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TESTIMONY OF
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ON THE "CHANGING ARCTIC AND THE NEED FOR FEDERAL INFRASTRUCTURE"

BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

AUGUST 19, 2010

Good morning, Chairman. I am pleased to be here today to discuss the Coast Guard's operational presence in a changing Arctic and the need for Federal infrastructure in the region.

ICEBREAKING CAPACITY IN THE ARCTIC

Just over a year ago, Admiral Allen testified before Congress on Coast Guard icebreaking. He stressed the importance of maintaining our Nation's ability to project maritime presence and strength throughout the world, and specifically in the Arctic region. Arctic policy has been further defined by National Security Presidential Directive (NSPD) 66 /Homeland Security Presidential Directive (HSPD) 25 on Arctic Region Policy. This Directive provides specific policy objectives while acknowledging the effects of climate change and increased human activity in the Arctic region. In addition, President Obama recently signed Executive Order 13547, which approved and directed Federal departments and agencies to implement the Final Recommendations of the Interagency Ocean Policy Task Force. One of the national priority objectives the Task Force highlighted was to address the changing conditions in the Arctic through better stewardship. In executing these directives, we must be prepared to address the impacts of more open water, an increasing population of maritime users operating in a fragile and challenging environment, and assertion of claims to the vast natural resources of the region. The Coast Guard, through the Department of Homeland Security and working closely with the Departments of State and Defense, must work to improve maritime domain awareness, preserve the global mobility of United States military and civilian vessels and aircraft, and project a sovereign United States maritime presence in the Arctic region.

To that end, the Coast Guard has continued expansion of its operations in Arctic waters during open water periods, while also ensuring its multi-mission capacity is available to support execution of Coast Guard responsibilities year round. As you know, the Coast Guard has three polar icebreakers, of which only the HEALY, a medium icebreaker, is currently operational and is capable of fulfilling most of the current icebreaking needs in the Arctic and is specifically adapted for scientific research. The HEALY is currently operating in the Arctic conducting hydrographic mapping of the U.S continental shelf. POLAR SEA, which is one of our two heavy icebreakers, is currently laid up due to a major engineering casualty. Our other heavy icebreaker, POLAR STAR, will be fully ready for operations in 2013 after completing a major reactivation project, funded by the 2009 and 2010 appropriations. These three ships represent our Nation's current polar icebreaking capacity.

ARCTIC TRENDS

The Arctic environment is fragile and often harsh , and the distances involved in Arctic operations can be immense. Observations and trends have been reported that could increase the intensity of our operations and impact our access requirements:

- *Dynamic changes in ice conditions*: The steady recession of the ice edge continues to open new water in the summer months. As such, dangers to shipping may increase because of the dynamic and unpredictable movement of ice.

- *Expanding Resource Development*: Based on assessments by the U.S. Geological Survey, there have been projections that an estimated 22 percent of the world's oil and natural gas could be located beneath the Arctic with some portion of undiscovered, technically recoverable resources located within the U.S. Exclusive Economic Zone (EEZ). Reflective of this value, oil companies bid nearly $2.7 billion to lease a part of the Chukchi Sea mineral rights.

- *Eco-tourism:* This industry continues to expand as cruise ships, carrying hundreds of passengers, test the limits of safe navigation in Arctic waters. To date, we have already observed an increase by one in the number of adventure cruises from last year's for Northwest Passage Transits. Two cruise ships recently transited the Northwest Passage, one from the east and one from the west with 164 and 184 passengers respectively.

- *Fish Stock Migration:* As the ice edge recedes and water temperatures change, the North Pacific Fishery Management Council reports an increase in fish stocks being observed in the Arctic waters north of the Bering Strait. As a result, fishing vessels have been observed moving further north, which could lead to increased foreign incursions into the U.S. EEZ.

- EEZ *Sovereignty Claims:* With the increased level of open water comes more ability to research and map the oceans floors. This research, including hydrographic surveys and bottom sampling may serve as precursors to international sovereignty claims to extended continental shelves pursuant to the Law of the Sea Convention**.** The HEALY has been working over the past few summers with a Canadian icebreaker, the LOUIS ST. LAURENT, to collect scientific data necessary to assert claims to an extended continental shelf in the Arctic.

NATIONAL ARCTIC POLICY

The United States is an Arctic nation. As the ice edge continues to recede in the summer, the extent of navigable waters increase. As we adjust to this dynamic, it is critical to recognize the Arctic Region as environmentally fragile, rich in natural resources, and of significant national importance and international interest. We must be prepared to meet current and future demands. The objectives established in the Arctic Region Policy, and reflected in the new national ocean policy, include:

- Meeting national security and homeland security needs relevant to the Arctic Region.
- Protect the Arctic environment and conserve its biological resources.
- Ensuring natural resource management/economic development are sustainable.
- Strengthening institutions for cooperation among the eight Arctic nations.
- Enhancing scientific monitoring and research into environmental issues.
- Involve the Arctic's indigenous communities in decisions that affect them.

Several of the Coast Guard's statutory missions have a significant role in supporting the objectives established in NSPD-66/HSPD-25 and the National Ocean Policy.

Additionally, the multi-nation Arctic Marine Shipping Assessment (AMSA) published in April 2009 provided a comprehensive assessment of the current uses and future impacts of increased accessibility and maritime activity in the Arctic. The report concluded that safe, secure, and environmental sound maritime commerce in the Arctic region will depend on adequate infrastructure to support shipping activity, search and rescue capabilities, short and long range aids to navigation, high-risk area vessel-traffic management, iceberg warnings, shipping standards, and comprehensive measures to protect the marine environment.

SUPPORTING EXECUTION OF THE NATIONAL ARCTIC POLICY OBJECTIVES

Today, one thing is certain regarding the Arctic: there is more navigable ocean during summer months where there used to be ice, and the Coast Guard has statutory and regulatory responsibilities in that ocean. The Coast Guard is the Nation's primary maritime safety, security, environmental protection and -law enforcement agency. As such, we hold a significant responsibility in executing the Arctic Region Policy and the National Ocean Policy. In order to better perform our anticipated role, we have developed an Arctic Strategic Plan to ensure the Coast Guard is both prepared and able to engage and conduct statutory operations in the Arctic. From my perspective as the Commander of the Seventeenth Coast Guard District, in addition to our existing mission demands, the Coast Guard must actively participate in the multi-agency effort to address current and future challenges associated with the Arctic.

Meeting Homeland Security needs in the Arctic

As part of a multi-agency effort to implement the Arctic Region Policy, we continue to push forward and assess our Arctic limits. In the summers of 2008 and 2009, we established Forward Operating Locations (FOL) on the North Slope. We employed Coast Guard small boats, helicopters, and Maritime Safety and Security Teams (MSSTs) in Prudhoe Bay, Nome, and Barrow to increase maritime domain awareness and test capabilities in the Arctic environment. We will continue those efforts this summer, when there is the most open water, by redeploying Forward Operating Location bases in most of the same places. Currently, these FOLs operate on a limited basis due to weather conditions, distances, and a lack of shore based infrastructure. We will institute changes based on lessons learned last year, as we continue to develop and refine our knowledge base on operations in the Arctic.

To evaluate activity trends in the Arctic, the Coast Guard commenced extensive Arctic Domain Awareness flights. Coast Guard C-130 flights originated out of a temporary Forward Operating Location in Kotzebue last summer and will continue later this summer. These flights help develop a complete awareness of all private, commercial, and governmental activities in the Arctic.

Protecting the maritime environment

To help protect the environment of the Arctic Region, we must continue to partner with companies operating in the region to support pollution response. Recognizing that oil spill clean-up is significantly more difficult in colder temperatures and ice-covered waters, enhancing prevention measures is even more critical as a means to reduce risk and mitigate against potential environmental damage. Moreover, the combination of a harsh environment and limited response resources and capabilities necessitates that awareness, contingency planning, and communications amongst stakeholders are effective and efficient.

While prevention is critical, so is response capability. We continue to exercise the Vessel of Opportunity Skimming System (VOSS) and the Spilled Oil Recovery System (SORS) in the Arctic. Both of these systems enable vessels to collect oil in the unfortunate event of a discharge. The VOSS is deployable and capable of being used on a variety of ships and the SORS is permanently stored and deployed from the Coast Guard's 225-foot ocean-going buoy tenders.

To better understand the impact the northward movement of fish stocks into the Arctic will have on sustainability, a regional management plan is needed. The North Pacific Fisheries Management Council imposed a moratorium on fishing within the U.S. EEZ in the Arctic until assessment of the practicality of sustained commercial fishing in the region is completed. Regardless of the outcome of the assessment and follow-on management plan, it is certain the Coast Guard will play a critical role in its enforcement.

Facilitating safe, secure, and reliable navigation

With the deployment of the Coast Guard buoy tender SPAR to the Arctic last year the Service began an in-depth Waterways Analysis Management Survey (WAMS). This ongoing survey applies criteria described in the AMSA to assess safe shipping routes, aids to navigation, and vessel routing and traffic system requirements in the Arctic.

Supporting Multi-Agency Arctic Region Policy Implementation

- Strengthen Cooperation Among the Eight Arctic Nations

  The Coast Guard continues to support international and multilateral organizations, studies, projects, and initiatives. Some key groups, projects, and legal frameworks include the Arctic Council, AMSA, Ilulissat Declaration (2009), and the U.N. Convention on the Law of the Sea (UNCLOS), to which the U.S. has not yet become a party. In April 2009, Coast Guard District Seventeen and the Canadian Coast Guard held a Joint Maritime Pollution Contingency Plan Table Top Exercise for oil spill responses in the Beaufort Sea. In addition, District Seventeen has excellent communications and working relationships with Russian agencies responsible for law enforcement, search and rescue, maritime pollution response, and other missions in the Arctic. Consistent with such efforts, the Coast Guard will continue to engage Arctic nations and international organizations to identify and meet current and future challenges associated with the Arctic.

- Involve the Arctic's Indigenous Communities in Decisions that Affect Them

  Some of the biggest successes and lessons for the way forward that the Coast Guard has gained in recent years have come from our continued engagement with Alaska Native Tribes. Their extensive knowledge, assistance, and collaboration have been invaluable to our safe operations and successful mission execution. The Coast Guard has also provided valuable assistance, including boating safety exchanges and medical, dental, and veterinary outreach programs while operating in remote villages on the North Slope. We will continue to focus on working with these groups, while ensuring their equities are recognized and protected to the greatest extent possible, as we adapt to the challenges associated with changing operations in the region.

- Enhance Scientific Monitoring and Research into Environmental Issues

The Coast Guard continues to support the Arctic research efforts of the scientific community through ongoing operations onboard the CGC HEALY this summer and early fall. These missions will support the Naval Research Lab, National Science Foundation, Office of Naval Research, and the Department of State to continue mapping of the continental shelf. Additionally, Air Station Kodiak has and will continue to provide scientific research support from its C-130s through deployment of data buoys in the Arctic.

NATIONAL ARCTIC CAPACITY

While our summer operations continue to provide valuable lessons and help us gain better insight regarding the Arctic, we must acknowledge the seasonal limitation of these efforts. When summer season commercial activity expands, mariners will test the boundaries of safe navigation, and as the eight Arctic nations continue to collect data to make jurisdictional claims, it is important to maintain an appropriate presence in the Arctic for law enforcement and response purposes with vessels capable of accessing the region. The expansive distances, severe weather conditions, and lack of land-based infrastructure continue to challenge our capabilities.

As established by NSPD-66/HSPD-25 and noted previously, the Coast Guard has jurisdiction and statutory mission requirements over Arctic waters and the demands associated with those obligations will increase as waterways continue to open. In addition, the Coast Guard will work with its interagency partners to address stewardship requirements in the Arctic consistent with the new National Ocean Policy. Future mission requirements for this vast, remote, and exceptionally harsh environment have been studied and are currently being reviewed. The full multi-agency missions and asset gaps for the future have yet to be determined.

In order to better understand our future roles and requirements in both the Arctic and Antarctic, the Coast Guard contracted a consultant to reviewcurrent mission requirements and assess how changing Arctic conditions might affect those requirements. The contractor has completed their report and the Coast Guard is reviewing the study. Information from this study, combined with lessons learned over the past two summers, will help the Coast Guard's ongoing efforts to determine the right mix of assets for the Arctic. The Coast Guard will leverage the ongoing work of other agencies that are also confronting mission impacts due to changing Arctic conditions, such as the Navy and NOAA. Working together under the auspices NSPD-66/HSPD-25 we will define and install the necessary infrastructure in the region. The Coast Guard is also partnering with DHS in an upcoming Workshop at University of Alaska Fairbanks to identify and prioritize research opportunities to support Coast Guard operations in the Arctic. The Workshop will emphasize infrastructure, communications, and sensors.

We will continue to update our Waterways Analysis & Management System (WAMS) to determine the changing needs and uses of the Artic federal navigational system. We are also moving forward with a Bering Strait Port Access Routing Study which is a preliminary document to establish Traffic Management Systems required by the International Maritime Organization for recognition of the international community.

It is currently premature to plan shore-based facilities without a clear understanding of what infrastructure will be required (e.g. deepwater support harbors, small boat stations, permanent air stations, etc). The Coast Guard will continue to monitor the direction industry takes, be it tourism, outer continential shelf (OCS) development, fishing or Alaska Native needs.

COAST GUARD ICEBREAKER ASSETS

The HEALY, commissioned in 2000, has an expected service life of 30 years. The POLAR SEA and POLAR STAR were both commissioned in the 1970s, and are fast approaching their extended service lives of just over 30 years. The POLAR SEA had a significant two-year refit in 2006, extending its projected service life to 2014.

Currently, we are engaged in a multi-year, $62 million project to reactivate POLAR STAR. The cutter is planned to be completed and ready to return to operations in 2013. This project will extend POLAR STAR's planned operational service life by seven to 10 years.

CONCLUSION

The Arctic is a vast and challenging environment going through significant changes. The unique nature of the region, magnitude of open water, harsh weather and great distances involved, and new users are leading to increased challenges to national sovereignty. As a Nation, we now have an Arctic Region Policy and a National Ocean Policy and the Coast Guard has a significant role in implementing those policy directives. We are pushing forward to meet our responsibilities using the resources available now.

To meet our national responsibilities in the Arctic, we must ensure we are prepared for the challenges associated with this unique and harsh environment. While we work to refine future mission requirements and identify the precise mix of assets needed to perform them, Coast Guard icebreakers stand ready to meet our current icebreaking needs in the Arctic. Other Coast Guard resources are also expanding their knowledge, experience, and competence to carry out mission responsibilities in this vast and vitally important region.

Thank you for the opportunity to testify today. I look forward to your questions.