

# ARCTIC WEST SUMMER 2012



## USCGC HEALY (WAGB-20) 30 Jul 2012 – 10 Nov 2012 Cruise Report

**Figure i-1** Front Cover: CGC HEALY steaming north through the Bering Sea at the beginning of HLY-12-01 (photo taken from CGC MUNRO).



**Figure i-2** Polar Bear observed at 80° 42' N, 157° 00' W on 17 Sept during HLY-12-02.



**Figure i-3** Steaming through the Gulf of Alaska in early August.

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commanding Officer  
USCGC HEALY (WAGB-20)

1519 Alaskan Way South  
Seattle, WA 98134  
Phone: (206) 217-6300  
Fax: (206) 217-6309

16155  
22 Apr 2013

## MEMORANDUM

*B. A. Havlik*  
From: B. A. Havlik, CAPT  
CGC HEALY (WAGB-20)

To: CG PACAREA (CG-35)

Subj: ARCTIC WEST SUMMER 2012 CRUISE REPORT

Ref: (a) Polar Icebreaker Cruise Reports, COMDTINST 16155.2B

1. This report is submitted in accordance with reference (a) and covers the period from 04 June 2012 to 10 November 2012.

#



## **Executive Summary**

HEALY completed three missions to support Arctic research during the Arctic West Summer 2012 (AWS-12) deployment.

The first mission, HLY-12-01, was conducted with researchers from the Chesapeake Bio Lab of the University of Maryland and sponsored by the Bureau of Ocean Energy Management. Researchers used various over-the-side sampling techniques to collect benthic, epibenthic, and pelagic specimens to develop an ecological snapshot of the biologically diverse and productive Hanna Shoal region.

The second mission, HLY-12-02, collected data in support of delineation of the U.S. and Canadian Extended Continental shelves. HEALY conducted multibeam sonar bottom-mapping and ocean floor dredges in the Nautilus Basin and the Chukchi Cap; gathered data was contributed to the Extended Continental Shelf data archive which, aboard HEALY, dates back to 2003.

The third mission of the patrol, HLY-12-03, was a continuation of HLY-08-05, HLY-09-05, HLY-10-03, and HLY-11-03 missions during which hydrographic moorings were recovered, serviced, and redeployed to continue study of the Alaskan Boundary Current.

Following the successful completion of all three missions, HEALY completed CART in Juneau, AK, then returned to Base Seattle on 10 November 2012 having travelled 18,100 NM in 104 consecutive days away from homeport.



## Table of Contents

	Arctic West Summer 2012 Cruise Report Memorandum .....	i-3
	Executive Summary .....	i-5
	List of Figures .....	i-7
	List of Tables .....	i-8
	Chronological List of Major Events .....	i-9
<b>I.</b>	<b>Deployment Phases</b> .....	
	<b>I.A. Pre-deployment Preparation</b>	
	<b>I.A.1. Ship Operations</b> .....	I-1
	<b>I.A.2. Science</b> .....	I-2
	<b>I.A.3. Phase Recommendations</b> .....	I-2
	<b>I.B. Northbound Transit to Dutch Harbor, AK</b>	
	<b>I.B.1. Ship Operations</b> .....	I-3
	<b>I.B.2. Air Operations</b> .....	I-3
	<b>I.B.3. Navigation</b> .....	I-4
	<b>I.C. HLY-12-01</b>	
	<b>I.C.1. Ship Operations</b> .....	I-5
	<b>I.C.2. Air Operations</b> .....	I-6
	<b>I.C.3. Navigation</b> .....	I-8
	<b>I.C.4. Science</b> .....	I-9
	<b>I.C.5. Phase Recommendations</b> .....	I-10
	<b>I.D. HLY-12-02</b>	
	<b>I.D.1. Ship Operations</b> .....	I-13
	<b>I.D.2. Navigation</b> .....	I-13
	<b>I.D.3. Science</b> .....	I-14
	<b>I.D.4. Phase Recommendations</b> .....	I-16
	<b>I.E. Mid-Patrol Break, Dutch Harbor, AK</b>	
	<b>I.E.1. Ship Operations</b> .....	I-19
	<b>I.F. HLY-12-03</b>	
	<b>I.F.1. Ship Operations</b> .....	I-22
	<b>I.F.2. Air Operations</b> .....	I-22
	<b>I.F.3. Navigation</b> .....	I-23
	<b>I.F.4. Science</b> .....	I-24
	<b>I.F.5. Phase Recommendations</b> .....	I-26
	<b>I.G. Southbound Transit to Seattle, WA via Juneau, AK</b>	
	<b>I.G.1 Ship Operations</b> .....	I-30
	<b>I.G.2 Navigation</b> .....	I-31
	<b>I.G.3 Phase Recommendations</b> .....	I-32
<b>II.</b>	<b>Communications &amp; Electronics</b>	
	<b>II.A. Communications</b> .....	II-1
	<b>II.B. Electronics</b> .....	II-1
<b>III.</b>	<b>Engineering</b> .....	IV-1
<b>IV.</b>	<b>Administration</b>	
	<b>IV.A. Personnel</b> .....	IV-1
	<b>IV.B. Morale</b> .....	IV-2

<b>V.</b>	<b>Supply</b>	
	<b>V.A. General Mess</b>	V-1
	<b>V.B. Ship’s Exchange</b>	V-1
<b>VI.</b>	<b>Medical</b>	
	<b>VI.A. Significant Cases</b>	VI-1
<b>VII.</b>	<b>Public Relations</b>	VII-1
<b>VIII.</b>	<b>Personnel Embarked</b>	
	<b>VII.A. Permanent Party</b>	VIII-1
	<b>VII.B. Temporary Assigned Duty (TAD) Personnel</b>	VIII-3
	<b>VII.C. Very Important Persons (VIPs) and Visitors</b>	VIII-3
	<b>VII.D. Science Parties</b>	VIII-4

**Appendices**

1.	CGC HEALY Deployment Schedule AWS-12	A-1
2.	OPORD, DEPSUM	A-2
3.	Shakedown & Ready-For-Sea Schedules	A-9
4.	AVSTAN Report	A-13
5.	Request and Waiver for Unfamiliar Aircraft Operations	A-18
6.	SMART/CART Schedule	A-19
7.	End of CART Report	A-23
8.	Public Affairs Press Releases	A-26
9.	AWS-12 Weekly Blog Updates	A-33
10.	Deployment Fuel Use & Transfer	A-61
11.	Orientation Cruise Message Traffic	A-64

## List of Figures

- i-1** Front Cover: CGC HEALY steaming north through the Bering Sea at the beginning of HLY-12-01 (photo taken from CGC MUNRO).
- i-2** Polar Bear observed at 80° 42' N, 157° 00' W on 17 Sept during HLY-12-02.
- i-3** Steaming through the Gulf of Alaska in early August.
  
- 2-1** Hot Refueling Evolution with CG6501 from AIRSTA Port Angeles.
- 2-2** Northbound Transit to Dutch Harbor ship's track.
- 2-3** CGC HEALY anchored offshore Barrow, AK.
- 2-4** Makeshift trailer ramp in Barrow, AK.
- 2-5** VERTREP with a commercial helicopter offshore Barrow, AK.
- 2-6** HLY-12-01 ship's track.
- 2-7** HLY-12-01: BOEM Hanna Shoal Ecosystem Study trackline.
- 2-8** HLY-12-01: Benthic trawl lowered with the Aft A-frame.
- 2-9** HLY-12-02 ship's track.
- 2-10** HLY-12-02: Scientists sort mud and rock from a dredging cast.
- 2-11** LTJG Valdez, CWO Rivera, and MK2 Schumacher free a juvenile bald eagle from fishing line.
- 2-12** ET1 Climacosa encountering a herd of wild horses.
- 2-13** HEALY's ASB supporting rescue swimmer training in Dutch Harbor.
- 2-14** Attack teams and proxy men train with the helo and pilots during a crash-on-deck drill.
- 2-15** HLY-12-03 ship's track.
- 2-16** HLY-12-03 North Slope Mooring trackline.
- 2-17** HLY-12-03: Small boat crew hooks mooring float with messenger line during recovery.
- 2-18** HLY-12-03: Slocum Glider trackline.
- 2-19** HLY-12-03: Small boat crew recovers Slocum glider.
- 2-20** Lifeline marking and wire tending report guide.
- 2-21** HLY-12-03: CTD swinging in moderate seas during deployment.
- 2-22** Whaling buffer/comms zones on Alaska's north slope.
- 2-23** Raising the Canadian flag upon entering the Canadian Inside Passage.
- 2-24** HEALY moored at South Franklin Dock, Juneau, AK.
  
- 4-1** Divers standby while the cofferdam is lowered into the water in Dutch Harbor, AK.
- 4-2** Main prop division installing the repaired end bell cooler.
  
- 5-1** Davey Jones' Henchmen, Arctic Line Crossing Ceremony.
- 5-2** Guests display their Honorary Crew Member certificates on the final night of the Tiger Cruise.
  
- 7-1** Two HEALY crew members lead a ship's tour for Dutch Harbor High School students.

## List of Tables

- 2-1 Arctic West Summer 2012 (AWS-12) Schedule.
  - 2-2 Northbound Transit Small Boat Sortie Log.
  - 2-3 Items purchased in 1<sup>st</sup> Dutch Harbor logistics stop.
  - 2-4 HLY-12-01 Small Boat Sortie Log.
  - 2-5 HLY-12-02 Small Boat Sortie Log.
  - 2-6 Items purchased during Mid-Patrol Break, Dutch Harbor, AK.
  - 2-7 HLY-12-03 Small Boat Sortie Log.
  - 2-8 Southbound Transit Small Boat Sortie Log.
  - 2-9 Items purchased in Juneau, AK.
- 
- 8-1 Permanent Party Embarked
  - 8-2 TDY Embarked
  - 8-3 Visitors Embarked
  - 8-4 Science Personnel Embarked, HLY-12-01
  - 8-5 Science Personnel Embarked, HLY-12-02
  - 8-6 Science Personnel Embarked, HLY-12-03

## Chronological Events

31 Jul 12      Departed Seattle, WA from Pier 36  
02 Aug 12      Shifted TACON from COMPACAREA to D-17  
04 Aug 12      Stood into Bering Sea at Unimak Pass  
04 Aug 12      Moored Dutch Harbor, AK at UMC Pier  
09 Aug 12      Departed Dutch Harbor, AK from UMC Pier  
10 Aug 12      Crossed 60°N latitude at 169°00'W longitude  
12 Aug 12      Stood into Arctic Ocean at Bering Strait  
12 Aug 12      Crossed Arctic Circle at 168°29'W longitude  
16 Aug 12      Conducted passenger debarkation via small boat at Barrow, AK  
25 Aug 12      Disembarked HLY-12-01 Science Party via helicopter at Barrow, AK  
25-26 Aug 12   Embarked HLY-12-02 Science Party via helicopter at Barrow, AK  
04 Sep 12      Reached 83°31'N, 162°11'W, highest latitude of deployment  
24 Sep 12      Crossed Arctic Circle at 168-31W longitude  
24 Sep 12      Stood into Bering Sea at Bering Strait  
25 Sep 12      Crossed 60°N latitude at 168°26'W longitude  
27 Sep 12      Moored Dutch Harbor, AK at UMC Pier  
04 Oct 12      Embarked HLY-12-03 Science Party  
05 Oct 12      Departed Dutch Harbor, AK from UMC Pier  
06 Oct 12      Crossed 60°N latitude at 168°26'W longitude  
07 Oct 12      Stood into Arctic Ocean at Bering Strait  
07 Oct 12      Crossed Arctic Circle at 168°30'W longitude  
22 Oct 12      Crossed Arctic Circle at 168°31'W longitude  
22 Oct 12      Stood into Bering Sea at Bering Strait  
23 Oct 12      Crossed 60°N latitude at 168°25'W longitude  
25 Oct 12      Moored Dutch Harbor, AK at UMC Pier  
27 Oct 12      Departed Dutch Harbor, AK from UMC Pier  
28 Oct 12      Stood into Gulf of Alaska at Unimak Pass  
31 Oct 12      Moored Juneau, AK at South Franklin Pier  
03-06 Nov 12   CART/SMART  
07 Nov 12      Departed Juneau, AK from South Franklin Pier  
08 Nov 12      Shifted TACON from D-17 to COMPACAREA  
10 Nov 12      Moored Seattle, WA at Pier 36



## I. Deployment Phases

### I.A. Pre-deployment Preparation

#### I.A.1. Ship Operations

##### I.A.1.a. Vessel Operations

The 2012 science missions consisted of three familiar missions, including a two week Bureau of Ocean Energy Management (BOEM) Chukchi Sea Offshore Monitoring in Drilling Area (COMIDA) Hanna Shoal mission, a five week Extended Continental Shelf (ECS) mission, and a three week North Slope Moorings mission.

The detailed description of the schedule is provided in Appendix 1. The operations order (OPORD) and deployment summary (DEPSUM) are contained in Appendix 2.

04 Jun – 10 Jun	Shakedown
11 Jun – 15 Jun	Ready-For-Sea
19 Jun – 22 Jun	Aviation Standardization (STAN) Team Visit
30 Jul – 11 Aug	N/B Transit: 6 day transit, 4 days i/p Dutch Harbor, 3 day transit to Chukchi Sea
12 Aug – 24 Aug	HLY-12-01 BOEM COMIDA Hanna Shoal
25 Aug – 26 Aug	DMO HLY-12-01 and MOB HLY-12-02 IVO Barrow
26 Aug – 23 Sep	HLY-12-02 Extended Continental Shelf (ECS)
24 Sep – 08 Oct	Transit and MPB Dutch Harbor
09 Oct – 21 Oct	HLY-12-03 North Slope moorings
22 Oct – 10 Nov	S/B Transit: 3 day transit to Dutch Harbor, 2 days i/p Dutch Harbor, 5 day transit to Juneau, 6 days i/p Juneau for SMART/CART, 4 day transit to Seattle

**Table 2-1** Arctic West Summer 2012 (AWS-12) Schedule

#### Shakedown & Ready-For-Sea (RFS), 04 – 15 June

From 04-15 June we performed a Shakedown and a Ready-For-Sea assessment following the 2012 dockside maintenance availability. The schedules for both operations are provided in Appendix 3. Vender work acceptance trials were performed, groomed systems were validated, and emergency drills were conducted.

#### Aviation Ship/Helo Standardization (STAN), 19 – 22 June

Aviation Training Center (ATC) Mobile's Ship-Helo Standardization Team completed an Aviation STAN Visit prior to AWS-12 deployment. A three-day inport assessment was held while moored at Base Seattle, 19-21 June. A one-day underway period was supported by an Air Station Port Angeles HH-65D. We successfully completed the assessment, earning the associated aviation certification. The final report from the Ship-Helo STAN Team is included as Appendix 4.

#### Predeployment Preparation, 23 June – 29 July

Topside preservation projects and science cargo onloads were completed in preparation for the AWS-12 deployment

## **I.A.2. Science Operations**

### **I.A.2.a. Projects**

#### Seattle Onload

Prior to departure from Seattle for the field season, several tons of scientific equipment and supplies were loaded aboard HEALY over a four day scheduled on-load period. With assistance from the Deck division, all the scientific gear was loaded successfully and stowed by the Marine Science division according to mission order. Gear was generally grouped by mission number in Cargo Holds 1, 2, 3 with additional overflow into the Hangar. This system made it easy to access each leg's gear while underway requiring minimal reorganization during mobilization periods. HLY-12-01 was loaded first and stored in the Hangar (large buoys), the Fantail, and Cargo Hold 1. HLY-12-02 was loaded second and stored in Cargo Holds 1 and 2. HLY-12-03 was loaded last and stored in Cargo Holds 1, 2, 3, and in the Hangar (large buoys). Pallets were picked from the pier using the knuckle and 04 cranes, and lowered directly into Cargo Hold 3 or pallet jacked into the Science Hoist.

### **I.A.3. Phase Recommendations**

Science parties unloaded their gear a week prior to our departure. Dockside equipment from projects that ran long created obstacles on the fantail and competition for crane use. The onload was extended by several hours due to this dual tasking of cranes.

Science gear began to arrive two weeks prior to the scheduled onload. Neither HEALY nor the base has the capacity to provide temporary storage for incoming gear. In addition, delivered gear volume surpassed expectations, so the loading plan had to be improvised on the spot. Guidance for Seattle onloads has been updated on Icefloe.net to stress the importance of on-time arrival and planned gear volume.

The Hangar is not an additional storage space for science gear. Gear must be packed efficiently to fit within the Cargo Holds.

**I.B. Northbound Transit to Dutch Harbor, AK**

**I.B.1. Ship Operations**

**I.B.1.a. Vessel Operations**

HEALY departed Seattle in the afternoon on 30 July. Helicopter Deck Landing Qualifications were conducted prior to departing the Strait of Juan de Fuca with an HH-65 from Air Station Port Angeles (see Section I.B.2 – Air Operations). During the transit to Dutch Harbor, an existing leak on the starboard shaft seal continued to worsen, leaking at 500 gal/day (see Section III – Engineering).

HEALY moored in Dutch Harbor on 04 August and mobilized HLY-12-01 on 05 August while refueling and oily waste offload was conducted via trucks. HEALY was originally scheduled to depart Dutch Harbor on 05 August, but repairs to the starboard shaft seal delayed the departure until 09 August. Repairs to the #3 MDG cooler end bell and #1 boiler were concurrently completed during the delay. HEALY departed Dutch Harbor on 09 August and transited en route Hanna Shoal for HLY-12-01.

**I.B.1.b. Boat Operations**

<b>Date</b>	<b>Sortie Type</b>	<b>Exact Mission</b>	<b>Boat</b>	<b>Time</b>
30 July	Ops	PAX Transfer	224710	58m
04 August	Ops	Line Handlers	224711	01h 52m

Table 2-2 Northbound Transit Small Boat Sortie Log.

**I.B.2. Air Operations**

**I.B.2.a. Operations**

After departing Seattle on 30 July, we conducted day and night flight operations with CG6501, an HH65 from AIRSTA Port Angeles. The helicopter completed 16 touch and go landings, 8 landings with primary tiedowns, and a hot refueling evolution. During the training flights, District 13 Commander (RADM Taylor) and his aide were transferred to AIRSTA Port Angeles. Throughout this evolution we remained positioned between traffic separation schemes IVO Eastern Bank.



Figure 2-1 Hot Refueling Evolution with CG6501 from AIRSTA Port Angeles.

### I.B.3. Navigation

#### I.B.3.a. Ship's Track

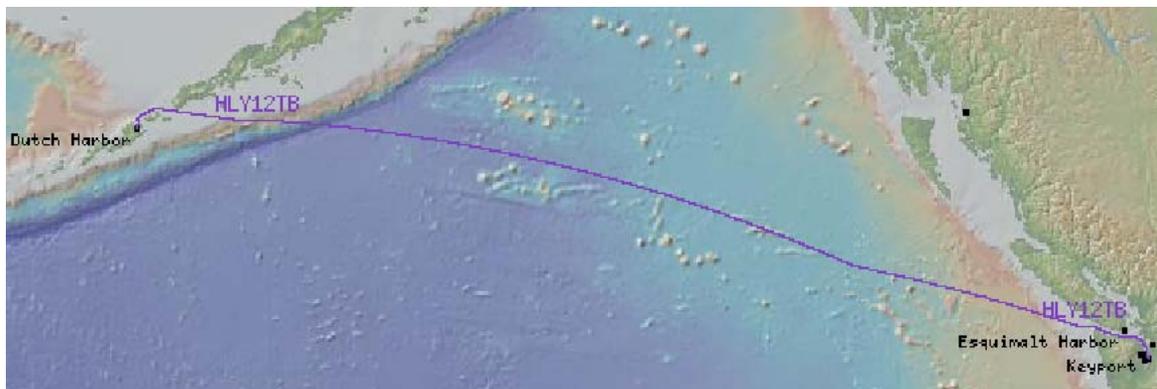


Figure 2-2 Northbound Transit to Dutch Harbor ship's track.

## **I.C. HLY-12-01**

### **I.C.1. Ship Operations**

#### **I.C.1.a. Vessel Operations**

HLY-12-01 was a 16 day mission that commenced in Dutch Harbor, AK and concluded offshore Barrow, AK. After the transit north through the Bering Sea, we remained in the vicinity of Hanna Shoal in the Chukchi Sea to conduct a variety of science equipment casts to study the complex ecosystem of the region. By the conclusion of the mission, 472 individual science casts were completed (see Section I.C.4 – Science Operations). On 22 August, two members of the science party were transferred to Barrow, AK, via CB-L. We concluded science operations on 24 August and transited to an anchorage near Barrow to conduct HLY-12-01 science party demobilization by commercial helicopter.

#### **I.C.1.b. Deck Operations**

##### Personnel Offload, Barrow, AK

On 22 August, two members of the science party were offloaded onto the beach about 2 NM from Barrow Airport. The pictures located at W:\Operations\Deck Division\Brows Ladders Moorings\Barrow Boat Ramps were useful in planning the approach and understanding the nature of the drop site. There were two options to drop off the scientists; drive up onto the beach and offload via the bow, or, come up alongside the makeshift flatbed trailer pier (71-18.180 N/156-45.870W). Due to a moderate surf line along the beach, the latter option was exercised. Instead of using the ramp itself, the CB-L was maneuvered to the north side of the ramp. The coxswain notched the bow between one of the tires and the wood fenders of the ramp. This allowed passengers to disembark with ease while keeping the CB-L in good water and out of the waves rolling ashore nearby.



**Figure 2-3** CGC HEALY anchored offshore Barrow, AK.



Figure 2-4 Makeshift trailer ramp in Barrow, AK.

### I.C.1.c. Boat Operations

Date	Sortie Type	Exact Mission	Boat	Time
22 August	Ops	PAX Transfer	224710	46m

Table 2-4 HLY-12-01 Small Boat Sortie Log.

### I.C.2. Air Operations

#### I.C.2.a. Operations

##### HLY-12-01 Demobilization & HLY-12-02 Mobilization off Barrow, AK

Prior to commencing AWS-12, plans were established with Maritime Helicopters to perform the demobilization of science crew HLY-12-01 and mobilization of science crew HLY-12-02. Justification and flight time estimates were coordinated between the Chief Scientist and Operations Officer. Helicopter call sign 4MH, model Bell 406 LIII, provided transport and VERTREP services from 25 to 26 August 2012. HEALY’s waiver to operate with unfamiliar aircraft is attached as Appendix 5.

HEALY anchored 2 NM west of Barrow (71-18.036N 156-50.930W) on the evening of 24 August. Flight operations on 25 August were delayed due to forecasted heavy fog in the vicinity of the Barrow Airport. While the predicted fog was not present, the wind parameters for VERTREP and landings were exceeded throughout the morning. A strong longshore current at our anchorage position dominated how we tended at anchor. In late morning, wind and visibility came within flight parameters; flight operations and passenger transfer commenced.

After extensive review of the SHOPS Manual and discussions with the pilot, passenger transfers were conducted without primary tiedowns and with rotors turning – greatly improving efficiency of the operation as compared to previous years. Maximum weight for passenger transfer was 600 lbs. Maximum weight for VERTREP was 800 lbs. All refueling was completed by gravity

fueling. A member of the fueling team remained stationed in the pump room and kept track of amount of fuel transferred.



**Figure 2-5** VERTREP with a commercial helicopter offshore Barrow, AK. To maximize efficiency, VERTREP procedures were as follows: 1) dropped off the package of the downwind side, 2) shifted to the upwind side assisted by flight deck personnel, 3) picked up the outbound package.

Tactically, this operation was successful, but did not adhere to the planned timeline. The combination of a late start and sheer volume of personnel and cargo required for transfer forced the commercial pilot to cease flight operations after nearly 13 hours. Ultimately, the transfer of 98 personnel, 6,000 lbs of groceries, and 4,000 lbs of gear (mud/water samples and other science gear) was completed over the course of 2 days.

Major logistics operations to or from Barrow must be narrowed in scope to achieve consistent mission success. The execution of such a transfer with a commercial (unfamiliar) helicopter carries significant risk for a mishap and can cause cascading schedule problems in the likely event the weather does not permit completion as scheduled. Extra care must be taken to ensure all parameters for flight operations are kept within the Coast Guard standards. For example, the commercial pilot conducted flight operations well over the Coast Guard 8 hour standard mission day. Holding the Coast Guard standard mission day would have been more prudent and should be negotiated prior to future transfers.

Designate a knowledgeable shore side support person to relay communications from shore to ship.

Flight evolutions included:  
18 Landings / 18 Take-offs

18 VERTREP deliveries  
18 VERTREP removals  
7 Static Refuels  
Total: 79 sorties

### I.C.3. Navigation

#### I.C.3.a. Ice Operations

In mid-August we encountered a vast and apparently grounded ice floe on Hanna Shoal. At its shallowest area, Hanna Shoal is 40 feet deep. RADARSAT imagery showed that the floe remained stationary at the shoal for several weeks. As we maneuvered in and out of the ice coverage for science, we avoided the heaviest floes (which had greater than 6 feet of freeboard), and therefore never encountered ice that required a third engine online or back and ram ice breaking.

#### I.C.3.b. Ship's Track



Figure 2-6 HLY-12-01 ship's track.

## I.C.4. Science

### I.C.4.a. Projects

#### Hanna Shoal Ecosystem Study

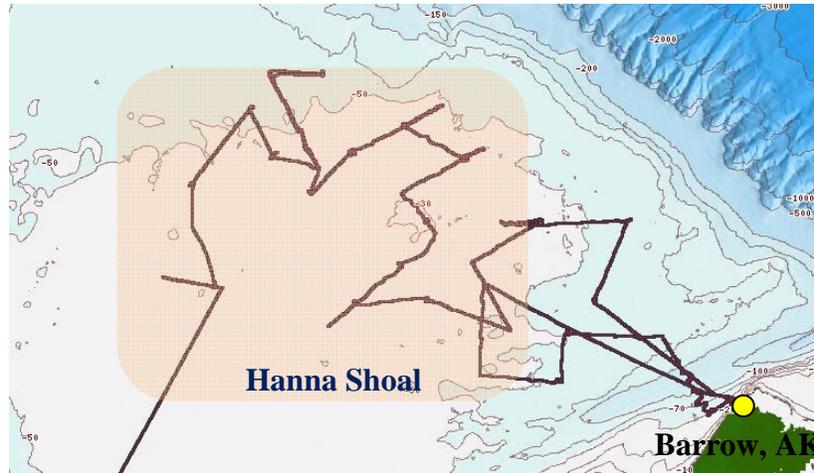


Figure 2-7 HLY-12-01: BOEM Hanna Shoal Ecosystem Study trackline.



Figure 2-8 HLY-12-01: Benthic trawl lowered with the Aft A-frame.

The BOEM (Bureau of Ocean Energy Management) COMIDA (Chukchi Sea Offshore Monitoring in Drilling Area) Hanna Shoal study was HEALY's first science mission of Arctic West Summer 2012 deployment. The mission, led by Dr. Jackie Grebmeier of University of Maryland, was a multi-disciplinary investigation to examine the biological, chemical and physical properties that define an area of high biological and exploratory energy significance: Hanna Shoal. Eighty nautical miles northwest of Barrow, AK, and within 40 NM of the Shell exploratory drill sites, the shallow depths of Hanna Shoal (40-50m) stand at the confluence of two nutrient-rich currents from the western Arctic and the Bering Sea. This upwelling facilitates high standing stocks of biota, especially near the bottom of the water column and in the marine sediment. The study focused on the Hanna Shoal ecosystem, specifically on the influence of the

plankton in the food chain, marine sediment fauna, and inventories of trace metal and organic compounds in the water column and on the seafloor. The physical oceanographic studies also addressed water mass movements, ice conditions and current modeling. The science team consisted of 38 scientists, graduate students and teachers representing 14 education and research institutions. The data collected by the team during the study will serve as a baseline data set prior to energy exploration in the region.

HEALY departed Dutch Harbor on 09 August and arrived in the vicinity of Hanna Shoal on 13 August to begin science stations in earnest. Data collection continued tirelessly with MSTs (plus one BM) assuming a standard 12-hour watch rotation. Between 09-25 August, we travelled over 2025 nautical miles and conducted 472 individual science casts in the vicinity of Hanna Shoal. Throughout the mission we conducted 166 Van Veen grabs, 71 water column (CTD) casts, 41 HAPS cores, 35 ring net casts, 33 bongo net casts, 30 drift buoy deployments, 22 phytoplankton net casts, 21 benthic trawls, 20 benthic camera casts, 14 gravity cores, 13 box cores, and 6 subsurface mooring deployments. The equipment deployed at each station varied from a single CTD to the deployment of the entire suite of gear listed above (“megastation”). MSTs operated the winch/A-frame and filled the deck supervisor role, with supplemental assistance from the Deck division during dredging and mooring evolutions.

HEALY demobilized HLY-12-01 and mobilized HLY-12-02 from an anchorage offshore Barrow, AK, on 25 & 26 August. See Air Operations Section for specific details.

### **1.C.5. Phase Recommendations**

*Lessons learned from small boat passenger transfer:*

#### PPE Requirement

A PPE waiver was granted to allow the two passengers to use Mustangs instead of dry suits. Despite this waiver, it is highly recommended that members embarking or disembarking at the ramp come prepared with waterproof boots in case they get their feet wet as they come in or out of the boat.

#### Small Boat Transfers to Barrow

The recommended boat for this evolution is the AS-B. The boat could make a straight approach; lower the front ramp and drop/pick up passengers ashore while remaining in good water depth and away from the waves rolling on the shoreline. Even with the AS-B, this type of transfer can only safely be accomplished in ideal conditions.

*Lessons learned from demobilizing/mobilizing via flight operations:*

#### Scope of Transfers

Logistics stops off Barrow must be limited to the minimum number of personnel and amount of gear necessary for mission success. If movement of more than personal luggage is desired, then transfer should be scheduled pier side where risk is significantly less.

### Departure Flight Arrangements

Over 80% of the departing scientists had flights scheduled for the day of the transfer; approximately 50% missed their flights. Contingency plans for personnel and cargo shipments are encouraged to accommodate unforeseen delays.

### VERTREP Tactics

Switching between cargo transfers and personnel transfers should be avoided; maximum efficiency is possible when all VERTREPs are conducted consecutively.

### Fatigue Considerations

Total operational time for the first day of flight operations became an area of concern as the transfer progressed. Pilot was restricted to a 14 hour operational day and an 8 hour flight day (time in air). Consider these factors when planning future operations to determine the number of days required. If future evolutions include personnel, cargo, and stores, recommend scheduling at least two days to ensure hour limits and CG fatigue standards are maintained.

### Command and Control

Place a senior person ashore (ideally an LSO) to handle coordination of passengers, luggage, and ship's cargo. Keeping track of shackles, straps, nets, mustangs and helmets was a constant challenge. The shore-side coordinator can work with the flight deck supervisor to maintain reliable communications and equipment management.

### Food Delivery

If there will be a considerable delay between food stores arriving and being transferred to the ship, try to secure some space in the grocery store freezer in advance. No facilities in Barrow offer refrigeration space that you can pay for. Although temperatures in late August hover around freezing, having a local freezer as a backup plan would be prudent.

### Mission Briefing

Recommend holding a DMO/MOB brief for all hands to ensure the plan and their role to support the plan is understood. The luggage transfer would have been more efficient had the tie down crew and fire team break-ins known exactly what to do with the luggage. Also, expectations for remaining on station could have been expressed, avoiding the need for pipes to recall personnel to move stores.

### District Support

D17 Logistics Support, in support of Arctic Shield, is a huge resource for logistics in Barrow.

### *Lessons learned from science operations:*

#### Watch Schedule

With concern for safety and the lack of chow relief scheduled with the traditional 12-hours on, 12-hours off watch cycle, a new schedule was enacted a few days into the mission that rotated personnel with a 5 hours on, 7 hours off, 7 hours on, 5 hours off cycle. This rotation was kept throughout the rest of the mission. The MST division experienced difficulty with the new schedule due to the consistent pattern of interrupted/insufficient sleep and the lack of time to

accomplish non-work related tasks (laundry, exercise, etc). A 12 hour watch rotation was reassumed later in the deployment (HLY-12-03).

### CTD Operations

A recurrent problem resurfaced with the CTD winch. For proper deployment and recovery of the CTD, three personnel are needed: one winch operator, one deck supervisor, and one tagline/wire wrangler. With only 2 MSTs on watch, the tagline/wire wrangler position has traditionally been tasked to a scientist or grad student. The high turnover of inexperienced non-ships company regularly caused slack in the wire upon recovery, causing a bird's nest at the wire drum and consequent operational delays. This problem was corrected later in the deployment (HLY-12-03) by manning three HEALY crewmembers to CTD evolutions. This manning (3 MSTs or BMs) should always be the case in future science evolutions.

### Aft A-Frame

The port A-frame preventer arm failed while booming out for a cast. Stress caused by over-extension was deemed to be the cause for the failure. Operations were delayed for several hours while the DC division welded a repair. To prevent recurrent failure, a "tattle-tale" line was tied to the boom and the frame, designed to tighten prior to maximum A-frame extension. The A-frame operator used this visual cue to stop the boom prior to maximum extension.

### Science Station Positioning

All science casts were conducted within a limited tolerance zone (1/2 – 1 NM from the science station coordinates) set by the Chief Scientist. Wind and current made staying within the tolerance challenging; we frequently had to reposition 1 - 3 times per station. In order to minimize time lost due to repositioning, the importance of staying within tolerance may require several quick maneuvers instead of a single time-consuming, large distance repositioning.

### Mooring Deployments

During one ice buoy deployment, an ADCP streamer was disconnected from the mooring due to ice flowing out from under the hull while lowering the buoy. The streamer was recovered an hour later with a grappling hook and precision shiphandling. It is recommended that the streamer be hand deployed last, just prior to the main buoy release.

### *Lessons learned from anchoring:*

#### Swift Current Near Barrow

While anchored offshore Barrow, AK, HEALY dragged anchor for 100 yards with 5 shots on deck in 29 meters of water to a muddy bottom. Winds were from the east at 10-12 knots and a 2 knot current was observed setting HEALY to the northeast. Veering more anchor chain may have prevented the anchor from dragging.

**I.D. HLY-12-02**

**I.D.1. Ship Operations**

**I.D.1.a. Vessel Operations**

The primary objective of this year’s ECS study was to collect high resolution multibeam data in the region north of the Chukchi Cap to locate the “foot of the slope” and better understand the transition of the Chukchi Cap into the Nautilus Basin. The interest in mapping the continental shelf is based on the United Nations Convention of the Law of the Sea (UNCLOS), allowing countries to submit rights to areas where their continental shelf extends beyond the 200 nautical mile Exclusive Economic Zone. By the conclusion of the mission, HEALY exceeded dredging and mapping objectives, covering 20,000 square nautical miles in the vicinity of the Chukchi Cap and Nautilus Basin.

Two cameramen from the production company Pipeline 39 were onboard for the HLY-12-02 mission to capture footage for the upcoming Weather Channel show: *Breaking Ice*. See Section VI – Public Relations, for more information.

**I.D.1.b. Boat Operations**

<b>Date</b>	<b>Sortie Type</b>	<b>Exact Mission</b>	<b>Boat</b>	<b>Time</b>
27 September	Ops	Line Handlers	224710	05h 07m

Table 2-5 HLY-12-02 Small Boat Sortie Log.

**I.D.2. Navigation**

**I.D.2.a. Ice Operations**

The observed ice coverage and thickness validated satellite assessments of the record low Arctic ice coverage in the fall of 2012. We operated between 78N and 84N (went as far north as 83°30.5’N) in late-August through mid-September and never encountered ice conditions that required a third MDG online or back and ram ice breaking.

## I.D.2.b. Ship's Track

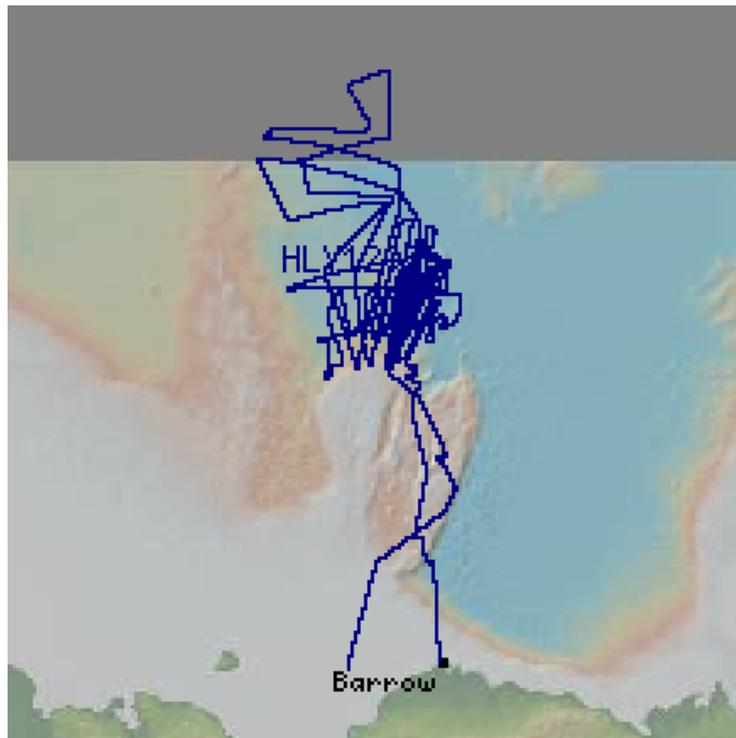


Figure 2-9 HLY-12-02 ship's track.

## I.D.3. Science

### I.D.3.a. Projects

#### Extended Continental Shelf Mission



Figure 2-10 HLY-12-02: Scientists sort mud and rock from a dredging cast.

The ECS study was HEALY's second science mission of the Arctic West Summer 2012 deployment. The mission, led by Dr. Larry Mayer of the University of New Hampshire, was the first single-ship ECS mapping program since 2008. Between 2009 and 2011, CGC HEALY paired with the Canadian icebreaker LOUIS S. ST. LAURENT (LSSL) to collect mapping and geologic data necessary to delimit the U.S. and Canadian continental shelf. The primary objective of this year's study was to collect high resolution multibeam data in the region north of the Chukchi Cap to locate the "foot of the slope" and better understand the transition of the Chukchi Cap into the Nautilus Basin. The science team consisted of 34 scientists representing 15 U.S. institutions. Data collected during this mission will contribute to the establishment and support of any potential submissions to sovereign rights over resources on and below the sea floor.

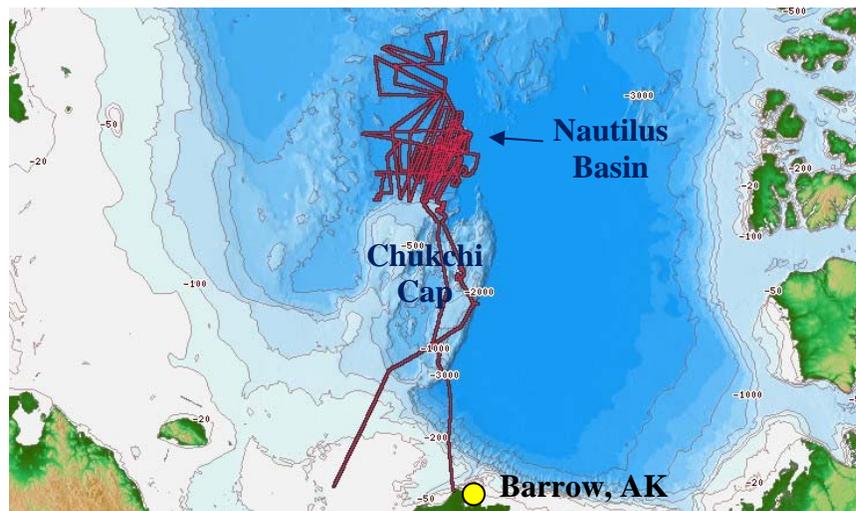


Figure 2-11 HLY-12-02: ECS mapping regions.

The mission began on 26 August after the two-day transfer of supplies and personnel offshore Barrow. Enroute to the Chukchi Cap, two EARS (Environmental Acoustic Recording System) acoustic buoys were deployed on behalf of DARPA/Lockheed Martin approximately 150 NM north of Barrow. We then transited to the Canadian Basin to perform a multibeam patch test and a deep CTD cast at the base of the Northwind Ridge. The multibeam was calibrated by subsequent XBT and XCTD casts. After the patch test was complete, we began a series of surveys that covered the northern Chukchi Cap and Nautilus Basin, dedicated to locate the foot of the slope. From 06 to 17 September, a detailed mapping of the area was conducted. In the course of mapping, a new submarine channel (135 NM long and 165 ft deep) was discovered in the Nautilus Basin. Representatives from the National Ice Center requested ice buoy deployments at intervals during the survey. After 16 September, the focus of the study shifted to dredging. Steep slopes (greater than 30 degrees) as identified in the multibeam data archive were targeted for dredging. Five sites were selected and rock samples were collected during each attempt. Upon completion of the last dredge site, the "Ice Goat" buoy was deployed for the US Naval Academy and we departed for Dutch Harbor.

In total, the science deployments for HLY-12-02 are as follows: 2 mooring deployments, 9 ice buoy deployments, 4 CTD casts, 74 XBT casts, 13 XCTD casts, 6 drifter buoy deployments, and 5 dredging casts. Total track covered on HLY-12-02 was 6,461 NM with 20,000 NM<sup>2</sup> of

multibeam sonar data collected. Total dredge haul was approximately 1520 lbs of rock and mud. MSTs operated the winch/A-frame, conducted all expendable deployments and filled the deck supervisor role for CTD casts. For dredging and buoy operations, deck division ran the deck with the assistance of MST petty officers.

The HLY-12-02 mission demobilized in Dutch Harbor on 28 September. 95% of the science cargo from that mission remained onboard and was shifted down to the cargo holds while cargo for HLY-12-03 was pre-staged on the fantail and in the main lab.

#### **I.D.4. Phase Recommendations**

*Lessons learned from Science Operations:*

##### Watch Rotation

With limited science casts, the MST watch rotation consisted of 8 hour watches, with one person on watch. If two people were required to conduct a science evolution, such as an XBT launch, the next MST on watch was on stand-by and would assist with the evolution. In addition, an MST was placed into the JOOD bridge watch rotation. The 4 hour watch would integrate with an 8 hour work day. After one week, the MST would come off the JOOD watch schedule and switch with another MST on the science watch rotation.

##### Multibeam Performance

While surveying in thin new ice, the ice would degrade the multibeam data quality and coverage. Several maneuvers were attempted to clear the transducers of the thin and elastic ice, such as backing down easy/hard, turning quickly, speeding up, etc. No reliable method for clearing was found.

##### Ice Buoy Deployment

Due to the frail/thin ice conditions, an ice floe suitable for on-ice deployment was never located. Therefore, the starboard knuckle crane with a quick release was utilized to deploy an ice buoy onto a stable ice floe.

##### Dredging

All dredging evolutions were executed from Aft Conn. This increased the situational awareness for the conning officer and facilitated communications between the deck supervisor, the conning officer, and the science party. The sequence of events for the dredging evolution was as follows:

- An ideal dredge target was identified by the science party. The primary consideration for prioritizing dredge targets was its slope; the steeper the better. The precise position (in the horizontal and vertical planes) was verified by re-surveying the area just prior to deployment.
- Once a target was validated, a safety brief and risk assessment was conducted while we pre-staged down-element from the target along a line generally perpendicular to slope. A voyage plan, intended to provide a path for the ship to follow and impact the target site at a right angle, was entered into VMS.
- A 'dredging representative' from the science party advised the winch operator. All orders to the winch operator were validated by the Conn and could be over ruled if deemed

appropriate for safety. Based on the desired approach distance and wire pay-out rate, an appropriate approach speed was determined (typically less than 1 kt).

- While slowly approaching the target, the conning officer studied the forces acting on the ship and determined the best combination of engine orders, rudders and bow thruster to stem the primary elements. While making the approach to the target, the Conn ordered a course to steer to the bow thruster; allowing subtle changes in the ship's track to be accomplished by changing only one force.
- The deck supervisor provided commands to the winch operator; initiating the deployment of the dredge from the deck to the water's edge. Once the dredge was beneath the water's surface; winch control was passed to the dredging representative in Aft Conn. The deck supervisor left the fantail and waited in standby until he was needed to complete the recovery.
- Incrementally during the pay-out, the winch was stopped to provide a reference weight. The science party recorded these weights to interpolate estimated weight of the empty dredge through the deployment.
- The winch paid out wire to approximately the sea floor depth (below the slope). During some of the later deployments wire was paid out until the dredge actually touched the bottom. This reference point was easily observed by an abrupt decrease in wire tension. If the bottom was touched, the dredge was quickly winched up 10-50 m to prevent the dredge from becoming shod.
- We continued across the slope once the dredge was at the desired depth at or near the bottom. Wire tension was closely monitored at this point. Once the dredge made contact with the slope, a significant increase in wire tension occurred. Wire was paid out to keep tension well below the safety threshold established during the brief (typically 10,000 lbs), but not so fast that the wire became coiled or fouled on the bottom.
- Once past the crest of the slope (~1000 yds beyond the apex) we kept station and the winch slowly paid in wire. While hauling around, the wire occasionally experienced minor increases in tension as it traveled up the slope. When tension increased significantly, the winch was stopped or slowly paid out. These significant tension events, or bites, occurred when the dredge caught bedrock, the desired fruit of the evolution. Management of the winch was intensive in order to apply enough force to break off rocks from the slope, but also kept the deployed dredge intact. This process continued until the dredge was no longer in contact with the slope; again, a change in the tension trend indicated this transition. The tension changed from exhibiting frequent changes to a constant reading.
- Once the dredge was away from the slope, it was recovered by winching up at maximum speed, stopping incrementally to again record reference weights at different depths. Comparing the weight during decent and ascent, the science party estimated the payload of the dredge and monitored any changes during the recovery.
- As the dredge neared the surface, the deck supervisor resumed station. Once in sight, the deck supervisor resumed control and directed the winch operator to safely bring the cast back on deck. Once the package was secured and safe to approach, the science party was permitted access to assess the haul back.
- The science party used hoses to remove any mud collected, and carefully sifted through the sample to retrieve rocks and fragments.

- This complex operation was advertised as rarely successful (expected return on deployment ~12.5% of the time). We successfully collected rocks on each deployment attempt.

## **I.E. Mid Patrol Break, Dutch Harbor, AK**

### **I.E.1. Ship Operations**

#### **I.E.1.a. Vessel Operations**

HEALY moored in Dutch Harbor at 1000 on 27 September. The HLY-12-02 mission was demobilized on 28 September and the HLY-12-03 was mobilized on 04 October. The crew enjoyed the Mid-Patrol Break in Dutch Harbor, with many crew members exploring the outdoor activities in the area.



**Figure 2-11** LTJG Valdez, CWO Rivera, and MK2 Schumacher free a juvenile bald eagle from fishing line.



**Figure 2-12** ET1 Climacosa encountering a herd of wild horses.

### I.E.1.b. Deck Operations



**Figure 2-13** HEALY's ASB supporting rescue swimmer training in Dutch Harbor.

While conducting training exercises with the Arctic Survey Boat (AS-B), the boat crew was requested to assist with swimmer training from CG-6503, an AVDET from USCGC MIDGETT. The cooperative training evolution was conducted inside the breakwater in Dutch Harbor.

## **I.F. HLY-12-03**

### **I.F.1. Ship Operations**

#### **I.F.1.a. Vessel Operations**

HLY-12-03 was successful, meeting 90% of the mission objectives with only one CTD line and mooring recovery incomplete (due to poor weather and CTD winch issues). Over the course of the 20 day mission, 83 CTD casts were completed, 4 moorings were recovered and 5 moorings were successfully deployed, including the first-ever subsurface mooring deployed in the Amundsen Gulf, located north of the Northwest Territories, Canada.

A team of seven engineers (4 HEALY MAT and 3 from other NESU's) deployed with HEALY during HLY-12-03 and completed 1904 labor hours on PMS and corrective maintenance action items. Their efforts were focused on clearing CART and SMART discrepancies, with the greatest focus on damage control systems and electrical safety inspections. This hugely successful endeavor should be the norm and not the exception.

HLY-12-03 science objectives required entry into the whale hunt buffer zone near Barrow while a single strike remained available to the community. The chief scientist contacted Mr. Johnny Aiken of the Alaskan Eskimo Whaling Commission to request clearance to conduct science operations within the buffer zone. Clearance was granted and all required operations in the area were successfully completed. This allowance is the exception, not the rule, and should not be relied upon for future operations. Once the mission was complete on 21 October, HEALY departed en route Dutch Harbor. We moored in Dutch Harbor on 24 October, one day earlier than scheduled, to avoid a large storm that was looming in the western Bering Sea.

#### **I.F.1.b. Deck Operations**

##### DF Calibration, 05 October

As we departed Dutch Harbor to commence HLY-12-03, a calibration of the VHF Direction Finder was conducted as required for CART. We maintained station outside of Iliuliuk Harbor while the small boat circled the ship making radio calls every 5 degrees as marked by the radar.

##### Command Structure on Deck

In previous years of North Slope Moorings missions, the deck was run by experienced members of the science party with members of the Science division operating the A-frame and assisting on deck as directed. This year the Coast Guard assumed ownership of the evolutions by placing the BOSN and Deck Division Chief in charge of all mooring operations. During HLY-12-03, 9 moorings were successfully deployed or recovered. The following changes proved to be effective:

- Commands between bridge and deck for lifting, moving, and releasing moorings were adjusted to match proper buoy deck commands/terminology (hang, set, heave around, etc.)
- Three senior personnel represented the Coast Guard on deck, with minimal break-ins.
- Science personnel on deck were minimized to include only those essential to the operation; their expertise was used to advise the Deck Supervisor in complex evolutions.

- A briefing preceded every evolution. All personnel involved with the evolution (scientists, MSTs, BMs, and bridge watch) were required to attend.
- A clear command structure was established prior to evolutions; the Deck Supervisor led all efforts.

Glider Tagline, 11 October

The CB-L was used as a platform from which to test and launch the Slocum glider. A member of the science party was designated to handle the glider. The plan outlined that the glider would have a tagline attached to a buoy to act as a safety if the glider’s ballast was incorrect. However, when the small boat recovered the glider by hauling in the buoy, the tagline had come loose; consequently, the glider had been underway on its own the whole time. Fortunately, all equipment was operating correctly and the science party was able to program the glider to conduct its mission. The glider was successfully recovered eight days later.

**I.F.1.c. Boat Operations**

<b>Date</b>	<b>Sortie Type</b>	<b>Exact Mission</b>	<b>Boat</b>	<b>Time</b>
05 October	Ops	Line Handlers/ DF Calibration	224710	02h 35m
10 October	Ops	Sci- Mooring Recovery	224710	54m
11 October	Ops	Sci- Glider Deployment	224710	01h 42m
12 October	Ops	Sci- Mooring Recovery (2)	224710	02h 26m
15 October	Ops	Sci- Mooring Recovery	224710	48m
20 October	Ops	Sci- Glider Recovery	224710	24m
24 October	Ops	Line Handlers	224710	02h 09m
27 October	Ops	Line Handlers	224710	01h 27m

Table 2-7 HLY-12-03 Small Boat Sortie Log.

**I.F.2. Air Operations**

**I.F.2.a. Operations**

On 05 October, HEALY departed Dutch Harbor and conducted flight operations for training with an HH-65, an AVDET from CGC MIDGETT. The helicopter completed 2 touch and go landings, 5 landings with primary tiedowns, 1 Vertical Replenishments (VERTREP), and 1 HIFR.

On 09 October, HEALY worked with the AVDET HH-65 from CGC BERTHOLF to successfully transfer a passenger from HEALY to Barrow for emergency leave (1 landing with primary tiedowns).



Figure 2-14 Attack teams and proxy men train with the helo and pilots for a crash-on-deck drill.

### I.F.3. Navigation

#### I.F.3.a. Ice Operations

The ice pack remained farther north than our highest latitude of 73° 12.1'N. Although fast ice was starting to grow from the Alaskan north shore during the month of October, we remained greater than 2 NM from shore and did not encounter any ice during the mission.

#### I.F.3.b. Ship's Track

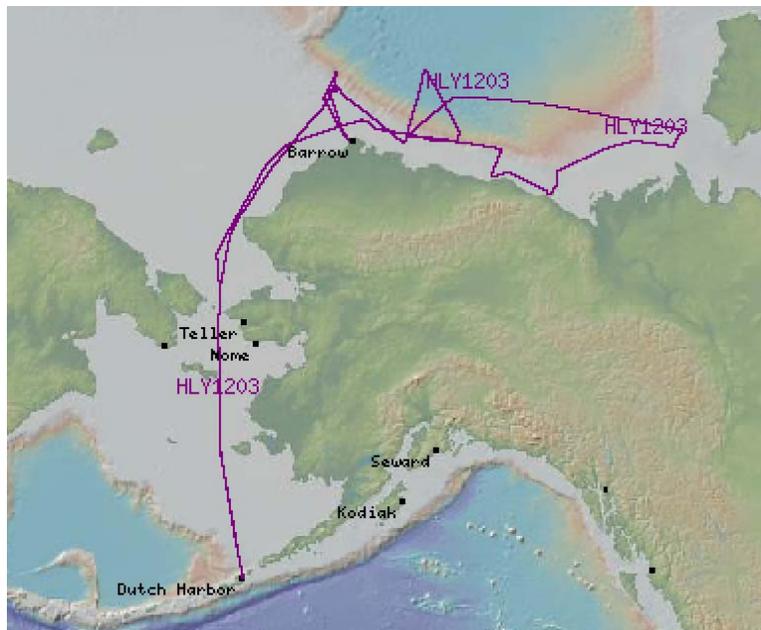


Figure 2-15 HLY-12-03 ship's track.

## I.F.4. Science Operations

### I.F.4.a. Projects

#### North Slope Moorings Mission

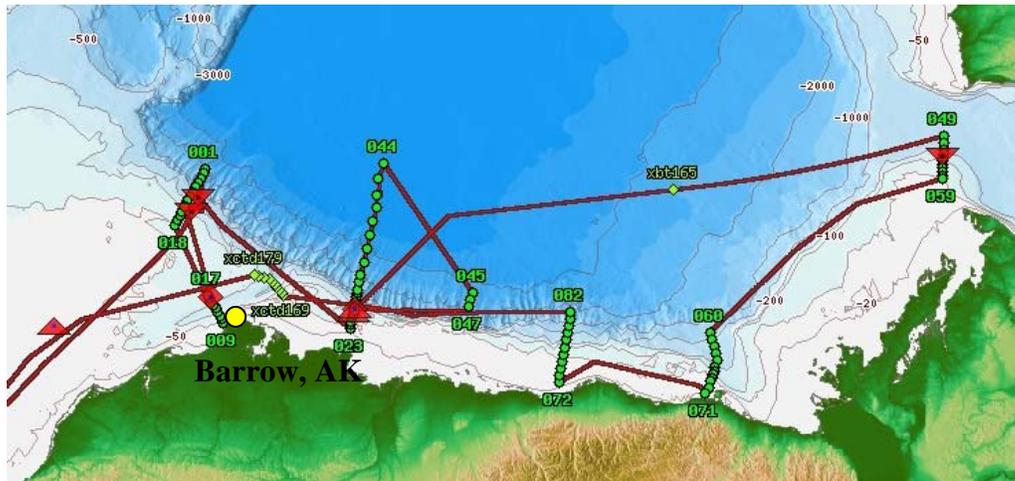


Figure 2-16 HLY-12-03 North Slope Mooring trackline.

The third science mission of AWS-12 was the North Slope Moorings mission. Led by Dr. Robert (Bob) Pickart of the Woods Hole Oceanographic Institute, this mission focused on the retrieval and deployment of subsurface moorings that measure the physical properties of the Western Arctic Boundary Current. Left in the Arctic year-round, the moorings require annual servicing to recover data and enable continued operation. Secondary objectives included conductivity/temperature/depth (CTD) stations, vessel-mounted Acoustic Doppler Current Profiler (ADCP) measurements, sea bird surveys, and the deployment of a Slocum (ocean) glider. Data collected during this mission will represent the annual assessment of the Western Arctic Boundary current.



Figure 2-17 HLY-12-03: Small boat crew hooks mooring float with messenger line during recovery.

The mission commenced with HEALY departing Dutch Harbor on 05 October. On 09 October, we arrived on station (90 NM NNW of Barrow, AK) to commence the first mooring evolution. Over the course of the 20 day mission, 4 moorings were recovered and 5 moorings were successfully deployed, including the first-ever subsurface mooring deployed in the Amundsen Gulf, located north of the Northwest Territories, Canada (see map). The schedule for the mooring evolutions constantly evolved, influenced by whaling season restrictions and autumn Arctic weather. As per guidance provided by the Alaska Eskimo Whaling Commission, we sent an email to the appropriate Commercial North Slope Communication Center every 6 hours when operating within the 25 NM buffer zones surrounding whaling villages, stating current location and intentions.

To supplement the moorings' data, CTDs were conducted perpendicular to the current at closely spaced intervals to create cross sections of physical and chemical properties. In total, 83 CTD casts were conducted along 7 tracklines on the Alaskan North Slope. In addition, 5 drifter buoys, 1 XBT and 9 XCDDTs were deployed.

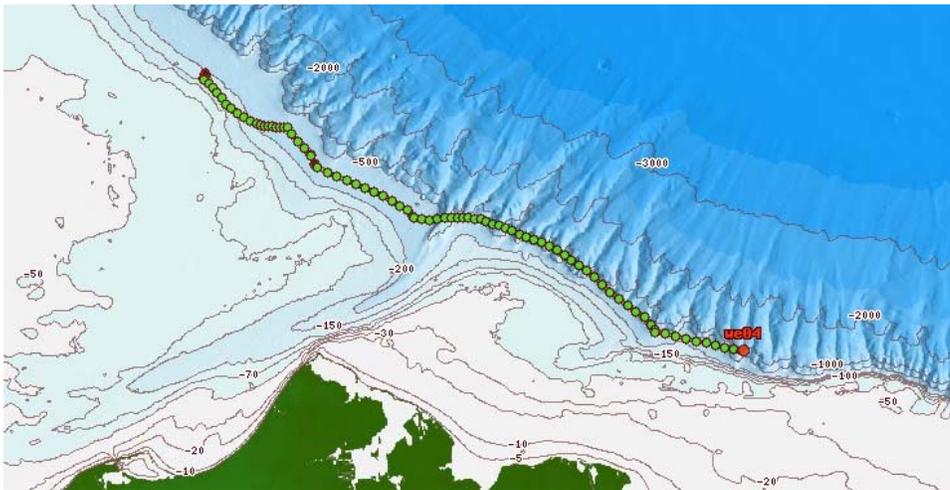


Figure 2-18 HLY-12-03: Slocum Glider trackline.



Figure 2-19 HLY-12-03: Small boat crew recovers Slocum glider.

A programmable ocean glider was deployed to conduct additional water property measurements along the edge of the Alaskan North Slope. The glider was launched via small boat 70 NM NNW of Barrow, AK on 11 October. The glider performed dives every half a mile along its trackline and travelled at an average speed of 0.6 mph. It was successfully recovered, via small boat, eight days later after travelling 175 nautical miles in the Beaufort Sea.

During the HLY-12-03 mission the MST division kept 3 members on watch at all times with a staggered 12-hour-on/12-hour-off watch rotation. With the pending expansion of Deck Division's responsibilities into science operations, several Boatswain's Mates began training as A-frame and Winch Operators. Responsibility for mooring recoveries and deployments on deck was shifted to the Deck Division.

#### **I.F.5. Phase Recommendations**

*Science Operations lessons learned:*

##### Glider

A member of the science party tied the knot that failed to hold the glider to the buoy. The impetus for the buoy-tended testing was due to the freshness of the water and the potential decrease in buoyancy of the glider. The glider surfaced despite the decreased salinity, therefore future buoy tended tests may not be necessary.

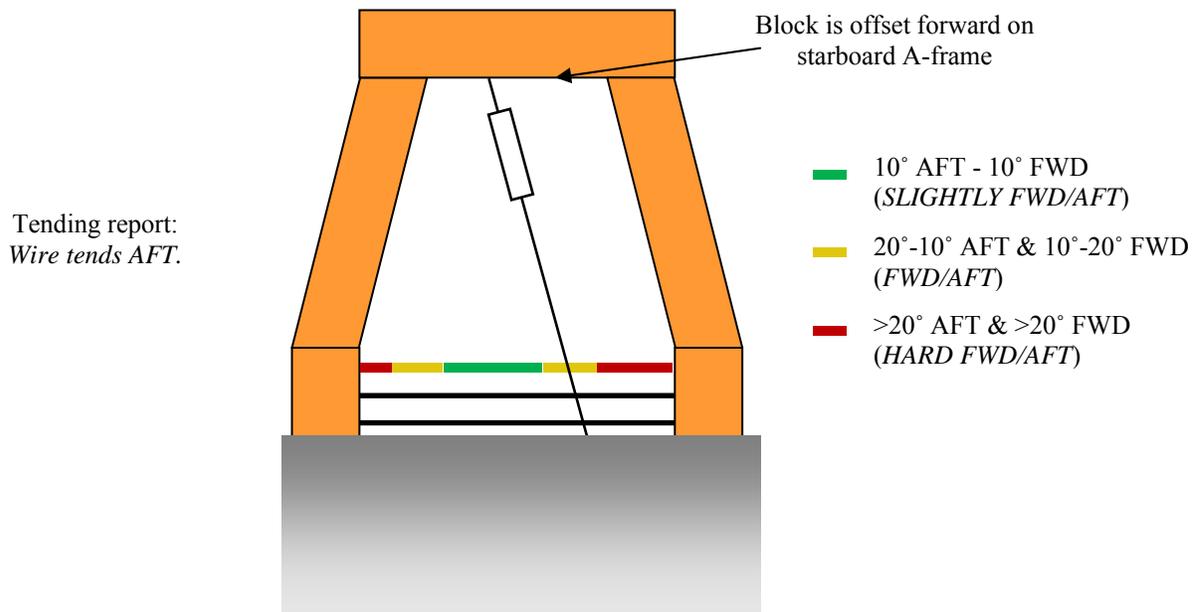
##### Lifelines

If left in place, the height of the lifelines at the starboard A-frame require the CTD to be lifted approximately six feet off the deck before being boomed out and lowered into the water. This lift is excessive and can make the CTD difficult to control during increased sea states. A temporary solution was devised to replace the top lifeline with synthetic line that could be easily clipped/unclipped during deployment and recovery. This allowed the CTD to be kept at or below shoulder height and was more controllable. The MST and Deck divisions are currently devising a less elastic alternative to keep the lifelines taut and still allow easy lowering and replacing. The lifelines were measured and marked with tape to assist the personnel on deck with relaying the fore and aft wire angles to the bridge. This proved to be a great improvement over the previous reporting method of estimated angles.

##### CTD hard landing

The CTD landed hard on deck during an early morning cast, the force slightly bent the outer frame and damaged some of the sensing equipment. The winch/A-frame operator brought the package out of the water in "full" mode rather than "fine" mode, a decision based on the moderate sea conditions. If the CTD is lifted too slowly out of the water, a passing swell could float and then "drop" the package back onto the wire, potentially damaging both wire and winch. Once the A-frame was boomed in, the operator neglected to change the wire speed back to "fine" mode. Thus, when the operator lowered the package, it was at a high speed and hit the deck with enough force to cause damage. The operator was a break-in, under the instruction of a newly qualified individual. Lessons learned from this event are as follows: newly qualified members should not have break-ins during their settle-in period (approximately 1-2 weeks); break-ins may

be limited to daylight hours so that their qualified observers can better see them manipulate the controls; more training on the CTD is necessary. Training only during operations is not conducive for learning due to time constraints and pressing operational priorities. Training should be taken advantage of while in port, with a weight substituting for the CTD package, or during transits when science parties are not embarked.



**Figure 2-20** Lifeline marking and wire tending report guide (looking outboard, starboard side).

### Winch/wire difficulties

During the deployment the .322 wire became asymmetrically wound around the spool due to the faulty lay of the wire itself. Either from age or twist, the wire would not lay properly, causing gaps and overlaps in the wire on the spool. In order to temporarily correct this problem, the winch room had to be manned during every CTD cast; the assigned member physically adjusted the follower to align with the drum. This problem greatly reduced the efficiency of the casts, as 3-4 stops were required each cast in order to manually adjust the wire. Wire replacements will be investigated during the inport period.

### Wire parting

The .322 wire parted as the CTD was being hoisted off the deck for a cast. The CTD fell approximately 2 feet onto the aluminum pallet, compressing the pallet but causing no further damage. No one was in the winch room at the time the wire parted. The inferred sequence of events is as follows. Prior to deployment of the CTD, the .322 wire jumped the drum. This likely occurred during the final stages of the previous deployment's recovery, as wire was slacked to transfer the CTD back into the starboard staging area. The wire jump was not perceivable on deck or on the winch camera. When the wire was taken to move the CTD back onto the deck for the next deployment, the wire wrapped around the guard forward of the drum.

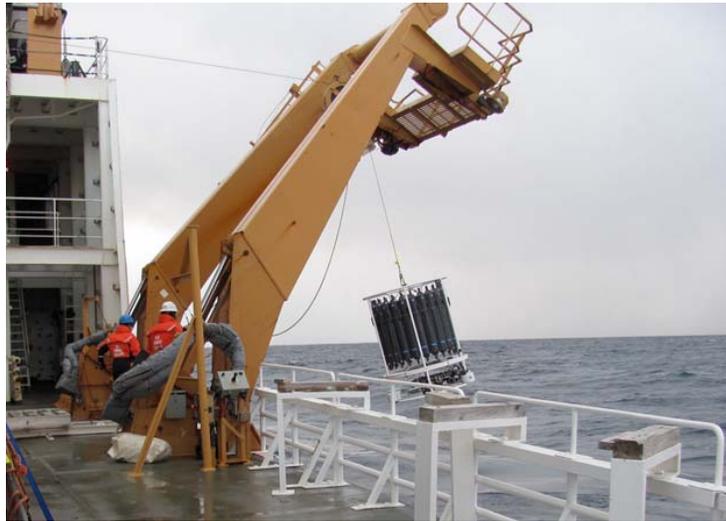


Figure 2-21 HLY-12-03: CTD swinging in moderate seas during deployment.

As the weight of the CTD package came onto the wire, it sheered apart at the drum. The following preventive actions may be taken to avoid this mishap in the future:

- Replace outdated cameras in winch room with high definition cameras to allow the winch operator a better view of the wire's tend and wrapping on the drum.
- Do not operate the winches without a spotter in the winch room. The spotter can radio to the winch operator any problems as they develop and stop operation before damage occurs to the equipment.

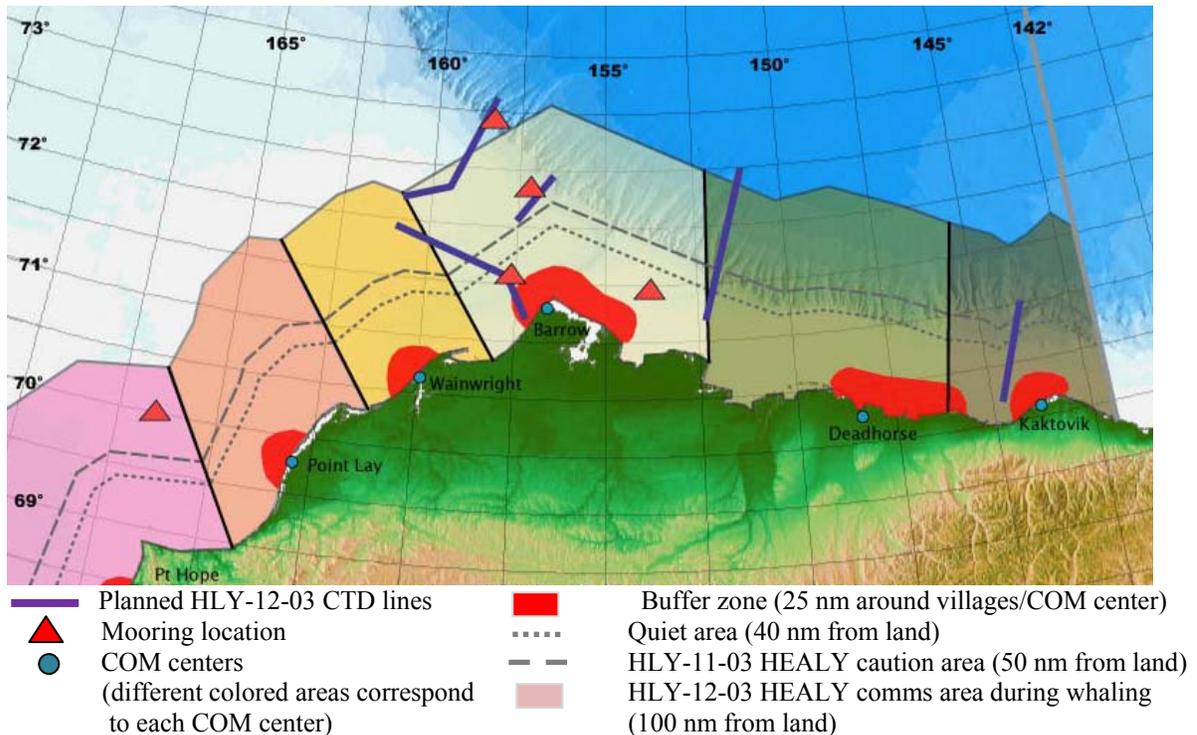


Figure 2-22 Whaling buffer/comms zones on Alaska's north slope.

Operating in the whaling buffer zone:

While operating within the whaling buffer zones (see figure), we submitted an e-mail every six hours to the appropriate Commercial North Slope Communication (COM) center to identify ourselves, state our current location, and relay our intentions until the next check in time. By publicizing our intentions and maintaining a communications schedule that kept us aware of the status of the whale hunt, we maintained good public relations and were able to conduct science operations within the buffer zones while a single strike remained available to the community. It was surprising during radio or phone call-ins to the Communications Center in Barrow that no information about whaling activity was available. The Communications Center watch standers reported that the whaling fleet does not regularly check in with them, so they only routinely have non-whaling vessel information. The embarked native observer provided valuable insight into the status of whaling activity and helped broker the authorization to enter the buffer zone before the whale hunt was completed.

## **I.G. Southbound Transit to Seattle, WA via Juneau, AK**

### **I.G.1. Ship Operations**

#### **I.G.1.a. Vessel Operations**

##### Transit to Juneau

A Steam Team comprised of 3 SFLC Assist Alameda personnel came aboard to inspect, troubleshoot and document life cycle problems with the steam system. Findings will be used to correct design problems with original construction and to create the dockside 2013 and 2014 repair specifications.

We departed Dutch Harbor on 27 October and transited to Juneau, AK. Our trackline deviated from the standard great circle route by staying close to the peninsula and cutting through the Shumagin Islands to avoid heavy seas in the Gulf of Alaska. We moored starboard side-to the Franklin Pier (a cruise ship mooring) at 1000 on 31 October. The first 3 days in Juneau were a Mid-Patrol Break, allowing the crew to explore the surrounding area. We hosted two days of Public Tours prior to the start of SMART/CART inspection (see Section VII. Public Relations).

##### SMART/CART in Juneau, 03 – 06 November

Our hard work and effort in preparation for SMART/CART was validated at the completion of the assessment. HEALY received only 15 discrepancies out of a total of 613 line items checked for SMART, scoring 98%. At the end of CART, HEALY received only 9 discrepancies totaling 42 points, a 710 point improvement over the last CART cycle. As 275 points is the maximum allowable points to remain eligible for the Battle 'E', HEALY scored well under that benchmark by 85%. The SMART/CART schedule of events is attached as Appendix 6. The End of CART Report is attached as Appendix 7.

##### Transit to Seattle

The transit from Juneau began the morning of 07 November. Upon approval from PACAREA, crew members invited friends and family to participate in a Tiger Cruise during the transit from Juneau to Seattle. 34 enthusiastic passengers came aboard and enjoyed a scenic trip through the Canadian Inside Passage (see Section III.B.7 – Navigation). We continued enroute Seattle, returning to homeport at 1000 on 10 November.



**Figure 2-23** Raising the Canadian flag upon entering the Canadian Inside Passage.

### **I.G.1.b. Boat Operations**

<b>Date</b>	<b>Sortie Type</b>	<b>Exact Mission</b>	<b>Boat</b>	<b>Time</b>
31 October	Ops	Training/Line Handlers	224710	04h 05m
07 November	Ops	Line Handlers	224710	02h 11m

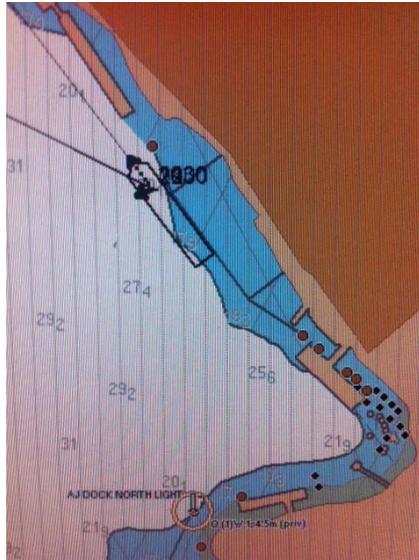
**Table 2-8** Southbound Transit Small Boat Sortie Log.

### **I.G.2. Navigation**

#### **I.G.2.a. Items of Interest**

##### Arriving Juneau, AK

HEALY transited Chatham Strait, Frederick Sound, Stephens Passage and finally Gastineau Channel enroute to Juneau. The transit from sea took 9 hours. Heavy currents +2.0kts were encountered at various locations within the passage. As per Standing Orders, a Nav Eval was manned once in coastal waters. As an additional safety precaution, the Deck and the Conn were split and manned by qualified OODs once we entered the Inside Passage. HEALY moored at 1047 (U), 31 October, starboard side-to South Franklin Pier, depth 75 feet, pier face 325 degrees True. Light traffic was encountered on the approaches and our track into the harbor was standard due to the tight channel.



**Figure 2-24** VMS screen capture of HEALY moored at South Franklin Dock, Juneau.

### Transit from Juneau, AK to Seattle, WA: Canadian Inside Passage

We arrived at the Pine Island pilot station on the northwest corner of Vancouver Island at 0400(U) on 09 November and embarked 2 Canadian harbor pilots via Jacob's ladder at the starboard A-Frame. Both Pilots were escorted to the pilothouse for a briefing and then CAPT KENNETH WRIGHT assumed the Conn and CAPT BRIAN-DALE JOHNSON went below. Each pilot stood a 5 hour watch over the course of the 20 hour transit. HEALY transited Gordon Channel, Blackfish Sound, Johnstone Strait, Seymour Narrows, Discovery Passage, the Strait of Georgia, Boundary Pass, Haro Strait, and into the Strait of Juan de Fuca. The CO remained on the bridge through from the pilots' embarkation until the passage widened into coastal waters. The transit was timed to pass through Seymour Narrows at slack. Even with this precaution, we observed a 3 kt current in the tightest part of the Narrows. HEALY arrived at the Pilot Station at Brotchie at the entrance of Victoria Harbor at 2240(U) on 09 November and disembarked both Pilots via Jacobs's ladder at the starboard A-Frame. We reported into COMOX Traffic (VHF-71) to check in as required at call in points and checked out with VICTORIA Traffic (VHF-11) upon departing the Pilot Station.

### **I.G.3. Phase Recommendations**

#### Bridge Watch Manning

Augmenting the bridge watch during extended restricted water transits proved effective and is recommended for similar evolutions in the future.

## **II. Communications and Electronics**

### **II.A. Communications**

Early in the deployment, the Comms division encountered a problem with the daily data transfer limit on Fleet Broad Band (FBB) due to a setting that was overlooked in Office Communicator. Essentially, the program would run in the background of everyone's computer and actively update the Global Addresses List with over 30 MB of data. This issue was resolved by TISCOM and there were no further bandwidth limit warnings for the remainder of the deployment.

Another issue encountered with FBB was the acquisition of signal through the Asia-Pacific Satellite and the Americas Satellite. The transition between satellites was not seamless and required a reboot of the equipment in order to allow data to pass through the newly acquired satellite signal.

Once above 74N, we were completely out of FBB range and switched over to INMARSAT B. While operating between 74N and 83N INMARSAT provided intermittent connectivity (decreasing speed and duration of connection as we progressed further north). At 83N connectivity was limited to less than 1 hour per day while connectivity was available 10-14 hours per day near 74N. During periods of reduced connectivity, we relied on the science data network (SDN) to email encrypted OPSUMs and other operational communications to JRCC Juneau. SDN uses KU band and Iridium reach back technologies and maintained email connectivity even at high latitudes. Further degrading communications, SDN internet connectivity was not available above 73N, a significant decrease in performance compared to coverage during AWSW 2011. The poor connectivity posed difficulties for execution of CG web-based business processes such as CGMS, TMT, AOPS, Direct Access and LMS. We requested installation of KU band during upcoming inport.

### **II.B. Electronics**

A chronological list of equipment casualties:

**ALOFT CONN CAMERA** – The forward-facing, exterior Aloft Conn camera experienced a pan and tilt functionality failure and video quality deterioration due to water intrusion. The replacement was the third camera in three years to fail at this location. A temporary fixed camera was installed inside the Aloft Conn pilot house. The ET Division is researching a replacement waterproof pan and tilt camera more suitable for the prescribed location.

**NAVIKNOT SPEEDLOG** – After upgrading the speedlog displays during shakedown the Naviknot speedlog began displaying several error codes. Technicians inspected the display installation and tightened down all the terminals. When the depth alarm failed to alarm at the selected threshold depth, technicians re-initialized the master control head and recycled the power. Unit operated as designed for six hours after which the master and remote display began alarming without an error code. Technicians disabled the speaker and CASREPED the system.

BATHY 1500 ECHO SOUNDER – The Bathy system was upgraded prior to getting underway for AWS-12. It quickly became apparent that the Bathy echosounder interfered with the Multibeam because both systems were operating at the same frequency. The Bathy was secured for the remainder of the science missions.

DPS: The Dynamic Positioning System (DPS) had not been used since 2010. During HLY-12-01, the ET division investigated inputs and verified functionality to the DPS. GE representative Clive Reed worked with the ETs to complete a successful test of the system. It was concluded that nothing was wrong with the system; it started up without issue and worked as expected upon testing. During the AWS-12 deployment, DPS was operated in joystick auto and joystick manual mode during flight ops and to hold position offshore Dutch Harbor, AK. In joystick auto, DPS was given control of the bow thruster and rudders in order to maintain a heading as directed by the operator. In joystick manual, the operator maintained control of propulsion and steering systems, but directed their use through the DPS console. In both modes, the operator maintained direct control of the throttles. DPS was not used during any science deployments.

TERASCAN LNB: ETs replaced the Terascan Low-Noise Block down converter (LNB) after it was determined to be faulty. The LNB converts the signals from electromagnetic or radio waves to electrical signals and shifts the signals from the downlinked C-band or KU-band to the L-band range. This enabled the Science Division to rely on the system for accurate weather monitoring and prediction.

### **III. Engineering**

#### CASREPS

##### *CAT 2 12034 - Vent 01-5 Centrifugal Fan*

The fan servicing Aft Conn and the Computer Lab was discovered to be inoperative prior to departure for AWS-12. Upon inspection, technicians found that the fan had suffered mechanical and electrical damage when the impeller slipped forward on the shaft and struck the housing. Electricians found that the motor windings had shorted and the fan housing was mechanically deranged. SFLC ordered a replacement fan, expected to arrive on 15 February 2013. Ship's force rigged a box fan in the computer lab to provide air circulation and cooling during the deployment.

##### *CAT 2 12035 - NAVIKNOT*

The NAVIKNOT system received an intermittent communication error between the legacy SRD-500 electronics unit and the NAVIKNOT electronics unit with fault codes 301-304. An RFI RF processor was received and installed; however, during underway testing the same intermittent faults appeared. ESU and technical assistance was requested upon return to homeport. See Electronics, Section III.B, for additional information.

##### *CAT 2 12036 - Starboard CB-L Glow Plug*

During boat checks, the starboard CB-L engine failed to start. The boat engineer troubleshoot and found that the engine glow plug was not energizing. Upon further inspection, a faulty relay was identified. A new relay was delivered and installed during mid-patrol break. Operational testing was satisfactory and the casualty report was closed on 10 October 2012.

##### *CAT 2 12037 - Starboard CB-L Lower Unit*

During boat training with the starboard CB-L, a loud metallic noise was heard from the engine compartment. The boat engineer investigated the noise and isolated it to a drive train failure. Excessive radial movement is present at the aft drive shaft bearing carrier assembly. Upon RTHP, the boat was sent to Coastal Marine to be assessed for scope of repair.

##### *CAT 2 12038 - 224711 Overweight Hull*

During annual boat weighing, the port and starboard CB-Ls were discovered to be over the 5 percent allowable growth in boat weight (See CASREP 11096 for 224710 Overweight CASREP). The Small Boat Product Line responded with a waiver allowing the port and starboard CB-Ls to be operated with a maximum of 7 personnel and for emergency or operational tasking only.

##### *CAT 2 12039 - Aft Staging Door*

The vertical drive shaft assembly on the aft staging door was found to be mechanically deranged and was binding intermittently when in operation. Technicians suspect that the bushings and universal joints in the vertical drive are failing. HEALY has requested assistance from NAVAIR to inspect and repair the door. NAVAIR is scheduled to repair the door upon RTHP.

### Items of Interest

The starboard shaft seal was discovered to be leaking an excessive amount of water, between 400 and 500 gallons per day, during the transit from Seattle to Dutch Harbor. The shaft seal had been repaired during the 2012 dockside. The original equipment manufacturer (Wartsila) agreed to remove and resurface the shaft seal under warranty during the Dutch Harbor logistics stop. After inflating the shaft seals, divers attempted to install a plastic wrap cofferdam which failed to overcome the hydrostatic pressure between it and the shaft. A clam shell metal coffer dam was fabricated, however the measurements for the coffer dam were incorrect due to incorrect ship drawings. Using measurements taken in situ by the divers, a new clamshell metal coffer dam was constructed and installed. Wartsila then removed the shaft seal, resurfaced, and reinstalled the seal. After 48 hours of operation with the resurfaced shaft seal, the seal was leaking less than five gallons per day. This repair caused a 4-day delay for the HLY-12-01 mission.



**Figure 4-1** Divers standby while the cofferdam is lowered into the water in Dutch Harbor, AK.

Another mission critical repair was also completed before HLY-12-01 while in Dutch Harbor, AK. Cracks were discovered on the pipe connections to the end bell of the #3 main diesel generator forward of the air cooler. This casualty has occurred on numerous instances, once in 2010, and twice in 2011. The DC division attempted weld repairs but were unable to maintain watertight integrity during operational testing. While in Dutch Harbor, the end bell was sent to a local weld shop for repair; the welds were renewed and operational testing was successful. A spare end bell with the correct configuration was provided by SFLC during the Barrow logistics stop. SFLC will continue to research a long term solution to this reoccurring casualty.



**Figure 4-2** Main prop division installing the repaired end bell cooler.

### General Emergencies (GE)

The GE condition was only set once during the AWS-12 deployment - flooding in the CO2 room. A pipe nipple on the starboard Miranda davit hydraulic power unit cooler failed and ASW started to flood the CO2 room. The isolation valves on the cooler failed to hold and ship's force isolated the forward branch of ASW system, securing multiple systems. Cavitation was the cause of the pipe leak and the globe discs fell off the stem of the isolation valve from normal wear and tear. The wasted section of piping and the inoperative isolation valves were renewed.

## **IV. Administration**

### **IV.A. Personnel**

#### SPO performance

The Seattle Service Personnel Office (SPO) was very helpful throughout the deployment and maintained an efficiency rating above 99%. When internet was available for communication, all issues were quickly addressed and resolved. The primary method of communication was email and secondary was message traffic. See Section III for connectivity issues that affected email usage and message traffic. In the future, it is recommended that new Administrative Division personnel visit the SPO while in port to establish a working relationship and rapport prior to deployments.

#### Future Advice

##### *Proactive*

Continue to act early and often to consolidate travel plans in and out of port/logistics calls. Sometimes there will be fair lead-time (DA Orders, Advance notice of incoming/outgoing personnel), while others will be short notice.

Anticipation of periods of internet connectivity is also important. All administrative work requiring internet connectivity should be executed during these times, to the greatest extent possible. The reduced connectivity experienced during AWS-12 often prevented access to DA, CGMS and TPAX.

##### *Reactive*

For the short notice notification, call/email the travel agent immediately upon notification.

##### *General*

It is important to have contingency plans in place to account for possible delays at stopovers, especially those involving VERTREPs. Personnel arriving should plan on arriving at least one day early, and personnel departing should plan on spending the night locally and departing via commercial air the next day. All scheduling must be flexible. Weather, especially in areas such as Barrow, can be very unpredictable. The VERTREP at the end of HLY-12-01 took a half day longer than anticipated. Many of those disembarking from HEALY missed flights due to delays, and the limited number of hotels in Barrow created problems for departing passengers who were required to remain overnight (see Section II.C.2 for more information on Barrow Air Operations).

In addition, flights should be booked to TONOs, as T-Pax is not reliably available while underway. Orders should be scanned or emailed to the travel agent who emails the itinerary (email attachments must be less than 200kb in size on CGDN and 125kb on the SDN).

The accuracy of any outgoing travel claims is also crucial. During AWS-12, two claims were rejected by PPC due to minor errors that prevented them from being processed. The travel claims were mailed back to the member's home address, where they could not be accessed in an expedient manner. Members reporting aboard should ensure that they have travel orders that are either original or 'certified to be a true copy.' This is required for inclusion in PCS travel claims.

When members report aboard while the ship is underway, they do not have access to original orders as they are kept at the SPO.

#### Vessel Cleanliness and Inspection

Ship's cleanliness was held to a high standard during the AWS-12 deployment, opening with three back-to-back field days conducted during the northbound transit to Dutch Harbor, AK. Every morning the MAA assembled the ship's company and assigned cleaning parties in all personal and public spaces. Special attention was given to spaces that rarely see detailed cleaning, such as the weather decks, overheads, and AMRs. These field days set a high bar for cleanliness and habitability, for both crew and scientists, throughout the remainder of the deployment.

To maintain this standard, room and materiel inspections were conducted weekly. The MAA would oversee crew room inspections, while the XO (accompanied by the Chief Scientist) would perform inspections of scientists' staterooms. Scientists were held to the same standard as the crew, keeping rooms clean, secured for sea, and without alteration to safety/emergency equipment. Maintaining a high standard of cleanliness throughout the deployment likely lessened the spread of illness throughout the ship and eased the room check-out process during hectic demobilization periods.

#### Science Party Meals

Scientists' meals are reimbursable to the Coast Guard at the end of each mission. The FS division supplies 3 meals a day, keeps track of the number of scientists attached to each mission, and routes a DD-1149 for reimbursement from the funding party. During AWS-12, a mistake was made in the accounting that resulted in an incorrect sum request. To ensure that this does not occur in the future, the Supply Officer will be included in the routing process for the reimbursement forms, to ensure proper checks and balances, before the form leaves the ship.

### **IV.B. Morale**

#### 2012 Line Crossing Ceremony

The Polar Bears put an extraordinary amount of planning into the event to make it memorable for each crew member and scientist that participated. Planning began several weeks out and involved brainstorming meetings attended by all Polar Bears and presided over by the Command Master Chief. Each event had a volunteer committee to plan, organize, decorate, and execute their event.

The Line Crossing Ceremony was a four day affair that began with the arrival of Davey Jones and his team of swashbuckling henchmen to officially welcome all Ice Worms and challenge their arrival into his Arctic Realm. The Ice Worms were split into teams for the duration of the week to prove they were worthy to join the ranks of the Polar Bears. Some of the planned events were a scavenger hunt, a skit night, and an Ice Worm morning workout session with the Polar Bears.



**Figure 5-1** Davey Jones' Henchmen, Arctic Line Crossing Ceremony.

The ceremony was a completely optional event. Strict rules govern against hazing in the Coast Guard and these rules were fully adhered to in the execution of this event. The vision of ceremony was camaraderie through shared experience. It is an opportunity to bring people together and get them working as a team.

The 2012 Line Crossing Ceremony during AWS-12-02 was a huge success for all involved. All those who participated in the event were rewarded with a Realm of the Arctic Circle Certificate.

#### Laundry Service

Morale offered laundry services for all the departing personnel during this deployment. Departing personnel were asked to donate \$5 to the morale fund in order for their linens to be washed by the Morale Committee. This program relied on volunteers and was used by the majority of departing personnel in each port call. Morale-provided laundry service generated \$293.00.

#### Tiger Cruise

HEALY requested permission from PACAREA to conduct an orientation cruise during the transit from Juneau, AK, to Seattle, WA, six weeks prior to the scheduled departure from Juneau (see Appendix 11 for the message traffic). Approval was returned from PACAREA four days later. In total, 32 family and friends of HEALY crew members joined us for the three day transit down the Alaskan and Canadian Inside Passages.

On the first day the guests participated in the required man overboard and the abandon ship drills. The abandon ship drill was a particular favorite of the crew as they were able to see their loved ones dress-up for the occasion in the fashionably orange “gumby” suits. That evening an

ice-breaker helped passengers mingle with games and questionnaires. The ice-breaker was not as successful as hoped because only a third or so of the guests attended. However, those who did come enjoyed themselves. Each night a movie was shown in the hangar with snacks and beverages provided by the Morale Committee. All were very well attended.

The second day consisted of several informative activities, including engineering tours, the HEALY 101 presentation given by the berthing coordinator, and the Nome presentation given by the CO. All three events were very popular with the guests. That evening was the HEALY classic event of bingo on the messdeck. There was a huge turn-out of crew members and guests alike.

The final full day of the transit consisted of mainly sight-seeing as HEALY transited the inside passage. There was also a presentation given by the DC's about GE and damage control basics, which was very informative and entertaining for the guests that attended. That evening a morale meal was held in the hangar with a movie of the patrol made by one of the crew members. The meal would have been a greater success if it had been a lunch instead of a dinner (so there was light to see the sights) and if it had more of a BBQ/cook-out feel with a grill on the flight deck versus having the food set up in the hangar. That evening consisted of another HEALY classic morale event, Team Trivia. This event wasn't as popular as the bingo, but there were several teams of guests and crew member alike that fought for the win.

Upon arriving onboard, all of the guests were given a HEALY Guest JQR to work on during the trip. If the guest completed their JQR, they earned an Honorary HEALY Crew Member certificate that was presented on the evening of the final day underway. The JQR consisted of several tasks designed to have the guest explore the ship and experience some of the jobs their crew member-hosts perform on a daily basis.



**Figure 5-2** Guests display their Honorary Crew Member certificates on the final night of the Tiger Cruise.

## **V. Supply**

### **V.A. General Mess**

#### Food Replenishment in Barrow

The food stores replenishment was set up prior to arrival in Barrow, AK, thru Food Services of America (FSA) who shipped the food to DECA warehouse in Kodiak, AK. Produce, bread and dairy were purchased. The stores were transported from Kodiak to Barrow via C-130; scheduling of the C-130 was arranged prior to the deployment via a request submitted thru Kodiak Aircraft Logistics/Support at (907) 487-5887 or email D17-PF-AirStaKodiakSkeds@uscg.mil. The C-130 unloaded the food stores at Era Aviation 24 hours prior to HEALY's arrival. The food was transferred with a long-bed pick-up truck (rental) two totes at a time to a local grocery store. Manpower for moving the totes was provided by arriving HEALY personnel. A deal was negotiated with the local grocery store to keep the food totes in their cooler overnight. The transport of 10 food totes took approximately 4 hours. The next morning all the totes were transported back to the airfield. A Bobcat skid steer loader was borrowed from the Barrow SAR facility to offload the totes from the truck. The total amount of purchase was \$14,169.98 and paid via government credit card.

### **V.B. Ship's Exchange**

During the two months prior to departure from Seattle, the Ship's Store stocked up on several new items including crew neck sweatshirts, sweatpants, stainless steel mugs, water bottles, and a number of new snack items. More than \$43,000 was spent stocking up the store for the AWS-12 deployment. The ship's store also worked with Morale to ensure the espresso machine was in full working order prior to the deployment. HEALY contracted Burgess Enterprises in Seattle to do a professional groom on the machine when the operators noticed the machine was not performing correctly. It is highly recommended to have Burgess Enterprises conduct an annual groom to prolong the life of the espresso machine, as HEALY does not have the tools or anyone with the intricate knowledge to properly maintain the expensive machine.

Between 31 July and 10 November, the Ship's Store sold \$24,250.15 of merchandise, half of which was apparel. This is the most the store has sold during a 3-month period in at least two years. Despite the large amount of sales, the ship's store stayed stocked in nearly everything ordered during the pre-deployment stock up. A couple of candy items, namely Hot Tamales, sold out before the end of the deployment, while a large number of AWS-12 t-shirts remained. Most size medium and large AWS-12 t-shirts were sold. The Ship's Store officer stocked more food from the Base Seattle Exchange than in years past and, as a result, the Ship's Store did not have to restock in Dutch Harbor, where everything is more expensive. Much of the leftover food will be returned to the Base Seattle Exchange for a refund, as they will reach their best buy date before they can be sold in the Ship's Store. The investment of effort associated with a large load out of ships store supplies is offset by the benefit of having a large stock available on hand. All items bought from the parent Exchange return a 5-percent profit to HEALY's Morale account and there is no profit margin for goods purchased on the economy in theatre.

## **VI. Medical**

### **VI.A. Significant Cases**

A chronological list of cases requiring significant treatment:

While in Dutch Harbor, a crew member developed an emergent dental problem that required a procedure. Member was flown via commercial air to Seattle, where he received treatment from the base clinic. Member returned to the ship in Barrow.

Prior to departure from Dutch Harbor for HLY-12-01, a civilian scientist sustained a laceration to her thumb while cutting open a box with a box opener. She was taken to the local clinic where she received 6 stitches. She returned to the ship with after care instructions and medications.

Two civilians were seen and treated for Upper Respiratory Infections. Patients were given antibiotics and decongestants. Follow-up visits showed improvement in symptoms.

## VII. Public Relations

All Press Releases for AWS-12 can be viewed in Appendix 8.

A D13 Public Affairs Petty Officer sailed aboard as we departed Seattle, WA, on 30 July. She departed via HH-65 in the vicinity of Port Angeles, WA, later that day.

Throughout the AWS-12 deployment, our Public Affairs Officer (PAO) wrote weekly updates aimed to entertain and inform friends and family of our progress and daily routine. Each update (“blog”) contained 1-2 pages of text and 4-5 pictures, each less than 150kb in size. The PAO emailed the blog material to Mr. Dave Cohoe of ESU Seattle to publish on HEALY’s USCG website ([www.uscg.mil/pacarea/cgchealy/aws12](http://www.uscg.mil/pacarea/cgchealy/aws12)) every Monday. See Appendix 9 for all AWS-12 updates.

The PAO received a request from a representative at the World Wildlife Fund for additional pictures and locations of the numerous walrus sightings mentioned on the blog. The corresponding email conversation extended to include media coverage on the record-breaking ice extent, with the representative asking for interviews and offering to facilitate media networking. At that point, the PAO turned to PACAREA for assistance in handling media inquiries, as connectivity limited HEALY’s ability to handle large scale media interest.

On three occasions during AWS-12, HEALY hosted representatives from Pipeline 39 production company for an upcoming Weather Channel show, *Breaking Ice*. Planning and logistics were coordinated via email and teleconference with the CG Motion Picture and Television Office. Cameramen were transported to and from the ship via small boat during both HEALY’s departure and return to homeport for docking footage and interviews. During HLY-12-02, HEALY hosted 2 production representatives for the entire mission. They stayed in CG berths on the 03 deck and were given full access to spaces throughout the mission. Filming hours were set between 0700 and 1800 during normal work days, giving the crew down time in the evenings and during holiday routine. All crew were informed of the camera’s presence and advised that they can request to not be filmed or have film of them erased at any time. These ground rules ensured that the media crew interacted with the crew in a professional and natural way.

Near the end of the trip, an interview request came to the PAO from a radio show “Base Alpha Kilo” for a member of the command to conduct a phone interview for a 2.5 minute show. Topics to be discussed would be general questions about the Coast Guard, the HEALY, and its missions. When we arrived in Dutch Harbor for mid-patrol break, the CO conducted the interview.

### Tours

Although HEALY was not open to the public during Dutch Harbor Mid-Patrol Breaks, several school groups requested tours. Tour guides were supplied from volunteers among the crew with the route as prescribed in the Cutter Organization Manual with adjustments to tailor it to the groups’ needs. Approximately 70 school children with their chaperones toured HEALY over two days.

HEALY opened for public tours in Juneau, AK, between 1300 and 1600 on Thursday and Friday, 01 - 02 November. The days and times were released via CG Public Affairs to the local news a few days before our arrival. Tour guides were supplied from volunteers among the crew and the tour was limited to the basic route as prescribed in the Cutter Organization Manual. 757 people turned out to tour HEALY's decks, making it an amazing success. Had we been able to offer tours over the weekend, the number of visitors would have been significantly higher, as there was great interest in icebreakers and CG missions in the Arctic.



**Figure 7-1** Two HEALY crew members lead a ship's tour for Dutch Harbor High School students.

**VIII. Personnel Embarked**

**VIII.A. Permanent Party**

<i>OFFICER PERSONNEL ABOARD</i>		<i>REMARKS</i>
CAPT	HAVLIK, BEVERLY A.	
CDR	TLAPA, GREGORY B.	
LCDR	CASS, JACOB L.	
LCDR	LOWRY, THOMAS S.	
LT	DUFRESNE, CHRISTOPHER P.	
LT	KEPLINGER, SWEETCHARITY M.	
LTJG	HOHNSTADT, SARAH E.	PCS DEPART 25AUG12
LTJG	STECKLE, EVAN J.	PCS DEPART 25AUG12
LTJG	VALDEZ, KRISTOPHER M.	
ENS	BOCK, SCOTT W.	PCS ARRIVE 25AUG12; LTJG 04NOV12
ENS	CUPRAK, TANYA M.	
ENS	FOLLMER, REBECCA F.	
ENS	FROOKS, ARTHUR E.	
ENS	SCHWARTZ, ERIC A.	
ENS	SHERIDAN, ERIN D.	LTJG 04NOV12
ENS	WOWSTCHUK, BOHDON M.	
CWO4	GALE, COLIN C.	
CWO2	RIVERA, JUAN J.	
CWO2	GOBLE, ROBERT E.	
<i>ENLISTED PERSONNEL ABOARD</i>		<i>REMARKS</i>
BMCM	SULLIVAN, TIMOTHY R.	
EMCM	FREUNDSCHUH, DAVID J.	
ETCM	LIPPMANN, MARCUS R.	
FSCS	GILBERT, PAMELA C.	
HSCS	APOLITO, BRIAN J.	
BMC	SHRUM, TROY L.	
DCC	LUDWICK, MICHEAL D.	
ETC	SWISHER, PAUL S.	
MKC	MALLOY, COREY R.	
MKC	PLASCENCIA, YANCY A.	MKCS 01NOV12
MSTC	STEWART, KIERAN M.	
OSC	HORNE, TIMOTHY M.	
SKC	GATEWOOD, GEOFFREY E.	
YNC	STORY, CHRISTOPHER A.	
BM1	CADDELL, GREGORY D.	
BM2	KAY, JEREMY R.	
BM2	BICHSEL, BLAINE M.	
BM3	DRESCHER, ADELYNN N.	
BM3	GANGL, BRIAN R.	
BM3	MILIAN, DIANA	
BM3	VOLKERSON, JONATHAN D.	
DC1	OROZCO, NICOLAS A.	
DC2	DOYON, JOEL L.	
DC2	MANDRIE, MONTARNO A.	

EM1	IRWIN, PAUL J.	
EM1	CLINE, RICHARD E.	
EM1	CLARK, PHILIP S.	
EM2	BROWN, MICHAEL T.	
EM2	ROBERTS, RYAN D.	
EM2	O'NEAL, OTIS L.	
EM3	ENNIS, RYAN L.	
ET1	CLIMACOSA, MARK A.	
ET2	COBB, MACON R.	
ET2	EMMONS, MATTHEW T.	
ET3	DELACH, DONALD J.	PCS ARRIVE 30SEP12
ET3	VALDIVIA, ALEXANDRO N.	
FS1	MULFORD, ALBERT M.	
FS2	BONDURANT, DOMINIQUE L.	
FS3	ARNDT, GARY T.	
FS3	DUNKIN, KASEY C.	
FS3	MCCALLUM, MICHAEL C.	PCS ARRIVE 25AUG12
IT1	BIRD, COLIN A.	
IT1	ORELLANA, GERARDO A.	
MK1	LEMAS, TIMOTHY A.	
MK1	PORTER, MARTIN H.	
MK1	WADA, MICHAEL J.	
MK2	MARTIN, ROBERT E.	
MK2	SCHUMACHER, CHRISTOPHER A.	
MK2	SIPLE, ZACHARY A.	
MK3	BOGDANOFF, MICAH J.	PCS DEPART 25AUG12
MK3	FORD, CHRISTOPHER W.	
MK3	MCCARTHY, MARY E.	
MK3	OSBURN, SAMUEL B.	FNMK 17SEP12
MK3	STEVENS, DANIELLE R.	
MST1	DEMAREST, STEVEN R.	
MST2	SHORT, SAMMY E.	
MST3	ADAMS, ELIZABETH I.	
MST3	CURTAZ, SHANNON M.	
SK2	GONZALES, ZYNOEL	
SK3	BOOTH, MATTHEW C.	
FNDC	BRINDLE, KEITH A.	DC3 01SEP12
FN	BUSHONG, KIRSTEN C.	
FN	LINDEN, ALEXANDRIA A.	
FN	MCNEACE, TYLER K.	
FN	TORRES, JESSE M.	
SN	CASON, ALEXANDER S.	
SN	DOVE, WILLIAM H.	
SN	ELLIS, GIANNA R.	
SN	HERD, MICHELLE U.	
SN	RAMSEY, ELII J.	
SN	RUPP, MATTHEW D.	SNBM 20SEP12
SN	WELDING, BRENDA T.	

Table 8-1 Permanent Party Embarked

### VIII.B. Temporary Assigned Duty (TAD) Personnel

<i>OFFICER PERSONNEL TDY</i>		<i>REMARKS</i>
CDR	RORSTAD, MICHAEL T.	TDY 30JUL12 – 09AUG12
LT	FREISMUTH, THOMAS (USN)	TDY 25AUG12 – 27SEP12
LTJG	PATRIA, NICK (USN)	TDY 25AUG12 – 27SEP12
ENS	GARCIA, PAUL A.	TDY 30JUL12 – 25AUG12
ENS	GREENDYK, JAMIE Z.	TDY 25AUG12 – 01NOV12
<i>ENLISTED PERSONNEL TDY</i>		<i>REMARKS</i>
MKCM	GRUSZKOWSKI, ROBERT J.	TDY 25OCT12 – 10NOV12
MKCS	LARSEN, BRUCE J.	TDY 25OCT12 – 10NOV12
MKC	RILEY, SHANNON D.	TDY 27SEP12 – 05NOV12
MSTC	AQUINO, KAREN A.	TDY 30JUL12 – 25AUG12
BM1	SKINNER, JOHN N.	TDY 27SEP12 – 10NOV12
DC2	MCNEIL, ALBERT A.	TDY 27SEP12 – 05NOV12
DC3	COLLUM, COURTNEY A.	TDY 27SEP12 – 05NOV12
EM1	HURTADO, DANIEL E.	TDY 30JUL12 – 09AUG12
EM1	IRWIN, PAUL J.	TDY 30JUL12 – 09AUG12
EM1	OLSON, JAMES K.	TDY 30JUL12 – 09AUG12 TDY 27SEP12 – 05NOV12
EM2	SAMAYOA, MARVIN A.	TDY 30JUL12 – 09AUG12
EM3	DIAZ, MICHAEL S.	TDY 27SEP12 – 05NOV12
FS3	KOENIG, CHRISTOPHER A.	TDY 30JUL12 – 25AUG12
HS2	AINSWORTH, MARVIN A.	TDY 25OCT12 – 10NOV12
IT1	WHITTY, ALEXANDER J.	TDY 27SEP12 – 01NOV12
MK2	SMITH, COREY N.	TDY 27SEP12 – 05NOV12
MK3	CARTAGENA, HECTOR A.	TDY 27SEP12 – 05NOV12

Table 8-2 TDY Embarked

### VIII.C. Very Important Persons (VIPs) and Visitors

<i>VISITORS</i>	<i>REMARKS</i>
WITT, DON	05 – 25 Aug; General Electric
REED, CLIVE	25 Aug – 26 Oct; General Electric
GIERS, WILLIAM	USCG Aux; 30 Sep – 16 Nov
OH, EUGENE	28 – 31 Oct; STEAM TEAM
BYRD, KY	06 – 10 Nov; TIGER CRUISE
BROSSARD, CHELSEA	06 – 10 Nov; TIGER CRUISE
CASON, SAMANTHA	06 – 10 Nov; TIGER CRUISE
CASS, JERRY	06 – 10 Nov; TIGER CRUISE
CLINE, LISA	06 – 10 Nov; TIGER CRUISE
COLLINS, GRAYSON	06 – 10 Nov; TIGER CRUISE
CUPRAK, RENEE	06 – 10 Nov; TIGER CRUISE
DICKEY, ERIC	06 – 10 Nov; TIGER CRUISE
DORE, CHERYL	06 – 10 Nov; TIGER CRUISE
DOYON, KATHLEEN	06 – 10 Nov; TIGER CRUISE
FOLLMER, PAMELA	06 – 10 Nov; TIGER CRUISE
FROOKS, SUSAN	06 – 10 Nov; TIGER CRUISE

GANGL, JOAN	06 – 10 Nov; TIGER CRUISE
GANGL, LEE	06 – 10 Nov; TIGER CRUISE
GORDON, ERICA	06 – 10 Nov; TIGER CRUISE
GORDON, RANDY	06 – 10 Nov; TIGER CRUISE
HAAGENSEN, SANDRA	06 – 10 Nov; TIGER CRUISE
HORNE, KATE	06 – 10 Nov; TIGER CRUISE
MCDONALD, CHANE	06 – 10 Nov; TIGER CRUISE
MORALES, RICHARD	06 – 10 Nov; TIGER CRUISE
NEEDHAM, DAN	06 – 10 Nov; TIGER CRUISE
NEEDHAM, MIKE	06 – 10 Nov; TIGER CRUISE
RAMSEY, ELLAURA	06 – 10 Nov; TIGER CRUISE
SHRUM, APRIL	06 – 10 Nov; TIGER CRUISE
SIPLE, JENNA	06 – 10 Nov; TIGER CRUISE
STEWART, KATHERINE	06 – 10 Nov; TIGER CRUISE
STORY, KRISTEN	06 – 10 Nov; TIGER CRUISE
SULLIVAN, STEPHANIE	06 – 10 Nov; TIGER CRUISE
TLAPA, L.J.	06 – 10 Nov; TIGER CRUISE
TORRES, DEE	06 – 10 Nov; TIGER CRUISE
VALDEZ, MARIA	06 – 10 Nov; TIGER CRUISE
VERESCHAGIN, LAINA	06 – 10 Nov; TIGER CRUISE

Table 8-3 Visitors Embarked

#### VIII.D. Science Parties

HLY-12-01

Last Name	First Name	Institution	Position	Date on	Date off
Crowley	Heather	Bureau of Ocean Energy Management-AK	Scientist	5-Aug-12	25-Aug-12
Cooper	Lee	Chesapeake Bio Lab/UMD Center Enviro Sci	Co-Chief Scientist	5-Aug-12	25-Aug-12
Grebmeier	Jacqueline	Chesapeake Bio Lab/UMD Center Enviro Sci	Chief Scientist	5-Aug-12	25-Aug-12
Johnson	Christian	Chesapeake Bio Lab/UMD Center Enviro Sci	Technician	5-Aug-12	25-Aug-12
Marshall	Kathleen	Chesapeake Bio Lab/UMD Center Enviro Sci	Technician	5-Aug-12	25-Aug-12
Zhang	Mengjie	Chesapeake Bio Lab/UMD Center Enviro Sci	Graduate Student	5-Aug-12	25-Aug-12
Fox	Austin	Florida Institute of Technology	Graduate Student	5-Aug-12	25-Aug-12
O'Neill	Brenna	Florida Institute of Technology	Graduate Student	5-Aug-12	25-Aug-12
Trefry	John	Florida Institute of Technology	Scientist	5-Aug-12	25-Aug-12
Trocine	Robert	Florida Institute of Technology	Technician	5-Aug-12	25-Aug-12
Wheeler	Deana	JC Parks Elementary School, LaPlata, MD	Educator	5-Aug-12	25-Aug-12
Roberts	Steve	National Center for Atmospheric Research	Technician	30-Jul-12	
Moore	Sue	NOAA-Science & Technology, Seattle	Scientist	5-Aug-12	25-Aug-12

Harvey	Rodger	Old Dominion University	Scientist	5-Aug-12	25-Aug-12
Muniak	Tetiana	Old Dominion University	Graduate Student	5-Aug-12	25-Aug-12
Pleuthner	Rachel	Old Dominion University	Technician	5-Aug-12	25-Aug-12
Taylor	Karen	Old Dominion University	Technician	5-Aug-12	25-Aug-12
Zhu	Guopong	Old Dominion University	Scientist	5-Aug-12	25-Aug-12
Martin	Toby	Oregon State University	Technician	30-Jul-12	25-Aug-12
Hiller	Scott	STARC-Scripps Institution of Oceanography	Technician	30-Jul-12	25-Aug-12
Konar	Brenda	University of Alaska Fairbanks	Scientist	5-Aug-12	25-Aug-12
Powell	Kimberly	University of Alaska Fairbanks	Graduate Student	5-Aug-12	25-Aug-12
Ravelo	Alexandra	University of Alaska Fairbanks	Graduate Student	5-Aug-12	25-Aug-12
Leech	David	University of Alaska Fairbanks	Technician	5-Aug-12	22-Aug-12
McEachen	Heather	University of Alaska Fairbanks	Graduate Student	5-Aug-12	25-Aug-12
Fang	Ying-Chih	University of Alaska Fairbanks	Graduate Student	5-Aug-12	25-Aug-12
Weingartner	Tom	University of Alaska Fairbanks	Scientist	5-Aug-12	25-Aug-12
Dunton	Kenneth	UTX Marine Science Inst/UTX Austin	Scientist	5-Aug-12	25-Aug-12
Schonberg	Susan	UTX Marine Science Inst/UTX Austin	Technician	5-Aug-12	25-Aug-12
Bucolo	Phillip	UTX Marine Science Inst/UTX Austin	Scientist	5-Aug-12	25-Aug-12
Saupe	Susan	UTX Marine Science Inst/UTX Austin	Technician	5-Aug-12	25-Aug-12
Young	Jordann	UTX Marine Science Inst/UTX Austin	Graduate Student	5-Aug-12	25-Aug-12
Sullivan	Johnny	UTX Marine Science Inst/UTX Austin	Graduate Student	5-Aug-12	25-Aug-12
Reedy	Martin	US Fish and Wildlife Service, AK	Technician	5-Aug-12	25-Aug-12
Kuletz	Kathy	US Fish and Wildlife Service, AK	Scientist	5-Aug-12	25-Aug-12
Gemery	Laura	US Geological Survey, Reston, VA	CBL (USGS)	5-Aug-12	25-Aug-12
Ashjian	Carin	Woods Hole Oceanographic Institution	Scientist	5-Aug-12	22-Aug-12
Alatalo	Phillip	Woods Hole Oceanographic Institution	Technician	5-Aug-12	25-Aug-12

**Table 8-4** Science Personnel Embarked, HLY-12-01.

HLY-12-02

Last Name	First Name	Institution	Position	Date on	Date off
Farrell	John	ARC	Scientist	25-Aug-12	28-Sep-12
Smith	Mabel	CH2MHILL	Mammal Observer	25-Aug-12	28-Sep-12
Dale	Chayes	Lamont-Doherty Earth Observatory	Scientist	25-Aug-12	28-Sep-12
Roberts	Steve	LDEO/UCAR	Scientist	25-Aug-12	28-Sep-12
Reyes	Joshua	Long Beach City College / MATE	Graduate Student	25-Aug-12	28-Sep-12

Morris	Giovanni	NAVO	Scientist	25-Aug-12	28-Sep-12
Price	Monica	NAVO	Scientist	25-Aug-12	28-Sep-12
Lim	Elliot	NGDC	Scientist	25-Aug-12	28-Sep-12
McQuinn	Evan	NGDC	Scientist	25-Aug-12	28-Sep-12
Clemente-Colon	Pablo	National Ice Center	Scientist	25-Aug-12	28-Sep-12
Zib	Bejamin	National Ice Center	Ice Analyst	25-Aug-12	28-Sep-12
Armstrong, CAPT	Andrew	NOAA	Asst. Chief Scientist	25-Aug-12	28-Sep-12
Rice	Glen	NOAA	Hydrographer	25-Aug-12	28-Sep-12
Brumley	Kelley	Stanford University	Graduate Student	25-Aug-12	28-Sep-12
Ayre	Matthew	Sunderland University	Graduate Student	25-Aug-12	28-Sep-12
Knorr	Paul	USGS	Scientist	25-Aug-12	28-Sep-12
McMullen	Kate	USGS	Sample Curator	25-Aug-12	28-Sep-12
Robbins	Lisa	USGS	Scientist	25-Aug-12	28-Sep-12
Wynne	Jonathan	USGS/University of South Florida	Scientist	25-Aug-12	28-Sep-12
Freismuth, LT	Thomas	USN	Hydrographer	25-Aug-12	28-Sep-12
McLaren, AG1	Chad	USN	Ice Analyst	25-Aug-12	28-Sep-12
Patria, LTJG	Nick	USN	Hydrographer	25-Aug-12	28-Sep-12
Moore	Barbara	US State Dept	Scientist	25-Aug-12	28-Sep-12
Coakley	Bernard	University of Alaska	Scientist	25-Aug-12	28-Sep-12
Arsenault	Roland	University of New Hampshire	Scientist	25-Aug-12	28-Sep-12
Calder	Brian	University of New Hampshire	Scientist	25-Aug-12	28-Sep-12
Englert	Chris	University of New Hampshire	Graduate Student	25-Aug-12	28-Sep-12
Flinders	Ashston	University of New Hampshire	Graduate Student	25-Aug-12	28-Sep-12
Jerram	Kevin	University of New Hampshire	Graduate Student	25-Aug-12	28-Sep-12
Mayer	Larry	University of New Hampshire	Chief Scientist	25-Aug-12	28-Sep-12
Massetti	Giuseppe	University of New Hampshire	Graduate Student	25-Aug-12	28-Sep-12
Sowers	Derek	University of New Hampshire	Graduate Student	25-Aug-12	28-Sep-12
Onac	Bogdon	University of South Florida	Scientist	25-Aug-12	28-Sep-12

**Table 8-5** Science Personnel Embarked, HLY-12-02.

**HLY-12-03**

Last Name	First Name	Institution	Position	Date on	Date off
Pickart	Robert	WHOI	Chief Scientist	4-Oct-12	26-Oct-12
Mathis	Jeremy	University of Alaska Fairbanks	Co-Chief Scientist	4-Oct-12	26-Oct-12
Kemp	John	WHOI	Mooring Tech	4-Oct-12	26-Oct-12

Ryder	Jim	WHOI	Mooring Tech	4-Oct-12	26-Oct-12
Bahr	Frank	WHOI	VMADCP/Instrument Tech	4-Oct-12	26-Oct-12
Brugler	Eric	WHOI	CTD Watchstander	4-Oct-12	26-Oct-12
Jakoboski	Julie	WHOI	CTD Watchstander	4-Oct-12	26-Oct-12
Kent	Kristin	WHOI	CTD Watchstander	4-Oct-12	26-Oct-12
von Appen	Wilken	WHOI	Student	4-Oct-12	26-Oct-12
Cross	Jessica	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Reisdorph	Stacey	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Hauri	Claudine	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Patsavas	Mark	University of Southern Florida	Water Chemistry	4-Oct-12	26-Oct-12
Stockwell	Dean	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Yang	Bo	University of Southern Florida	Water Chemistry	4-Oct-12	26-Oct-12
Whitty	Julie	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Oxtoby	Laura	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Blount	Monica	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Tynan	Pascual Eithne	University of Alaska Fairbanks	Water Chemistry	4-Oct-12	26-Oct-12
Juranek	Laurie	Oregon State	Water Chemistry	4-Oct-12	26-Oct-12
Goni	Miguel	Oregon State	Water Chemistry	4-Oct-12	26-Oct-12
Gong	Donglai	WHOI	Glider	4-Oct-12	26-Oct-12
Nelson	Arvin	Monterey Peninsula College	Glider	4-Oct-12	26-Oct-12
McKee	Terry	WHOI	CTD Data Processor	4-Oct-12	26-Oct-12
Casso	Michael	USGS	Methane	4-Oct-12	26-Oct-12
Griffin	Sheila	UCI	Radiocarbon	4-Oct-12	26-Oct-12
Roberts	Steve	UCAR	Science Support	4-Oct-12	26-Oct-12
Martin	Toby	Oregon State	Science Support	4-Oct-12	26-Oct-12
Arnesen	Erik	Oregon State	Science Support	4-Oct-12	26-Oct-12
Egyptien	Joe	Freelance Journalist	Outreach	4-Oct-12	26-Oct-12
Wieland	Patrick	Freelance Journalist	Outreach	4-Oct-12	26-Oct-12
Forcucci	David	USCG	Outreach	4-Oct-12	26-Oct-12
Small	Robert	NGA	Cartographer	4-Oct-12	26-Oct-12
Fisher	Rick	NGA	Cartographer	4-Oct-12	26-Oct-12

**Table 8-6** Science Personnel Embarked, HLY-12-03

# Appendix 1: CGC HEALY Deployment Schedule AWS-12

CGC Healy Deployment Schedule for FY 2012  
Revision Date: 8/3/2012

Revision 31

#	Start Date	End Date	Activity	Days	DAFHP	IPAFHP	UW	IP Ops	IP Stby	Port Call	Maintenance	Notes
1	1 Oct (Sat)	1 Oct (Sat)	Inport Dutch harbor - Fueling, Logistics & Liberty	1	1	1			1	1		
2	2 Oct (Sun)	2 Oct (Sun)	Inport Dutch Harbor - mob HLY-11-03	1	1	1		1				
3	3 Oct (Mon)	27 Oct (Thu)	U/W HLY-11-03 Moorings (u/w 0800 10/3, moor 1600 10/27)	25	25		25					1140NM / 95hrs @ 12kts (3d 23hrs) Barrow - Dutch
4	28 Oct (Fri)	28 Oct (Fri)	Inport Dutch Harbor - dmo HLY-11-03 & Fueling	1	1	1		1				
5	29 Oct (Sat)	31 Oct (Mon)	U/W enroute Seward (u/w 1600 10/29)	3	3		3					722 NM / 60hrs @ 12kts (2d 12hrs)
6	1 Nov (Tue)	5 Nov (Sat)	Inport MPB Seward (moor 0900 11/1)	5	5	5			5	5		
7	6 Nov (Sun)	6 Nov (Sun)	Inport Seward - mob HLY-11-04	1	1	1		1				
8	7 Nov (Mon)	17 Dec (Sat)	U/W HLY-12-01 - Winter Cruise (u/w 1000 11/7, moor 1400 12/17)	41	41		41					
9	18 Dec (Sun)	3 Jan (Tue)	Inport Dutch Harbor - dmo HLY-12-01 & prep/mob HLY-11-05	17	17	17		2	15			
10	4 Jan (Wed)	29 Jan (Sun)	U/W HLY-11-05 Nome Energy Support Mission	26	26		26					
11	30 Jan (Mon)	3 Feb (Sun)	U/W Enroute Seattle (moor 1000 2/5)	7	6		7					1740 NM / 146hrs @ 12kts (8d 1hrs) + Wx & SAR divert
12	6 Feb (Mon)	28 Feb (Mon)	Standdown/ IPP Groom/MPCMS Upgrade start	15							15	MPCMS upgrade DO S to Windows 06Feb-03Jun
13	21 Feb (Tue)	10 May (Thu)	2012 Dockside Availability/IPP Groom/MPCMS Upgrade (cont'd)	80							80	23-27Apr: CAV/visit
14	11 May (Fri)	3 Jun (Sun)	Post-Dockside Maint/winch groom/MPCMS Upgrade (cont'd)	24							24	28May-30May: AVCERT Inspect; 01Jun: Fast Cruise
15	4 Jun (Mon)	10 Jun (Sun)	U/W Sea Trials & Shake-down (u/w 1000 6/4)	7	5	1	5	1	1			08Jun: Manchester Fuel; 09Jun: Orientation Cruise
16	11 Jun (Mon)	15 Jun (Fri)	RFS ATG (u/w 1000 6/13, moor Victoria 1600 6/15)	5	3		3	2				
17	16 Jun (Sat)	16 Jun (Sat)	Inport Victoria, BC	1	1	1			1	1		
18	17 Jun (Sun)	17 Jun (Sun)	U/W Enroute Seattle (u/w 1000, moor 1600)	1			1					
19	18 Jun (Mon)	18 Jun (Mon)	Inport Halo STAN Preps	1								
20	19 Jun (Tue)	22 Jun (Fri)	Halo STAN (u/w 1000 6/21, moor 0900 6/22)	4	1		2	2				19Jun - External Exchange Audit
21	23 Jun (Sat)	29 Jul (Sun)	Pre-Deployment Preps/topside paint work/NATO N visit	37							37	
22	30 Jul (Mon)	4 Aug (Sat)	U/W Enroute Dutch Harbor (u/w 1300 7/30)	6	6		6					1740 NM / 146hrs @ 12kts (8d 1hrs)
23	5 Aug (Sun)	8 Aug (Wed)	Inport Dutch Harbor - mob BOEM (moor 04 AUG PM, u/w 09 AUG PM)	4	4	4	1	4				BS Lt to mob BOEM - Extension due to shaft seal repairs
24	9 Aug (Thu)	11 Aug (Sat)	U/W transit north to BOEM Mission	3	3		3					1140NM / 95hrs @ 12kts (3d 23hrs)
25	12 Aug (Sun)	24 Aug (Fri)	U/W BOEM	13	13		13					13 day mission - shortened due to shaft seal repairs in Dutch
26	25 Aug (Sat)	25 Aug (Sat)	U/W offshore Barrow - dmo BOEM / mob ECS	1	1	1		1				
27	26 Aug (Sun)	23 Sep (Sun)	U/W ECS	29	29		29					29 day mission
28	24 Sep (Mon)	27 Sep (Thu)	U/W Enroute Dutch Harbor (moor 1600 9/27)	4	4		4					1140NM / 95hrs @ 12kts (3d 23hrs)
29	28 Sep (Fri)	4 Oct (Thu)	Inport Dutch Harbor - dmo ECS/fueling, MPB & mob Moorings	7	7	7		1	6	6		
30	5 Oct (Fri)	8 Oct (Mon)	U/W transit North to North Slope Mooring Mission (u/w 1000 10/6)	4	4		4					1140NM / 95hrs @ 12kts (3d 23hrs)
31	9 Oct (Tue)	21 Oct (Sun)	U/W North Slope Moorings	13	13		13					13 day mission
32	22 Oct (Mon)	25 Oct (Thu)	U/W transit South to Dutch Harbor (moor 1400 10/25)	4	4		4					1140NM / 95hrs @ 12kts (3d 23hrs)
33	26 Oct (Fri)	26 Oct (Fri)	Inport Dutch Harbor - dmo North Slope Moorings	1	1	1			1	1		
34	27 Oct (Sat)	31 Oct (Wed)	U/W Enroute Juneau (u/w 1600 10/27, moor 1000 10/31)	5	5		5					1220NM / 101 hrs @ 12kts (4d 6hrs)
35	1 Nov (Thu)	3 Nov (Sat)	Inport Juneau - Logistics & Liberty	3	3	3		3	3			
36	4 Nov (Sun)	6 Nov (Tue)	Inport Juneau - CART	3	3	3		3				
37	7 Nov (Wed)	10 Nov (Sat)	U/W Enroute Seattle (u/w 1000 11/7, moor 1000 11/10)	4	4		4					950 NM / 73hrs @ 13.5 kts (2d 23hrs)
38	11 Nov (Sun)	26 Nov (Mon)	Standdown & Demob	16							16	
39	27 Nov (Tue)	2 Dec (Sun)	Inport Maintenance - Drydock & TSTA Preps	6							6	
40	3 Dec (Mon)	21 Dec (Fri)	TSTA	19			13		6			
41	22 Dec (Sat)	6 Jan (Sun)	Drydock Preps	16							16	
42	7 Jan (Mon)	3 Jan (Sun)	Drydock 2013	147							147	
43	3 Jan (Mon)	16 Jan (Sun)	Post-Dockside Maint/Science Equipment groom	14							14	
44	17 Jan (Mon)	30 Jan (Sun)	U/W Shakedown	14	9		10		4			
45	1 Jul (Mon)	21 Jul (Sun)	Pre-Deployment Preps	21							21	
46	FY 2012 (01 Oct 2011 to 30 Sep 2012) Totals			366	200	35	170	14	26	10	156	
47	AWS-12 Deployment (30 Jul - 10 Nov 2012) Totals			104	104	18	87	8	10	10	0	

## Appendix 2: OPORD, DEPSUM (UNCLAS/FOUO)

### A. Operations Order

R 271627Z JUN 12  
FM COMPACAREA COGARD ALAMEDA CA//PAC-3//  
TO USCGC HEALY  
INFO COMDT COGARD WASHINGTON  
DC//CG-541/CG-751/CG-311/CG-5523/DCMS-53//  
COMPACAREA COGARD ALAMEDA CA//PAC-5/PAC-6/PAC-2//  
COMLANTAREA COGARD PORTSMOUTH VA//LANT-30//  
COMCOGARD SFLC BALTIMORE MD//LRE//  
COMPACFLT PEARL HARBOR HI//N2/N3/N5/N6//  
HQ PACAF HICKAM AFB HI//LGT/LGTA/PAMO//  
COMCOGARD FORCECOM NORFOLK VA  
CCGDTHIRTEEN SEATTLE WA//DR/DRMC//  
CCGDSEVENTEEN JUNEAU AK//DR/DRMC//  
COGARD ESU ALAMEDA CA  
COGARD BASE SEATTLE WA  
COGARD NESU SEATTLE WA  
COGARD AIRSTA KODIAK AK  
COMCOGARD AIRSTA SFO PORT ANGELES WA  
COGARD MIFC PAC ALAMEDA CA  
COMCOGARD SECTOR ANCHORAGE AK  
USCGC POLAR STAR  
NSF POLAR WASHINGTON DC//OPP//  
COGARD CAMSPAC PT REYES CA  
NAVICECEN SUITLAND MD  
COGARD BASE KODIAK AK  
USCGC BERTHOLF  
USCGC ALEX HALEY  
USCGC HICKORY  
USCGC MAPLE  
USCGC SPAR  
USCGC SYCAMORE  
BT  
UNCLAS FOUO //N03170//  
SUBJ: HEALY ARCTIC WEST SUMMER 2012 (AWS-12) OPERATIONS ORDER  
A. COMPACAREA 191614Z JAN 07, DAILY OPSUM FORMAT UPDATE  
B. COMPACAREA 262159Z FEB 09, UPDATE TO DAILY OPSUM REPORTING REQUIREMENTS  
C. COMPACAREA SOP  
D. COMPACAREA 031850Z JAN 03, AT/FP AND FORCE PROTECTION CONDITIONS  
E. COMPACAREA 062033Z OCT 11, PACAREA MAJOR CUTTER TACON SHIFT GUIDANCE  
1. Situation: This OPORD covers three science research missions.  
2. Mission: HEALY will deploy for 103 days in support of three Arctic Science research missions and CART.  
3. Execution:  
3.A. COMPACAREA will maintain OPCODE and ADCON throughout the deployment. HEALY will shift TACON to D17 when operating within District AOR boundaries.  
3.B. COMCOGARD SFLC (LRE-PL) will provide logistics, engineering, and admin support for HEALY as required.  
3.C. HEALY shall:  
3.C.1. Conduct subj mission IAW the following itinerary as operations

and weather permit:

23Jun-29Jul: I/P H/P predeployment preps.

30Jul-04Aug: U/W E/R Dutch Hbr, AK.

05Aug: I/P Dutch Hbr, AK, mob HLY-12-01 COMIDA Hannah Shoal.

06Aug-08Aug: U/W transit.

09-24Aug: U/W HLY-12-01 COMIDA Hannah Shoal.

25Aug: U/W IVO Barrow, AK. demob HLY-12-01, mob HLY-12-02 ECS.

26Aug-23Sep: U/W HLY-12-02 ECS.

24Sep-27Sep: U/W transit.

28Sep-04Oct: I/P Dutch Hbr, AK, logistics, demob HLY-12-02 ECS, mob HLY-12-03 North Slope Moorings, MPB.

05Oct-08Oct: U/W transit.

09-21Oct: U/W NLY-12-03 North Slope Mooring.

22Oct-25Oct: U/W transit.

26Oct: I/P Dutch Hbr, AK, demob HLY-12-03 North Slope Mooring, BSL.

27-31Oct: U/W transit.

01-03Nov: I/P Juneau, AK, MPB

04-06Nov: I/P Juneau, AK, CART.

07-09 Nov: U/W transit.

20 Nov: RTHP, Seattle, WA.

4. Anticipate operations with unfamiliar helicopters. A waiver request pends the identification of the aviation service provider.

5. Report operations per Ref B and C.

6. Diving operations are not authorized and are not scheduled for the science mission.

7. Ship provided support: while deployed, Districts may provide HEALY with tasking that does not interfere with assigned ops, TACON changes or homeport rtn dates. If tasking is provided, info PACAREA.

Districts are encouraged to pass info regarding high threat areas and make applicable intel and sighting reports as operations allow.

8. Coordinating instructions:

8.A. Dirlauth Alcon.

8.B. This order is effective upon receipt and canceled upon receipt of a revised message or completion of the mission.

9. Command and signal:

9.A. Comms IAW standard communications procedures in annex K of ref D and as amplified by PACAREA (PAC-6). Current INMARSAT/Iridium policy messages are provided on the PAC-3 intranet:

<http://cgweb.pacarea.uscg.mil/pacareapo/pohomepage.htm> then click the policy messages link.

9.B. OPCON POC is the PACAREA Command Center (510) 437-3701.

9.C. Maintain unit sailing lists with TACON, copy to PACAREA (PAC-3).

10. Maintain FPCON Alpha following guidance in ref E.

11. PACAREA POC: LCDR Doug Wyatt at (510) 437-6612, or douglas.e.wyatt(AT)uscg.mil

BT

NNNN

## B. Deployment Summary

R 101800Z NOV 12

FM USCGC HEALY

TO COMPACAREA COGARD ALAMEDA CA//PAC-3/PAC-2/PAC-6/PAC-35//

INFO COMDT COGARD WASHINGTON DC//CG-751/CG-711/CG-WWM//

COMLANTAREA COGARD PORTSMOUTH VA//LANT-30//

CCGDSEVENTEEN JUNEAU AK//DR/DRE/DRM/DRI//

CCGDSEVEN MIAMI FL//DPA//

COMCOGARD SFLC BALTIMORE MD//LRE//

COGARD CAMSPAC PT REYES CA

NSF POLAR WASHINGTON DC

COGARD MIFC PAC ALAMEDA CA

USCGC BERTHOLF

USCGC MELLON

USCGC MIDGETT

USCGC MUNRO

USCGC RUSH

USCGC SHERMAN

USCGC ALEX HALEY

USCGC POLAR STAR

COGARD AIRSTA KODIAK AK

COGARD AIRSTA SITKA AK

COGARD AIRSTA PORT ANGELES WA

COGARD BSU KODIAK AK

COGARD BSU KETCHIKAN AK

COGARD BASE SEATTLE WA

COGARD NESU SEATTLE WA

COGARD ESU SEATTLE WA

HSWL FO CAPE MAY NJ

BT

UNCLAS FOUO //N16240//

SUBJ: USCGC HEALY DEPLOYMENT SUMMARY 30JUL12 - 10NOV12

A. COMPACAREA SOP, ANNEX R, APPENDIX 5

B. COMPACAREA 271627Z JUN 12, ARCTIC WEST SUMMER 2012 (AWS-12) OPERATIONS ORDER

C. COMDT (CG-711) 071239 AUG 12, WAIVER TO CONDUCT FLIGHT OPERATIONS WITH NON-USCG HELOS

1. PURPOSE OF DEPLOYMENT: ARCTIC WEST SUMMER ISO SCIENCE.

A. SHAKEDOWN: 7 DAY TRNG PERIOD. (04 JUN - 10 JUN)

B. RFS: 5 DAY TRNG PERIOD. (11 JUN - 15 JUN)

C. AVSTAN: 4 DAY CERTIFICATION PERIOD. (19 JUN - 22 JUN)

D. N/B TRANSIT: 6 DAY TRANSIT, 4 DAYS INPORT DUTCH HARBOR, 3 DAY TRANSIT TO CHUKCHI SEA. (30 JUL - 11 AUG)

E. AWS-12-01: 13 DAY BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM). (12 AUG - 24 AUG)

F. DMO AWS-12-01 AND MOB AWS-12-02 IVO BARROW: 1 DAY (25 AUG)

G. AWS-12-02: 29 DAY ARCTIC EXTENDED CONTINENTAL SHELF. (26 AUG - 23 SEP)

H. TRANSIT AND SCIENCE PARTY CHANGE OUT: 4 DAY TRANSIT, 7 DAYS INPORT DUTCH HARBOR, 4 DAY TRANSIT TO CHUKCHI SEA. (24 SEP - 08 OCT)

I. AWS-12-03: 13 DAY NORTH SLOPE MOORINGS. (09 OCT - 21 OCT)

- J. S/B TRANSIT: 3 DAY TRANSIT TO DUTCH HARBOR, 2 DAYS INPORT DUTCH HARBOR, 5 DAY TRANSIT TO JUNEAU, 6 DAYS INPORT JUNEAU FOR SMART/CART, 4 DAY TRANSIT TO SEATTLE. (22 OCT - 10 NOV)
2. DEPLOYMENT STATISTICS.
    - A. DEPARTED HOMEPORT FOR AWS-12: 30JUL12
    - B. RETURNED HOMEPORT: 10NOV12
    - C. DAFHP THIS PATROL: 16 (SHAKEDOWN, RFS AND STAN) AND 104 (AWS- 12)
    - D. DAFHP FY12: 204
    - E. DAFHP FY13: 41
    - F. DISTANCE TRAVELED FOR AWS-12: 18,100 NM
    - G. DAYS IN HIGH THREAT AREA: 0
    - H. TRANSIT DAYS: 30
    - I. UNPLANNED INPORT DAYS: 4
    - J. PLANNED INPORT DAYS: 15
  3. PORT CALLS.
    - A. DUTCH HARBOR, AK, 05 AUG - 08 AUG, REPAIR SHAFT SEAL, FUELING, SCIENCE GEAR ONLOAD AND MOBILIZATION (MOB) OF AWS-12-01.
    - B. DUTCH HARBOR, AK, 28 SEP - 04 OCT, FUELING, LOGISTICS, SCIENCE GEAR OFF/ONLOAD, DEOMOBILIZATION (DMO) OF AWS-12-02, MOB OF AWS-12-03 AND CREW LIBERTY/MID-PATROL BREAK.
    - C. DUTCH HARBOR, AK, 25-26 OCT, SCIENCE GEAR OFFLOAD AND DMO OF AWS-12-03.
    - D. JUNEAU, AK, 01 NOV - 06 NOV, SMART/CART AND CREW LIBERTY/MID-PATROL BREAK.
  4. LAW ENFORCEMENT STATISTICS: NTR.
  5. SAR STATISTICS: NTR.
  6. SCIENCE STATISTICS:
    - A. SCIENCE CASTS: 158 CONDUCTIVITY-TEMPERATURE-DEPTH, 75 EXPENDABLE BATHYMETRIC THERMISTOR, 33 BONGO NET, 35 RING NET, 22 EXPENDABLE CONDUCTIVITY-TEMPERATURE-DEPTH.
    - B. SUBSURFACE MOORING EVOLUTIONS: 16 (11 DEPLOYMENTS, 5 RECOVERIES).
    - C. OTHER EVENTS: 166 VAN VEEN GRABS, 13 BOX CORES, 14 GRAVITY CORES, 41 HAPS CORE, 09 ICE BUOY DEPLOYMENTS, 35 DRIFT BUOY DEPLOYMENTS, 21 BENTHIC TRAWLS, 20 BENTHIC CAMERA CASTS (VPR), 22 PLANKTON NET TOWS, AND 05 DREDGING CASTS.
    - D. MET OR EXCEEDED ALL PLANNED DEPLOYMENT GOALS:
      1. AWS-12-01 (BOEM): COLLECTED ALL BIOLOGICAL SAMPLES REQUESTED.
      2. AWS-12-02 (ARCTIC ECS): EXCEEDED DREDGING AND MAPPING OBJECTIVES, COVERING 20,000 SQUARE NAUTICAL MILES IN VICINITY OF THE CHUKCHI CAP AND NAUTILUS BASIN.
      3. AWS-12-03 (NORTH SLOPE MOORINGS): EXECUTED ALL MOORING RECOVERY/DEPLOYMENT AND CTD OBJECTIVES.
  7. DOMESTIC ICEBREAKING STATISTICS: NSTR.
  8. FUEL:
    - A. DIESEL USED (CUTTER AND BOAT): 1,091,585 GAL (670,253 GAL FY12).
    - B. GAL/DAY PROPULSION AVG PER U/W DAYS: 9,761 GAL/DAY.
    - C. JP-5 USED (AVIATION): 308.6 GAL (101.1 GAL FY12).
    - D. FUELING AFHP AMOUNT AND PRICE PER GALLON.
 

LOCATION	TYPE	AMOUNT	PRICE	TOTAL
1. DUTCH HARBOR	DIESEL	125,000	\$3.44	\$430,125.00
2. DUTCH HARBOR	DIESEL	519,393	\$3.65	\$1,893,239.42
  9. ENGINEERING:
    - A. MAJOR CASUALTIES:

1. CAT 2 CASREP 12015 - PRPLN NR1 SHAFT STERN TUBE JOHN CRANE. SHAFT SEAL LEAKAGE RATE EXCEEDED OEM ALLOWABLE PARAMETERS AND WAS EXPECTED TO WORSEN OVER TIME. FACE INSERTS WERE RENEWED, SEAL FACES MACHINED, THEN REINSTALLED WHILE INPORT DUTCH HARBOR. UNDERWAY OPERATIONAL TESTS VERIFIED LEAK RATE REDUCED TO LESS THAN 5 GALLONS PER DAY AND WITHIN TOLERANCE.
  2. CAT 2 CASREP 12032 - PRPLN NR3 DIESEL GEN-SET. SHIP'S FORCE DISCOVERED CRACKS ON NR3 MAIN GENERATOR FWD AIR COOLER ON THE PIPE CONNECTIONS TO THE COOLER ENDBELL HOUSING ASSEMBLY. LREPL CONTRACTED MAGONE MARINE SVCS TO ASSIST IN RESOLVING CASUALTY IN DUTCH HARBOR. UNDERWAY TESTS CONFIRMED REPAIRS.
- B. ENGINEERING CASUALTIES: DAYS THIS PATROL/DAYS FY12
- | MDE1  | MDE2  | MDE3   | MDE4   | SHAFT |
|-------|-------|--------|--------|-------|
| 00/00 | 00/00 | 09/00  | 00/00  | 00/00 |
| BOIL1 | BOIL2 | CYCLO1 | CYCLO2 | AGEN  |
| 00/00 | 00/00 | 00/00  | 00/00  | 00/00 |
10. HELO OPS:
    - A. NO EMBARKED HELO FOR THE SCIENCE MISSIONS OF AWS-12, HOWEVER, CONDUCTED FLIGHT OPS WITH COMMERCIAL BELL 206L3 LONG RANGER AIRCRAFT FOR PAX TRANSFER AND WITH CG HELOS TO MEET RECERTIFICATION STANDARDS.
    - B. 30JUL12: 16 TOUCH AND GOS, 8 LANDINGS W/ PRI TIE, AND 1 HIFR COMPLETED W/ AIRSTA PORT ANGELES HH-65 FOR TRNG AND RECERT.
    - C. 25-26AUG12: 23 LANDINGS, 12 VERTREP DELIVERIES, 12 VERTREP REMOVALS AND 5 REFUELINGS COMPLETED W/ COMMERCIAL BELL 206L3 LONG RANGER AIRCRAFT FOR DMO OF HLY-12-01 AND MOB OF HLY-12-02 NEAR BARROW, AK.
    - D. 05OCT12: 2 TOUCH AND GOS, 5 LANDINGS W/ PRI TIE, 1 HIFR, AND 1 VERTREP COMPLETED W/ CGC MIDGETT AVDET HH-65 FOR TRNG AND RECERT.
    - E. 09OCT12: 1 LANDING W/ PRI TIE COMPLETED WITH CGC BERTHOLF AVDET HH-65 FOR PAX TRANSFER TO BARROW, AK.
  11. COMMUNICATIONS:
    - A. IRIDIUM USE: TOTALS PENDING FEEDBACK FM TISCOM.
    - B. MINI-M USE: TOTALS PENDING FEEDBACK FM TISCOM.
    - C. CONNECTIVITY: WE CONTINUE TO ADVOCATE FOR A RELIABLE AND SUSTAINABLE HIGH LATITUDE CONNECTIVITY SOLUTION; CURRENTLY ONE DOES NOT EXIST. SOUTH OF 74N FLEET BROADBAND (FBB) WAS PRIMARILY RELIED UPON WITH SATISFACTORY CONNECTIVITY. ABOVE 74N A FBB CONNECTION WAS NOT AVAILABLE SO INMARSAT WAS USED. WHILE OPERATING BETWEEN 74N AND 83N INMARSAT PROVIDED INTERMITTENT CONNECTIVITY (DECREASING AS WE WENT NORTH). AT 83N CONNECTIVITY WAS LIMITED TO LESS THAN 1 HOUR PER DAY WHILE CONNECTIVITY WAS AVAILABLE 10-14 HOURS PER DAY NEAR 74N. DURING PERIODS OF REDUCED CONNECTIVITY WE RELIED ON THE SCIENCE DATA NETWORK (SDN) TO EMAIL ENCRYPTED OPSUMS AND OTHER OPERATIONAL COMMUNICATIONS TO JRCC JUNEAU. SDN USES KU BAND AND IRIDIUM REACH BACK TECHNOLOGIES AND RELIABLY MAINTAINS EMAIL CONNECTIVITY EVEN AT HIGH LATITUDES. THE POOR CONNECTIVITY ENCOUNTERED POSED DIFFICULTIES FOR EXECUTION OF CG WEB BASED BUSINESS PROCESSES SUCH AS TMT, AOPS, DIRECT ACCESS AND LMS. WE REQUESTED INSTALLATION OF KU BAND DURING UPCOMING INPORT. FBB POSED ADDITIONAL CHALLENGES EVEN WHEN OPERATING ALONG THE PERIMETER OF ITS COVERAGE FOOTPRINT. TRANSITION BETWEEN THE AMERICAS AND ASIAN SATELLITES WAS NOT AUTOMATIC. EACH TIME WE TRAVELED FROM ONE SATELLITE FOOTPRINT TO THE OTHER, MANUAL INTERVENTION WAS REQUIRED BY THE COMMUNICATIONS DIVISION TO RESET THE CONNECTION.

12. INTELLIGENCE: NTR.

13. PORT SERVICES COSTS:

PORT	DAYS	TOTAL COST (LESS PROVISIONS)
A. DUTCH HBR	6	\$13,955.49
B. BARROW	2	\$2,719.82
C. DUTCH HBR	9	\$20,824.77
D. DUTCH HBR	4	\$6,704.02
E. JUNEAU	8	\$38,462.85

14. LOGISTICAL SUPPORT:

- A. WE RECEIVED GREAT SUPPORT FM D17, FOL BARROW, CGC MIDGETT, CGC BERTHOLF, NESU SEATTLE, AND ESU SEATTLE.
- B. WE CONTINUE TO CONFUSE BARROW, ALASKA, WITH A LOGISTICS PORT. OUR DEPLOYMENT ORDERS CALLED FOR THE DEMOBILIZATION OF 12-01 AND MOBILIZATION OF 12-02 PERSONNEL VIA CONTRACT HELO WHILE OFFSHORE BARROW, WHICH INCLUDED GEAR AND A STORES RESUPPLY. ALL TOLD, IT WAS 70 SORTIES THAT MOVED 98 PERSONNEL, 6,000 LBS OF GROCERIES, AND 4,000 LBS OF GEAR AND MUD/WATER SAMPLES. TACTICALLY, THIS OPERATION WAS SUCCESSFUL, BUT THE SCIENTISTS' EXPECTATIONS WERE NOT MET AS THEY HAD NOT BUILT ANY CONTINGENCY INTO THEIR OWN LOGISTICS. SEVERAL OF THEM MISSED COMMERCIAL FLIGHTS AS THE EVOLUTION SPILLED INTO A SECOND DAY DUE TO A WEATHER DELAY AND THE SHEAR NUMBER OF SORTIES. ADDITIONALLY, THE START OF 12-02 WAS DELAYED BY ONE DAY. THE SCIENCE COMMUNITY'S EXPECTATIONS FOR RELIABLY CONDUCTING FLIGHT OPERATIONS OFFSHORE BARROW HAVE GROWN TO AN UNREASONABLE LEVEL AND I DO NOT SUPPORT THE CONTINUATION OF THIS PRACTICE.

15. CO'S COMMENTS:

- A. ICE COVERAGE: OBSERVED ICE COVERAGE AND THICKNESS VALIDATED SATELLITE ASSESSMENTS OF THE RECORD LOW ARCTIC ICE COVERAGE IN THE FALL OF 2012. WE OPERATED BETWEEN 78N AND 84N IN LATE AUGUST THROUGH MID SEPTEMBER AND NEVER ENCOUNTERED ICE CONDITIONS THAT REQUIRED A THIRD MDG ONLINE OR BACK AND RAM ICE BREAKING.
- B. OPERATION ARCTIC SHIELD: I INTENTLY MONITORED THE DAILY UPDATES FOR OPERATION ARCTIC SHIELD. RECOMMEND INCORPORATING HEALY INTO FUTURE OPERATIONS. FOR FY13, WE WILL NOT MEET VESSEL EMPLOYMENT STANDARDS. RATHER THAN LEAVE PRECIOUS RESOURCE HOURS ON THE TABLE, WE COULD BE INCORPORATED INTO FUTURE ARCTIC SHIELD OPERATIONS, PARTICULARLY AT THE TAIL END OF THE SEASON.
- C. SUBSISTENCE WHALING: AWS-12-03 SCIENCE OBJECTIVES REQUIRED ENTRY INTO THE WHALE HUNT BUFFER ZONE NEAR BARROW WHILE A SINGLE STRIKE REMAINED AVAILABLE TO THE COMMUNITY. THE CHIEF SCIENTIST CONTACTED MR. JOHNNY AIKEN OF THE ALASKAN ESKIMO WHALING COMMISSION TO REQUEST CLEARANCE TO CONDUCT SCIENCE OPERATIONS WITHIN THE BUFFER ZONE. CLEARANCE WAS GRANTED AND ALL REQUIRED OPERATIONS IN THE AREA WERE SUCCESSFULLY COMPLETED. THIS ALLOWANCE IS THE EXCEPTION, NOT THE RULE, AND SHOULD NOT BE RELIED UPON FOR FUTURE OPERATIONS. THE EMBARKED NATIVE OBSERVER PROVIDED VALUABLE INSIGHT INTO THE STATUS OF WHALING ACTIVITY AND HELPED BROKER THE AUTHORIZATION TO ENTER THE BUFFER ZONE BEFORE THE WHALE HUNT WAS COMPLETED.
- D. BLOG: OUR PAO POSTED WEEKLY BLOG-LIKE UPDATES TO OUR WEBSITE DETAILING PROGRESS THROUGH THE DEPLOYMENT TO THE PUBLIC AND INTERESTED MEDIA AVENUES. A DEDICATED FOLLOWING OF THE BLOG DEVELOPED AND A GREAT DEAL OF POSITIVE FEEDBACK WAS RECEIVED.
- E. TIGER CRUISE: UPON APPROVAL FROM PACAREA, OUR CREW MEMBERS INVITED FRIENDS AND FAMILY TO PARTICIPATE IN A TIGER CRUISE DURING OUR TRANSIT FROM JUNEAU TO SEATTLE. 34 ENTHUSIASTIC PASSENGERS JOINED US AND ENJOYED A SCENIC TRIP THROUGH THE INSIDE PASSAGE.

- F. VESSEL SIGHTINGS: ALTHOUGH VESSEL TRAFFIC IN THE ARCTIC CONTINUED TO INCREASE THIS YEAR, WE DID NOT OBSERVE ANY OF IT. IN SPITE OF THE ICE RECEDING TO RECORD LEVELS IT SEEMS THAT THE NOVELTY OF ARCTIC TRAVEL IS FOCUSED NEAR SHORE AND NOT UP IN THE HIGHER LATITUDES.
  - G. HANNA SHOAL: IN MID AUGUST WE ENCOUNTERED A VAST AND APPARENTLY GROUNDED ICE FLOE ON HANNA SHOAL. AT ITS SHALLOWEST AREA, HANNA SHOAL IS 40 FEET DEEP. RADARSAT IMAGERY SUPPORT SHOWED THAT THE FLOE REMAINED STATIONARY AT THE SHOAL FOR SEVERAL WEEKS.
  - H. INCREASED WILDLIFE SIGHTINGS: A HIGH DENSITY OF POLAR BEARS AND WALRUS WERE OBSERVED NEAR HANNA SHOAL AND UP NEAR THE ICE EDGE. I SUSPECT THAT THE LOW ICE YEAR DRAMATICALLY INCREASED WILDLIFE DENSITY ON AVAILABLE ICE.
  - I. SHORE MAINTENANCE PROJECT (SMP) 49: A TEAM OF SEVEN ENGINEERS (4 HEALY MAT AND 3 FROM OTHER NESU'S) DEPLOYED WITH US DURING AWS-12-03 AND COMPLETED 1904 LABOR HOURS ON PMS AND CMA ITEMS. THESE ITEMS WERE FOCUSED ON CLEARING CART AND SMART DISCREPANCIES, WITH THE GREATEST FOCUS ON DAMAGE CONTROL SYSTEMS AND ELECTRICAL SAFETY INSPECTIONS. THIS HUGELY SUCCESSFUL ENDEAVOR SHOULD BE THE NORM AND NOT THE EXCEPTION. THANK YOU LREPL FOR SUPPORTING THIS PROJECT.
  - J. STEAM TEAM: A STEAM TEAM COMPRISED OF 3 SFLC ASSIST ALAMEDA PERSONNEL BOARDED TO INSPECT, TROUBLESHOOT AND DOCUMENT LIFE CYCLE PROBLEMS WITH OUR STEAM SYSTEM. FINDINGS WILL BE USED TO CORRECT DESIGN PROBLEMS WITH ORIGINAL CONSTRUCTION AND TO CREATE THE DOCKSIDE 2013 AND 2014 REPAIR SPECIFICATIONS.
  - K. TRAINING SUPPORT:
    - 1. HSWL CAPE MAY PROVIDED A TEMPORARY DUTY HS2 WHO DELIVERED CPR TRAINING TO THE CREW DURING TRANSIT.
    - 2. AUX BILL GIERS FROM CGD7 PROVIDED TMT TRAINING TO THE ENTIRE CREW.
    - 3. THE SUPPORT PROVIDED BY THESE PERSONNEL, TEAMS, AND OTHER SUPPORTING COMMANDS ENSURED WE ACHIEVED AND MAINTAINED A HIGH STATE OF READINESS.
  - L. SMART/CART: OUR OFFICERS AND CREW FOCUSED AN INCREDIBLE AMOUNT OF ENERGY AND EFFORT PREPARING FOR SMART AND CART INSPECTIONS. WHEN WE WERE NOT ACTIVELY SUPPORTING SCIENCE, WE WERE PREPARING FOR CART. OUR EFFORTS WERE VALIDATED AT THE COMPLETION OF CART HAVING RECEIVED ONLY NINE TOTAL DISCREPANCIES TOTALING 42 TOTAL POINTS, A 710 POINT IMPROVEMENT OVER THE LAST CART CYCLE. BRING ON TSTA.
16. POC: LCDR JAKE CASS, OPERATIONS OFFICER, JACOB.L.CASS(AT)USCG.MIL,  
(206) 217-6300 x408.

BT  
NNNN

## Appendix 3: Shakedown & Ready-For-Sea Schedules (04 – 15 June 2012)

### A. Shakedown Schedule (04 - 09 June)

#### Monday, 04 June – Depart Pier 36, Seattle

0700 – Liberty Expires  
0800 – NSTT Drill Brief  
0830 – Quarters  
0900 – Navigation Brief (NSST/DCTT)  
**NAV-A: Preps for Getting Underway**  
**ET-01: ET Space Preps for Getting Underway**  
1000 – Underway  
TBD – Begin engine break-ins (16hrs) ASAP once u/w  
1100 – Lunch  
1200 – Navigation Drills (NSTT)  
**NAV-X: Piloting by ECINS**  
**NAV-X: Loss of ECINS Component**  
1600 – MOB – Boat/Day (NSTT)  
**SEA-X: Man Overboard Boat Recovery (Day)**  
1700 – Dinner

#### Tuesday, 05 June - Underway

0600 – Begin EM122 Multibeam Calibration (ADCP testing concurrently)  
0700 – Breakfast  
0800 – Locker Training  
0900 – DCTT Brief  
1000 – Class “A” Fire Drill (DCTT)  
**TBD DC Drill Cards**  
1100 – Lunch  
1200 – DCTT Brief  
1230 – Begin Winch & CTD Testing  
1300 – Setting Material Condition & Main Space Fire Drill (DCCT/ETT)  
**DC-08Y: Setting Condition Y**  
**DC-08Z: Setting Condition Z**  
**ENG-04: Major Fuel Oil Leak**  
**DC-06U: Main Propulsion Space Fire Underway**  
**ENG-38: Class Bravo Fire in Propulsion Plant**  
1500 – Crew De-Brief  
1700 – Dinner  
TBD – Upon completion of Multibeam & Winch testing, proceed inbound to Eastern Bank  
2100 – MOB – Boat/Night (NSTT)  
**SEA-X: Man Overboard Boat Recovery (Night)**

#### Wednesday, 06 June – Underway

0700 – Breakfast  
0800 – Commence TACAN Calibration IVO Port Angles  
0900 – Locker Training  
1000 – Toxic Gas Drill (DCTT/MTT)  
**DC-17: Toxic Gas Drill**  
**MED-02: Personnel Casualty Transportation**

1100 – Lunch  
1200 – ITT Brief  
1300 – ITT Drill (NSTT/DCTT/ETT/MTT)  
**NAV-06: Loss of Steering Control**  
**ENG-01: Steering Casualty**  
**DC-09U: Underwater Hull Damage Underway**  
**DC-14U: Major Flooding of a Propulsion Machinery Space**  
**ENG-37: Major Uncontrolled Flooding in Main Machinery Space**  
**MED-03: Compound Fracture**  
1500 – ITT Debrief  
1530 – Crew Debrief  
1600 – MOB – Ship/Day (NSTT/MTT)  
**SEA-03D: Man Overboard Shipboard Recovery (Day)**  
**MED-04: Sucking Chest Wound**  
1700 – Dinner  
1800 – Anchor Brief  
1900 – Precision Anchorage (NSTT)  
**SEA-01D: Precision Anchoring**  
**NAV-02D: Precision Anchoring**  
2100 – Small Boat Training (Day into Night)

#### **Thursday, 07 June – Underway**

0700 – Breakfast  
0800 – Inbound Anchor/Navigation Brief  
0830 – Anchor Detail (conduct semi-annual chain inspection on BOTH anchors)  
1100 – Lunch  
1200 – Navigation Drills (NSTT)  
**NAV-X: Piloting loss of ECINS**  
**NAV-X: Piloting by Gyrocompass**  
1530 – Special Sea Detail  
1600 – Moor Manchester Fuel Pier  
1700 – Dinner  
1800 – Fueling Briefs

#### **Friday, 08 June – Underway**

0600 – Breakfast  
0700 – Fueling Brief & commence fueling (app. 8 hrs? anticipated)  
1000 – Navigation Brief  
1100 – Lunch  
1600 – Special Sea Detail  
1630 – Underway en route Pier 36  
1700 – Dinner  
1830 – Moor Pier 36

#### **Saturday, 09 June – Orientation Cruise**

0700 – Breakfast  
0830 – Navigation Brief  
0900 – Quarters  
1000 – Underway  
1100 – Lunch  
1600 – Moor Pier 36, Seattle

## **B. Ready-For-Sea Schedule (11 – 15 June)**

### **Monday, 11 June – Inport, Pier 36, Seattle**

0800 – ATG personnel arrive  
0830 – ATG Inbrief  
0900 – Begin CART Checklist spot-checks & Hot-Cold Checks  
1100 – Lunch  
1600 – Conclude Day 1

### **Tuesday, 12 June – Inport (Fast Cruise), Pier 36, Seattle**

0800 – Training Team Briefs  
0900 – Setting Material Condition Yoke (DCTT)  
*DC-08Y: Setting Condition Y*  
1000 – Abandon Ship/Emergency Destruction Drill (NSTT)  
*SEA-05: Abandon Ship*  
*IT-06: Emergency Destruction*  
1100 – Lunch  
1200 – Setting Material Condition & Main Space Fire Drill (DCCT/ETT/MTT)  
*DC-08Z: Setting Condition Z*  
*ENG-04: Major Fuel Oil Leak*  
*DC-06U: Main Propulsion Space Fire Underway*  
*ENG-38: Class Bravo Fire in Propulsion Plant*  
1500 – Crew DeBrief

### **Wednesday, 13 June – Inport (Fast Cruise), Pier 36, Seattle**

0730 – Training Team Briefs  
0800 – Toxic Gas Drill (DCTT/MTT)  
*DC-17: Toxic Gas Drill*  
*MED-02: Personnel Casualty Transportation*  
0930 – High Voltage Drill (DCTT/ETT)  
*DC-20: High Voltage Drill*  
*ENG-44: High Voltage Drill*  
1100 – Lunch  
1200 – ITT Brief  
1230 – OBTT Briefs  
1300 – ITT Drill (NSTT/DCTT/ETT/MTT)  
*NAV-06: Loss of Steering Control*  
*ENG-01: Steering Casualty*  
*DC-09U: Underwater Hull Damage Underway*  
*DC-14U: Major Flooding of a Propulsion Machinery Space*  
*ENG-37: Major Uncontrolled Flooding in Main Machinery Space*  
*MED-03: Compound Fracture*  
*MED-07: Facial Wound*  
1430 – ITT Debrief  
1530 – Crew Debrief

### **Thursday, 14 June – Underway**

0700 – Breakfast  
0800 – Training Team Briefs  
0900 – Navigation/Anchor Briefs (NSST/DCTT)  
*NAV-A: Preps for Getting Underway*

***ET-01: ET Space Preps for Getting Underway***

1100 – Lunch

1230 – Underway

1330 – Navigation Drill (NSTT)

***NAV-01D: Piloting by Gyrocompass***

1430 – ITT Drill (NSTT/DCCT/MTT)

***ET-07: Combating Class “C” Fire & Drawing Emergency Spares***

***MED-08: Electrical Shock***

***MED-10: Burns***

***NAV-11: Loss of ECINS System***

1600 – MOB – Boat/Day (NSTT/MTT)

***SEA-04N: Man Overboard Small Boat Recovery (Day)***

***MED-04: Sucking Chest Wound***

1645 – Crew Debrief

1700 – Dinner

1800 – BECCEs (ETT)

***ENG-03: Loss of MPCMS***

***ENG-13: Overheating Diesel Engine***

***ENG-11: Class “C” Fire in Generator***

***ENG-18: Main Propulsion Diesel Engine Low/Loss L/O Pressure***

1830 – Evening Meeting

2000 – Anchor Brief

2110 – Precision Anchorage (Night) (NSTT)

***SEA-01D: Precision Anchoring***

***NAV-02D: Precision Anchoring***

\*\*\*\*\* *Remain Anchored Overnight* \*\*\*\*\*

**Friday, 15 June – Underway**

0700 – Breakfast

0745 – NSTT/ETT Briefs

0815 – Weigh Anchor Brief

0830 – Anchor Detail

0900 – Loss of Steering Drill (ETT/NSTT)

***NAV-06: Loss of Steering Control***

***ENG-01: Steering Casualty***

1100 – Lunch

1200 – MOB – Ship/Day (NSTT)

***SEA-03D: Man Overboard Shipboard Recovery (Day)***

1300 – Crew Debrief

1330 – Navigation Brief

1500 – Special Sea Detail

1600 – Moor Esquimalt, BC

**Saturday, 16 June – Inport Esquimalt, BC**

Holiday Routine

**Sunday, 17 June – Underway En Route Pier 36, Seattle**

0700 – Breakfast

0800 – Quarters / Navigation Brief

1000 – Underway

1600 – Moor Pier 36, Seattle

## Appendix 4: AVSTAN report

### Report of Recurrent Standardization Inspection

#### Day 1 and 2

##### *Standardization Examinations*

An ATC Ship/Helo Standardization (STAN) team administered a written examination to all crewmembers qualified in flight deck billets. The STAN team reviewed scores, addressed missed items, and trained individuals to standard as needed. We encourage your ATT to train and test often using exam results in building your aviation training program. The qualifications granted by the completion of this training are valid until 30 June 2014.

As of the date the standardization exam was given, the overall fleet average was: 83%

Reference material including practice tests, billet-specific presentations and study guides are available on CG Portal at: Training and Education; Aviation; Ship-Helo

We solicit your input on the effectiveness and relevance of the training material and tests. The following summary of recommendations is provided to bolster your aviation operations:

##### *Examination Results*

<b>Flight Billet</b>	<b>Test Taken/Failed</b>	<b>Average Score</b>	<b>High Scores</b>
HCO	7/0	89%	
LSO	2/0	85%	
Tiedowns	6/0	90%	
Fire Party	11/0	95%	ET3 Adams – 100% ET2 Gainey – 100% EM1 Olson – 100% FNDC Brindle – 100%
Fuel Detail	3/0	90%	
CIC	0/0	N/A	
<b>Overall</b>	<b>29/0</b>	<b>90%</b>	

##### *JP-5 testing: Below Standard / Trained to Standard / **Standard** / Exceeded Expectation*

Instructor comments: The Day 1 inspection was completed with one minor and one major discrepancy found. Minor: Quarterly fuel analysis must include a test sample taken from all JP5 service & storage tanks as well as a separate test sample from the fuel nozzle IAW Chapter 8,F,6(a-h). A change to the SHOPS manual has been submitted in an effort to better clarify this requirement and alleviate confusion in the fleet. All samples must be drawn independently from each tank (prior to being filtered) to accurately assess the condition of the fuel within the tanks. Major: JP5 system pressure was initially tested with a max “deadhead” pressure of 80+ psi. The fuel team was instructed on the proper adjustment of the regulator and the system pressure was reduced to 55psi (within limits). The fuel team performed exceptionally throughout all phases of fuel testing. ATC recommends that fuel team personnel routinely review Chapters 8 & 9 of SHOPS to remain proficient in proper testing/handling procedures. Fuel team members were instructed to adhere closely to the manufacturer’s manuals for all testing equipment and ensure these references are kept readily available. They were also reminded to ensure that the all quarterly lab test results are logged appropriately and compared to the ship’s testing equipment results. This check and balance system will ensure that the ship’s equipment is calibrated and operating properly.

#### **CERTIFICATION REVIEW**

##### *Discrepancies affecting certification:*

- (1) None:

*Other equipment discrepancies and Best Practices:*

- (1) Some LPU-30/P Inflation assemblies were secured using type shear wire not specified in SHOPS Chapter 4.D.4(1). Proper shear wire listed in the instruction is 0.0159in Type "S" shear wire.
- (2) Hangar and flight deck surfaces appeared mechanically sound. VLAs were repainted to show maximum contrast and surface spot repairs were made prior to inspection. Very well done!
- (3) ATC will place the new H65 Tow Bar stock number on the portal page.
- (4) ATC will place the Go/No Go gauge info on the portal page.
- (5) ATC will advocate for the following changes to the Ship Helo Manual and or changes to CGC HEALY's facilities: NVG compatible lighting reconfiguration, CO2 3-6 ft range (manual change), change 6.C.5.k of the manual to accommodate HEALY's boat davit/ready boat requirement, TALON/flight deck lighting reconfiguration and subsequent Dynamic Interface testing to broaden the operational effectiveness of HEALY.

**DRILLS and TRAINING**

*ATT led COD Walkthrough:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation  
Comments: The ATT conducted a comprehensive and effective drill briefing and the risk assessment strategy accurately reflected circumstantial factors affecting the drill. HEALY is equipped with a primary fire monitor system which negates the need for a primary hose team during normal operations. For this drill the ATT elected to render the fire monitor system inoperative which initiated the response of the secondary hose team, which was composed primarily of tie-down team members. While the response from the secondary hose team was adequate, the drill highlighted a potential vulnerability in HEALY's crash response plan, namely that if the LSO or tie-down members were injured or missing following the crash, the ability to man a secondary hose team would be compromised. A recommendation was made to the ATT that they consider manning the secondary hose team with personnel not assigned to the tie-down teams.

Overall, the ATT performed very well throughout the drill. They maintained close control over the drill timeline, and made effective use of training time-outs whenever necessary. Each member demonstrated a solid ability to evaluate and instruct their crew members, and the ATT on the whole was extremely receptive to ATC instructors' input. Nice job!

**Day 3**

*VERTREP:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation

Comments: The HCO conducted the operation by the book, kept the command well informed and aided the LSO in managing the overall operation. The HCO oversaw a very efficient transition from FLICON 1 to FLICON 3 and maintained outstanding situational awareness throughout the evolution. It was clear that the HCO had a clear handle on the situation and was ready to initiate a wave off at any time should the situation deteriorate.

*On the flight deck:* All LSOs and hookup personnel were given instruction on safe positioning of personnel by the forward peripheral line to maximize safety zone IVO hovering helicopter. The LSO provided clear signals to deck personnel as well as the aircrew and managed a safe, controlled evolution. LSO's were reminded that hook-up personnel should be signaled to immediately evacuate the operating zone as soon as the pendant is safely secured to the cargo hook. LSOs were also reminded to move about the flight deck as necessary to maintain visual contact with the pilot at the controls. NOTE: At times it appeared that the aircrew did not respond appropriately to the LSO's advisories despite the fact that the LSO was very clear, bold and concise and positioned properly to pass all signals. ATC was able to confirm that the pilot at the controls was having trouble with the evolution due to limited proficiency and reiterated the importance of maintaining clear visual contact with the LSO.

*HIFR:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation

Comments: A very efficient transition from FLICON 3 to FLICON 4 was noted. The HCO provided the fuel test results (sediment, free water, and FSII) and clear and bright status to the aircrew prior to HIFR at

the appropriate time. The fuel team remained in position to quickly obtain required clear and bright tests and the results were promptly passed to the aircrew. As a best practice, the HCO should consider timing the HIFR evolution every time, and record the results to verify that certification GPM results remain consistent. A decline in GPM measurements could be indicative of problems with the fueling equipment. Outstanding teamwork by all hands noted throughout the evolution. LSOs/HCOs are reminded that once the hook up of the HIFR rig to the hoist hook is made the rig is hoisted 3-5 feet over the flight deck and then the helicopter should be signaled to move to port while hoisting the HIFR rig to the "TUBE LOCK" position. This nuance is not annotated in the Ship Helo Manual yet but will be in future revisions due to the recent HIFR mishap where the rig was improperly hooked to the hoist cable.

*On the flight deck:* The hose-tenders and grounding personnel did an excellent job during hook up and hose-tending. The LSOs were reminded to inspect the HIFR assembly prior to giving a manned and ready report. Initially, the flight mechanic struggled with opening the nozzle bail, requiring ATC to provide verbal instructions over the radio. While the responsibility for the nozzle and valve position when hooked to the aircraft rests with the flight mechanic, the LSO's were encouraged to make an attempt to visually verify the nozzle is correctly configured prior to requesting an energized pump. Both aircrew and LSOs were given spot instruction by ATC to prevent bail misalignment in future evolutions.

*Helostatic fueling:* Below Standard / Trained to Standard / Standard / Exceeded Expectation  
Instructor comments: Not observed. Please review PG 2-5 2.D.5f-g for clarification on refueling operations and manning requirements. Please remember gravity hot refueling is always prohibited even for contract aircraft support.

*Helohot refueling:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation  
Comments: The fuel team proceeded to fuel the aircraft in a safe and orderly manner and remained on scene to obtain the required clear and bright tests. These results were promptly passed to the aircrew. The LSO controlled the deck and responded to the fueling evolutions very well. NOTE: When the fuel hose is laid out for on deck fueling, the fuel team should ensure it is laid outside the peripheral lines on the flight deck and secured at the nozzle and approximately 1-hose length back to ensure hose doesn't migrate during flight ops. ATC recommends hook and loop style securing devices clipped to a permanent anchor point. Plastic cable ties cannot be used on the flight deck due to an inability to determine wear and tear and are considered a FOD hazard.

*JP-5 fueling system performance check:* desired class rating for WMEC is class 6R which requires minimum HIFR flow rate of 25-49 GPM

33.0 GPM – Actual on deck refueling

28.0 GPM – Actual HIFR to hovering MH-65D

Note: ATC recommends continued monitoring of this value during future HIFR evolutions; while within parameters, this value is definitely on the low end of the acceptable range for class 6R certification.

*HCO/Bridge Operations:* Below Standard / Trained to Standard / Standard / **Exceeded Expectation**  
Comments: HCOs performed very well in all aspects of helo operations and were actively involved throughout. The checklists were effective and the binder format utilized was outstanding; some checklists do need to be updated with the most recent SHOPS guidance, in particular the night time lighting checklist. HEALY does not possess a full complement of NVG-compatible lighting; however, recoveries may be conducted with aircrews using NVG's (for operational missions only See PG 5-3 of SHOPS) provided the Pilot-in-Command is NVG shipboard qualified and current, the appropriate lights are adjusted accordingly and the Commanding Officer and Pilot-in-Command are comfortable with the conditions. Furthermore, caution should be given to ensuring that LSO's have enough ambient light about the flight deck to ensure safe movement and operations. HCOs were clearly able to adapt to circumstances and stayed ahead of the game.

*Flight following:* Below Standard / Trained to Standard / Standard / Exceeded Expectation

Comments: ELVA not observed. NOTE: CGC HEALY is not outfitted or staffed with a complete CIC. Due to the nature of HEALY's primary mission, flight following is generally limited to the establishment of a "guard" which is maintained by the HCO during extended flight operations. If changes to this current format are anticipated (ie. a return to extended deployments with a USCG aviation detachment); ATC recommends that consideration be given to establishing a modified CIC staff to serve as primary flight followers whenever FLICON 2 is set in order to alleviate the HCO's current task load.

*Helo launch/recovery:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation

Comments: On the Bridge, launch and recovery operations were executed safely and efficiently and checklists were executed in an accurate, bold and concise manner. Environmental numbers and ALL cutter certification/qualifications were passed to the helicopter without delay on the initial recovery based on a planned sequence of events. HEALY's ATT elected to use the opportunity to train a "break-in" HCO for the bulk of launch/recovery operations, and it should be noted that he performed quite well despite his lack of experience.

*On the flight deck:* It was noted by ATC that LSO's were providing non-standard hand signals for the installation and removal of tie-downs. The situation was immediately corrected once on-the-spot coaching was provided by the stan team. Additionally, aft/high tie-down team members had to be reminded to face the LSO during removal of tie-downs; each member should be positioned aft of the tie-down points and looking forward for LSO signals in case of an emergency. Lastly tie-down teams were instructed to muster as close to the aircraft as possible and to safely but quickly depart the rotor disc area at a point adjacent the forward tie-down on a 45 degree angle; team members must also expedite movement to ensure the aircraft is secured or ready for takeoff as soon as possible. Subsequent coaching by ATC was required to ensure the ATT understood the importance of accurate, bold and concise hand signals for LSOs and movement about the flight deck area for team members during launch and recovery. Nevertheless it was a very safe sequence of evolutions; nicely done!

*Graded Crash-on-deck Drill:* Below Standard / Trained to Standard / **Standard** / Exceeded Expectation

Comments: The ATT made a noted attempt to incorporate all of ATC's feedback and recommendations from the initial Day 2 drill. It became apparent that composing the secondary hose-team of personnel NOT assigned to the tie-down teams was a far more prudent approach. The secondary response following the simulated failure of the primary fire monitor was substantially smoother and more efficient, and the LSO/tie-down teams were able to muster clear of the crash environment, ensure accountability of all members, and adequately prepare themselves to react in the event a tertiary hose team was required. NOTE: Tie-down personnel had to be instructed by ATC to take all tie-down gear with them when they evacuate the flight deck to prevent tripping hazards for the fire teams. Additionally, response teams were instructed that all simulated firefighting, extraction efforts, and "C" checks (NAVAIR 00-80R-14 para 7.6.3.9) should be executed methodically and to completion during every drill. Practicing to drill completion requires the hose teams to advance forward of the rescuemen and aft of the extraction point/path of the aircraft. This will prevent the likelihood of spraying/ wetting of the rescuemen during an actual crash, as heat transfer through wet clothing could very well cause injury to the rescuemen. ATC recommends the ATT, particularly the OSL representative review initial response and hose team requirements as outlined in the SHOP's chapter 14. All personnel were extremely receptive to ATC input and are encouraged to continue to train as much as possible to sharpen their proficiency.

## **LOGISTICAL ISSUES**

Aircraft Support: Due to the separation between the Seattle operations area and Air Station Port Angeles, aircraft-related logistics can often be a challenge when the vessel is located close to home port and transport of ATC stan members is required. When circumstances dictate, ATC recommends that consideration be given to coordinating a dedicated air asset and crew to operate out of an airport located closer to Seattle.

In this case, ATC transport was not required due to the fact that the stan team larger than average (four members) and berthing was available aboard HEALY.

#### **AVIATION TRAINING TEAM EVALUATION**

ATC found the ATT comprised of an appropriate number of members who were qualified and experienced in the positions they were evaluating. The ATT did an excellent job in preparing their crew members for Helo Stan by conducting practice drills and test reviews well before ATC's arrival and it was demonstrated in their overall performance. Furthermore, it was obvious early on in the visit that the ATT members had used the checklist and available information on CG Portal to prepare for their evaluation. BZ!

#### **FINAL COMMENTS**

Pier-side material inspections began with an in-brief with the CO, XO, EO, OPS, and members of the ATT present. Immediately following the in-brief, all flight billeted personnel were provided situational training using video from real-world operations and an LPU-30/cranial review. Afterwards, billet specific testing was conducted with those results being addressed at the beginning of this report. A certification review of all aviation equipment was performed with only minor discrepancies found. ATC would like to commend the PPE custodian and ship's company for their outstanding efforts. The following individuals did an especially noteworthy job: MK2 Gavaldon and MK2 Schumacher for their excellent systems/equipment knowledge and leadership of the auxiliary fuel team; BM1 Caddell, BM3 Drescher, and OSC Horne for their superb work in preparing for Helo Stan. Additionally, CWO2 Placido's tireless efforts and attention to detail throughout the inspection were instrumental in one of the most successful stan visits this team has seen to date. The entire CGC HEALY crew maintained a high degree of motivation, were eager to learn, and were very receptive to and coaching. CGC HEALY is safe, standard, and efficient in all aspects of aviation operations.

## Appendix 5: Waiver for Unfamiliar Aircraft Operations

R 031620Z AUG 12

FM COMPACAREA COGARD ALAMEDA CA//PAC-35//

TO COMDT COGARD WASHINGTON DC//CG-711/CG-751/CG-WWM//

INFO CCGDSEVENTEEN JUNEAU AK//DR/DRM/DRE//

NSF POLAR WASHINGTON DC

COGARD ATC MOBILE AL//SHIPHELO//

COGARD AIRSTA KODIAK AK

BT

UNCLAS //N03710//

SUBJ: WAIVER ENDORSEMENT FOR CGC HEALY TO OPERATE WITH NON-USCG HELOS

A. USCGC HEALY 252100Z JUL 12

B. SHIPBOARD-HELICOPTER OPERATIONAL PROCEDURES MANUAL, COMDTINST M3710.2E

1. PACAREA POSITIVELY ENDORSES AND RECOMMENDS APPROVAL OF REF A FOR CGC HEALY TO OPERATE WITH MARITIME HELICOPTERS' BELL 206 L3 LONG RANGER AND NORTH SLOPE BOROUGH'S BELL 412 HELICOPTERS.

2. FOR ALL UNDERWAY SHIPBOARD-HELICOPTER OPS, THE GENERAL LAUNCH AND RECOVERY LIMITS WILL BE IAW FIG B-1 OR APPENDIX B TO REF B.

3. ALL FLICON PERSONNEL WILL COMPLETE ORIENTATION FOR THE RESPECTIVE HELICOPTERS PRIOR TO COMMENCING OPERATIONAL FLIGHTS.

4. THE CUTTER WILL ENSURE THAT THE HELICOPTER OPERATORS ARE FAMILIAR WITH USCG FLIGHT DECK OPERATING PROCEDURES AS ESTABLISHED IN REF A.

5. PACAREA POC: LCDR RUSSELL HALL, 510-437-5358.

BT

NNNN

## Appendix 6: SMART/CART Schedule (03 - 06 November)

**3-Nov-12**

SMART DAY 1 - ADMIN INSPECTION

						SHIPBOARD INSPECTION
0730	<b>0745:</b> HSWL INSPECTORS ARRIVE - GREETED BY BOSN / XO ON QUARTERDECK, SIGN IN AND ESCORT TO THE WARDROOM					
0800	<p><b>0800:</b> INBRIEF/INTRO FOR DEPT HEADS, PROGRAM MANAGERS, CHECKLIST MANAGERS - WARDROOM.  <b>CO:</b> CAPT Havlik, <b>XO:</b> CDR Tlapa, <b>OPS:</b> LCDR Cass, <b>EO:</b> LCDR Lowry, <b>AEO:</b> LT Dufresne, <b>SUPPO:</b> CWO Goble,  <b>Safety Coordinator:</b> CWO Rivera, <b>GM:</b> BM2 Kay, <b>Medical:</b> LT Keplinger/HSCS Apolito, <b>ORM:</b> BMCM Sullivan,  <b>Man-Aloft:</b> ETCM Lippmann, <b>Respiratory Protection:</b> BMC Shrum, <b>Rescue &amp; Survival:</b> BM2 Bichsel, <b>Training:</b> ENS Sheridan</p>					
0830	<p>REVIEW SHIPBOARD PROGRAMS, DOCTRINES, INSTRUCTIONS, &amp; PLANS - WARDROOM  <b>HSWL INSPECTOR:</b> HSCS UTLEY, <b>XO:</b> CDR Tlapa, <b>Safety Coordinator:</b> BOSN,  <b>Training Officer:</b> ENS Sherdian  <b>***CHECKLIST HOLDERS / PROGRAM COORDINATORS WILL BE ON CALL ALL DAY***</b></p>					<p>COMMENCE SHIPBOARD WALKTHROUGH  INSPECTOR - DCC SPENCER  HEALY REP - LCDR LOWRY  HEALY REP - ENS CUPRAK</p>
0900						
0930						
1000						
1030						
1100	<b>1100-1200:</b> LUNCH					
1130						
1200	<p>REVIEW SHIPBOARD PROGRAMS, DOCTRINES, INSTRUCTIONS, &amp; PLANS - WARDROOM CONTINUED</p>					
1230						
1300						
1330						
1400						
1430						
1500						
1530						
1600	<b>1600:</b> CHECKOUT - COMMAND OUTBRIEF					

**4-Nov-12**

CART - DAY 1 - ADMIN INSPECTION

	ITT	DCTT	ETT	NSTT	MTT	FPTT	CHECKLIST HOLDERS	ENG
0730	<b>0745:</b> ATGPNW ARRIVE - GREETED BY T.O. ON QUARTERDECK, SIGN IN AND ESCORT TO <u>SCI CONF ROOM</u>							
0800	<b>0800:</b> INBRIEF/INTRO FOR DEPT HEADS, OBTT LEADERS, CHECKLIST MANAGERS - <u>SCI CONF ROOM</u> . <b>CO:</b> CAPT Havlik, <b>XO:</b> CDR Tlapa, <b>OPS:</b> LCDR Cass, <b>EO/DCTT:</b> LCDR Lowry, <b>SUPPO:</b> CWO Goble, <b>ETT:</b> CWO Gale, <b>NSTT:</b> LTJG Valdez, <b>ATFP/FPTT:</b> BMC Shrum, <b>Deck:</b> CWO Rivera, <b>C3:</b> OSC Horne, <b>GM:</b> BM2 Kay, <b>Medical/MTT:</b> LT Keplinger, <b>Nav/Vis Comm:</b> BMCM Sullivan, <b>Elect:</b> ETCM Lippmann, <b>ENG:</b> LT Dufresne, <b>DC:</b> ENS Cuprak, <b>Training:</b> ENS Sheridan							
0830	<b>0830-1030:</b> TRAINING FOR XO & OBTT LEADERS - <u>WARDROOM</u> .						CHECKLIST REVIEW AND INSPECTION <b>ATFP</b> - BMC Shrum <b>Deck</b> - CWO Rivera <b>C3</b> - OSC Horne <b>GM</b> - BM2 Kay <b>Medical</b> - LT Keplinger <b>Nav</b> - BMCM Sullivan <b>Vis Com</b> - BMCM Sullivan <b>Elect.</b> - ETCM Lippmann <b>ENG</b> - LT Dufresne <b>DC</b> - ENS Cuprak <b>Training</b> - ENS Sheridan & XO	ENGINEERING HOT CHECKS
0900	<b>ATFP</b> - ENS Frooms, <b>ETT</b> - CWO Gale, <b>DCTT</b> - DCC Ludwick, <b>NSTT</b> - LTJG Valdez, <b>MTT</b> - HSCS Apolito, <b>CSTT</b> - ET1 Climacosa, <b>ITT</b> - XO / ENS Sheridan							
0930								
1000								
1030								
1100	<b>1100-1200:</b> LUNCH							
1130	<b>1200-1245:</b> LEVEL OF KNOWLEDGE TESTS:							
1200	<b>DWO/ROTR</b> - <u>WARDROOM</u> , <b>BDS</b> - <u>CHIEF SCI CONF RM</u> , <b>NAV/SEA</b> - <u>SCI CONF RM</u> , <b>ENG</b> - <u>MESSDECK</u>							
1230	<b>1300-1345:</b> LEVEL OF KNOWLEDGE TESTS:							
1300	<b>FLIGHT OPS</b> - <u>SCI CONF ROOM</u> , <b>DC</b> - <u>MESSDECK</u> , <b>ATFP</b> - <u>WARDROOM</u>							
1330								
1400				<b>1400:</b> NSTT BRIEF <u>WARDROOM</u> CG-NAV-11				
1430				<b>1430:</b> NAV TRAINER - NAV				
1500				DETAIL				
1530				<u>BRIDGE</u>				
1600	<b>1600:</b> DEADLINE FOR RESOLVING CHECKLIST DISCREPANCIES							
1630	<b>1630:</b> COMMAND OUTBRIEF - <u>CO CABIN</u>							
1700	<b>1700:</b> QUARTERS - <u>HANGAR</u>							

**5-Nov-12**

CART DAY 2 - FAST CRUISE I

	DCTT	ETT	NSTT	MTT
0700				
0730	<b>0745:</b> ATGPNW ARRIVE - GREETED BY TO ON QUARTERDECK, SIGN IN AND ESCORT TO - <u>SCI CONF LOUNGE</u> <b>0750:</b> MORNING MUSTER- PROP DISCLOSURE FOR ALL HANDS - <u>HANGAR</u>			
0800	<b>0815:</b> ITT BRIEF - <u>WARDROOM</u>			
0830				
0900	<b>0900:</b> DCTT MEETING MSF DRILL - <u>WARDROOM</u>	<b>0915:</b> ETT MEETING BECCES - <u>CPO MESS</u>	<b>0900:</b> NSTT MEETING NAV (01D, 02, 03, 04, 06), SEA 01, IT 06 DRILLS - <u>BRIDGE</u>	<b>0900:</b> MTT MEETING - <u>CHIEF SCIENTIST CONF ROOM</u>
0930				
1000				
1030		<b>1015:</b> WATCH SECTION BRIEFS	<b>1030:</b> NAV AND ANCHOR BRIEF (NSTT NAV-A) - <u>BRIDGE</u>	
1100	<b>1100 - 1145:</b> LUNCH			
1130				
1200	<b>1200:</b> SET TRAINING ENVIRONMENT, SET THE AT SEA WATCH, COMMENCE BECCES <u>BECCES:</u> FINISH BECCES, CASCADE INTO MSF/ITT DRILL <u>ITT:</u> DC-13, 14; MED-03, 04, 07; NAV-06; ENG-01, 03, 37			
1230				
1300				
1330				
1400				
1430	<b>1430:</b> ABANDON SHIP AND EMERGENCY ACTION PLAN DRILLS			
1500	<b>1500:</b> SECURE FROM DRILL, STOW ALL GEAR, ON STATION DEBRIEFS			
	DCTT DEBRIEF	ETT DEBRIEF	NSTT DEBRIEF	MTT DEBRIEF
1530	<b>1530:</b> ITT DEBRIEF - <u>WARDROOM</u>			
1600	<b>1600:</b> CREW DEBRIEF - <u>MESSDECK</u>			
1630	<b>TBD:</b> ATGPNW DEPARTS			

**6-Nov-12**

CART DAY 3 - FAST CRUISE II

	DCTT	ETT	NSTT	MTT
0700				
0730	<b>0745:</b> ATGPNW ARRIVE - GREETED BY TO ON QUARTERDECK, SIGN IN AND ESCORT TO <u>SCI CONF LOUNGE</u> <b>0750:</b> MORNING MUSTER- PROP DISCLOSURE FOR ALL HANDS - <u>HANGAR</u>			
0800	<b>0815:</b> ITT BRIEF - <u>WARDROOM</u>			
0830				
0900	<b>0900:</b> DCTT MEETING - <u>WARDROOM</u>	<b>0900:</b> ETT MEETING - <u>CPO MESS</u>	<b>0900:</b> NSTT MEETING - <u>BRIDGE</u>	<b>0900:</b> MTT MEETING - <u>CHIEF SCIENTIST CONF ROOM</u>
0930	<b>0930:</b> SET TRAINING ENVIRONMENT, SET THE AT SEA WATCH			
1000	<b>0945:</b> ITT DRILL			
1030	<b>~1030:</b> SECURE FROM DRILL, STOW ALL GEAR, ON STATION DEBRIEFS			
	DCTT DEBRIEF	ETT DEBRIEF	NSTT DEBRIEF	MTT DEBRIEF
1100	<b>1100 - 1200:</b> LUNCH			
1130				
1200	<b>1200:</b> ITT DEBRIEF - <u>WARDROOM</u>			
1230	<b>1230:</b> CREW DEBRIEF - <u>MESSDECK</u>			
1300	<b>~1300:</b> COMMAND OUTBRIEF - <u>CO CABIN</u>			
1330	<b>TBD:</b> ATGPNW DEPARTS			

## Appendix 7: End of CART Report

TMMCKTHDR\$\$FQDN:D13-PF-CGCHEALY-RECEIVED@USCG.MIL\$\$RI:RUNEPP\$\$CSN:81\$\$TO:120  
RTTUZYUW RUCOWCA1966 3132206-UUUU--RUNEPP.  
RUNEPP DE TMMCIRCUIT  
ZNR UUUUU  
R 082206Z NOV 2012 ZUI ASN-AET313028158  
FM COGARD LO AFLOATRAGRUPAC PACNORWEST DET TO USCGC HEALY INFO ZEN/COMDT  
COGARD WASHINGTON DC//CG-751// ZEN/COMPACAREA COGARD ALAMEDA CA//PAC-3//  
ZEN/COMCOGARD FORCECOM NORFOLK VA//FC-A// ZEN/COMCOGARD SFLC BALTIMORE  
MD//LREPL// ZEN/COGARD HSWL SC NORFOLK VA ZEN/COGARD LO COMAFLOATRAGRUPAC SAN  
DIEGO CA ZEN/COGARD LO AFLOATRAGRULANT NORFOLK VA ZEN/COGARD LO  
AFLOATRAGRUMIDPAC PEARL HARBOR HI ZEN/COGARD AFLOATRAOFF MAYPORT FL  
ZEN/COGARD NESU SEATTLE WA ZEN/COGARD TQC CHESAPEAKE VA ZEN/COGARD TRACEN  
YORKTOWN VA BT UNCLAS SUBJ/END OF CART REPORT FOR USCGC HEALY//  
MSGID/GENADMIN/ATGPACNORWEST// REF/A/DOC/COMDT COGARD M3502.4I/31AUG2007//  
REF/B/DOC/COMPACAREA COGARD/30OCT2006// REF/C/DOC/FORCECOMINST  
M3502.1/22DEC2009// REF/D/DOC/COMDTINST M9000.6F/22MAR2011//  
REF/E/DOC/COMPACAREA COGARD/DTG 202314Z FEB 09// NARR/REF A IS CUTTER  
TRAINING AND QUALIFICATION MANUAL.  
REF B IS THE PACAREA SOP. REF C IS AFLOAT TRAINING PROGRAM.  
REF D IS NAVAL ENGINEERING MANUAL. REF E IS FORCECOM MESSAGE WITH RESULTS  
FROM AFLOAT TRAINING GROUP MEETING.  
POC/D.G.OWEN/LT/ATGPNW-CGLO/NAVAL STATION EVERETT WA/  
TEL: CML 425-304-4728/EMAIL:DANIEL.G.OWEN(AT)USCG.MIL//  
GENTEXT/REMARKS/1.COMMAND ASSESSMENT OF READINESS AND TRAINING (CART) WAS  
CONDUCTED ABOARD CGC HEALY 4-6 NOV 12 IN JUNEAU, AK IAW REFS A-E TO VERIFY  
COMPLIANCE WITH COAST GUARD REQUIREMENTS AND TO ASSESS THE CURRENT STATE OF  
TRAINING AND READINESS. THE FOLLOWING INFORMATION HIGHLIGHTS TRAINING TEAM  
PROFICIENCY, WATCHSTANDER PROFICIENCY, AND COMMENTS OR RECOMMENDATIONS ON  
TRAINING.

2. WARFARE AREAS WERE EVALUATED ON WHETHER THEY ARE  
ESTABLISHED AND READY TO TRAIN.

A. ANTI-TERRORISM FORCE PROTECTION (ATFP)

1. ANTI-TERRORISM FORCE PROTECTION TRAINING TEAM:  
ESTABLISHED AND READY TO TRAIN.

2. ANTI-TERRORISM FORCE PROTECTION (ATFP)

A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE  
B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE  
C. MINOR (M) DISCREPANCIES: NONE  
D. CART SELF-ASSESSMENT: EFFECTIVE.

B. COMBAT SYSTEMS (CSTT)

1. COMBAT SYSTEMS TRAINING TEAM: ESTABLISHED AND READY  
TO TRAIN.

2. SURFACE WARFARE (SUW):

A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE  
B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE  
C. MINOR (M) DISCREPANCIES: NONE  
D. CART SELF-ASSESSMENT: EFFECTIVE.  
E. GRADESHEETS COMPLETED/ATTEMPTED: 01/02

C. DAMAGE CONTROL (DCTT)

1. DAMAGE CONTROL TRAINING TEAM: ESTABLISHED AND READY  
TO TRAIN.

2. DAMAGE CONTROL:

A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE  
B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE

- C. MINOR (M) DISCREPANCIES: 02
- D. CART SELF-ASSESSMENT: EFFECTIVE
- E. GRADESHEETS COMPLETED/ATTEMPTED: 02/03
- 3. COMMENTS: SEE ATACHED .PDF FOR COMPLETE LIST OF DAMAGE CONTROL DISCREPANCIES.
- D. ENGINEERING (ETT)
  - 1. ENGINEERING TRAINING TEAM: ESTABLISHED AND READY TO TRAIN.
  - 2. ENGINEERING:
    - A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: 02
    - B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: 02
    - C. MINOR (M) DISCREPANCIES: 01
    - D. EFFECTIVE PROGRAMS:
      - 1. SAFETY INSTRUCTION MANAGEMENT
      - 2. DIESEL ENGINE MAINTENANCE
      - 3. LOGS AND RECORDS MANAGEMENT
      - 4. TRAINING
      - 5. FLEXIBLE HOSE
      - 6. CASUALTY CONTROL MANUAL UPDATE
      - 7. TAG OUT PROGRAM
      - 8. FUEL OIL MANAGEMENT
      - 9. CORROSION INHIBITOR
      - 10. GAUGE AND METER CALIBRATION
      - 11. LUBE OIL MANAGEMENT
      - 12. ELECTRICAL SAFETY
    - E. INEFFECTIVE PROGRAMS (1 OR MORE RU, OR 2 OR MORE RTS): NONE
    - F. GRADESHEETS COMPLETED/ATTEMPTED: 03/08
  - 3. COMMENTS:
    - A. UNABLE TO OBSERVE CART CHECKLIST LINE ITEMS XVIII.A.23.A AND XVIII.A.23.D DUE TO SHORE POWER CABLES NOT ONBOARD AT TIME OF CART. ATG WILL ASSESS THESE LINE ITEMS AT ARRIVAL READINESS INSPECTION (ARI) 3 DEC 12.
    - B. HEALY CURRENTLY HAS FORCECOM/ATG APPROVED TRAINING WAIVERS IN PLACE FOR DISCREPANCIES ISSUED DURING CART, WITH EXCEPTION OF ONE RT ISSUED FOR CCTV ELECTRICAL CABLES.
    - C. SEE ATTACHED .PDF FOR COMPLETE LIST OF ENGINEERING DISCREPANCIES.
- E. MEDICAL (MTT)
  - 1. MEDICAL TRAINING TEAM: ESTABLISHED AND READY TO TRAIN.
  - 2. MEDICAL (FSO-M):
    - A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE
    - B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE
    - C. MINOR (M) DISCREPANCIES: NONE
    - D. INEFFECTIVE PROGRAMS: NONE
    - E. CART SELF-ASSESSMENT: EFFECTIVE
    - F. GRADESHEETS COMPLETED/ATTEMPTED: 03/03
- F. NAVIGATION/SEAMANSHIP (NSTT)
  - 1. NAVIGATION/SEAMANSHIP TRAINING TEAM: ESTABLISHED AND READY TO TRAIN.
  - A. NAVIGATION:
    - 1. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE
    - 2. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE
    - 3. MINOR (M) DISCREPANCIES: 01
    - 4. CART SELF-ASSESSMENT: EFFECTIVE.
    - 5. GRADESHEETS COMPLETED/ATTEMPTED: 00/00

6. COMMENTS: SEE ATTACHED .PDF FOR COMPLETE LIST OF NAVIGATION DISCREPANCIES.
- B. SEAMANSHIP:
1. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE
  2. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE
  3. MINOR (M) DISCREPANCIES: NONE
  4. CART SELF-ASSESSMENT: EFFECTIVE.
  5. GRADESHEETS COMPLETED/ATTEMPTED: 01/01
- G. CUTTER TRAINING (ITT)
1. INTEGRATED TRAINING TEAM: ESTABLISHED AND READY TO TRAIN.
  2. CUTTER TRAINING PROGRAM (TRA):
    - A. UNDERWAY RESTRICTIVE (RU) DISCREPANCIES: NONE
    - B. TRAINING RESTRICTIVE (RT) DISCREPANCIES: NONE
    - C. MINOR (M) DISCREPANCIES: 01
    - D. CART SELF-ASSESSMENT: EFFECTIVE.
    - E. GRADESHEETS COMPLETED/ATTEMPTED: 00/02
    - F. COMMENTS/RECOMMENDATIONS: SEE ATTACHED .PDF FILE FOR COMPLETE LIST OF TRAINING DISCREPANCIES.
  3. CART DISCREPANCY STATUS:
 

	RU	RT	MIN
END OF CART	02	02	05
3. IAW REF C, CUTTER SHALL PROVIDE STATUS OF CART DISCREPANCY CORRECTIONS VIA MSG TRAFFIC NLT ONE WEEK PRIOR TO COMMENCEMENT OF TSTA. YOUR TRAV WEEK IS SCHEDULED FOR 3-7 DEC 12 IN SEATTLE, WA, AND TSTA IS SCHEDULED FOR 10-21 DEC 12 IN SEATTLE, WA. REFER TO REF C, CH. 3 PG. 3-5 FOR COMPLETE DEFINITIONS OF DISCREPANCIES AND PROCEDURES OUTLINING REQUIREMENTS AND RESPONSIBILITIES FOR REQUESTING WAIVERS.
4. CGLO COMMENTS:
- A. FF/DC TRAINING IS SCHEDULED AT OLYMPIC COLLEGE, BREMERTON CAMPUS, AND FREMONT MARITIME SERVICES, SEATTLE, WA DURING THE WEEK OF 3 DEC 12. CONTACT MR. KEITH JOHNSON AT 206-217-6823, EMAIL: KEITH.G.JOHNSON(AT)USCG.MIL TO FINALIZE ARRANGEMENTS AND SCHEDULE.
  - B. SMART PORTION OF CART RESULTS PROVIDED VIA SEPCOR.
  - C. ANY CART CHECKLIST ITEM IS SUBJECT TO INSPECTION DURING ARRIVAL READINESS INSPECTION (ARI) AND TSTA. THE ORIGINAL COMPLETED CART CHECKLIST, ANNOTATED WITH ANY CORRECTIVE ACTION OR SUBSEQUENT PROBLEMS SHALL BE MADE AVAILABLE TO THE TLO UPON ARRIVAL AT THE TSTA TRAINING SITE.
5. ATGPACNW APPLAUDS HEALY FOR THEIR THOROUGH PREPARATIONS AND POSITIVE ATTITUDE EXIBITED THROUGHOUT CART. THE COMBINATION OF A MOTIVATED CREW AND RECEPTIVE OBTT MEMBERS RESULTED IN A VERY SUCESSFUL CART. ATGPNW LOOKS FORWARD TO HEALYS TSTA CYCLE.
6. SPECIFIC DETAILS OF EXERCISES, EVOLUTIONS, MATERIAL CONDITIONS AND RECOMMENDATIONS FOR IMPROVEMENT WERE PROVIDED TO THE COMMANDING OFFICER AND TRAINING TEAM LEADERS DURING THE CART OUTBRIEF. REFER TO END OF CART REPORTS FOR DETAILS ON DISCREPANCIES. ORIGINAL CART REPORTS ARE MAINTAINED ABOARD HEALY. COPIES OF END OF CART EVALUATION REPORTS ARE MAINTAINED BY ATGPNW.

## Appendix 8: Public Affairs Press Releases

A. 09 August 2012

### U. S. DEPARTMENT OF HOMELAND SECURITY U. S. Coast Guard

---

**FOR IMMEDIATE RELEASE**

**August 9<sup>th</sup>, 2012**

Contact: ENS Erin Sheridan  
Erin.D.Sheridan@uscg.mil

Dutch Harbor, AK – The nation’s only operational polar ice breaker, Coast Guard Cutter HEALY, got underway from the UMC Pier in Dutch Harbor, AK on August 9<sup>th</sup>, 2012 to embark on their first of three Arctic science missions in 2012.

After an extensive dockside maintenance period, CGC HEALY departed Seattle on 30 July 2012 for a 3.5 month deployment that will include three missions to support scientific research in the Arctic. After a brief stop in Dutch Harbor, AK, for logistics and to welcome aboard the 38 members that comprise the HLY-12-01 science party, HEALY continued its northbound transit through the Bering Strait to the Chukchi Sea.

As part of the Chukchi Sea Offshore Monitoring in Drilling Area (COMIDA) project, the first science mission is a multi-disciplinary investigation to examine the biological, chemical and physical properties that define an area of high biological and exploratory energy significance: Hanna Shoal. Eighty nautical miles northwest of Barrow, AK, and within 40 nm of the Shell exploratory drill sites, the shallow depths of Hanna Shoal (40-50m) stand at the confluence of two nutrient-rich currents from the western Arctic and the Bering Sea. This upwelling facilitates high standing stocks of biota, especially near the bottom of the water column and in the marine sediment. The study focuses on the Hanna Shoal ecosystem, specifically on the influence of the plankton in the food chain, marine sediment fauna, and inventories of trace metal and organic compounds in the water column and on the seafloor, as well as physical oceanographic studies that will address water mass movements, ice conditions and modeling.

To retrieve this sensitive data, HEALY will deploy a vast array of scientific instruments, including Conductivity-Temperature-Depth (CTD) rosettes, a benthic camera, bongo nets, a benthic trawl, a Van Veen grab, and gravity/multi cores, as well as deploying six moorings and numerous drift buoys. The CTD provides a profile of the water column while capturing water samples at different depths for further analysis. The benthic camera is an optical package that monitors spectral absorption and attenuation, spectral backscattering, and chlorophyll fluorescence. The bongo net consists of two very fine mesh nets that are designed to capture small particles or organisms at different depths throughout the water column and store them in such a way as to not harm the specimen, which allows them to be studied while still alive. The benthic trawl is towed along the seafloor to collect biological samples on the surface, while the Van Veen grab shallowly penetrates the seafloor to provide samples of sub-benthic flora and fauna. Corers are designed to provide profiled sediment samples, paired with bottom water.

HEALY, which was commissioned in 2000, is the nation’s newest and largest U.S. polar icebreaker. The cutter is 420 feet long and has extensive scientific capabilities. Homeported in

Seattle, WA, the cutter has a permanent crew of 96; its primary mission is scientific support. In addition, as a Coast Guard Cutter, HEALY is capable of other operations such as search and rescue, ship escort, environmental protection, and the enforcement of laws and treaties in the Polar Regions.

For more information about HEALY, please check:

<http://www.uscg.mil/pacarea/cgchealy>

<http://www.icefloe.net>

**B. 25 August 2012**

**U. S. DEPARTMENT OF HOMELAND SECURITY  
U. S. Coast Guard**

---

**FOR IMMEDIATE RELEASE**

**August 27<sup>th</sup>, 2012**

Contact: ENS Erin Sheridan  
Erin.D.Sheridan@uscg.mil

Barrow, AK – The nation’s only operational polar ice breaker, Coast Guard Cutter HEALY, recently conducted two days of flight operations offshore of Barrow, Alaska, to support logistics associated with the transition between the first and second summer science missions in the Arctic.

Since departing Dutch Harbor, AK on August 9<sup>th</sup> with 38 scientists aboard, CGC HEALY has travelled over 2025 nautical miles and conducted 472 individual science casts in the vicinity of Hanna Shoal in the Chukchi Sea. As part of the Chukchi Sea Offshore Monitoring in Drilling Area (COMIDA) project, the first science mission was a multi-disciplinary investigation to examine the biological, chemical and physical properties of Hanna Shoal. Eighty nautical miles northwest of Barrow, AK, and within 40 nm of the Shell exploratory drill sites, the shallow depths of Hanna Shoal (40-50m) contain unusually high standing stocks of biota due to its location at the confluence of Arctic Ocean and Bering Sea currents. The timing of this mission was important in order to create a baseline of data prior to extensive energy development in the region.

On the 25<sup>th</sup> and 26<sup>th</sup> of August, CGC HEALY exchanged nearly 100 personnel, in addition to thousands of pounds of science equipment and provisions, via commercial helicopter in the northernmost American city on the continent. After 15 hours of flight operations, CGC HEALY weighed anchor and steamed north to frozen waters of the Arctic Ocean.

The focus of the second mission of Arctic West Summer 2012 is to collect mapping and geologic data necessary to delimit the US Extended Continental Shelf. This is the 7<sup>th</sup> time CGC HEALY has participated in this mission. In previous cruises, scientists have demonstrated that the foot of the continental slope, a key parameter in determining the extent of the continental shelf, which extends well north of the Chukchi Cap into Nautilus Basin towards the Alpha/Mendelev Ridge. The exact location of the foot of the slope in this region remains unknown and is the focus of this mission. Seafloor bathymetry will be measured with a multi-beam echo-sounder, supplemented with seafloor samples taken by dredge. Water column properties will be measured and ancillary programs include weather and ice observations, deployment of ice buoys and ice studies, geochemical measurements to study ocean acidification, and bird and mammal observations.

HEALY, commissioned in 2000, is the nation’s newest and largest U.S. polar icebreaker. The cutter is 420 feet long and has extensive scientific capabilities. Homeported in Seattle, WA, the cutter has a permanent crew of 96; its primary mission is scientific support. In addition, as a Coast Guard Cutter, HEALY is capable of other operations such as search and rescue, ship escort, environmental protection, and the enforcement of laws and treaties in the Polar Regions.

C. 31 October 2012

**U. S. DEPARTMENT OF HOMELAND SECURITY**  
**U. S. Coast Guard**

**FOR IMMEDIATE RELEASE**

**October 31st, 2012**

Contact: ENS Erin Sheridan  
Erin.D.Sheridan@uscg.mil

Juneau, AK – The nation’s only operational polar ice breaker, Coast Guard Cutter HEALY, moored in Juneau, AK this morning after recently completing 84 days of operations in the Bering Sea, Chukchi Sea, Beaufort Sea, and Arctic Ocean. During that time, CGC HEALY and her crew of 96 successfully conducted three missions to further our nation’s scientific knowledge of the Arctic.

The first science mission was a multi-disciplinary investigation to examine the dynamic ecosystem on Hanna Shoal, an area of high biological and exploratory energy significance. Located eighty nautical miles northwest of Barrow, AK, and within 40 nm of the Shell exploratory drill sites, the shallow depths of Hanna Shoal contain unusually high standing stocks of biota due to its location at the confluence of Arctic Ocean and Bering Sea currents. During the 17-day mission HEALY’s crew conducted 472 individual science casts to collect samples of the biological and chemical properties of the region. The timing of this mission was important in order to create a baseline of data prior to extensive energy development in the region.

The focus of the second mission of Arctic West Summer 2012 was to collect mapping and geologic data necessary to delimit the US Extended Continental Shelf. This was the 7<sup>th</sup> time CGC HEALY participated in this mission. In previous cruises, scientists demonstrated that the foot of the continental slope, a key parameter in determining the extent of the continental shelf, extended well north of the Chukchi Cap into Nautilus Basin towards the Alpha/Mendelev Ridge. For 12 days CGC HEALY cut multiple tracklines across the Nautilus Basin, adding scope and detail to the bathymetric maps of the region. In the course of the mapping, a new submarine channel (160 km long and 80 km deep) was discovered in the Nautilus Basin. The ice coverage throughout the mission was much lighter than expected; HEALY did not encounter the ice pack (>7/10<sup>th</sup> ice coverage) until 81 degrees North latitude. During the second half of the mission, five deep dredge casts were conducted to obtain seabed samples to supplement the bathymetric data. By the end of the mission, approximately 20,000 nm<sup>2</sup> was mapped, added ~25% to the US Arctic sonar mapping inventory.

The third science mission centered on the retrieval and deployment of subsurface moorings that measure the physical properties of the Western Arctic Boundary Current. Left in the Arctic year-round, the moorings require annual servicing to recover data and allow continued operation. To supplement the moorings’ data, water column casts were conducted at closely spaced intervals to create a cross section of physical and chemical properties perpendicular to the current’s flow. A remotely-controlled, programmable glider was also deployed to conduct additional water column measurements along the edge of the continental shelf. It was successfully recovered eight days later after travelling 175 nm in the Beaufort Sea.

While in Juneau, AK, CGC HEALY will be open for tours on the 1<sup>st</sup> and 2<sup>nd</sup> of November between from 1 pm to 4 pm. The public and press are welcome to attend.

CGC HEALY will return to Seattle, WA to moor at the U.S. Coast Guard Base Support Unit, Pier 36 on 10 November, 2012 at 10 am.

CGC HEALY, commissioned in 2000, is the nation's newest and largest U.S. polar icebreaker. The cutter is 420 feet long and has extensive scientific capabilities. Homeported in Seattle, WA, the cutter has a permanent crew of 96; its primary mission is scientific support. In addition, as a Coast Guard Cutter, HEALY is capable of other operations such as search and rescue, ship escort, environmental protection, and the enforcement of laws and treaties in the Polar Regions.

For more information about HEALY, please check:

<http://www.uscg.mil/pacarea/cgchealy>

<http://www.icefloe.net>

**D. 07 November 2012**

**U. S. DEPARTMENT OF HOMELAND SECURITY  
U. S. Coast Guard**

---

**FOR IMMEDIATE RELEASE**

**November 7<sup>th</sup>, 2012**

Contact: LTJG Erin Sheridan  
Erin.D.Sheridan@uscg.mil

Juneau, AK – The nation’s only operational polar ice breaker, Coast Guard Cutter HEALY, departed Juneau, AK this morning on the final leg of the Arctic West Summer 2012 deployment. CGC HEALY recently completed 84 days of operations in the Bering Sea, Chukchi Sea, Beaufort Sea, Amundsen Gulf and Arctic Ocean, conducting three missions to further the nation’s scientific knowledge of the Arctic.

The first science mission was a multi-disciplinary investigation to examine the dynamic ecosystem on Hanna Shoal, an area of high biological and exploratory energy significance. Located 80 nautical miles northwest of Barrow, AK, and within 40 nautical miles of the Shell exploratory drill sites, the shallow depths of Hanna Shoal contain unusually high standing stocks of biota due to its location at the confluence of Arctic Ocean and Bering Sea currents. During the 17-day mission HEALY’s crew conducted 472 individual science casts to collect pelagic and benthic samples in the vicinity of Hanna Shoal. Data collected will establish a baseline standard for physical, chemical, and biologic properties of the region prior to the pending energy exploration nearby.

The focus of the second mission of Arctic West Summer 2012 was to collect bathymetric data necessary to delimit the U.S. Extended Continental Shelf. This was the 7<sup>th</sup> year HEALY participated in this mission. In previous cruises, scientists demonstrated that the foot of the continental slope, a key parameter in determining the extent of the continental shelf, extends well north of the Chukchi Cap into Nautilus Basin towards the Alpha/Mendelev Ridge. For 12 days HEALY cut multiple tracklines across the Nautilus Basin, adding scope and detail to the bathymetric maps of the region. In the course of the mapping, a new submarine channel (160 km long and 80 km deep) was discovered in the Nautilus Basin. The ice coverage throughout the mission was much lighter than previous years; HEALY did not encounter the ice pack (>7/10<sup>th</sup> ice coverage) until 81 degrees North latitude. During the second half of the mission, five deep dredge casts were conducted to obtain seabed samples to supplement the bathymetric data. By the end of the mission, approximately 20,000 square nautical miles was mapped, increasing the U.S. Arctic mapping coverage by ~25%.

The third science mission focused on the retrieval and deployment of subsurface moorings which included the first-ever subsurface mooring deployed in the Amundsen Gulf, located north of the Northwest Territories, Canada, that measure the physical properties of the Western Arctic Boundary Current. Left in the Arctic year-round, the moorings require annual servicing to recover data and enable continued operation. To supplement the moorings’ data, water column casts were conducted perpendicular to the current at closely spaced intervals to create a cross section of physical and chemical properties. A programmable ocean glider was also deployed to

conduct additional water column measurements along the edge of the continental shelf. It was successfully recovered eight days later after travelling 175 nautical miles in the Beaufort Sea.

CGC HEALY will return to Seattle, WA, to moor at the U.S. Coast Guard Base Seattle, Pier 36 on 10 November, 2012 at 10 am.

CGC HEALY, commissioned in 2000, is the nation's newest and largest U.S. polar icebreaker. The cutter is 420 feet long and has extensive scientific capabilities. Homeported in Seattle, WA, the cutter has a permanent crew of 81; its primary mission is scientific support. In addition, as a Coast Guard Cutter, HEALY is capable of other operations such as search and rescue, ship escort, environmental protection, and the enforcement of laws and treaties in the Polar Regions.

For more information about HEALY, please check:

<http://www.uscg.mil/pacarea/cgchealy>

<http://www.icefloe.net>

## Appendix 9: AWS-12 Blog Updates

### A. August 3, 2012

Hey there, friends and family!

Welcome to the 2012 Arctic West Summer CGC HEALY blog. My name is ENS Erin Sheridan, Public Affairs Officer, and I will be your host to the life and times of the HEALY crew as we carry out our important mission to support scientific research in the cold, dynamic waters of the Arctic. Throughout the summer feel free to write in with your questions and I will do my best to answer them the following week.

This week we got underway. Months of maintenance and repairs came together to finish on the date we pulled away from the pier. As our new Engineer Officer said time and again as the deadline drew near, "I will win." And with the help of 94 crew and over 50 contractors, he did. At Quarters, representatives of the Lake Washington Navy League recognized EM1 Olson as HEALY's 2011 Sailor of the Year. EM1 Olson, recently relocated across the brow to Base Seattle NESU, was commended for his sustained high performance over the course of the last year. This deployment sees many new faces, as HEALY turned over 34 crew members. New crew adds a challenge in training yet also provides fresh perspective and enthusiasm. To the relatives of our new shipmates, welcome to the HEALY family. And to old friends, fair winds; we will miss you.



EM1 Olson distinguished himself as Sailor of the Year 2012 by qualifying as EOW and by helping to qualify over 100 Security Watchstanders and TOWs



BM3 Volkerson, BM1 Caddell, BM2 Kay, and SN Herd scrub and swab the 01 deck during transit north.

While we pulled away from the Pier, two cameramen (one on aboard and the other ashore) captured the action. During this deployment, in addition to our science parties, HEALY will be hosting a production team from the upcoming Weather Channel series BREAKING ICE. The show will seek to examine the personal and professional lives of the crews of several Arctic icebreakers; the team will join HEALY for the second mission. Stay tuned.

We were also privileged to host RADM Taylor, Commander of District 13. He remained onboard as HEALY transited north through Puget Sound and Admiralty Inlet, observing drills and interacting with the crew, before departing aboard a HH-65. The Admiral's departure was only one of many helo evolutions that took place during the late afternoon, in overcast and breezy conditions, in the Strait of Juan de Fuca. Working with Air Station Port Angeles is one of the few

opportunities HEALY has throughout the year to meet her certification requirements and to train crew in the various aviation positions on the Flight Deck and in Helicopter Control. New and experienced crew performed beautifully in 16 separate evolutions, and at the end of a very long day, HEALY turned to the west and returned to sea.

Tuesday through Friday had one common theme: cleaning. Extensive and detailed cleaning, known aboard as Field Days, occupied the entire workday and enlisted all crew not currently on watch. Every day after breakfast and lunch, MSTC Stewart would muster the crew in the Science Conference Lounge and with words of encouragement, sent out groups (or swat teams) to tackle areas of the ship. No deck or space escaped the assault. You might notice I am using battle terminology, and for good reason; months of maintenance had built up layers of grime on all surfaces. Cleaning the entire ship after a dockside is not an easy (or relatively fun) task, but the crew performed admirably, and I think we will all appreciate a cleaner home for the next few months.



Cleaning ship includes dusting those hard to reach places, as demonstrated by YNC Story.



HEALY's 3.5 day transit through the Gulf of Alaska was relatively calm, with seas and swells remaining below 6 feet, and wind keeping off the bow at 10-25 kts.

Speaking of maintenance, it should not be overlooked that engineering has recently completed an extensive maintenance cycle to prepare HEALY for the 2012 missions. Repairs include several underwater system repairs that are normally completed while drydocked but were conducted while waterborne thru the use of cofferdams. The waterborne repairs saved hundreds of thousands of dollars in docking costs and contributed to our on time completion of repairs. During our transit north, our engineers are validating the repairs completed during the maintenance cycle, making minor system repairs and fine-tuning the engineering plant enroute to our mission area.

As I type this on Friday afternoon we are nearing Unimak Pass through the Aleutian Islands, the gateway to the Bering Sea. Just around the corner is our home away from home, Dutch Harbor, AK. We will be pulling in for brief repairs and to welcome aboard the 38 scientists that comprise the 1st mission science party. More on the 1st mission next week. Until then, thanks for tuning in.

## B. August 11, 2012

Hello again friends and family,

Last week was the week of the unexpected. It started last Saturday as CGC HEALY was 25 nm outside of Dutch Harbor, steaming ahead in restricted visibility, with a scheduled mooring in late afternoon. The seas held a slight swell out of the north, but the water was glossy with only a light breeze. The bridge team was alert; there were several small fishing vessels and tugs operating in the vicinity, and with the fog they were only visible to us via radar and AIS. The bridge wing doors were open, so it was a little chilly on the bridge, and every 2 minutes the ship's whistle would sound one prolonged blast, but no sound returned in the fog. Around 0830, the fog abruptly lifted.



A Humpback whale dives among Shearwaters on Saturday morning outside Dutch Harbor, AK  
(Photo by ETC Swisher)



Lowering the cofferdam for the first attempt at sealing the starboard shaft (Plan B)

The mountainous island of Unalaska was clearly visible off to our left and the water was dotted with thousands (literally thousands) of Short Tailed Shearwaters. The most notable sight, however, was the large pod of over 50 Humpback Whales that suddenly surrounded the ship. Immediately HEALY came all back on the throttles and just ghosted ahead through groups of breaching, fin slapping, and flukes-up diving whales. Within minutes of the pipe announcing the whales, the crew lined the rails of the fo'c'sle, getting great views from all sides. After an hour of touch and go with the throttles, we were clear of the thickest area of the pod, and the crew turned back to ship's work in the form of a man overboard drill. With Oscar (our training prop), our life rings, and the small boat recovered, HEALY headed into Dutch.

After all lines were doubled up and secured, attention turned to

a problem we needed to address before continuing North. The starboard shaft seal (which allows the propeller shaft to pass through the hull while keeping the ocean outside) was leaking water at an undesirable rate. The pumps were keeping up with the problem, but it was clear that the issue needed to be resolved before steaming into the Arctic. To fix the problem, the shaft seal needed to be removed, retooled and/or replaced, and reaffixed.



DC2 Doyon performing a triple pass Copper Nickel TIG weld for the flange side of the end bell on the cooling system for the #3 MDG

Quite a challenge in such a remote location as Dutch Harbor, AK.



BM1 Caddell directs the Crane Operator to place the Arctic Survey Boat in its cradle, with boat crews looking on.

First, another barrier needed to be put in place (from outside the ship) to keep the sea from rushing in when the seal was removed. Plan A was to send divers down to put a soft, non-hardening adhesive epoxy (think silly putty) around the shaft. This plan was enacted Saturday night but it soon became apparent that the seal would not hold. Plan B was to install a hard cofferdam around the shaft. The cofferdam was built to HEALY's specifications at a local machine shop on Sunday, and installed by divers on Monday. However, it did not fit tight enough to fulfill its purpose, and was removed and sent back to the machine shop to be retooled. When it returned to the ship on Tuesday, the fit was perfect. Alas, when the engineers went to pump down shaft alley, they couldn't get enough suction. The hose that was being used was collapsing on itself under the pressure (think about trying to drink a thick milkshake with a weak straw). So, another hose with a hard exoskeleton had to be found to do the job. Once it was in place, all the parts worked and seal could be removed. Retooled, the seal returned to boat Wednesday

evening and the crew watched with anticipation on the ship's camera system as it was installed around the shaft. Finally, the cofferdam was removed and the shaft was optested on Thursday morning. Divers, contractors, specialists, and crew had worked around the clock for days to repair a serious problem in a remote port with limited resources. Bravo Zulu!

In the meantime, the crew once again found themselves in Dutch Harbor. We didn't make light of the time; the days were filled with training, maintenance, and preparing for the upcoming science mission. On Sunday morning 38 scientists reported on board and spent the week moving their equipment (loaded in Seattle) into their lab spaces and setting up their work areas. The Deck division exercised the CBL (Cutter Boat Large) and ASB (Arctic Survey Boat), holding coxswain and boat crew training with both. The ASB, which hadn't been operated since this time last year, started like a charm and passed its power trials. Engineers were busy (in addition to shaft repairs) with repairing the end bell housing for one of the Main Diesel Generators and troubleshooting issues with one of boilers. Evenings were spent in typical Dutch Harbor fashion, with the highlight being the nightly beach bonfire overlooking Hog Island and Natkeenin Bay.



MKC Placencia observes the approach of CGC MUNRO while transiting in the Bering Sea (Photo by MK2 Schumacher)



CGC HEALY as observed from the bridge wing of the CGC MUNRO.

At 1400 on Thursday, HEALY pulled in her mooring lines and passed by the same pod of whales on her way into the Bering Sea. Calm seas grew in heavy chop that persisted through Friday. In the early afternoon on Friday, a little blip on the radar announced the presence of USCGC MUNRO, a 378' High Endurance Cutter from Kodiak, AK. Strangely enough, they appeared to be heading right towards us. Radio calls preceded a shiphandling exercise. As the ships cruised alongside at a distance of 300 yards, both crews lined the rails to snap pictures. I imagine

HEALY's crew admired the ease with which MUNRO sliced through the water, while I imagine MUNRO's crew admired HEALY's stability. We aboard HEALY barely felt the rough chop while cruising at a speed of 15 kts, while MUNRO moved around considerably. It was a unique experience to

steam alongside our partners who ply the northern waters. We parted ways with best wishes for a safe and successful deployment.

Like I said, a week of the unexpected. It's fitting that I ended last week's entry as HEALY approached Unimak Pass, while this week I end it as we near Bering Strait, the gateway to the Chukchi Sea. I know I said that I would talk more about the first science mission, but that will have to wait til next week. You also can look forward to poetry, as a member of the science party (Deanna Wheeler - a school teacher) has invited the crew to submit poetry based on their experiences on board HEALY. I will post some of the entries to this site as well. Until then, thanks for tuning in.

### C. August 17, 2012

Hello again friends and family,

Fog and science and polar bears ... rinse ... repeat. Late on Monday evening, as HEALY began 24/7 science operations, HEALY entered the fog and hasn't emerged since. Temperatures have hovered just above freezing. Surprisingly large ice floes have made maneuvering between science stations challenging due to the reduced visibility. The days are starting to blend together as the crew falls into the daily repetition of work, watch, eat, sleep. However, since my last update, HEALY has successfully completed 157 separate science casts! Here is a brief description of the scientific focus of this mission.



The first Polar Bear sighted in the Arctic this deployment (Photo by ETC Swisher)



MSTC Stewart, MST3 Curtaz, and scientists ready the fantail for the deployment of the Van Veen grab in arctic fog (photo by Johnny Sullivan).

Hanna Shoal, a 30 nm mile long shelf at the confluence of the Bering Sea and the Chukchi Sea, sits 75 nm northwest of Barrow, AK. Its location is significant due to the upwelling of nutrients caused by the collision of two ocean currents and the shallowness of the water. It is one of the most biologically productive spots in the Chukchi Sea; it is also within 40 nm of one of the Shell's exploratory drill sites. The purpose of HEALY's first science mission is to comprehensively study this region, creating a baseline of biological, chemical, and physical data that can be used to monitor changes in the future. The scientists onboard are also taking an in

depth look into the region's ecosystem in order to understand how the animal and plant life depend on one another. In order to gather this data, the science party is deploying an unusually wide variety of instruments: CTDs (Conductivity, Temperature, Depth), nets, trawls, cores, cameras, grabs, and buoys. And because deployments occur around the clock, members of the Marine Science Division are suited up day and night to assist the science team.

DC College also took place this week. All newly reported members (34 in total) were required to attend in order to become qualified in damage control. As HEALY frequently operates far from outside assistance, all crew members must be well versed in combating any type of casualty that threatens their floating home. Hosted by the DC division, the college covers medical care, fire detection, fire fighting, patching, pumping, proper protective gear, desmoking, safety, and more. Classes are mostly practical, hands-on instruction with repetition being the key to gaining experience and confidence. It also makes the learning process fun.



A Basket Star: one of the many seafloor specimens from Hanna Shoal recovered for study with the Benthic Trawl (photo by Deanna Wheeler).

At quarters on Tuesday, SN Herd and SN Ellis were recognized and commended for qualifying as Bridge Watchstanders. ENS Cuprak, ENS Frooms, ENS Schwartz, MK3 McCarthy, and FN Torres were awarded the Sea Service Ribbon, commemorating one year of sea service in the Coast Guard. Also, I wish to make a special (and slightly belated) recognition of HEALY's Sailor of the Quarter: MK2 Chris Schumacher. MK2 Schumacher ("Shue") was commended for his hard work in keeping the auxiliary systems on HEALY in functional order, as well as his dedication to his shipmates, often stepping up to fill out watch sections and work the extra hours necessary to ensure job completion. Bravo Zulu MK2! I'm sorry you won't get a chance to enjoy your Sailor of the Quarter parking spot.

Sightings of Arctic wildlife were plentiful this week. Several times the crew was pulled to the rail by pipes of "Polar Bear off the port bow" or "A colony of Walruses off the starboard beam." Fortunately, the encounters were close enough to see without binoculars and lasted long enough



MK2 Schumacher is recognized as HEALY Sailor of the Quarter by CAPT Havlik and Command Master Chief Lippman (photo by LCDR Cass).

for several of our crew to take some great photos. Thanks to ETC Swisher for once again sharing his shots with this blog. All in all, three polar bears and numerous seals and walruses were sighted. And this is only our first week in the Arctic. The crew remains alert and hopeful for more.

If you recall from last week, I mentioned that a member of the science party, elementary school teacher Deanna Wheeler, had challenged the crew of the HEALY to submit poetry about their experiences to share with her students. I will end this blog with one of the submissions: a haiku by newly reported ENS Rebecca Follmer.

*Beware the north realm  
The realm of the Blue Noses  
I am an Ice Worm.*

We are above the Arctic Circle and the red hats have come out among the crew. Honorable Polar Bears are on the prowl. Ice Worms beware!

**D. August 24, 2012**

Hello again friends and family,

And just like that, the first mission is over. HEALY's trackline across Hanna Shoal is reminiscent of the random doodlings of a toddler, but there was order in the chaos. With keen precision, the scientists and crew took best advantage of the time allowed to gain a detailed profile of the life and properties of this remote region.

At the end of the last blog, I left HEALY in the cold Arctic fog, a condition that persisted thru the beginning of the weekend. Undeterred, the morale committee hosted a series of events to promote fun and interaction among both crew and scientists. Saturday night started out with Wii-lympics, in celebration of the closing ceremonies of the Summer Olympic games. Events were swordmanship, ping-pong, archery, and canoeing; contestants could play in teams or solo. FS3 Arndt and MK3 Ford took home the gold but



Numerous Arctic Mammal of the Week goes to the Walrus; colonies of 100+ were spotted this week (Photo by BMC Sullivan).

everyone who participated received a consolation prize. Afterwards the focus of the evening shifted to the hangar, where in absence of an embarked helo, a screen was rolled over the flight deck doors and lawn chairs were set up on the non-skid deck. And Voila! The northernmost floating movie theatre in the world, complete with soda and popcorn.

On Sunday, the fog rolled away from HEALY; the wind and swell settled. We were surrounded by calmly floating ice floes, decayed into strange but beautiful sculptures. The sky was so pale that it became difficult to differentiate the sea and sky, an effect enhanced by the perfect reflection of ice and clouds in the still

water. It was like being in a painting. As we conducted science, we spotted several more polar bears, including a mother and cub. Those on the bridge watched through binoculars as the bears walked, napped, and played (rolling around with their feet in the air like they had an itch on their back). On Tuesday, LTJG Steckle made what will probably be the most memorable pipe of the voyage: "Now, for the information of all hands, there is a polar bear eating a seal off the port bow." Crew and scientists made their way out onto the bow in record pace. Although not close enough to see in detail, this rare sight served as a reminder of the skill and speed of these huge bears.



Between the days of fog, the Arctic gave us many beautiful sunrises and sunsets (Photo by Johnny Sullivan).



Steaming through a painting (Photo by LCDR Lowry).

Speaking of meals, this week I would like to highlight the hard work of the Food Service Specialists who serve aboard HEALY. The FS division is responsible for preparing, cooking, and serving 4 meals a day for 125 people, taking into account dietary preferences and allergies. And since no one takes a day off from eating, the FSs are on a continuous rotation. Despite the grueling hours, they produce delicious and nutritious menus with, of course, delectable desserts.



IT1 Orellana receives a Good Conduct award from Capt Havlik.

The crew looks forward to Taco Tuesdays, Fishy Fridays, and all the variety in between. Thanks FSs; our hats are off to you (literally too - covers are not allowed on the mess deck)!

On Wednesday morning, HEALY held station offshore of Barrow, AK on a calm, sunny morning to transfer two science personnel ashore via small boat. Better conditions could not have been asked for and the crew got their first view of vessel contacts and land in over a week. Traveling through ice and fog can be quite lonely at times; the smell and sight of something different was a welcome change. It was a

brief visit though, as HEALY recovered her small boat and headed back into the ice for two more days of science.

Several shipmates were recognized at Quarters on Friday. Attention to IT1 Orellana for a Good Conduct Award, FS3 Koenig for a Letter of Appreciation (returning to POLAR STAR after sailing with HEALY for the first mission), Letters of Commendation for departing Junior Officers LTJG Steckle and LTJG Hohnstadt, and a Coast Guard Achievement Medal for departing MK3 Bogdanoff. Thank you for your dedication and friendship, departing shipmates! May you always have fair winds and open leads. Qualifying personnel were also recognized: 21 crew members qualified in Basic Damage Control after last week's DC College but valedictorian credit was awarded to FS3 Dunkin for scoring 100% on his final exam; SN Ramsey qualified as Rigger, SN Cason qualified as Bridge Watchstander, and OSC Horne and ENS Frooms passed their boards to qualify as underway Officers of the Deck. Congratulations to all for your significant achievements!



FS3 Arndt and FS3 Koenig prepare grilled halibut and shrimp scampi for lunch on Fishy Friday.

As I conclude this installment, the final CTD of this mission is complete and HEALY is steaming back to Barrow. In all, over 450 separate science MSTs were conducted, without a single piece of equipment lost or damaged (Bravo Zulu MSTs!). This evening the crew anticipates anchoring close offshore to Barrow and a full day of helicopter evolutions on Saturday to transfer personnel, mail, equipment, and "freshies" (fresh fruit and vegetables). It

will be a long day, but the crew is already starting to look ahead to the next mission. One down (successfully completed), two to go.

'Til next time, thanks for tuning in.

**E. August 31, 2012**

Hello again friends and family,

This week started with a flurry of activity. As I stated in the last entry, the plan was to anchor offshore Barrow, AK on Friday night, conduct flight operations the following day, and weigh anchor Saturday evening. But as Captain Havlik regularly reminds us, “We have a good plan, but don’t fall in love with the plan.”



USCGC HEALY anchored off of Barrow on Friday evening.



IT1 Bird directs the helicopter across the flight deck to pick up a load rigged by BM3 Drescher and SN Herd.

After a delay due to predictions of fog, flight operations commenced late Saturday morning. The outgoing science party completed a thorough check out process where linens were washed, rooms inspected, and pagers returned. Supplies, gear, and personnel heading ashore were weighed, marked, and recorded prior to staging in the hangar. Careful planning was required to ensure the helo was not overloaded; each trip was limited to 660 lbs. Mixed loads of personnel, bags, and cargo were sent ashore throughout the day. The priority for order sent was based on flight & hotel reservations, frozen specimen transport, and other follow on plans. There was an equally busy transfer from ashore to HEALY, each time the helo returned. Balancing it all took constant attention with a bit of patience thrown in. By 11 pm on Saturday, all the personnel heading ashore and all but 2 of the personnel coming to the ship had been successfully transferred. Landing Signal Officers BM1 Caddell, IT1 Bird, and ENS Sheridan had directed 41 individual evolutions. Tiedown crew BM3 Gangl, BM3 Drescher, SN Rupp, SN Welding, SN Herd, SN Ramsey, and SN Cason were working under the blades assisting passengers and carrying cargo to and from the flight deck. The

Deck division, headed by Bos’n Rivera and assisted by ENS Cuprak, organized cargo and rigged nets for VERTREPS (Vertical Replenishments). DC2 Mandrie and DC2 Doyon remained dressed out as fire fighting proxymen and on-call in the hangar for the duration of the flight operations.

Crew that were not actively involved with flight evolutions were nevertheless an important part of the operation. With every arrival of passengers, the berthing coordinator ENS Follmer greeted and showed the guests to their rooms. When loads of groceries, mail, or parts landed on deck, all hands mobilized to carry the goods down into the holds. Because much of the crew on the flight deck couldn’t leave for lunch and dinner, the Commissary Division (FSs) brought meals to them (the hot cocoa in particular was delicious). The list can go on and on. It



Midnight Sun

was a long day.

On Sunday, the remaining loads of passengers and cargo made it to the ship safely. HEALY weighed anchor and by late afternoon was steaming away from Pt Barrow and back into the Arctic Ocean. As HEALY proceeded North to the next mission, the crew continually expected to encounter sea ice. However, it wasn't until 2.5 days later and 500nm north of Hanna Shoal that HEALY once again returned to the ice. Traditionally, the 3rd week of September is considered the end of the melting season, marking the minimum ice extent for the year. We are still three weeks away, but this year has already broken the all time record for minimum Western Arctic sea ice.



MK3 McCarthy constructs a snowman with the plentiful snow on the flight deck.

On Wednesday it started to snow. Sometimes light, sometimes heavy, but the snow has not stopped falling since. The flight deck has become home to a family of snowmen and snow angels. Caution is advised when traversing the slippery deck, but it is also wise to be wary of flying snowballs from your caring shipmates. And although we only see it rarely, we have traveled far enough north that the sun never sets. It is a pleasure to stand the midwatch (0000-0400) and have it be as bright outside as if it were noon.

At Quarters on Friday, LT Dufresne, ENS Wowstchuk, and MK3 Stevens were recognized for qualifying as Technicians of the Watch (TOW). Among the crowd dressed in ODUs, FNDC Brindle stood out in his dress uniform. Called in front of the Captain, he was pinned by his division with the single chevron of a Petty Officer Third Class. Congratulations on your advancement DC3!

Currently, HEALY is steaming south through open water and scattered ice. The temperature outside is 25 degrees F and it is still snowing. We are proceeding at a steady speed conducive for mapping the contours of the ocean floor. I will elaborate on the details of the second mission of Arctic West Summer 2012 next week. On a final note, as I conclude this entry, an all hands page has alerted the ship's company to the following message, "All Papa Bravos lay to the Wardroom at 2000." Hmm... I guess I have a secret squirrel meeting to attend. More to follow.

'Til next time, thanks for tuning in.

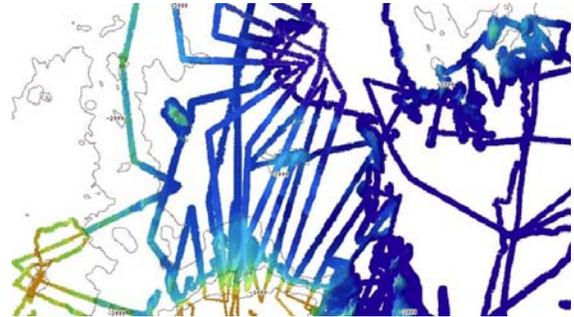


DC1 Orozco pins the cover while DC2 Doyon and DC2 Mandrie pin the crow's for DC3 Brindle.

## F. September 7, 2012

Hello again friends and family,

HEALY has completed the second week of the Extended Continental Shelf survey mission. This will mark the 7th year HEALY has participated in this particular mission. A little known fact – only ~11% of the Arctic Ocean has been bathymetrically mapped and 5% of the Arctic Ocean floor has been mapped by CGC HEALY. With the Arctic Ocean being approximately 540,000 square miles, HEALY has surveyed 27,000 square miles! The interest in mapping the continental shelf is based on a provision in UNCLOS (United Nations Convention of the Law of the Sea) that allows countries to claim mineral rights in areas where its continental shelf extends beyond the 200 nautical mile (1 nm = 2000 yards) Exclusive Economic Zone. Previous years have allowed scientists to follow the North American continental shelf out to 500 nm north of Barrow, AK. This year's mission seeks to find the edge of slope in this remote area, known as the Nautilus Basin.



CGC HEALY multibeam data in the Nautilus Basin and Chukchi Cap

HEALY collects the high resolution survey data from the installed multibeam echosounder. As HEALY steams along, the multibeam continually scans back and forth perpendicular to the ship's track. Within seconds, an area up to 2 nm wide is mapped onto the sonar's monitor. As long as HEALY drives slow, nearly straight, and avoids thick ice floes that shake the ship and disrupt the beam, the swaths overlay each other evenly to form an unbroken image comprised of all the colors of the rainbow (red = shallow; blue = deep). As a result, the Nautilus Basin where HEALY has spent the last week and a half is filled with crossing lines of color where before there was only vague contour lines. Thus was coined the phrase "Paint By Cutter."



Executive Officer, CDR Tlapa, serves breadsticks at Healianos (Photo by MK2 Schumacher).

Here's a look back at week 2. On Saturday evenings it is tradition for a group or division to host a morale dinner. The purpose is to shake things up, provide a little fun, and give the cooks a break. This past week the Wardroom volunteered. Instead of the usual serving line, diners were seated by a Maître D, provided with menus, and served by a wait staff that consisted of the CO, XO, EO, and OPS. Dinner started with salad and breadsticks, continued onto an entrée of choice (Spaghetti with Meatballs or Chicken Carbonerra), and finished up with Coffee Cake. To match the Italian theme, the restaurant was named Healianos. Although the unconventional wait staff made some of the crew a tad

uncomfortable, the service was quick and the food delicious. Special thanks to LT Keplinger ("Doc") for spearheading the event.

And in the Arctic on a Saturday night, nothing compliments Italian food like Sumo Wrestling. After dinner the crew and science party headed to the hangar to cheer on their shipmates as they tried to push, pull, or throw one another out of the padded ring while wearing inflatable sumo suits. A quick note on the sumo suit – you are so padded that it is nearly impossible to bend any joint, so you walk (aka bounce) with your ankles to gain momentum in one direction. If you fall, then like an overturned turtle, you can flail around, but only outside assistance will right you again. Patrolling the edges of the ring, members of the Chief’s mess stood at the ready to protect the crowd from rolling participants and to right fallen competitors. After seven preliminary contests, the final match came down between Scientist Elliot Lim and Coastie FS3 Dunkin. FS3 emerged victorious and was awarded with the “Top-knot” title and championship sumo belt; the belt now proudly displayed above the mess deck serving line along with a sign that proclaims, “The Galley - Home of the Champions.”



Two contestants grapple for victory in the HEALY Sumo Ring (Photo by ETC Swisher).



Division reviews drill props with the crew (FO – Fuel Oil Leak).

Sunday and Monday the ship held holiday routine in observance of Labor Day. Mapping continued 24/7 and Tuesday we were back to work. Wednesday and Friday afternoons were designated for emergency drills. With a machinery plant as complicated as HEALY’s, the crew must be prepared to handle any type of emergency. On Wednesday the crew trained to respond to personnel casualties, navigation gear failure, and a high voltage fire in one of the auxiliary machinery spaces. Thursday, we experienced our first General Emergency of the deployment. The call came to the bridge that there was flooding by means of a

ruptured pipe fitting that was spraying water at a rate of 2-3 gallons per minute. General Emergency was piped ship-wide, and thanks to the repetitive training, the crew remained calm, assumed their stations, and controlled the situation within minutes. In under an hour the space was dewatered and the ship returned to business as usual. Bravo Zulu HEALY!

Also on Thursday, HEALY exited the ice pack as we headed south to conduct mapping around the Chukchi Cap. The bump and shimmy that define HEALY’s movement through ice was replaced by the pitch and roll of a long period swell. The sun also emerged for a rare appearance, causing the temperature to warm above freezing, melting most of the accumulated ice and snow. The most obvious sign of the sun’s presence (besides heavy squinting) was the loud impact of falling ice. When the temperature dropped below freezing last week, any moisture that collected on the halyards, yardarms, and antennas froze, encasing the mast in rime ice (a clear and smooth layer of ice). Warmed from the sun and rolled about by seas, the ice broke off and shattered on the 0-6 and 0-5 decks, sometimes startling those standing bridge watch.

This week at quarters, LTJG Valdez was commended for qualifying as underway Officer of the Deck. Also, on 02 September, 21 days had passed since HEALY crossed the Arctic Circle. FS3 Dunkin, MK3 McCarthy, BM2 Bichsel, SK2 Gonzales, EM1 Clark, and SA Ellis were selected to receive the Arctic Service Medal on behalf of the crew. These first timers to the Arctic received a medal; all those returning received a star. And speaking of new comers to the Arctic, there may or may not be a secret squirrel ceremony in the upcoming weeks. I cannot say more than it will be wet, it will be cold, and it will be fun!



Representatives from the crew receive the Arctic Service Medal at Quarters.

## G. September 15, 2012

Hello again friends and family,

This week's theme was metamorphosis.

Quite suddenly, the signs of approaching winter are all around us. Within one week, we went from nearly 24 hours of day to almost 10 hours of night. Grey fingers of new ice now extend between thicker pieces of blue multiyear ice, joining them together into a single floe. Open water is becoming scarce as we travel north and south through this dynamic area, with front row seats to the freezing of the Arctic. As ice forms, the water takes on a greasy appearance, dampening out ripples and waves. As the ice develops, the surface becomes peppered with small white spheres that grow outward along the surface until they interconnect into a solid sheet of grey ice. With continued exposure to freezing temperatures, the ice thickens downward and turns white in color. So far we've only seen the grease and grey ice stages, but as the temperature continues to drop it's only a matter of time.



Host FN Tyyler McNeace welcomes contestant FS2 Bondurant to the Hot Seat.



Cup of Noodles, before and after the deep CTD cast.

One of the goals for this leg of the deployment was to identify an ice floe thick and stable enough to deploy personnel onto the ice. Both science party and crew examined satellite images and searched visibly for an area that would permit an “on ice” deployment and liberty. Unfortunately, the seasonal ice melt in HEALY's vicinity prevented this favorite crew evolution.

Sticking with the metamorphosis theme, we also conducted two deepwater CTD casts last week. Along with the rosette of sampling bottles and numerous sensors, the crew attached bags filled with decorated Styrofoam cups to make the trip to the bottom of the Nautilus Basin. At 3000 meters deep (or 1.8 miles), the pressure is 300 times what we feel at the sea

level. A large percentage of Styrofoam is air, and being moderately incompressible, it is squeezed out of the foam by the immense pressure of the water at depth. When the cups return to the surface, they are compressed to less than one-half of their original size. These unique cups are a favorite keepsake of the crew and serve as a vivid illustration of the physical properties of the sea.

Last Saturday, the morale committee hosted “Who Wants To Be A Healionaire?” (A spin off of Who Wants To Be A Millionaire?) in the hangar. All those who entered received a raffle ticket and participants were randomly drawn from the crowd. Host, FN Tyyler McNeace, grilled those in the hot seat with a



A ribbon of snow and new ice – a sign of approaching winter (Photo by John Farrell).

series of nine questions and a tempting set of prizes. Contestants could use three lifelines, including “Phone-a-Watchstander,” through the use of a speakerphone installed in the hangar for the game. Unsuspecting crew were frequently called into action to offer critical assistance to their shipmates in need. Congrats to MK3 Osburn for being the only contestant to make it through the entire set of questions and walk away with the grand prize.



A polar bear on multiyear ice welcomes the newly indoctrinated Blue Noses (Photo by ETC Swisher).

On Tuesday afternoon, HEALY crew met in the lounges and on the messdeck to continue a new initiative – the Underway Leadership Development Program. Hosted by the Chief’s mess, the crew meets every week to read and discuss the Coast Guard leadership competencies. The initiative has been successful in sparking some good conversations with take-away applicability. Leadership Tuesdays – “Developing leaders, 30 minutes at a time.”

Perhaps the most memorable metamorphosis this week was transformation of pollywogs (those who have never sailed in the Arctic) into Blue-Nosed Polar Bears. Through a series of events that spanned the entire week, the crew built camaraderie through shared experience and honored those who have come before by carrying on the spirit of the ceremony.

By Saturday morning, there were 53 newly indoctrinated Polar Bears among the crew and scientists. The event was a monumental group effort that took many hours of hard work and creative effort. Special thanks to ETCM Lippman for spearheading the charge! New Papa Bravos, it is up to you to keep the tradition alive for future Arctic sailors. And in seeming recognition of their new comrades, two actual polar bears were sighted on Saturday shortly after events concluded. A fitting end to the week.

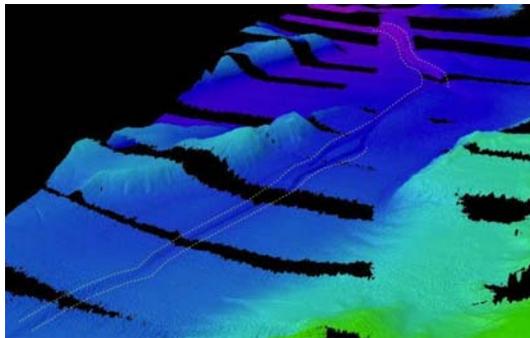
## H. September 21, 2012

Hello again friends and family,

This week marked the halfway point of Arctic West Summer 2012. Day 52 out of 103 appropriately fell on a Wednesday (“hump day”). Since the morning we departed Seattle on July 30th, HEALY has traveled over 8725 nautical miles and sailed in 5 different bodies of water: Puget Sound, Gulf of Alaska, Bering Sea, Chukchi Sea, and Arctic Ocean. The crew of the HEALY has seen days of round-the-clock sunlight and days of non-stop snow, 100% ice coverage and open water where we expected ice. We sighted 13 polar bears (5 in this past week alone), dozens of humpback whales, and hundreds of walrus. Science has deployed nearly 500 equipment casts and mapped over 5,000 miles of ocean floor. We’ve come a long way, but are now more than halfway to mission complete, and it’s all down hill from here.



A polar bear taking its ease  
(Photo by ETC Swisher)



The newly discovered submarine canyon mapped with multibeam echosounder.

Although the large-scale layout of the Arctic sea floor is known, very little data has been collected on the small scale features, leaving a lot of room for new discoveries. For example, during the 1st Extended Continental Shelf mission in 2003, a new seamount was discovered just east of the Chukchi Cap and named for the vessel conducting the survey: the Healy Seamount. A couple of weeks ago, HEALY surveyors discovered a new submarine canyon in the Nautilus Basin. Greater than 135 nautical miles long, 165 ft deep, 500 ft wide, and situated 600 nm north of Barrow, AK, the canyon is believed to have

been formed by a “landslide” of heavy, sediment laden water, called a turbidity current.

Triggered by earthquakes or an excessive build up of sediment, turbidity currents carve steep canyons into the continental slope and deposit fine silt sediment onto the ocean plains. An unexpected find, the canyon is now extensively mapped and could be named in the near future.

With the goals of the mapping project complete, the science party turned their attention to the pursuit of another objective – attaining physical samples of the ocean floor to assist in describing the natural prolongation of the continental shelf (as stated in United Nations Convention on the Law of the Sea). Extracting rocks 1-2 miles below the surface is no easy task, however. First, we needed to position HEALY over the bottom of the slope and lower the rock dredge from the fantail to just above



LTJG Valdez at the conn and SN Ramsey at the helm during a dredging operation with camera crew at the ready

the ocean floor, a process that can take up to 2 hours while adjusting for environmental forces such as migrating ice floes, wind, and sea swells. Once the dredge is in place, HEALY slowly maneuvers up the slope, letting out or taking in wire to place the dredge on the targeted position. The dredge contacts the slope and captures rock freshly broken off bottom outcroppings. HEALY must maintain position while the wire and dredge is winched up. After hours of anticipation, it is an exciting moment when the dredge breaks the surface, is lowered to the fantail, and the science party can inspect our catch. Analysis of the rocks collected provides our science party with a rich data source for future papers and PhD level dissertations. Therefore, it is too early to give results on the hundreds of rock samples caught by dredge in the past week.

As the science winds down for our return trip to Dutch Harbor, so does the cinematography. For the last three weeks, a camera crew has documented the life and times on CGC HEALY. The footage will be used for the production of a new Weather Channel television series, Breaking Ice. Although a little strange at first, the sight of cameramen around the ship has become commonplace and the crew has become more accustomed to telling their stories as red hull sailors. Stay tuned for a future air date.



Scientists gather around a fresh dredging catch of calcareous ooze and potential bedrock from the continental shelf.

Several times a week, HEALY conducts training and drills to maintain a high state of readiness for any type of emergency. The focus for this week was Force Protection and Physical Readiness. On Tuesday, the two dozen personnel onboard who are qualified to carry weapons refreshed on the Coast Guard Use of Force policy. OSC Horne and BM2 Kay led trainees through standard use of force tactics employed for Law Enforcement and Force Protection. On Friday, the techniques were exercised in drills that simulated an unauthorized Shipboard Intruder. It was great practice in judging and applying the minimum force necessary to compel

compliance when faced with a confrontation.

At Quarters this week, HEALY crew had a run on qualifications. BM1 Caddell was recognized for passing his underway Officer of the Deck board. SN Ramsey and SN Ellis qualified as Flight Deck Tiedown and Rigger, respectively. MKC Plascencia and MK3 McCarthy qualified as Technicians of the Watch. ET2 Emmons and BM2 Bichsel qualified as Junior Officers of the Deck. ET2 Cobb was recognized for a Good Conduct Award. Arctic Service Medals were awarded to ENS Bock, ENS Greendyk, BMC Shrum, FS3 Pulotu, FS3 McCallum, and the 35 members of the science party.



Crew practice control and response use of force techniques.

Fitting in with the halfway point in our deployment, Autumnal Equinox was this past Saturday, marking the day when the sun is halfway on its trip to

the Tropic of Capricorn in the Southern Hemisphere. As we make our way south through the Bering Sea to Dutch Harbor, we will lose 7 minutes of sunlight every day as winter approaches. With the promise of imminent darkness, many of the crew hope for the first sighting of the Northern Lights.

**I. October 5, 2012**

Hello again friends and family,

Over the past two weeks, HEALY has transited from high in the Arctic to Dutch Harbor, AK, enjoyed a Mid Patrol Break (MPB), and departed once again for the North. Over the deployment, we have encountered many picturesque settings. In homage to the old adage, “a picture is worth a thousand words,” this week’s update will be presented through images captured by the crew.



14 Sep 12 – Extended Continental Shelf mission. Sunset from the starboard bridge wing at 2200 (10 pm) near 80 degrees North. (Photo by ETC Swisher)



16 Sep 12 – Extended Continental Shelf mission. The searchlight stands sentinel on the flying bridge as HEALY transits through thin ice near 81 degrees North. (Photo by LCDR Lowry)



17 Sep 12 – Extended Continental Shelf mission. This polar bear decided to take a nap while waiting for us to pass. (Photo by ETC Swisher)



30 Sep 12 – MPB, Dutch Harbor, AK. CWO Rivera, MK2 Schumacher, LTJG Valdez, and BMCM Sullivan discovered a juvenile bald eagle entangled in fishing line while hiking on Unalaska Island. Acting with great care and caution, they worked for 30 minutes to free the eagle. Once freed from the line, the bird remained nearby for a short time before it flew away, apparently unharmed. (Photo by BMCM Sullivan)



04 Oct 12 – MPB, Dutch Harbor, AK. The Arctic Survey Boat, manned by HEALY crew, stands-by to support Rescue Swimmer training in Iliuliuk Bay. Although not currently deployed with an AVDET (Aviation Detachment), HEALY works closely with the aviation community to conduct flight training as often as possible. (Photo by ENS Sheridan)



04 Oct 12 – MPB, Dutch Harbor, AK. ENS Bock and EM2 Roberts lead a tour of HEALY for students from the Unalaska City School District. Many students expressed interest in joining the Coast Guard. (Photo by ENS Sheridan)

## J. October 12, 2012

Hello again friends and family,

Two science missions down, one to go. CGC HEALY departed Dutch Harbor, AK on October 5th. A short distance outside of the harbor, the Officer of the Deck (OOD) slowed the ship and turned into the wind in preparation for helicopter operations. Our unique mission and remote area of operations limit HEALY's opportunities to conduct helo ops with CG aircraft. Therefore, anytime HEALY is in the vicinity of a CG helo, the opportunity is seized to gain proficiency and flight deck qualifications for the crew. Since HEALY is a one-of-a-kind platform, flight crews are eager to land on HEALY's flight deck for their professional growth as well. During this training evolution, HEALY worked with an HH65D and flight crew from Kodiak, AK. Over a period of 3 hours, we conducted 7 landings, 1 crash on deck drill, 2 refuelings on deck, 1 in-flight refueling, and 2 vertical replenishments before securing from flight quarters and proceeding north.



Flight deck fire teams attack the fire while proxymen advance on the helicopter to save the crew trapped inside.  
(Photo by Bill Giers, USCG Aux)



The boat crew skillfully hooks the mooring for recovery. (Photo by Eric Brugler)

We are currently underway on the last mission of the Arctic West Summer 2012 deployment. This mission's focus is the western Arctic Boundary Current. In order to study the physical and chemical properties of this dynamic current, several subsurface moorings have been placed along the current's path between the Amundsen Gulf (the southern entrance to the Northwest Passage) and Barrow Canyon (NW of Barrow, AK). The moorings require annual servicing to recover data and allow continued operation. To service a mooring, HEALY approaches its location from downwind and lowers a transducer to communicate with the submerged gear. The acoustic mooring release is then triggered and all eyes are fixed forward, looking for the mooring to break the surface. A small boat is deployed to assist in hooking the mooring with a messenger line from HEALY. Once under tow, the mooring is retrieved from the fantail. After 4 days on location, HEALY has successfully recovered 3 and deployed 3 moorings. Lines of CTD casts running perpendicular to the current supplement the data gathered from the moorings. Each CTD cast is spaced 4 miles apart (on average) and gathers data on the conductivity, temperature, density, and salinity of the water column. By linking all the CTDs on the line together, a cross-section of the current properties is constructed. Through this mission's studies, scientists seek to better understand the interaction between the Pacific, Atlantic, and Arctic Oceans, and the flow of heat and nutrients through the system.

There are many ways to study ocean circulation. In May of 1990, a storm south of the Alaskan peninsula knocked 21 containers off a ship delivering goods from Korea to the United States. Four of those containers burst open, jettisoning 61,000 brand new Nike sneakers and hiking

boots into the North Pacific. The following Thanksgiving, hundreds of the shoes washed onto the beaches of the West Coast, from Oregon to the Queen Charlotte Islands. Through some research, interested scientists were able to learn the initial location and date the shoes were lost, as well as the individual serial numbers that were sewn on each shoe, in order to track their travels. A similar experiment (not using shoes) is being performed on HEALY this mission. At specific locations through the mission, reed arrows marked with a website and the phrase “this is a friendly arrow” are fired from the vessel into the water. After a safety briefing and instruction, the crew were allowed to participate in the fun. The arrows are small, buoyant, blunt and constructed solely of natural materials. They will follow the predominant current until they are washed ashore and hopefully recovered by someone who will visit the website and report the arrow’s location. As the arrows are recovered, their destination will continue to reveal information about global ocean circulation for years to come.



MK3 Ford draws back for the launch of a drift arrow from the flight deck.



Crew gather on the flight deck to watch the Northern Lights as HEALY transits through the Bering Sea.  
(Photo by MK2 Schumacher)

Recent weather has been more variable than the last two missions. Low-pressure systems have rolled across the Arctic, one after the other, keeping both the winds and seas lively. The benefit to this variable weather is that we no longer experience the uninterrupted overcast conditions common during the first two missions; clear skies prevail between the storms. This is especially exciting at night when the Northern Lights emerge. The displays have been amazingly vivid, illuminating the sky so that at midnight there is still enough light to easily see on deck. They are mostly white and green in color, but occasionally flare to red in the thickest areas. For several nights this past week, the lights have danced for hours, turning the flight deck into a viewing platform. It’s been beautiful.

**K. October 19, 2012**

Hello again friends and family,

As I write this latest update, CGC HEALY is working its way back to the west across the northern coast of Alaska. The winds and seas are light, with intermittent snow flurries. The decks have turned white with a thin cover of snow, sustained by temperatures that hover just below freezing. Every five miles, the OOD stops and orients the cutter with the winds off the starboard side. The CTD is launched from the starboard A-frame, lowered to just above the sea floor, and recovered with water samples from various depths. Over the past week, 60 CTD casts have been successfully conducted between the entrance to Amundsen Gulf and Barrow, AK.



This Snow Owl kept us company for a day as we transited in the vicinity of Amundsen Gulf. (Photo by BMC M Sullivan)



MK2 Smith and MK3 Cartagena from NESU replace a leaky seal on the Auxiliary Diesel Generator jacket water pump. (Photo by MKC Riley)

When HEALY steamed east from Pt Barrow last week to conduct a mission of cross-shelf current analysis, it left behind a small glider to conduct its own mission. The Slocum glider (named for the first man to sail solo around the world) is a remotely-controlled, programmable glider capable of collecting data similar to that of a CTD cast. Its mission was to perform dives every half a mile along the edge of the continental shelf and record the physical and chemical properties of the water column. True to its name, the glider operates without mechanical propulsion. As it dives and surfaces (controlled by internal buoyancy adjustments), wings on either side of the glider slice through the water and provide forward thrust. The glider averaged a speed of 0.6 mph, surfacing every

2.5 hours to communicate via satellite with the HEALY. After its launch on the 11th of October, it travelled approximately 175 nautical miles eastward along the shelf break before being recovered by HEALY nine days later.

While science continues around the clock, HEALY's crew is looking ahead and diligently preparing for an important event beyond the last science mission – Command Assessment of Readiness for Training (CART). CART is a biennial assessment of a cutter's ability to properly train its crew and meet the standards that allow the cutter to perform its required operations. Preparation for CART involves a meticulous self-examination of the cutter's inventory, training records and assessment of equipment performance. To assist the crew in this colossal effort, HEALY is currently hosting a detachment of 7 Naval Engineering Support



AUX Bill Giers leads Team Coordination Training on the mess deck.



The Slocum glider is recovered by small boat after travelling 175 nm solo across the Beaufort Sea.

Unit (NESU) members: MKC Riley, EM1 Olson (2011 HEALY Sailor of the Year), MK2 Smith (2007 HEALY Sailor of the Year), and DC2 McNeil from NESU Seattle; EM3 Diaz from NESU Portsmouth; DC3 Collum from NESU Honolulu; and MK3 Cartagena from NESU Boston. These personnel joined HEALY on September 27th and will stay with the crew until the beginning of CART on November 5th. During their time onboard, the detachment has repaired a variety of equipment and have undertaken large scale projects, such as the inspection of 1300 electrical outlets for safety hazards and un-

seizing 150 deck drains for inspection. Many of these repairs and inspections have required the unit to fabricate their own tools to accomplish the task. Without a doubt, their efforts have greatly assisted the crew in bringing HEALY up to top-notch condition for CART. Thanks NESU!

Mr. Bill Giers from Coast Guard Auxiliary Division 17, Port Canaveral, Florida, has also been riding with the HEALY this past mission to provide an important service to the crew. Team Coordination Training is a multiday course designed to increase team effectiveness and communication while minimizing human error. The course mainly focuses on group discussion of real and invented scenarios that require team effort to resolve. Mr. Giers was highly adaptive to HEALY's busy underway schedule to ensure that all hands were able to receive this valuable training. Many thanks, Mr. Giers!



SN Welding receives her new bow from David Forcucci and Morale Officer ENS Cuprak.

I mentioned in last week's update that the crew was given the opportunity to participate in the deployment of drift arrows from the flight deck. Local Seattle archer, Jay St. Charles, crafted the bows used for launching the arrows. Mr. St. Charles donated two bows to the ship for the drift arrow project and to enhance the morale of the crew. All those that participated in the drift arrow deployment placed their names into a hat for a drawing for one of the bows. The winner, SN Welding, was announced at Quarters on Friday. Along with a bow, she received a quiver of reed arrows and a forearm guard. Thank you, Mr. St. Charles! SN Welding is very excited to try out her new bow.

With only 7.5 hours of sunlight everyday, the crew is looking forward to rounding Point Barrow and heading south, back to the land of light and slightly warmer temperatures. Seattle, here we come!

## L. November 8, 2012

Hello again friends and family,

The time has come to close the door on Arctic West Summer 2012. As I write this last entry on Thursday evening, we are steaming south through Queen Charlotte Sound with mild seas and beautiful weather. For the first time in months, crew members can step outside in a t-shirt and feel only a mild chill (its comparatively balmy in the high 40's). 102 days have passed since CGC HEALY cast off mooring lines from Pier 36 in Seattle, WA. Only 3 months, but it seems a lot longer when you look back at all we have accomplished in that time.



BMCM Sullivan raises the Canadian flag as a courtesy to our northern neighbor upon entering Canadian waters. (Bill Giers, USCG AUX)



SN Ramsey, accompanied by his wife Ellaura, stands as helmsman as HEALY departs Juneau, AK. (Bill Giers, USCG AUX)

Since departing Seattle on July 30th, CGC HEALY has travelled 18,100 nm and conducted 687 over-the-side science casts. The crew has spotted 14 polar bears, hundreds of walrus, dozens of whales, and one sociable Snowy Owl that travelled with us for a day. HEALY broke through the ice pack to 83.5° N latitude, 730 nm north of Barrow, AK, the farthest point north reached during the deployment. The crew of HEALY had the opportunity to sumo wrestle, observe the Northern Lights, experience 24 hours of daylight, rescue a juvenile Bald Eagle in distress, climb Mt. Ballyhoo, shoot drift arrows into the sea, and be filmed for an upcoming Weather Channel TV show. Scientists successfully created a data baseline for the ecological study of Hanna Shoal, added 25% more data to the bathymetric mapping project of the extended continental shelf, and serviced subsurface moorings in the Beaufort Sea. It has been a fruitful voyage.

To add even more success to the mix, CGC HEALY recently underwent a very thorough and detailed inspection called CART (Command Assessment of Readiness for Training). The crew of HEALY spent months gearing up for this inspection and it all came down to three days of grueling assessment in Juneau, AK. When the checklists were finally put away, HEALY emerged victorious. Out of 2,541 line items checked, only 10 were found to be discrepant (less than half of a percent of all items). It was a tremendous achievement for the crew!

Juneau was also the setting of an important event in two young officers' careers. On November 4th, Ensigns Scott Bock and Erin Sheridan were promoted to Lieutenant Junior Grade. Following tradition, their promotion coincided with a "Wetting Down." There are many interpretations of



Mr. Scott Bock and Ms. Erin Sheridan promote to LTJG. (SNBM Rupp)

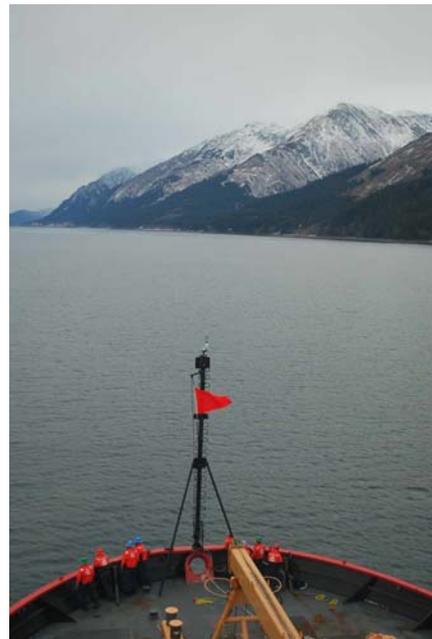
this old phrase, but my favorite is as follows. When officers were promoted their new stripes or gold braid (and sometimes the rest of them) were dipped in salt water to make them appear more weathered and to symbolize their gaining of knowledge (or becoming “salty”). Today’s Wetting Down is typically a party with many toasts and advice given to the newly promoted officers.

When HEALY departed Juneau on the 7th of November, the sailing list carried the names of an additional 35 friends and family. A Tiger Cruise is when families and family are welcome aboard for a trip, in this instance, the transit from Juneau to Seattle through the inside passage of Alaska and Canada. The crew was offered the opportunity to bring their loved ones along for a taste of what life is like aboard a Coast Guard Icebreaker while travelling through a breathtaking, scenic area. The weather has been favorable and humpback whales have abounded along the transit route. After the months of ceaseless focus and hard work, it is gratifying to see

everyone relaxed and surrounded by loved ones.

On Saturday morning, the familiar skyscrapers of Seattle, WA, will appear over the hills edging Puget Sound and CGC HEALY will pull back into Pier 36. To all those who have followed these updates, thank you for your patronage and interest in our mission. It has been my pleasure relating our journey.

Thanks for tuning in and take care.



Line handlers gather on the foc’sle as HEALY cruises up the Gastineau Channel in preparation for mooring in Juneau, AK. (ET2 Emmons)

## Appendix 10: Deployment Fuel Use & Transfer

### Northbound Transit to Dutch Harbor, AK

DFM	JP-5	DTG OF SOUNDING	CONFIG	ENGINE REMARKS
4,887	0	302300Z JUL 12	2 MDEs	DEP Homeport 302012Z JUL 12
23,642	0	312300Z JUL 12	2 MDEs	
30,397	0	012300Z AUG 12	3 MDEs	
32,639	0	022300Z AUG 12	3 MDEs	
37,181	0	032300Z AUG 12	3 MDEs	
25,361	0	042300Z AUG 12	3 MDEs	
4,677	0	052300Z AUG 12	ADG	ARR Dutch Harbor, AK 050021Z AUG 12
4676	0	062300Z AUG 12	ADG	
4677	0	072300Z AUG 12	ADG	
3091	0	082300Z AUG 12	ADG	
5415	0	092300Z AUG 12	ADG	DEP Dutch Harbor, AK 092125Z AUG 12
176,643	0	TOTALS		

### HLY-12-01

DFM	JP-5	DTG OF SOUNDING	CONFIG	ENGINE REMARKS
5085	0	102300Z AUG 12	2 MDEs	
10308	0	112300Z AUG 12	2 MDEs	
16716	0	122300Z AUG 12	2 MDEs	
16716	0	132300Z AUG 12	2 MDEs	
5793	0	142300Z AUG 12	1 MDE	
3954	0	152300Z AUG 12	2 MDEs	
6514	0	162300Z AUG 12	2 MDEs	
4233	0	172300Z AUG 12	2 MDEs	
8706	0	182300Z AUG 12	2 MDEs	
4146	0	192300Z AUG 12	2 MDEs	
5511	0	202300Z AUG 12	2 MDEs	
5711	0	212300Z AUG 12	2 MDEs	
4059	0	222300Z AUG 12	1 MDE	
4575	0	232300Z AUG 12	1 MDE	
5120	0	242300Z AUG 12	1 MDE	
3425	0	252300Z AUG 12	1 MDE	ANCHORED off Barrow, AK 250407Z AUG 12
110,572	0	TOTALS		

### HLY-12-02

DFM	JP-5	DTG OF SOUNDING	CONFIG	ENGINE REMARKS
2912	0	262359Z AUG 12	1 MDE	DEP Barrow, AK 262228Z AUG 12
16773	0	272359Z AUG 12	2 MDEs	
31963	0	282359Z AUG 12	2 MDEs	
7265	0	292359Z AUG 12	2 MDEs	
6661	0	302359Z AUG 12	2 MDEs	
3894	0	312359Z AUG 12	1 MDE	
9195	0	012359Z SEP 12	1 MDE	
10997	0	022359Z SEP 12	2 MDEs	
7405	0	032359Z SEP 12	2 MDEs	
6120	0	042359Z SEP 12	2 MDEs	
6898	0	052359Z SEP 12	2 MDEs	
7510	0	062359Z SEP 12	2 MDEs	
8921	0	072359Z SEP 12	1 MDE	
10283	0	082359Z SEP 12	1 MDE	

8499	0	092359Z SEP 12	1 MDE	
8592	0	102359Z SEP 12	1 MDE	
9802	0	112359Z SEP 12	1 MDE	
10086	0	122359Z SEP 12	1 MDE	
12096	0	132359Z SEP 12	1 MDE	
6694	0	142359Z SEP 12	1 MDE	
8263	0	152359Z SEP 12	1 MDE	
7793	0	162359Z SEP 12	1 MDE	
9334	0	172359Z SEP 12	1 MDE	
6106	0	182359Z SEP 12	1 MDE	
4678	0	192359Z SEP 12	1 MDE	
7026	0	202359Z SEP 12	1 MDE	
10849	0	212359Z SEP 12	1 MDE	
8992	0	222359Z SEP 12	2 MDEs	
18917	0	232359Z SEP 12	2 MDEs	
20057	0	242359Z SEP 12	2 MDEs	
8597	0	252359Z SEP 12	1 MDE	
8392	0	262359Z SEP 12	1 MDE	
1242	0	272359Z SEP 12	1 MDE	ARR Dutch Harbor, AK 271813Z SEP 12
312,812	0	TOTALS		

**HLY-12-03**

<b>DFM</b>	<b>JP-5</b>	<b>DTG OF SOUNDING</b>	<b>CONFIG</b>	<b>ENGINE REMARKS</b>
1242	0	282359Z SEP 12	ADG	
1242	0	292359Z SEP 12	ADG	
1310	0	302359Z SEP 12	ADG	
1311	0	012359Z OCT 12	ADG	
2057	0	022359Z OCT 12	ADG	
2057	0	032359Z OCT 12	ADG	
2057	0	042359Z OCT 12	ADG	
3137	0	052359Z OCT 12	ADG	DEP Dutch Harbor, AK 052056Z OCT 12
14730	0	062359Z OCT 12	2 MDEs	
21077	0	072359Z OCT 12	2 MDEs	
12642	0	082359Z OCT 12	2 MDEs	
16797	0	092359Z OCT 12	2 MDEs	
9305	0	102359Z OCT 12	2 MDEs	
10259	0	112359Z OCT 12	2 MDEs	
8352	0	122359Z OCT 12	2 MDEs	
4834	0	132359Z OCT 12	1 MDE	
6150	0	142359Z OCT 12	1 MDE	
4975	0	152359Z OCT 12	1 MDE	
15997	0	162359Z OCT 12	2 MDEs	
11670	0	172359Z OCT 12	2 MDEs	
16905	0	182359Z OCT 12	2 MDEs	
11279	0	192359Z OCT 12	2 MDEs	
16003	0	202359Z OCT 12	2 MDEs	
8718	0	212359Z OCT 12	1 MDE	
25989	0	222359Z OCT 12	2 MDEs	
22049	0	232359Z OCT 12	2 MDEs	
15160	0	242359Z OCT 12	2 MDEs	
2607	0	252359Z OCT 12	ADG	ARR Dutch Harbor, AK 250325Z OCT 12
3375	0	262359Z OCT 12	ADG	
3376	0	272359Z OCT 12	ADG	DEP Dutch Harbor, AK 272359Z OCT 12

19688	0	282359Z OCT 12	2 MDEs	
21653	0	292359Z OCT 12	2 MDEs	
19269	0	302359Z OCT 12	2 MDEs	
14108	0	312359Z OCT 12	2 MDEs	ARR Juneau, AK 311834Z OCT 12
2324	0	012359Z NOV 12	ADG	
2324	0	022359Z NOV 12	ADG	
2325	0	032359Z NOV 12	ADG	
2764	0	042359Z NOV 12	ADG	
6874	0	052359Z NOV 12	ADG	
2662	0	062359Z NOV 12	ADG	
2479	0	072359Z NOV 12	ADG	
		082359Z NOV 12		
		092359Z NOV 12		
		102359Z NOV 12		
	0	TOTALS		

**Fuel and Lube Oil Transfer**

Oil Type (Fuel/Lube)	Date	Amount (gallons)	Cost	To/From
Fuel	05AUG12	125,000	\$430,125.00	USCGC HEALY/Dutch Harbor (Petro Star)
Fuel	29SEP12	511,858	\$1,893,239.42	USCGC HEALY/Dutch Harbor (Petro Star)

## Appendix 10: Orientation Cruise Message Traffic

R 200426Z SEP 12

FM USCGC HEALY

TO COMPACAREA COGARD ALAMEDA CA//PAC-3// INFO CCGDTHIRTEEN SEATTLE  
WA//DR/DRE// COGARD BASE SEATTLE WA COMCOGARD SECTOR PUGET SOUND WA  
CCGDSEVENTEEN JUNEAU AK//DR/DRE/DRMC// BT UNCLAS //N04650//

SUBJ: USCGC HEALY ORIENTATION CRUISE

A. PACAREA INSTRUCTION 4650.1E, UNDERWAY GUESTS ABOARD CUTTERS B. ALCOAST  
112/10, MANDATORY REQUIREMENTS FOR FOREIGN VISITS TO U.S. COAST GUARD  
FACILITIES 1. IAW REF A, REQ TO CONDUCT AN ORIENTATION CRUISE OOA 07-10NOV12  
WHICH INCLUDES 3 DAYS OVERNIGHT. THE FOLLOWING INFORMATION IS PROVIDED IAW  
REF A:

- A. NUMBER OF GUESTS: UP TO 40
  - B. NATURE OF MISSION: HEALY WILL BE TRANSITING FROM JUNEAU TO  
SEATTLE AFTER COMPLETING AWS12.
  - C. THE FOLLOWING GUEST GUIDELINES HAVE BEEN ESTABLISHED FOR THIS  
REQUEST:
    - 1) MINIMUM AGE REQUIREMENT: 8 YEARS OF AGE.
    - 2) MAX PARENT/CHILD RATIO: TWO CHILDREN (UNDER 18) FOR ONE  
ADULT PASSENGER.
    - 3) CHILDREN UNDER THE AGE OF 13 MUST PROVIDE THEIR OWN  
LIFE JACKET.
  - D. PROPOSED ITINERARY:
    - 1) DATES: 1000 07NOV12 THRU 1000 10NOV12
    - 2) LOCATION: TRANSIT JUNEAU, AK TO SEATTLE, WA VIA INSIDE  
PASS.
  - E. ADEQUATE BERTHING, MESSING AND SURVIVAL EQUIPMENT WILL BE  
PROVIDED FOR ALL GUESTS.
  - F. GUEST LIST IS NOT YET CONFIRMED. FOREIGN VISIT REQUESTS WILL  
BE SUBMITTED IAW REF B FOR ANY FOREIGN NATIONAL GUESTS.
2. POC: LCDR JACOB L. CASS, OPERATIONS OFFICER
- A. E-MAIL: JACOB.L.CASS(AT)USCG.MIL
  - B. INMARSAT: 011-870-763-709-857
  - C. IRIDIUM: 808-659-5000

BT

NNNN

R 242143Z SEP 12

FM COMPACAREA COGARD ALAMEDA CA//PAC-3// TO USCGC HEALY INFO CCGDTHIRTEEN  
SEATTLE WA//DR/DRE// COGARD BASE SEATTLE WA COMCOGARD SECTOR PUGET SOUND WA  
CCGDSEVENTEEN JUNEAU AK//DR/DRE/DRMC// BT UNCLAS //N04650//

SUBJ: UNDERWAY GUESTS ABOARD USCGC HEALY A. YOUR 200426Z SEP 12 B.

PACAREAINST 4650.1 SERIES C. COMPACAREA SOP, TAB D, TO APPENDIX 1 1. IN  
RESPONSE TO REF A, YOUR REQUEST FOR OVERNIGHT OFFSHORE GUESTS ONBOARD CGC  
HEALY 07-10 NOV 12 IS APPROVED.

2. ADHERE TO THE GUIDELINES IN REF B AND C.

3. POC: LCDR DOUG WYATT, 510-437-6612, DOUGLAS.E.WYATT(AT)USCG.MIL.

BT

NNNN