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R 082354Z SEP 06 ZUI ASN-P03252000001  
 FM USCGC HEALY  
 TO COMPACAREA COGARD ALAMEDA CA//PP/PPW/PR/PRE/PRM/PX/PT/PI/PRMC//  
 INFO COMDT COGARD WASHINGTON DC//G-PWM/G-RCU/CG-45/G-RCA//  
 NSF POLAR WASHINGTON DC//JJJ//  
 COMCOGARD MLC PAC ALAMEDA CA//V/VR/T/K/MDL//  
 CCGDTHIRTEEN SEATTLE WA//DR/DP/DRMC//  
 CCGDSEVENTEEN JUNEAU AK//DR/DRM/DP/DRMC//  
 COMCOGARD SECTOR SEATTLE WA  
 COGARD INTSUPRTCOM SEATTLE WA  
 COGARD AIRSTA PORT ANGELES WA  
 COGARD NESU SEATTLE WA  
 COGARD ESU SEATTLE WA  
 COGARD INTSUPRTCOM KODIAK AK  
 COGARD AIRSTA KODIAK AK  
 COGARD COMMSTA KODIAK AK  
 COGARD MSD UNALASKA AK  
 COGARD ENGLOGCEN BALTIMORE MD//015//  
 COGARD ATC MOBILE AL  
 COGARD TISCOM ALEXANDRIA VA  
 COGARD CAMSPAC PT REYES CA  
 MIFCPAC ALAMEDA CA  
 NAVICECEN SUITLAND MD//30//  
 NAVPACMETOCEN PEARL HARBOR HI  
 NAVPACMETOC DET WHIDBEY ISLAND WA  
 COMAFLOATRAGRUPAC SAN DIEGO CA//N01/N013//  
 AFLOATRAGRUPACNORWEST EVERETT WA  
 USCGC POLAR SEA  
 USCGC POLAR STAR  
 USCGC MELLON  
 USCGC MIDGETT  
 USCGC ALEX HALEY  
 USCGC STORIS  
 USCGC ACUSHNET

BT  
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 SUBJ: ARCTIC WEST SUMMER 2006 (AWS-06) DEPLOYMENT SUMMARY  
 A. MY 192102Z AUG 06 - CLASS A MISHAP (NOTAL)  
 B. MY 250702Z AUG 06 - CLASS A MISHAP UPDATE (NOTAL)  
 C. MY 062125Z MAY 06 - S/V JERSEY CLIPPER SITREP THREE/FINAL (NOTAL)  
 D. MY 091908Z JUN 06 - INITIAL ASSESSMENT OF AVIATION SUPPORT (NOTAL)  
 1. DEPLOYMENT STATISTICS:  
 A. EVENTS:  
 30 APR U/W FROM SEATTLE (CART DURING TRANSIT)  
 06 MAY ARR DUTCH HBR (SCIENCE ONLOAD/ATG RIDERS DPT)  
 07 MAY U/W COMMENCED AWS 06-01 BERING SEA MISSION

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- 05 JUN ARR DUTCH HBR; (CHANGE OF COMMAND, SCI OFFLOAD)
- 06 JUN U/W ENR SEATTLE
- 11 JUN ARRIVED SEATTLE
- 19 JUN ORIENTATION CRUISE (SEATTLE TO EVERETT WA)
- 20 JUN COMMENCED TSTA (NAVSTA EVERETT)
- 06 JUL CONCLUDED TSTA; TRANSIT TO MANCHESTER WA FOR BSF.
- 07 JUL U/W FROM MANCHESTER USN FUEL PIER
- 16 JUL ENTERED ICE
- 18 - 19 JUL SCI PARTY ONLOAD (BARROW)
- 17 AUG CLASS A DIVE MISHAP
- 19 AUG EXITED ICE
- 22 AUG PACAREA/PCMC VISIT; EMBARKED AIB, CISM (BARROW)
- 22 AUG OFFLOAD SCI PARTY (NOME); COMDT/D17/MCPOCG VISIT
- 26 AUG ARRIVED KODIAK
- 03 SEP ARRIVED SEATTLE

- B. PURPOSE: ARCTIC RESEARCH (SEE PAR 5)
  - HLY 06-01: 30 DAYS (07 MAY - 05 JUN)
  - HLY 06-02: 31 DAYS OF 40 SCHED (18 JUL - 17 AUG)
  - HLY 06-03: CANX (30 DAY BOTTOM MAPPING)
  - HLY 06-04: CANX (14 DAY AUV OPTTEST)

- C. CUTTER DAYS SUMMARY:
  - DAFHP: 109 (TOTAL DAFHP FY06: 183)
  - TRANSIT: 35
  - SUPPORT OF SCIENCE: 61 UNDERWAY, 5 INPORT
  - TSTA: 17
  - MPB: 10 (SEATTLE, KODIAK)

D. PORT CALLS: EXCELLENT SUPPORT FROM ISC KODIAK, ISC SEATTLE AND NAVSTA EVERETT. IN ADDITION TO LISTED PORTS, HEALY SPENT APPROX 4 DAYS OFFSHORE NOME AND BARROW FOR HELO-SUPPORTED LOGISTICS.

PORT:	DATES:	PURPOSE:
DUTCH HARBOR	06 MAY - 07 MAY	BSL
DUTCH HARBOR	05 JUN - 06 JUN	CHANGE OF COMMAND/BSL
SEATTLE	11 JUN - 19 JUN	MPB/LOGISTICS
EVERETT	20 JUN - 06 JUL	TSTA
MANCHESTER WA	07 JUL	BSF
KODIAK	26 AUG - 30 AUG	MPB

- E. FUEL EXPENDED:
  - PROPULSION: 1,233,541 GALLONS
  - AVIATION (JP5): 2,936 GALLONS
  - TOTAL: 1,236,477 GALLONS

F. TRACKLINE MILES: 17,665 NM

2. HELICOPTER OPERATIONS (SEE ALSO PAR 8.B AND REF D):  
 MARITIME HELICOPTER COMPANY; BELL 206L3 (N303MH AND N306MH)

- A. HLY06-01: N303MH
  - DATE EMBARKED: 07 MAY
  - DISEMBARKED: 30 MAY
  - DAYS EMBARKED: 24

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DAYS FLOWN 16  
 SORTIES: 28  
 FLIGHT HOURS: 36.6  
 PAX CARRIED: 84  
 CARGO CARRIED: 1,325 LBS  
 AVAILABILITY: 100%

B. HLY06-02: N303MH; N306MH  
 DATE EMBARKED: 18 JUL  
 DISEMBARKED: 26 AUG (N303MH); 22 AUG (N306MH)  
 DAYS EMBARKED: 40 (N303MH); 36 (N306MH)  
 DAYS FLOWN: 23  
 SORTIES: 99  
 FLIGHT HOURS: 44.8  
 PAX CARRIED: 232  
 CARGO CARRIED: 24,534 LBS  
 AVAILABILITY: 100%

C. HEALY AWS-06 AVIATION TOTALS:  
 DAYS EMBARKED: 64  
 DAYS FLOWN: 39  
 SORTIES: 127  
 FLIGHT HOURS: 81.4  
 PAX CARRIED: 316  
 CARGO CARRIED: 25,859 LBS  
 AVAILABILITY: 100%

D. MISSIONS: LOGISTICS, SCIENCE SUPPORT, ICE RECONNAISSANCE.

3. MAJOR CASUALTIES (SEE PAR 7.A):

- A. CASREP 06018: NR1 CLIMATE CONTROL CHAMBER
- B. CASREPS 06019, 06020: MDE F/O RELIEF VALVES
- C. CASREP 06021: TERASCAN
- D. CASREP 06022: MARINE GYRO DISTRIBUTION SYSTEM
- E. CASREPS 06023, 06029, 06030, 06036: BOILER CASUALTIES
- F. CASREP 06024: PRINCIPLE HIGH VOLTAGE PLANT
- G. CASREP 06025: TV-DTS
- H. CASREP 06026: NR4 MDE
- I. CASREP 06027: CTES
- J. CASREPS 06028, 06034: PORT SHAFT SEALS
- K. CASREP 06031: INCINERATOR
- L. CASREP 06032: NR2B STEERING GEAR
- M. CASREP 06033: STBD ANCHOR WINDLASS CLUTCH
- N. CASREP 06035: MSW PIPING
- O. CASREP 06037: NR1 MAIN MOTOR L/O COOLER
- P. CASREP 06038: ADG JACKET WATER LEAK
- Q. CASREPS 06039, 06040: EVAPS
- R. 8 MSW AND ASW PIPING LEAKS (SEE PAR 7.C)

4. COMMUNICATIONS:

A. INMARSAT: INMARSAT CONNECTIVITY WAS INTERMITTENT DURING THIS DEPLOYMENT. AT TIMES, EVEN WHILE PIERSIDE, THERE WERE 12-14 HOUR DOWNTIMES WITH NO CLEAR CAUSE DETERMINED.

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B. IRIDIUM: COMMS THROUGH REACHBACK GENERALLY RELIABLE. IRIDIUM PROVIDED PRIMARY SCIENCE PARTY DATA AND EMAIL TRANSFER AT ALL LATITUDES. IRIDIUM PHONE THROUGH MXU2000 SINGLE CHANNEL UNIT WAS THE PRIMARY VOICE COMMUNICATIONS CIRCUIT WITH MINI-M SERVING AS SECONDARY. IRIDIUM FUNCTIONED WELL FOR BOTH VOICE AND DATA AT HIGHEST LATITUDES REACHED (APPROX 80N).

5. SCIENCE:

A. HLY 06-01 (07 MAY - 05 JUN): 30 DAY NSF MISSION TO STUDY ARCTIC ECOSYSTEM CHANGE AND CONTINUE A LONG-TERM (1950-PRESENT) ASSESSMENT OF BENTHICS IN THE BERING SEA NEAR ST. LAWRENCE ISLAND. HEALY COMPLETED 118 STATIONS IN 26 DAYS, INCLUDING 1,004 OVER-THE-SIDE EVOLUTIONS (533 VAN-VEEN BOTTOM GRABS, 126 CTD CASTS, 102 ZOOPLANKTON NETS, 98 HAPS BOTTOM CORES, 74 OTTER BOTTOM TRAWLS AND 71 UV METER DIPS).

B. HLY 06-02 (18 JUL - 17 AUG): 31 DAY NSF MISSION TO COLLECT SEISMIC DATA ON THE CHUKCHI BORDERLAND, INCLUDING THE NORTHWIND RIDGE, CHUKCHI PLATEAU AND MENDELEEV RIDGE. HELICOPTERS DEPLOYED 90-LB SEISMOMETERS ONTO ICE FLOES AT 6NM INTERVALS ALONG TRACKS (3 ROUTES, 90NM EACH). 165NM OF SEISMIC DATA WAS COLLECTED DURING 84 TOTAL HRS TOWING PNEUMATIC DEVICE CLOSE ASTERN. HLY 06-02 MISSION ALSO INCLUDED CORING ON THE CHUKCHI BORDERLAND: COLLECTED 5 BENTHOS GRAVITY CORES (3 METERS), 3 LARGE GRAVITY CORES (7 METERS) AND 9 JUMBO PISTON CORES (51 METERS).

6. SIGNIFICANT EVENTS:

A. 4 - 6 MAY S/V JERSEY CLIPPER MEDEVAC: SEE REF C.

B. 20 JUN - 6 JUL TSTA: CART COMPLETED DURING TRANSIT FROM SEATTLE TO DUTCH HARBOR. HEALY RETURNED TO PUGET SOUND FOR TSTA BETWEEN AWS 06-01 AND AWS 06-02 MISSIONS. 100% OF 41 REQUIRED TERMINAL OBJECTIVES COMPLETED.

C. 17 AUGUST CLASS-A DIVE MISHAP: SEE REFS A, B.

7. ENGINEERING AND SCIENCE SYSTEMS:

A. BOILERS: BLOWN TUBES ON NR 2 BOILER, FUEL PUMP COUPLING ON BOTH BOILERS, CHEMICAL FEED SYSTEM LEAKS.

B. SHAFT SEALS: STBD BULKHEAD SEAL FAILED DURING BOLLARD TESTING; REPLACED BY NESU SEATTLE. PORT BULKHEAD SEAL AND THE PORT SHAFT SEAL FAILED DURING HLY 06-02 MISSION (REPAIRS SCHED FOR 2006 DRYDOCK.) SHIP IS MONITORING LEAKS AND PUMPING SHAFT ALLEY EVERY 8 HRS WHILE MOORED. INFLATABLE SEAL FAILED TO STOP LEAK UPON RTHP. WORKING WITH MLC FOR TECH REP ASSISTANCE AND IN-WATER REPAIRS PRIOR TO DD-07. BOTH SHAFT SEALS SCHEDULED FOR RENEWAL IN DD-07.

C. SALTWATER PIPING: THERE ARE CURRENTLY 2 ASW AND 5 MSW EMERGENCY TEMP REPAIRS FOR CHRONIC SALTWATER PIPING EROSION. A VARIABLE-SPEED PUMP CONTROLLER WAS INSTALLED ON THE ASW SYSTEM DURING THIS TRIP IN AN ATTEMPT TO REDUCE THE FLOW RATE OF WATER THROUGH THE PIPING. ALL TEMP REPAIRS ARE SCHEDULED FOR PERMANENT RENEWAL IN DD-07 CONTRACT, BUT SIGNIFICANT DAMAGE HAS BEEN DONE TO BOTH ASW AND MSW PIPING SINCE DELIVERY AND WE EXPECT NEW LEAKS TO OCCUR UNTIL ALL ERODED SECTIONS ARE REPAIRED.

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D. CYCLOCONVERTERS: HEALY EXPERIENCED SEVERAL TRIPS AT LOW SPEEDS AND LIGHT LOADS. IDENTIFIED AND REPAIRED LOOSE CONNECTIONS, BUT UNABLE TO FIND MORE DEFINITIVE CAUSE.

E. AVR UPGRADE: DESPITE RIGOROUS TESTING OF AUTOMATIC VOLTAGE REGULATOR SYSTEM UPGRADE PRIOR TO DEPLOYMENT, UNDERWAY SUPPORT FROM THE IPP CONTRACT WAS REQUIRED FOR SEVERAL WEEKS. UPGRADE DID RESULT IN IMPROVED LOAD SHARING BETWEEN GENERATORS. ONE INCIDENT OF EXCESSIVE HIGH VOLTAGE OUTPUT DURING SINGLE GENERATOR OPERATION REQUIRED MANUAL VOLTAGE REDUCTION.

F. STBD ANCHOR WINDLASS CLUTCH: UNABLE TO ENGAGE/DISENGAGE STARBOARD WILDCAT USING FOC SLE CONTROL STATION. WILDCAT CLUTCH CONTROL PEDESTAL INNER SHAFT SEIZED TO OUTER SHAFT. SHIP'S FORCE DISCONNECTED FOC SLE PEDESTAL TO ALLOW LOCAL CONTROL FROM WINDLASS ROOM.

G. TERASCAN: TERASCAN ANTENNA EXPERIENCED PROBLEMS LOSING AZIMUTH LOCATION AND DRIVING TO ENDSTOP. AFTER ANTENNA REPLACEMENT AND SOFTWARE PATCH IN JUNE, TERASCAN STILL LOST AWARENESS OF AZIMUTH. THIS IS NOT ASSOCIATED WITH ANY LOSS OF HEADING, POWER, OR VIBRATION. AT IRREGULAR INTERVALS THE SYSTEM DRIVE ITSELF TO AN AZIMUTH ENDSTOP AND OVERHEATS THE MOTOR. SEASPACE IS ADDRESSING THIS PROBLEM.

8. CO COMMENTS:

A. LDEO CONTRACT: THE NSF-FUNDED SCIENCE SYSTEMS SUPPORT CONTRACT WITH COLUMBIA UNIVERSITY'S LAMONT-DOHERTY EARTH OBSERVATORY IS MEETING THE GOAL OF PROVIDING EXPERTISE AND CONSISTENCY IN ONBOARD SCIENTIFIC TECHNICAL SUPPORT.

B. AVIATION SUPPORT: SCIENCE REQUIREMENTS WERE FULLY MET BY OUR CIV AVDET. THE CIVILIAN AVDET INTEGRATED WELL AND WERE EFFECTIVE. MARITIME HELICOPTER COMPANY PROVIDED ONE BELL 206L3 HELICOPTER AND 2-PERSON FLIGHT CREW (PILOT/MECH) FOR HLY 06-01 MISSION AND TWO 206L3 HELOS AND A 4-PERSON CREW (2 PILOTS/2 MECHS) FOR HLY 06-02 MISSION. THE DEPARTMENT OF INTERIOR'S AVIATION MANAGEMENT DIRECTORATE PROVIDED ONE AVIATION MGR FOR EACH MISSION; THIS MGR SERVED AS THE COMMAND INTERFACE WITH THE AVDET AND CAN BE FUNCTIONALLY COMPARED TO THE 'SENIOR AVIATOR' POSITION IN A CG AVDET. REF D DISCUSSES MORE THOROUGHLY OTHER POTENTIAL ISSUES SUCH AS DEGRADED SAR CAPABILITY, VFR-ONLY LIMITS AND FLIGHT FOLLOWING.

C. BARROW ARCTIC SCIENCE CONSORTIUM (BASC): BASC PROVIDES NECESSARY LOGISTICS SUPPORT TO HEALY AND EMBARKING/DISEMBARKING SCIENTISTS IN BARROW. BASC PERSONNEL ALSO HELP HEALY TO ESTABLISH AND MAINTAIN POSITIVE RELATIONS WITH LOCAL COMMUNITIES BY COORDINATING SHIP LOGISTICS WITH LOCAL WHALE AND SEAL HUNTS, AND THEY SERVE AS OUR LINK TO REGIONAL GOV'T AND ORGANIZATIONS.

D. NORTHSLOPE BOROUGH SAR (BARROW): AS IN PAST YEARS, NORTHSLOPE BOROUGH SAR PROVIDED FREE USE OF THEIR HANGAR FACILITY FOR HEALY LOGISTICS, A MUCH-NEEDED BASE OF OPERATIONS AT BARROW AIRPORT.

E. U.S. NAVAL ICE CENTER ICE IMAGERY: THE HIGH RESOLUTION ICE IMAGERY PROVIDED BY NIC WAS ACCURATE AND PROVED ESSENTIAL TO OUR

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EFFICIENT TRANSIT IN ARCTIC WATERS.

9. POC:

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