‘Great Power’ Fight Might Require Different Blend of Vessels, But Marines Won’t Shun Amphibious Operations, NDIA Speakers Say

ANNAPOLIS, Md. — Despite the commandant’s stark warning about the vulnerability of current amphibious warships, the Marines are not moving away from amphibious operations. But to operate in the future highly contested littoral waters, the amphibious force must be more numerous, adding a lot of smaller, cheaper and “risk worthy” vessels and unmanned systems, senior Marine and Navy officers and civilian analysts said Oct. 23.

Those officers and experts and other groups of uniformed and civilian officials also argued that providing logistical support for amphibious operations in waters threatened by the modern deadly weapons employed by peer competitors, such as China and Russia, will require starkly different systems and tactics.

And in an extensive series of panel presentations during the second day of the National Defense Industrial Association’s conference on expeditionary warfare in the era of great power competition, the speakers appealed to industry representatives in the audience to help provide the new

technologies and platforms the naval forces will need to fight and win in any future conflict.

Much of the discussion was shaped by the Commandant's Planning Guidance issued this summer by the new Marine leader, Gen. David Berger, which highlighted the threat to traditional large, complex and relatively expensive amphibious ships, if they have to operate within the reach of the long-range precision weapons and submarines fielded by China and, to a lesser extent, Russia and Iran.

"We are not walking away from amphibious operations," said Brig. Gen. Benjamin Watson, commanding general of the Marine Corps Warfighting Laboratory. He noted that the new operational concepts proposed by Berger – Expeditionary Advanced Base Operations and Littoral Operations in a Contested Environment – require amphibious operations. "The commandant is not calling for a smaller amphibious fleet, but a larger one" with "smaller, less expensive and more risk-worthy ships" to complement the larger ships, Watson said.

Maj. Gen. Tracey King, director of expeditionary warfare, said he "hears a lot of talk inside [the Pentagon] that we'll never do another amphibious landing. We don't want to do another Iwo Jima … but we will do amphibious operations again."

The new amphibious missions will involve "distributed operations," a Navy-promoted concept that provides "the

advantage of mass with distributed forces," King said. That will require larger numbers of smaller units with "risk worthy platforms and connectors," because "we're absolutely going to take some body blows."

Asked by an audience member how they measure "risk worthy," Watson conceded "we don't know" whether it is defined by lives or by the cost of the platforms, noting that the current amphibs "are these expensive platforms that we, as a nation, cannot afford to replace."

Two panels addressed the challenges of providing logistical support to naval operations in the contested waters, with Lt. Gen. Charles Chiarotti, deputy commandant for installations and logistics, admitting that "Marine Corps logistics is not postured to sustain the future fight." They will require "hybrid logistics," that blends the legacy assets with what new systems they can acquire to provide Integrated, maneuverable logistics "in concert with the Navy."

Other speakers from logistical support organizations and program managers cited the need for very different logistical platforms, including a variety of unmanned surface, subsurface and aerial systems, some of the existing smaller, cheaper vessels, such as the Expeditionary Fast Transport, Expeditionary Mobile Base and Littoral Combat Ships, and even Military Sealift Command and commercial cargo vessels.

Navy to Commission Littoral Combat Ship Indianapolis

The future USS Indianapolis sails Lake Michigan toward Naval Station Great Lakes for a sail-by and salute. The Navy will commission the littoral combat ship on Oct. 26 in Burns Harbor, Indiana. U.S. Navy/Mass Communication Specialist 2nd Class Camilo Fernan

ARLINGTON, Va. – The U.S. Navy will commission its newest Freedom-variant littoral combat ship, USS Indianapolis, during a 10 a.m. CDT ceremony on Oct. 26 in Burns Harbor, Indiana, the Defense Department said in a release.

The future USS Indianapolis, designated LCS 17, honors Indiana's state capital and largest city. It will be the fourth ship to bear the name.

Lisa W. Hershman will deliver the commissioning ceremony's principal address. Jill Donnelly, wife of former U.S. Sen. Joe Donnelly of Indiana, is the ship's sponsor. She will continue the time-honored Navy tradition of giving the first order to "man our ship and bring her to life!"

"This Freedom-variant littoral combat ship will continue the proud legacy created by ships previously bearing the name Indianapolis," Navy Secretary Richard V. Spencer said. "The crew will carry on the tradition of service to confront the many challenges of today's complex world. To the men and women who will ring in the first watch, you carry with you the fighting spirit of incredible bravery and sense of duty that is inherently recognized with the name Indianapolis."

The most recent Indianapolis was a Los Angeles-class fast-attack submarine, which was commissioned in 1980 and served through the end of the Cold War before being decommissioned in 1998. The first Indianapolis was a steamer built for the U.S.

Shipping Board (USSB) and commissioned directly into the Navy in 1918. After two runs to Europe, the ship was returned to the USSB following World War I.

It is the second Indianapolis, a Portland-class heavy cruiser, that is perhaps the best known of the three. Commissioned in 1931, its service ended when the ship was sunk by a Japanese torpedo minutes after midnight on July 30, 1945. Only 317 of the ship's 1,196 Sailors survived after five days afloat in the Pacific.

But it was the ship's impressive war record that first brought it to the attention of Navy leaders and Americans. The ship saw action in the Aleutians, the Gilbert Islands, Saipan, the Battle of the Philippine Sea, Iwo Jima and Okinawa. In addition to frequently serving as the flagship of the U.S. 5th Fleet, the ship earned 10 battle stars for World War II service. Before it was sunk, Indianapolis successfully completed the top-secret mission to deliver components of the nuclear bomb "Little Boy" to Tinian that ushered in the end of WWII with the use of the bomb at Hiroshima.

The future USS Indianapolis, a Freedom-variant LCS, is a fast, agile, focused-mission platform designed for operation in near-shore environments as well as open-ocean operation. It is designed to defeat asymmetric "anti-access" threats such as mines, quiet diesel submarines and fast surface craft.

LCS is a modular, reconfigurable ship designed to meet validated fleet requirements for surface warfare (SUW), anti-submarine warfare (ASW) and mine countermeasures (MCM) missions in the littoral region.

The LCS class consists of two variants, the Freedom variant and the Independence variant, designed and built by two industry teams. The Freedom variant team is led by Lockheed Martin (for the odd-numbered hulls). The Independence variant team is led by Austal USA (for LCS 6 and the subsequent even-

numbered hulls).

Air Force to Manage Next-Generation MUOS, Navy Secretary Announces

A launch vehicle carrying the U.S. Navy's fifth Mobile User Objective System (MUOS) communications satellite lifts off from Cape Canaveral Air Force Station, Florida, in 2016. U.S. Navy via United Launch Alliance

WASHINGTON – The secretary of the Navy said that the U.S. Air Force, not the Navy, will manage the program for the next generation of the Mobile User Objective System (MUOS).

The MUOS, built by Lockheed Martin, is a communications satellite equipped with a wideband code division multiple-access payload that enables a 10-fold increase in capability over the previous UHF Follow-On satellite.

The MUOS provides secure channels for voice and data at high speeds with streaming capability. The five-satellite system includes an in-orbit spare. Four are operational. The fifth – the spare – was launched in 2016 and turned over to Navy control in October 2017. General Dynamics has built MUOS ground stations in Hawaii, Virginia and Australia. In August 2018, the system was approved for expanded use by U.S. Strategic Command.

Construction Electrician 2nd Class Corinna Wentz sets up a satellite communications antenna for a demonstration of an MUOS capability. MUOS provides secure worldwide ultra-high

frequency satellite communications. U.S. Navy/Mass Communication Specialist 1st Class Samuel Souvannason
The MUOS is unusual in that it is a Navy-developed and owned space satellite system. The Air Force is the primary operator of defense space satellites for the armed services.

Spencer, speaking Oct. 23 to an audience at the Bookings Institution, a Washington, D.C., think tank, replying to a question about the Navy Department's involvement in space, said the Navy should subscribe to space services rather than purchase more satellite systems itself.

"My fundamental position, and I believe the CNO [chief of naval operations] and commandant [of the Marine Corps] agree with me, is we've moved to a thought process where I just want the service and/or the resource provided to me," Spencer said.

"I just signed a memorandum of agreement with the Air Force," Spencer said. "They will take over MUOS Next Generation. If that's your expertise, I want you on it and [the Navy Department] will just buy the service from it."

Navy C-40 Fleet Deliveries Complete

A U.S. Navy C-40 prepares to land at Marine Corps Air Station Kaneohe Bay at Marine Corps Base Hawaii on July 26. U.S. Marine Corps/Sgt. Jesus Sepulveda Torres
PATUXENT RIVER, Md. – The Navy's C-40 fleet has undergone some major changes in the last few months – adding two airplanes, one squadron and completing its current planned aircraft

procurements, according to a Naval Air Systems Command release.

The Tactical Airlift Program Office (PMA-207) took delivery of the Navy's 16th aircraft in June and 17th aircraft on Sept. 26. The Navy's latest C-40A will be assigned to U.S. Naval Reserve Fleet Logistics Support Squadron (VR) 57.

These last two deliveries have allowed the C-40 fleet to realign and expand its horizons.

"The C-40 plays an important role in the Navy Unique Fleet Essential Airlift (NUFEA) fleet," said Capt. Steve Nassau, PMA-207's program manager. "These extremely flexible logistics support aircraft are an integral part of every type of maritime mission, from humanitarian assistance to long-range, high priority deliveries."

The sixth Navy C-40 squadron was established in September. VR-51, nicknamed the Windjammers and deploying from Kaneohe Bay, Hawaii, received two C-40 aircraft from the fleet. The squadron will be fully operational in October, following receipt of its "safe for flight" certification.

"The … certification is an entire program overview in which the government ensures that all contractor, aircrew and government operating procedures are in place and functioning correctly," said Darwin Lazo, PMA-207's medium-lift deputy assistant program manager for logistics. "It is the final certification for a new squadron."

VR-51 will soon begin entering the VR deployment rotation.

"There is always a C-40 deployed to U.S. Central Command, U.S. European Command and U.S. Pacific Command to meet mission requirements," said Donna Elliott, PMA-207's medium-lift IPTL.

Over the past year, the C-40 fleet logged 24,374 hours of

flight time, completed 1,555 missions, transported 95,746 passengers and 20 million tons of cargo. In doing so, the aircraft has maintained a 90% readiness rate and has played a vital role in providing military transport not available with contract or commercial carriers. The C-40, a commercial derivative of the Boeing 737-700C, is the mainstay of the Navy's medium-lift capability.

Coast Guard Cutter Dependable Returns Home After Patrol in Caribbean Sea

VIRGINIA BEACH, Va. – The crew of the U.S. Coast Guard Cutter Dependable returned home Oct. 23 after a 49-day patrol conducting counter-drug and migrant interdiction missions in the Caribbean Sea, the Coast Guard 5th District said in a release.

The crew of the Dependable conducted two separate counter-narcotics boardings while tasked as a surface asset to Joint Interagency Task Force South. In total, the ship's crew spent a combined 91 hours on counter-narcotics boardings, completed more than 40 small boat sorties and spent more than 647 hours ensuring that suspect vessels were in compliance with international laws.

The Dependable's crew sailed more than 7,500 nautical miles in the Caribbean Sea and traveled as far south as Curacao and as far east as the Greater Antilles. During the voyage, the crew conducted more than 100 drills in transit to maintain optimal readiness.

The Dependable is a 210-foot Reliance-class medium-endurance cutter homeported in Virginia Beach. The crew conducts homeland security missions in the offshore waters of the Western Hemisphere, from New England to the Caribbean Sea and the eastern Pacific.

Berger Plan to Build More Smaller and Cheaper Ships Could Greatly Expand Available Expeditionary Force, Analysts Tell NDIA Conference

ANNAPOLIS, Md. — Marine Corps Commandant Gen. David Berger's proposal to build a lot of different, smaller and cheaper ships — including unmanned vessels — to substitute for or augment large amphibious warships is not yet clearly defined, but presents the possibility of greatly expanding the available force, two veteran naval analysts said Oct. 22.

And an alternative future shipbuilding plan is needed because the cost of building and sustaining the 355-ship fleet proposed in the latest 30-year plan might be unsupportable given the high cost of such a force and the growing national budget deficit, they added.

Addressing the National Defense Industrial Association's expeditionary warfare conference, Ronald O'Rourke, the senior naval analyst at the Congressional Budget Office, and Eric

Labs, the Congressional Research Service's naval analyst, called the force structure and operational changes proposed in Berger's guidance the "most significant strategic document" since the From the Sea naval concept of the 1990s.

A dramatic element of Berger's guidance was the recognition that the current large and expensive amphibs probably are too big and vulnerable to be sent into the waters heavily defended by China and are too few in number to support the distributed operations and other nontraditional expeditionary missions that would be required. From that conclusion, Berger said the Corps would no longer use the long-cherished goal of a 38-amphib fleet as a force planning guide.

Labs said the Navy's plan that supposedly would produce the 355-ship fleet by 2034 would cost much more than the historic average shipbuilding budget, and the soaring cost of sustaining even the existing fleet of 290 ships might make that goal unreachable. O'Rourke quoted Navy Undersecretary Thomas Modly as saying the sustainment costs could hold the fleet's growth to 305 to 308 ships.

O'Rourke said Berger's proposal for a significantly different amphib fleet was driven by the threat from China's defenses but also could be enabled by the changing technology, including unmanned systems. The mix of alternative platforms Berger suggested has not been defined, he noted.

Labs agreed but offered the idea that if the Navy would seek new ships that would cost $600 to $700 million each – less than even the cheapest current gators – it could buy a fleet of 68 to 78 ships by 2034 for the same $75 billion the Navy expects to pay for 28 ships.

Both said the savings on unmanned vessels might not be as much as some believe, because despite the name, such ships have to

have people involved in their operations and maintenance. Because the unmanned vessels would not be repaired or maintained at sea, they would require a larger support infrastructure ashore, Labs said.

This story was corrected from an earlier version.

New Force Structure Assessment Will Address Needs of 'Great Power Competition,' Two Top Requirements Officers Say

ANNAPOLIS, Md. – U.S. Navy and Marine Corps requirements and capabilities leaders are working together to produce an Integrated Naval Force Structure Assessment, which will replace the Navy assessment that usually shapes the shipbuilding plan, the two top requirements officers said Oct. 22.

And the assessment will be driven by the capabilities needed to operate integrated naval forces in the highly contest environments expected in the emerging "great power competition," said Vice Adm. James Kilby and Lt. Gen. Eric Smith.

"Distributed Maritime Operations (DMO) is the guiding principle

for what we're doing in the Navy," and that "ties in very closely" with the Marine Corps' Expeditionary Operations in a Contested Environment (LOCE) concept, said Kilby, who is deputy chief of naval operations for warfighting requirements and capabilities. DMO means "the ability to distribute your forces and to be able to concentrate effects at the right time," he said.

DMO also reflects a shift to a focus on sea control, Kilby said. For the last 20 years, the naval forces have focused on power projection, he said. "It's time to rethink that model" to "how do we support each other."

"We will build one force optimized for the expeditionary force," designed to ensure access for the fleet, said Smith, who is deputy commandant for combat development and integration. His directions come from Marine Commandant David Berger's guidance that dictates "where the Marine Corps is going in support of the fleet," he said.

DMO, "it's our concept" and addresses "what the Marine Corps does to support the fleet in littoral operations in a contested environment." The integrated assessment also will support the Marine's concept of Expeditionary Advanced Base Operations, which envisions small, mobile Marine forces taking positions within the enemy's area with which to support the fleet's effort to gain sea control.

In developing the integrated assessment, Smith said, "we're doing a tremendous amount of work together. What's not

helpful," he continued,
is that "once again we're under a CR," or continuing resolution, instead of
normal funding. "That means no new starts, tread water," he said. "I can't
tread water against a pacing threat."

Addressing a two-day National Defense Industrial Association
conference on the future of expeditionary operations, the two leaders said they
and their staffs are working tightly together to shape this new assessment.
They will submit their proposals to the naval services' leadership as an
"interim" assessment, which will be refined for release early next year, they
said.

The shipbuilding plan that emerges from this integrated
assessment could be significantly different due to Berger's dramatic statements
in his guidance that the traditional large amphibious warships may not be
survivable in face of the area-denial weapons being deployed by China and his
support for a large number of other ships, which would be smaller, cheaper and
more expendable.

Kilby, however, said that in the amphibious forces, "the
things that have existed in the past will exist in the future. We will need
big-deck amphibs" and the LPD-17 amphibious transport dock ships, "which are
more capable than in the past due to sensors." But he said they also will need
connectors, not just to get Marines ashore but to sustain them. The assessment

will look at whether they need faster connectors, or low-signature assets. He
said there also was a need for intra-theater support ships.

Both officers said the new force assessment would call for more unmanned vessels.

Kilby noted that the Navy is looking at a range of unmanned vessels, ranging from small to large. He suggested the large unmanned ships could serve as magazines, with large number of weapons, while smaller vessels would serve as sensors and to deceive an adversary as to where attacks were going.

Smith said the unmanned systems are “hugely important” to the commandant’s vision for future expeditionary operations. “If we can produce a truly autonomous vehicle that has a range of say 1,000 miles … that can carry the cargo I need to sustain an EABO,” Kilby said.

Cutter Alex Haley Returns Home After 40-Day, 5,000-Mile Patrol

A crew member aboard a 26-foot over-the-horizon boat prepares to come alongside Coast Guard Cutter Alex Haley while underway in the Bering Sea. Alex Haley’s crew returned to their homeport in Kodiak on Oct. 20. U.S. Coast Guard/Ensign Richard Zogby

KODIAK, Alaska — The crew of U.S. Coast Guard Cutter Alex Haley returned to their homeport in Kodiak on Oct. 20 following a 40-day deployment throughout the Bering Sea and

Aleutian Islands, the Coast Guard 17th District said in a release.

Since departing Kodiak in September, the crew patroled 5,000 miles and conducted 13 at-sea boardings.

The crew also conducted law-enforcement operations during the opening of the red king crab season and participated in several search-and-rescue cases. Most notably, Alex Haley's onboard helicopter crew medically evacuated a crew member from fishing vessel Alaska Victory after he was exposed to a release of toxic ammonia refrigerant on Sept. 28.

A small boat from Alex Haley underway following a fisheries law enforcement and safety boarding in the Bering Sea. U.S. Coast Guard/Ensign Richard Zogby

Midway through the patrol, Alex Haley visited the remote community of St. Paul, Alaska, where crew members conducted a clean-up of a local lakefront and met with community elders. These events helped strengthen one of the many partnerships between the Coast Guard and local Alaskan communities.

"This patrol is my first aboard Alex Haley and my first in the Bering Sea," said Cmdr. Benjamin Golightly, the cutter's commanding officer. "After a long period in homeport, which included major dockside repairs, the crew did an outstanding job transitioning back into the demanding routine of operations at sea."

"The opportunity to patrol the Bering Sea during the highly visible red king crab season was tremendously rewarding and uniquely challenging," Golightly added. "Between the rapid operational pace of fisheries boardings, the notorious unpredictability of the weather, and the fact that search-and-rescue cases can occur at any time, there was no shortage of challenges to be met by the crew."

Alex Haley is a 282-foot medium-endurance cutter that has been

homeported in Kodiak since 1999, routinely operating throughout the Bering Sea, Gulf of Alaska and Pacific Ocean. The cutter's ability to operate in extreme weather provides the mission flexibility necessary to perform search and rescue, fisheries law enforcement and vessel safety inspections across Alaska.

These operations occur under the tactical control of the 17th Coast Guard District in Juneau, which encompasses the entire state of Alaska, as well as the coastal and offshore waters seaward over several thousands of miles.

Coast Guard Repatriates 76 Dominicans Following Three Interdictions at Sea

A white yola vessel with 20 people aboard 15 miles southwest of Mona Island, Puerto Rico, on Oct. 17. The boat was one of three interdicted, leading to the repatriation of 76 Dominican migrants by the Coast Guard Cutter Diligence crew. U.S. Coast Guard

SAN JUAN, Puerto Rico – The Coast Guard Cutter Diligence repatriated 76 of 80 Dominican migrants to a Dominican Republic navy vessel on Oct. 18 following the interdiction of three separate illegal migrant voyages near Puerto Rico, the Coast Guard's 7th District said in a release.

Four other migrants will remain in Puerto Rico to face possible federal prosecution on charges of violating U.S. code for trying to illegally re-enter the United States.

The interdictions were a result of ongoing efforts in support of Operation Unified Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group (CBIG).

“Medium endurance Coast Guard cutters like Dependable and Diligence provide persistent and robust search-and-rescue and law-enforcement presence along the United States’ vast maritime borders and ocean areas promoting safety of life at sea by helping prevent loss of life from perilous migrant voyages in overloaded and unsafe vessels, as well as enforcing compliance with federal laws and regulations,” said Cmdr. Luke Slivinski, commanding officer of the cutter Diligence.

“Our recent interdictions were expertly supported by CPB Air and Marine Operations patrol aircraft that located the migrant vessels and adeptly directed our small boats over dozens of miles of open ocean at night to safely intercept them. The success of these recent joint operations highlights the excellent cooperation, coordination and interoperability between marine law enforcement agencies in and around Puerto Rico.”

The first interdiction took place Oct. 14 after a Customs and Border Protection (CBP) Air and Marine Operations DHC-8 marine patrol aircraft crew sighted a migrant boat near Aguadilla, Puerto Rico. The Coast Guard Cutter Dependable interdicted the illegal voyage and embarked all 29 migrants, 22 men and seven women.

The second interdiction took place Oct. 15 evening after a Customs and Border Protection (CBP) Air and Marine Operations marine patrol aircraft crew sighted a migrant boat, approximately 18 nautical miles west of Cabo Rojo, Puerto Rico. The Coast Guard Cutter Diligence interdicted the illegal voyage and embarked all 31 migrants, 28 men and three women.

The third interdiction took place Oct. 17 after the crew of a Customs and Border Protection (CBP) Air and Marine Operations

DHC-8 marine patrol aircraft crew sighted a migrant boat in the Mona Passage, about 13 nautical miles southwest of Mona Island. The Coast Guard Cutter Diligence interdicted the illegal voyage and embarked all 20 migrant men.

Five Transport Vessels Survive, Thrive in Hostile Water Simulation, Tactical Adviser Says

Aware that in the increasingly tense global security environment the U.S. Navy's sealift and logistical support fleet may have to sail through seas contested by a near peer adversary, U.S. Transportation Command recently sent five unarmed transport vessels through simulated hostile waters in a convoy similar to those used during World War II's dangerous "battle for the Atlantic."

The five ships, crewed by civilian mariners, "executed tactical formation maneuvers" to counter the threat of hostile submarines or sea mines, TRANSCOM said in a release. The civilians were assisted by experienced Navy Reserve officers under a new program created in recognition of the possibility of attacks against the sealift and supply ships, which would be

crucial in any major overseas conflict.

The convoy exercise was conducted during an unprecedented “turbo activation” in late September in which 33 vessels from the Military Sealift Command (MSC) and the Maritime Administration (MARAD) fleets were mobilized on short notice to test whether the ships – most of which are considered aged – were mechanically ready to sail and that enough qualified mariners would be available to crew them during a national security crisis.

“The turbo activation was an exercise to prove that the material readiness and crews’ skill level of our surge sealift ships make it possible to respond to world events on short notice,” said Cmdr. Vincent D’Eusanio, the tactical adviser (TACAD) who sailed aboard one of the ships in the exercise.

“We had to know if our ships would be capable of delivering supplies and equipment to our deployed troops serving overseas when required,” said D’Eusanio, who also is MSC’s TACAD program manager.

The TACAD program was initiated in 2017 “based off of years of experience and past lessons learned,” D’Eusanio said in the TRANSCOM release.
“During World War II, we lost lots of merchant ships and mariners. Some of this was a result of not knowing how to sail a merchant ship in a hostile environment. When the Navy began to train mariners to counter threats, like the German U-boats, our losses dwindled.”

Most of the TACADs are Navy reservists who sail as mariners in their civilian careers. D’Eusanio is a licensed chief engineer with the
Staten Island Ferry when not on Navy duty.

The TACADs are assigned to educate the civilian crews “about how to sail in a contested environment … provide tactical advice and facilitate
communications with the combatant fleet to allow our mariners to successfully
operate in unfriendly waters,” D-Eusanio said.

After sailing from their East Coast ports, the five MSC ships rendezvoused in the North Atlantic, formed into a convoy and performed tactical maneuvers while sailing through the simulated contested waters. The crews were trained to reduce their electromagnetic signature to avoid being detected and targeted by enemy missiles or aircraft, said Capt. Hans Lynch, MSC’s Atlantic commodore who led the East Coast mobilization.

They also were instructed how to darken the ships at night to reduce the chances of being spotted by the enemy. Lynch said the activation was not only a good test of the materiel condition of the ships and the availability of trained mariners but also the ability of the U.S. Coast Guard and the American Bureau of Shipping to provide technicians to determined if the ships were ready to sail.

“Everyone did really well,” he said. “None of the ships had major issues due to not being able to be inspected or getting people required to the vessels.”