CONCEPTUAL DESIGN AND HAVE PROVIDED RECOMMENDATIONS TO ASSIST IN THE DESIGN PROCESS.

ALTHOUGH THE DESIGN AND ACQUISITION PROCESS IS MOVING FORWARD, THE CONGRESSIONAL GOAL OF HAVING THIS NEW CLASS OF POLAR ICE-BREAKING VESSELS OPERATIONAL BY THE CONCLUSION OF FY 1990 IS NOT FEASIBLE. CONSTRUCTION OF EACH ICEBREAKER, ESTIMATED TO BEGIN IN 1989, IS EXPECTED TO TAKE APPROXIMATELY 4 YEARS, FOLLOWING COMPLETION OF PRELIMINARY AND CONTRACT DESIGN AND AN ESTIMATED 15-MONTH PROCUREMENT PROCESS. THE COMPLEXITY OF THE DESIGN AND CONTRACT PROCESSES COUPLED WITH A NORMAL CONSTRUCTION PERIOD INDICATES THAT A FIRST NEW POLAR ICEBREAKER COULD BE FULLY OPERATIONAL IN FY 1993 AND A SECOND VESSEL COULD BE FULLY OPERATIONAL IN 1994.

COMPARABILITY OF U. S. AND FOREIGN ICE-BREAKING CAPABILITY

IN COMPARING WORLD ICEBREAKER FLEETS AND THEIR CAPABILITIES, THERE ARE TWO IMPORTANT MEASURES: 1) FLEET SIZE, WHICH MEASURES THE ABILITY OF A NATION'S FLEET TO ENGAGE IN SIMULTANEOUS OPERATIONS IN DIFFERENT AREAS, AND 2) INDIVIDUAL SHIP CAPABILITY, WHICH DETERMINES HOW FAR A COUNTRY CAN PROJECT ITS PRESENCE INTO

THE POLAR PACK WITH A SURFACE VESSEL. INDIVIDUAL SHIP CAPABILITY, THEREFORE, IS A GOOD MEASURE OF A NATION'S STRATEGIC CAPABILITIES IN THE ARCTIC.

IN TERMS OF FLEET SIZE, THE U. S. IS THIRD IN THE WORLD WITH FOUR ACTIVE ICEBREAKERS AND ONE IN RESERVE. THE SOVIET UNION IS THE LEADER WITH SIXTEEN ACTIVE ICEBREAKERS WITH FOUR MORE IN VARIOUS STAGES OF CONSTRUCTION. CANADA IS SECOND WITH SIX ACTIVE GOVERNMENT ICEBREAKERS ALONG WITH SIX COMMERCIALY-OWNED SHIPS. THE CANADIAN GOVERNMENT IS ALSO IN THE PLANNING STAGES OF BUILDING A SEVENTH ICEBREAKER. THREE OTHER NATIONS OPERATE ICEBREAKERS; JAPAN WITH TWO, AND ONE EACH IN ARGENTINA AND WEST GERMANY.

IN INDIVIDUAL ICEBREAKER CAPABILITY THE U. S. RATES SECOND BEHIND THE SOVIET UNION. OUR TWO **POLAR** CLASS ICEBREAKERS CAN PRODUCE 60,000 SHAFT HORSEPOWER (SHP) WHEN OPERATING ON GAS TURBINES, DISPLACE 13,000 TONS, AND CAN BREAK SIX FEET OF LEVEL ICE AT A CONTINUOUS THREE KNOTS. THE SOVIET'S THREE **ARKTIKA** CLASS NUCLEAR POWERED SHIPS PRODUCE 75,000 SHP, DISPLACE 25,000 TONS AND CAN BREAK EIGHT FEET OF ICE AT THREE KNOTS. **ARKTIKA**, NOW NAMED **LEONID BREZHNEV**, IS THE FIRST AND ONLY SURFACE SHIP TO REACH THE GEOGRAPHIC NORTH POLE. CANADA IS THIRD IN LINE WITH THE **LOUIS ST. LAURENT** WHICH PRODUCES 24,000 SHP WITH STEAM TURBINES, DISPLACES 14,000 TONS, AND BREAKS 4.5 FEET OF ICE.

IF THE CANADIANS BUILD THEIR CURRENTLY-PLANNED ICEBREAKER, THE SHIP WILL MATCH THE SOVIET ICEBREAKER WITH AN EIGHT FOOT ICEBREAKING CAPABILITY, BUT USE 100,000 SHP TO MOVE THE LARGER, 35-40,000 TON, SHIP.

THE FOUR ICEBREAKERS THE SOVIETS ARE CONSTRUCTING INCLUDE: TWO SHALLOW DRAFT, 52,000 SHP, 22,000 TON ICEBREAKERS, CAPABLE OF BREAKING SIX FEET OF ICE; ANOTHER **ARKTIKA** CLASS; AND ONE 40,000 SHP, 61,000 TON, LIGHTER ABOARD SHIP (LASH) ICEBREAKER.

CURRENTLY U. S. ICEBREAKER PLANS ARE LIMITED TO THE COAST GUARD'S DESIGN AND EVALUATION OF CONSTRUCTING TWO NEW ICEBREAKERS WITH MULTI-MISSION ASPECTS. AS WITH THE CURRENT COAST GUARD ICEBREAKERS, WHICH ARE THE ONLY U. S. ICEBREAKERS, THE NEW SHIPS WILL BE USED FOR POLAR RESEARCH AND LOGISTICS SUPPORT. OUR CURRENT DESIGN CALLS FOR A SHIP DISPLACING 16,000 TONS AND PROPELLED BY A DIESEL-ELECTRIC PLANT PRODUCING 30,000 SHP. WHEN THE TWO NEW SHIPS ARE COMPLETED AND OPERATIONAL THEY WOULD REPLACE OUR OLDEST ICEBREAKERS.

FUTURE REQUIREMENTS

THE REQUIREMENTS FOR THE ICE-BREAKING CAPABILITY OF THE U. S. POLAR ICEBREAKERS IN THE FUTURE INCLUDE ALL OF THE PRESENT TASKS CURRENTLY LEVIED ON THE FLEET, AS WELL AS ANY THAT ENSUE

FROM AN EXPANDING ROLE OF THE U. S. IN POLAR SCIENTIFIC RESEARCH. THE SCIENTISTS WHO USE OUR ICEBREAKERS FOR MARINE RESEARCH ARE TELLING US THAT SCIENTIFIC INVESTIGATIONS INTO THE POLAR CLIMATE, ITS SEAS, AND THE LIVING AND NON-LIVING RESOURCES THEY CONTAIN, REQUIRE EXTENDING OPERATIONS FURTHER INTO THE ICE PACK AND FURTHER INTO THE POLAR WINTER THAN BEFORE. FOR INSTANCE, THERE IS A STRONG DESIRE TO CONTINUE SHIPBOARD OBSERVATIONS IN THE WEDDELL SEA OF ANTARCTICA ON A YEAR-ROUND BASIS, REQUIRING THE WINTERING-OVER OF AN ICEBREAKER. EXPLORATION FOR OIL AND GAS IN THE ARCTIC HAS PROMPTED THE U. S. MARITIME ADMINISTRATION TO EVALUATE THE FEASIBILITY OF AN ARCTIC MARINE TRANSPORTATION SYSTEM. POLAR TRAFFICABILITY STUDIES ARE GEARED TOWARD ASSESSING THE REQUIREMENTS FOR SUSTAINING YEAR-ROUND OPERATIONS THROUGH NAVIGATION IN ICE-COVERED WATERS OF THE BERING, CHUKCHI AND BEAUFORT SEAS. RESEARCH IN SUPPORT OF NATIONAL DEFENSE OBJECTIVES HAVE EXTENDED OPERATIONS IN THE WESTERN ARCTIC INTO THE LATE FALL, REQUIRING THE FULL EFFORT OF OUR MOST CAPABLE POLAR-CLASS ICEBREAKERS TO COMPLETE THE MISSION.

THE ICE-BREAKING CAPABILITY OF OUR PRESENT FLEET IS BOUNDED BY THE POLAR-CLASS ICEBREAKERS ON THE UPPER END WITH APPROXIMATELY 6+ FT. CONTINUOUS, LEVEL ICE BREAKING AT THREE KTS, AND BY THE WIND-CLASS AT THE LOWER END AT APPROXIMATELY THREE FEET. OF COURSE, GREATER ICE THICKNESSES MAY BE BROKEN IN THE BACKING AND RAMMING MODE. ANALYSIS OF HISTORICAL ICE CONDITIONS AND PROJECTED USER REQUIREMENTS INDICATE THAT A CONTINUOUS, LEVEL ICE-BREAKING CAPABILITY OF 4.5 FT. FOR THE NEW POLAR ICEBREAKERS

WOULD BE ADEQUATE FOR MEETING USER NEEDS IN THE FUTURE. THIS VALUE WAS ARRIVED AT GIVEN THE ASSUMPTION THAT THE POLAR-CLASS ICEBREAKERS WILL BE OPERATING INTO THE BEGINNING OF THE NEXT CENTURY WITH THEIR 6+ FOOT CAPABILITY AVAILABLE FOR RESPONDING TO THE MOST STRINGENT MISSION REQUIREMENTS. ANOTHER ASSUMPTION IS THAT EACH ICEBREAKER IN THE FLEET MUST BE CAPABLE OF ACCOMPLISHING THE BASELINE MISSION OF U. S. STATION RESUPPLY IN THE ARCTIC AND ANTARCTIC BY ITSELF IN ANY GIVEN YEAR. THIS IS NECESSARY TO PROVIDE FOR THE STRATEGIC CAPABILITY OF A FLEET WHICH IS NORMALLY DEPLOYED IN WIDELY SEPARATED GEOGRAPHIC REGIONS DURING THE SAME SEASON, SO THAT IT CAN MEET THE OPERATIONAL REQUIREMENTS OF ALL OF ITS USERS. THIS REQUIRES SOME FLEXIBILITY IN SCHEDULING ICEBREAKERS FOR POLAR DEPLOYMENTS, TO ALLOW FOR MUCH NEEDED MAINTENANCE AND TRAINING PERIODS, AND TO ACCOUNT FOR THE INEVITABLE, BUT UNPREDICTABLE CASUALTIES OR UNEXPECTED CONTINGENCIES BROUGHT ABOUT BY A NATIONAL EMERGENCY.

AS NOTED LATER IN THIS STATEMENT, THE COMBINED ICE-BREAKING CAPABILITY OF THE FLEET, AFTER THE NEW REPLACEMENT ICEBREAKERS HAVE BECOME OPERATIONAL (APPROXIMATELY 1993-94), IS PROJECTED TO PUT THE U. S. SECOND OR THIRD IN INDIVIDUAL VESSEL CAPABILITY AMONG THE NATIONS OF THE WORLD THAT HAVE ICEBREAKERS. NEVERTHELESS, WE BELIEVE THAT THE FLEET MIX OF ICE-BREAKING CAPABILITY THAT WE EXPECT TO HAVE AVAILABLE BY THE MID-1990'S WILL BE THE APPROPRIATE ONE FOR THIS NATION, AND THAT THE NEEDS OF POLAR RESEARCH WERE AN IMPORTANT FACTOR IN DETERMINING THE FUTURE ICE-BREAKING REQUIREMENTS.

I WOULD LIKE TO DIFFER TO MY COLLEAGUES AT NSF AND DOD TO DISCUSS THE CONSEQUENCES AND COSTS OF NOT PROVIDING THIS VESSEL SUPPORT FOR THE NATION'S OCEANOGRAPHIC RESEARCH.

SUMMARY

IN CONCLUSION, THE COAST GUARD BELIEVES THAT ITS EXPERIENCE IN ICE OPERATIONS AND IN THE APPLICATION OF DIRECTED, OPERATIONAL MARINE SCIENCE TO SERVING MISSION-ORIENTED PROBLEMS HAS BEEN AN EXTREMELY REWARDING AND SUCCESSFUL ENDEAVOR THAT HAS NOT ONLY BENEFITED THE CONSTITUENT AGENCIES THAT WE HAVE ASSISTED BUT, MORE IMPORTANTLY, THE PUBLIC WE SERVE AS WELL. PROVIDED WE HAVE THE RESOURCES, THE COAST GUARD IS COMMITTED TO SUPPLYING THE FUTURE REQUIREMENTS FOR ICE OPERATIONS AND MARINE SCIENCE SUPPORT.

POLAR ICEBREAKER CHARACTERISTICS

	NORTHWIND/ WESTWIND	GLACIER	POLAR STAR/ POLAR SEA
LENGTH	269 FT	310 FT	400 FT
BEAM	64 FT	74 FT	83.5 FT
DRAFT (FULL LOAD)	29 FT	29 FT	31 FT
DISPLACEMENT	6515 TONS	8450 TONS	13,000 TONS
HORSEPOWER	10,000	21,000	18,000/60,000
PROPULSION	DIESEL-ELECTRIC	DIESEL-ELECTRIC	DIESEL-ELECTRIC/ GAS TURBINE
MAXIMUM SPEED	16 KTS	17.5 KTS	19 KTS
ENDURANCE	38,000 NM/10 KTS	25,000 NM/12 KTS	41,000 NM/9 KTS
HELO PLATFORM	YES	YES	YES
ICEBREAKING CAPABILITY	3 FT CONTINUOUS 11 FT RAMMING	3.5 FT CONTINUOUS 14.5 FT RAMMING	6 FT CONTINUOUS 21 FT RAMMING
CREW: OFFICER	15	15	14
ENLISTED	139	183	125
AVIATION	14	14	14
SCIENTISTS	12	23	20
TOTAL	180	235	173
SCIENCE SPACE:			
LABS (NO./FT ²)	1/82	5/882	2/654
DECK SPACE AFT (FT ²)	1708	3095	3150
WINCHES: HYDROGRAPHIC	1	1	2
CORING/TRAWLING	0	1	0
BUILT	1944-47	1954	1975-1977

TAB A. COAST GUARD MARINE SCIENCE LEGAL AUTHORITY

A. OPERATIONS

THE COAST GUARD IS AUTHORIZED TO CONDUCT OCEANOGRAPHIC RESEARCH UPON ITS OWN INITIATIVE OR IN COOPERATION WITH OTHER AGENCIES. COAST GUARD OCEANOGRAPHIC AND METEOROLOGICAL ACTIVITIES PROVIDE SUPPORT FOR THE COAST GUARD'S OWN OPERATIONS AND CONCURRENTLY MAKE OBSERVATIONS AND PRODUCTS AVAILABLE TO OTHER FEDERAL AGENCIES SUCH AS THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, THE NAVY, AND THE NATIONAL SCIENCE FOUNDATION. THE COAST GUARD ALSO SUPPORTS OTHER AGENCIES BY PROVIDING SHIP PLATFORMS FOR NON-COAST GUARD RESEARCH PROGRAMS ON AN OPERATIONS PERMITTING, NON-INTERFERENCE BASIS. THE COAST GUARD IS AUTHORIZED TO STUDY AND OBSERVE ICE AND CURRENT CONDITIONS IN THE NORTH ATLANTIC OCEAN, AS MAY AFFECT THE SET AND DRIFT OF ICE.

14 U.S.C. 2 SPECIFIES ONE OF THE PRIMARY DUTIES OF THE COAST GUARD IS TO ENGAGE IN OCEANOGRAPHIC RESEARCH.

14 U.S.C. 92 AUTHORIZES THE SECRETARY TO DO ALL THINGS NECESSARY TO CARRY OUT THE PURPOSES OF THE COAST GUARD.

14 U.S.C. 93 GENERALLY AUTHORIZES THE COAST GUARD TO CONDUCT EXPERIMENTS AND INVESTIGATIONS TO ASSIST IN THE PERFORMANCE OF ITS DUTIES, AND TO ESTABLISH SHORE FACILITIES.

14 U.S.C. 94 REQUIRES THE COAST GUARD TO CONDUCT OCEANOGRAPHIC RESEARCH AND TO COOPERATE WITH OTHER GOVERNMENT AGENCIES AS MAY BE IN THE NATIONAL INTEREST.

14 U.S.C. 141 GENERALLY AUTHORIZES THE COAST GUARD TO UTILIZE ITS PERSONNEL AND FACILITIES TO ASSIST OTHER FEDERAL AND STATE AGENCIES UPON REQUEST.

14 U.S.C. 147 AUTHORIZES COOPERATION WITH THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR METEOROLOGICAL OBSERVATION AND SERVICES.

33 U.S.C. 1254 AUTHORIZES THE COAST GUARD TO COOPERATE WITH THE ENVIRONMENTAL PROTECTION AGENCY IN RESEARCH RELATED TO THE REMOVAL, PREVENTION, CONTROL, AND ELIMINATION OF OIL AND HAZARDOUS SUBSTANCES POLLUTION.

33 U.S.C. 1441-1444 REQUIRES THE COAST GUARD, JOINTLY WITH THE ENVIRONMENTAL PROTECTION AGENCY AND THE DEPARTMENT OF COMMERCE, TO CONDUCT RESEARCH IN OCEAN DUMPING AS MAY AFFECT OCEANIC, COASTAL, AND THE GREAT LAKES AND ITS CONNECTING WATERS.

46 APP. U.S.C. 738A AUTHORIZES THE COAST GUARD TO STUDY AND OBSERVE ICE AND CURRENT CONDITIONS IN THE NORTH ATLANTIC OCEAN.