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**ON
“COAST GUARD ICEBREAKER NEEDS, RADIO NAVIGATION PLAN,
AND OIL SPILL RESPONSE CAPABILITIES”**

**BEFORE THE
HOUSE COAST GUARD AND MARITIME TRANSPORTATION SUBCOMMITTEE**

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Introduction

Good morning Mr. Chairman and distinguished Members of the committee. We are honored to be here today to discuss the Coast Guard's icebreaking needs, radio navigation plan, and oil spill response capabilities.

COAST GUARD POLAR ICEBREAKING PROGRAM

The Coast Guard's current icebreaking activity in the Arctic and Antarctic is being met with the minimum number of assets necessary, but as these assets age, the ability to maintain this level of effort is at significant risk. The Coast Guard Cutter (CGC) POLAR STAR, the nation's only operational heavy icebreaker, was reactivated in 2013, extending its service life by 7-10 years (2020 to 2023). POLAR STAR's classification as a heavy icebreaker makes it suitable for operations in either the Antarctic or Arctic. Although still in commission, a second heavy icebreaker (POLAR SEA) is inactive and has been unable to get underway since experiencing major propulsion plant casualties in 2010. The HEALY, a medium polar icebreaker, was commissioned in 1999 with a design service life of 30 years, and is primarily designed for operations in the Arctic.

CGC POLAR STAR is currently in dry dock undergoing planned repairs prior to deploying for a third time in support of Operation Deep Freeze later this year. Operation Deep Freeze (ODF) is an annual activity managed by NSF to resupply the National Science Foundation's (NSF) Antarctic research station at McMurdo Sound. During the past two ODF deployments, POLAR STAR also came to the aid of mariners in distress, including the rescue of an Australian fishing vessel trapped in the Antarctic ice. The Coast Guard's second active icebreaker- CGC HEALY- is currently underway in the Arctic, where the crew is working with the National Oceanic and Atmospheric Administration (NOAA) to test Arctic technologies. HEALY's deployment will

continue through October and will also support an NSF study of trace elements in the Arctic water column and the Coast Guard's own annual studies collectively known as Operation Arctic Shield.

Due to its age and certain antiquated systems, extensive maintenance activities must occur on POLAR STAR upon her return from Antarctica, if she is to be used for the next year's Operation Deep Freeze. Because maintenance facilities for a large icebreaker are limited and a home port shipyard may not be available or cost effective, there may be excessive strain on the crew. For example, in 2014 POLAR STAR crew members spent over 220 days away from home port between Operation Deep Freeze and their follow-on maintenance period in Vallejo, CA; the Coast Guard anticipates a similar operational schedule for the POLAR STAR in 2015. The requirements that Coast Guard is developing for its new icebreaker will address such issues.

The Coast Guard is collecting updated information to inform a decision regarding whether to decommission or reactivate POLAR SEA. By the end of fiscal year 2015, we will commence a Preservation Dry Dock on POLAR SEA which will slow deterioration of the hull and machinery and preserve the vessel for layup work that is necessary regardless of future disposition. In conjunction with and following this dry dock our plan is to conduct a full Materiel Condition Assessment of the hull and all systems with \$6million in funding requested in the 2016 President's Budget. The assessment will determine the scope of work and costs that would be incurred to reactivate POLAR SEA based on the vessel's current condition. The Coast Guard plans to evaluate the cost effectiveness of reactivation based on the assessment and anticipates a final determination to either decommission or reactivate by the end of 2016. Regardless of the final determination, a reactivation of POLAR SEA is only viable as a bridging strategy and does not mitigate the need for the recapitalization effort currently underway if we are to maintain our current polar icebreaking capacity.

The acquisition program underway is currently in the Analyze/Select phase which involves establishing asset requirements, evaluating alternatives for achieving the requirements, and assessing the merits of each alternative to select a solution. In January 2015, the Coast Guard completed a Preliminary Operational Requirements Document (PORD) for the new Polar Icebreaker that established baseline requirements as defined by an interagency Integrated Product Team (IPT). Future milestones include finalizing requirements, completing an Alternatives Analysis, and identifying a preferred material solution. Upon selection of a material solution the Coast Guard will develop a formal Acquisition Plan. Details of the acquisition timeline will continue to evolve until the plan is finalized. The fiscal year 2016 President's Budget includes \$4 million to continue these pre-acquisition activities.

The ongoing recapitalization effort to acquire a single new heavy icebreaker will sustain our current capacity. Additional assets may be needed as human activity increases in the Polar Regions. The Coast Guard is also meeting the demands of increasing Arctic activity during the summer months through mobile and seasonal presence in the region. In 2016, the Coast Guard's Operation Arctic Shield will focus on assessing the operational capabilities of cutters, boats, and aircraft, executing the Coast Guard's multiple Arctic missions, and strengthening relationships with state, local, and tribal stakeholders.

COAST GUARD INVOLVEMENT WITH THE 2014 FEDERAL RADIONAVIGATION PLAN

The Federal Radionavigation Plan (FRP) is the official source of positioning, navigation, and timing (PNT) planning for the U.S Federal Government. The FRP is prepared jointly by the

Departments of Defense (DoD), Homeland Security (DHS), and Transportation (DOT), and is signed by the Secretary of each agency. The Coast Guard's responsibilities include statutory obligations under 14 USC § 81 to establish, maintain, and operate aids to maritime navigation, aids to air navigation (as requested by the FAA or DoD), and electronic aids to navigation systems.

The FRP reflects planning for present and future federally provided PNT systems, covering common-use PNT systems (i.e., systems used by both civil and military sectors). The Federal Government operates PNT systems as one of the necessary elements to enable safe transportation and encourage commerce within the United States. While all users require services that are safe, readily available, and easy to use, unique requirements exist for military as well as civil users.

Nationwide Differential GPS

The Secretary of Transportation has statutory authority to implement the Nationwide Differential GPS (NDGPS) service in support of surface transportation and other terrestrial civil PNT missions. System operations and maintenance are provided by the Coast Guard under a Memorandum of Agreement (MOA) in a coordinated fashion with the Coast Guard-provided Maritime Differential Global Positioning System (MDGPS) as a combined national differential GPS utility.

DGPS was developed by the Coast Guard to improve accuracy in positioning aids to navigation when the original GPS signal was transmitted for civil users with Selective Availability, which decreased the position accuracy of GPS from five meters to approximately 100 meters. By using static reference stations to calculate corrections to the GPS signal received from the satellites DGPS is able to retransmit a corrected GPS signal to users with DGPS receivers, providing accurate positioning information to within approximately three meters. In May of 2000, the U.S. Government decided to permanently disable Selective Availability, providing all users with GPS receivers with the maximum accuracy available from the GPS satellites. Furthermore, the newer GPS III satellites no longer have the capability to transmit with an induced error.

Over time, a number of factors have contributed to the declining public use of NDGPS, including lack of a carriage requirement, technological advances in GPS, and limited availability of consumer-grade DGPS receivers. Working with the Department of Transportation and U.S. Army Corps of Engineers, which both have responsibility for terrestrial uses of DGPS, the Coast Guard is finalizing a Federal Notice that will provide the public an opportunity to comment on a proposed plan to continue to provide differential coverage in major ports and waterways.

OIL SPILL RESPONSE CAPABILITIES

The Coast Guard is committed to proactive oil spill prevention and response. As the nation's lead federal agency for ensuring maritime safety, security, and stewardship, the Coast Guard protects people on the sea, protects the U.S. against threats delivered from the sea, and protects the sea itself. Our stewardship function includes marine oil spill preparedness and response in our role as pre-designated Federal On-Scene Coordinator (FOSC) in the Coastal Zone and, through a memorandum of agreement with the Environmental Protection Agency (EPA), for designated inland waters. This authority originates from the Clean Water Act as amended by the Oil Pollution Act of 1990 (OPA 90) and by regulation in the National Oil and Hazardous Substance Pollution Contingency Plan (or NCP for short). As FOSC, the Coast Guard is involved in

preparing for spill incidents and responding when they occur. The FOSC leads government planning and preparedness activities in the coastal zone, overseeing the preparedness of the marine transportation industry segment we regulate, and collaborating with other regulatory agencies in their preparedness oversight of other elements of the petroleum supply chain.

Under the U.S. “polluter pays” approach to environmental response, the petroleum industry and supply chain players are required to plan, prepare and retain equipment for response, as well as carry out this pre-planned response under government direction when a spill occurs. Because of these requirements, regulated industry provides the bulk of the U.S. pollution response capability. In the U.S., those who spill oil on the navigable waters are liable for cleanup costs and are referred to as the "Responsible Party (RP)". In the event that the RP is either unknown or the spill exceeds RP capabilities, the Coast Guard will hire commercial and/or government response resources using the Oil Spill Liability Trust Fund.

The Coast Guard’s primary jurisdiction for oil spill preparedness and response consists of the navigable waters of the U.S., adjoining shorelines, the contiguous zone, and the high seas involved in outer continental shelf activities. Our Coastal Zone preparedness and response functions are complemented by the EPA in the inland zone under the same statutes and regulations. The coastal zone is generally waters affected by the tide, the Great Lakes, and specified inland ports, with specific boundaries negotiated between EPA regions and Coast Guard districts, documented in memoranda of agreement and added into Regional and Area Contingency Plans.

While the Coast Guard and EPA lead federal preparedness and response efforts, responding to pollution incidents involves coordination with numerous state and federal agencies as well as the private sector, Non-governmental Organizations, science institutions, and academia response capabilities. The Coast Guard also depends on its own personnel and resources to augment the required industry response capability and provide RP oversight.

The Coast Guard also coordinates with federal, state, and international partners to ensure government and industry have the necessary oil spill response equipment, capability, and contingency plans to address worst-case discharge scenarios in anticipation of increased maritime activities in the Caribbean, U.S. and international Gulf of Mexico, and Arctic regions, and to mitigate potential risks associated with oil exploration and production. As a result of Cuba offshore drilling in 2011-2012 strong multilateral engagement occurred in the Caribbean to address oil spill risks to the United States. This effort produced the non-binding Wider Caribbean Region Multilateral Technical Operating Procedures for Offshore Oil Pollution Response (MTOP). The intent of MTOP is to build a responder-to-responder network that can work effectively in the event of a large spill that threatens more than one of the participating countries. The Coast Guard is committed to continued multilateral engagement to enhance international pollution response cooperation and capabilities.

Coast Guard Pollution and Incident Management Resources

National Strike Force personnel and equipment are strategically placed throughout the U.S. and available to provide nationally deployable incident management, oil spill response expertise, and specialized equipment. The Coast Guard’s fleet of 225-foot seagoing buoy tenders are equipped with deployed Spilled Oil Recovery Systems (SORS), and three National Strike Force Teams maintain Vessel of Opportunity Skimming Systems (VOSS), trailers with air palletized inflatable

booms, viscous oil pumping systems, various submersible and non-submersible high-volume pumps, and dispersant monitoring equipment.

Coast Guard Sectors nationwide are staffed with officers and enlisted members proficient in pollution response operations. These personnel are responsible for mitigation and response activities through Responsible Party oversight or mobilization of contracted resources. Certain Sectors maintain pollution response trailers that provide oil spill response capabilities for first response operations in remote locations. Combined with the efforts of numerous state and federal agencies, the private sector, NGOs, science institutions, and academia this network comprises the National Response System that, through cooperative work, successfully responds to thousands of oil spills every year within the United States.

Coast Guard Pollution and Incident Management Enhancements

Throughout its 45 years, the National Response System has been proven to be a resilient, agile construct during myriad pollution incidents. The system experienced no greater challenge than in 2010 during response operations following the MC252 Deepwater Horizon oil spill. As a result of the lessons learned from Deepwater Horizon, the Coast Guard has taken a number of actions to enhance our spill preparedness and response posture. For instance, the Coast Guard instituted a two week Federal On-Scene Coordinator course that provides junior incident commanders with applied knowledge for directing smaller oil spills, while enhancing major spill response readiness. Additionally, the Coast Guard established a full time national Incident Management Assistance Team (IMAT), as well as civilian Incident Management and Preparedness Advisors in each Coast Guard District.

The Coast Guard also regularly conducts Spill of National Significance (SONS) exercises. A SONS is a spill that due to its severity, size, location, or impact, requires extraordinary coordination to contain or clean up the discharge. In recent years, the Coast Guard has shifted the SONS exercise program towards annual training and seminar events which include the opportunity to discuss complex and politically sensitive response issues among the DHS and the fifteen National Response Team (NRT) agencies. Additionally, senior level seminars were conducted in 2012, 2013, and 2014 that focused on offshore spill scenarios in the Arctic. The Coast Guard gathered lessons learned from these seminars and established critical guidance and policy for future spills. Currently, the Coast Guard is working with the EPA on a SONS exercise scheduled for 2016, which will focus on a crude-by-rail incident.

In addition to the initiatives mentioned above, the Coast Guard works closely with stakeholders to develop new oil spill response capabilities as Chair of the congressionally-mandated Interagency Coordinating Committee on Oil Pollution Research (ICOPR). Additionally, the Coast Guard Research and Development (R&D) Center continues to build upon its 40-year track record of successful research to address oil spill response capability needs. Recently, the Coast Guard has been actively engaged in analyzing oil spill response equipment in the Arctic environment. Engineers and scientists led by the Coast Guard R&D Center have utilized HEALY's deployments to the Arctic to perform testing and evaluation of communications equipment, ice navigation technologies, and oil spill detection and recovery capabilities in sea ice.

In partnership with the DHS Science and Technology Directorate (S&T), the Coast Guard is also engaged in research on Arctic communications; coastal Surveillance and maritime domain awareness; identification, tracking, and communicating sea-ice hazards, high resolution

modeling of Arctic sea ice and currents, and oil spill modeling for the Bering, Chukchi, and Beaufort Seas. These S&T efforts complement those of the Coast Guard R&D Center and bring a wide array of expertise to bear on addressing the challenges of Arctic operations, including DHS Centers of Excellence such as the Center for Maritime, Island, Remote and Extreme Environment Security (MIREES).

Conclusion

Over the past 224 years, the Coast Guard's missions have evolved along with the United States. The broad scope of the Coast Guard's authorities, and our diverse mission set, are highlighted in the topics discussed today- from our icebreaking mission in the Polar regions, to our support as partner agencies assess PNT alternatives, and our oil spill prevention and response activities.

Mr. Chairman, thank you again for the opportunity to testify today, and for your continued support of the United States Coast Guard. We would be pleased to answer any questions you may have.