General Dynamics Enhances Littoral Combat Ship With New Anti-Ship and Land-Attack Cruise Missile System

FAIRFAX, Va. – General Dynamics Mission Systems has equipped the USS Gabrielle Giffords with new over-the-horizon missile capability in support of the Chief of Naval Operations' mandate to increase littoral combat ships' lethality and survivability, according to a Sept. 26 company release.

The integration of the Mk87 Mod 0 over-the-horizon Naval Strike Missile (NSM) aboard the USS Gabrielle Giffords, an Independence-variant LCS, strengthens the ship's mission readiness and defensive capabilities.

General Dynamics was able to integrate the NSM system by determining equipment placement, adapting the ship's navigation system to provide unique signals to the missile system, designing the operational station in the Integrated Command Center, designing the system for providing specialized power to the Mk87 and conducting all of the analyses necessary for a safe and effective system. The General Dynamics team, including Austal USA, designed structures and foundations and accomplished the installation in San Diego.

"The open-architecture design of the ship's computing environment and electronic systems made the design and integration of the new NSM system feasible in an accelerated timeline," said Carlo Zaffanella, vice president and general manager of maritime and strategic systems at General Dynamics Mission Systems.

The NSM, produced by Kongsberg and managed in the United

States by Raytheon, is a long-range, precision-strike weapon that can find and destroy enemy ships at distances up to 100 nautical miles.

In addition to the USS Gabrielle Giffords, General Dynamics will serve as the prime contractor for the integration and installation of the NSM capability on all Independence-variant LCSs already in service.

Defense Secretary Mark Esper Visits Newport News Shipbuilding

Defense Secretary Mark Esper during his visit to Huntington Ingalls Newport News Shipbuilding. Huntington Ingalls

NEWPORT NEWS, Va. – Defense Secretary Mark Esper visited Huntington Ingalls Industries' Newport News Shipbuilding division and the aircraft carrier USS Gerald R. Ford, the company said in a Sept. 25 release. This was Esper's first visit to the shipyard since he was sworn in to lead the Pentagon in July.

Esper toured Ford to see the progress being made during the ship's post-shakedown availability and to learn more about its weapons-handling innovations and increased warfighting capabilities.

"Our shipbuilders play a vital role in building our Navy's future fleet," said Jennifer Boykin, president of Newport News Shipbuilding. "We appreciate that Secretary Esper took the time to visit our operations and Ford to see firsthand how we

are working with our Navy partners to redeliver the newest nuclear-powered aircraft carrier that will be the centerpiece of our nation’s security strategy for decades to come.”

Concerns Over Component Reliability Delay Trident Nuclear Warhead Upgrade

An unarmed Trident II missile launches from the Ohio-class ballistic missile submarine USS Rhode Island off the coast of Florida in May. The planned upgrade of the nuclear warhead on some U.S. Navy sub-launched missiles has been delayed for 18 months by unacceptable reliability of some components. U.S. Navy/John Kowalski

ARLINGTON, Va. – The planned upgrade of the nuclear warhead on some U.S. Navy submarine-launched ballistic missiles (SLBMs) has been delayed for 18 months by unacceptable reliability of some components.

Testifying Sept. 25 on Capitol Hill before the House Armed Services Committee’s subcommittee on strategic forces, Charles P. Verdon, deputy administrator for defense programs for the National Nuclear Security Administration (NNSA), said that during stress tests to certify some electrical components of the weapons, some capacitors for the Navy’s W88 Alteration 370 warhead for the Trident D5LE SLBM and the Air Force’s B61 Mod 12 nuclear bomb did not meet the stringent reliability requirements. The capacitors were commercial-off-the-shelf (COTS) components.

Verdon said a blue-ribbon panel established by NNSA formed to

study the matter “advised in June 2019 that the prudent approach was to accept the delay of these programs and replace these components rather than risk component failure in future years.”

The recommendations were accepted by NNSA at that time, Verdon said, noting that NNSA is developing a specific production schedule and initial operational capability dates are being explored.

Verdon said the capacitor of insufficient reliability was a $5 part, whereas the replacement capacitor – being built to a new standard that did not exist at the time the original capacitors were procured – cost $75. Although the figures for program delays are not yet final, he said the delay would cost NNSA an additional $120 million to $150 million for the W88 Alt 370 and $600 million to $700 million for the B61 bomb.

Verdon also said the additional costs could be mitigated by balancing the workload within NNSA’s modernization portfolio. He said that any increase in funding would not be needed until fiscal 2021.

Vice Adm. Johnny Wolfe, the Navy’s director of strategic systems programs, also testifying before the committee, said the upgrades for the W88 Alt 370 begun in 2008 focused on procuring the arming, fuzing and firing units and replacing the warhead’s high explosives. He said the installation of the Alt 370 was delayed to a start of December 2019, “removing any schedule margin for the refurbishment effort.”

He said the Navy and NNSA are planning for about an 18-month delay to the Alt 370 program and that the Navy is working with the ballistic-missile submarine fleet’s operational commander, U.S Strategic Command, to mitigate the effect of the delays and ensure that the nation’s strategic requirements are met on schedule.

“We will meet the requirements as we move forward,” Wolfe said.

Verdon said that “[a]s a root cause, we identified that our methodology for the insertion of COTS components into high-reliability, long-life nuclear warheads needs to be improved” to avoid such future delays.

He said the NNSA “underestimated the variability between lots” in COTS-procured capacitors.

A closed classified session was held by the subcommittee following the open hearing.

Official: Marines on Amphibs Need to Help Navy in Future Fight

QUANTICO, Va. — The return of the Marine Corps to the concept of the Fleet Marine Force means that the Marines must be active in defense of amphibious forces for amphibious missions to be successful, a Marine Corps official said.

Col. Kurt Schiller, director of Air Combat Element/Maritime Expeditionary Warfare Division, Combat Capabilities Directorate, speaking last week at the Modern Day Marine expo at Marine Corps Base Quantico, Virginia, said that “Marines cannot just be passengers” on amphibious or prepositioning ships … “but need to help with fleet defense.”

“We need better self-defense capability on these L-class [amphibious warfare] ships,” he said.

Schiller discussed several trends that he has noted in the current and future amphibious platforms, some of which are problems being remedied and some which need addressing in an era of great power competition.

He sees a rise in force protection risks because of an adversary's more long-range precision munitions and more ISR (intelligence, surveillance and reconnaissance) capabilities, including unmanned aerial vehicles.

Second, insufficient platform availability limits the number of amphibious ships that can deploy on short notice. "We just don't have enough of them and can't keep them afloat as much as we'd like," he said.

Third, he noted insufficient capacity in the digital domain and the ability of adversaries "to take out our command and control systems."

Fourth, Schiller noted "insufficient planning and coordination spaces on the ships. There's not enough space on the ships for all of the things we want to do."

Fifth, he said that amphibious warfare ships need the C5I [command, control, communications, computers and combat] systems that enable them to operate independently from an amphibious ready group.

Sixth, amphibious warfare ships likely will need to handle greater capacity with regards to Marine Corps equipment, like the F-35 strike fighter, MV-22 Osprey aircraft and the Joint Light Tactical Vehicle, all of which are heavier than their predecessors.

"All the Marine [Corps] systems are getting heavier," Schiller said.

He also noted a decreased readiness and capacity of old

landing craft. The Navy is in the process of procuring new LCAC 100-class ship-to-shore connectors and new utility landing craft.

Navy’s Sea Hunter USV Showcased in Major Project Demonstration

Sea Hunter pulls into Joint Base Pearl Harbor-Hickam, Hawaii, last year. The unmanned ship was recently featured in a major demonstration using an advanced sensor. U.S. Navy/Mass Communication Specialist 1st Class Corwin M. Colbert

RESTON, Va. – Leidos’ unmanned ship, Sea Hunter, was recently featured in a major demonstration using an advanced sensor, the company said in a Sept. 19 release.

The new milestone comes less than a year after the ship voyaged from San Diego to Hawaii with no personnel on board. Including the return trip, this transit covered about 5,000 nautical miles.

The Office of Naval Research project was supported by the Naval Information Warfare Center-Pacific, Naval Undersea Warfare Center-Newport and Johns Hopkins Applied Physics Laboratory to explore how unmanned vehicles can be used as a naval force multiplier and allow warships to be available for other missions.

The exercise also showcased the open architecture and flexibility of Sea Hunter, which has hosted a variety of mission payloads, including airborne sensors.

“This exercise offered valuable lessons learned on how to take full advantage of a medium unmanned surface vehicle, with no personnel on board,” said Nevin Carr, Leidos Navy’s strategic account executive. “Autonomous vessels, especially when combined with artificial intelligence, have the potential to impact naval warfare in ways yet to be discovered.”

Navy, Marine Corps Wrap Exercise of Littoral Combat Forces in Adverse Arctic Conditions

U.S. Marines with Marine Wing Support Squadron 371 prepare to provide fuel to aircraft during Arctic Expeditionary Capabilities Exercise in Adak, Alaska, on Sept. 18. U.S. Marine Corps/Lance Cpl. Tia D. Carr

About 3,000 servicemembers took part in the Arctic Expeditionary Capabilities Exercise (AECE), which just concluded in Alaska.

AECE is a manifestation of the joint Navy and Marine Corps Littoral Operations in a Contested Environment (LOCE) concept, issued in 2017, which calls for the creation of Littoral Combat Forces (LCFs) of various units to conduct specific missions.

The exercise commander was Rear Adm. Cedric Pringle, commander of Expeditionary Strike Group Three. The LCF construct provides a

multifunction command and control force that can be ashore or embarked at sea
or both.

For AECE, the LCF headquarters was established at Joint Base Elmendorf-Richardson in Anchorage, and the operating forces were divided
into Littoral Combat Groups 1 and 2, with those commanders embarked aboard USS
Somerset (LPD 25), carrying a Special Purpose Marine Air-Ground Task Force
(SP-MAGTF), and USS Comstock (LSD 45), respectively.

A landing craft temporarily moors to the stern gate aboard the amphibious dock landing ship USS Comstock during AECE 2019. U.S. Navy/Mass Communication Specialist 2nd Class Nicholas Burgains

Speaking to reporters Sept. 23, Pringle said AECE was a
“natural evolution” of the Pacific Blitz exercise, held in March in California,
which exercised the LCF construct. But, he said, AECE was conducted in
“unfamiliar territory,” with wider range of assets than what he usually has
available to him with his expeditionary strike group and more adverse weather
conditions.

Like Pacific Blitz, the Navy-Marine Corps team was fully integrated. But as the exercise was planned, both U.S. Air Force and Coast
Guard assets were included.

The U.S. Alaskan Command hosted the AECE command element
at Joint Base Elmendorf-Richardson in Anchorage. Operations were taking place
in Seward, about 125 miles away, and Adak, 1,200 miles away,

as well as off the
Silver Strand at Coronado, California.

AECE included mine-clearance operations at Seward and an
air assault on the airfield at Adak to establish a site for fueling and
rearming of P-8 Poseidon maritime patrol aircraft. Support at Anchorage was provided by the
Alaska National Guard. The Coast Guard embarked an MH-65 Dolphin helicopter on
USS Somerset, and an HC-130 Hercules from Coast Guard Air Station Kodiak
supported AECE with search-and-rescue capability and aerial refueling,
respectively. Coast Guard Cutter Douglas Munro (WHEC-724) supported search-and-rescue
operations and securities and enforcement in Adak. The Air Force C-130 aircraft
was able to fly to Adak with a medical team aboard to quickly evacuate a Sailor
in need of a higher level of care.

Navy Secretary Richard V. Spencer (left) speaks with Cmdr. Kevin Culver, commanding officer of the amphibious dock landing ship USS Comstock, following a tour as part of AECE 2019. U.S. Navy/Mass Communication Specialist 2nd Class Nicholas Burgains

The exercise provided an opportunity to use platforms in
nontraditional roles and to bring together forces that do not usually operate
together.

“We had to find a way to have unity of command and
effort,” Pringle said. “This was all new.”

A key element to expeditionary operations is logistics
and what Pringle called the “ability to push fuel to forces ashore.” AECE

included the deployment of the offshore petroleum discharge system (OPDS) and a forward arming and refueling point (FARP).

“To be able to get here, do expeditionary operations and test our logistics capabilities made AECE a phenomenal opportunity to exercise muscles we don’t usually exercise,” Pringle said.

USS Comstock transported the ABLTS system from San Diego to Seward – the first time an amphibious ship was used to transport the ABLTS – and demonstrated the capability by pumping water from a barge to a “fuel farm” consisting of three 20,000-gallon bladders. The system can support combat operations or provide humanitarian assistance as a part of the Navy’s Defense Support to Civil Authorities (DSCA) mission.

A U.S. Coast Guard C-130 participates in forward arming and refueling point operations during AECE in Adak, Alaska, on Sept. 18. U.S. Marine Corps/Lance Cpl. Tia D. Carr

“If a natural disaster were to take out a coastal town’s power, gas stations or drinkable water anywhere in the world, we could fill a barge and send it to the affected region,” Pringle explained. “Systems like ABLTS and our ability to transfer thousands of gallons of liquids like drinkable water or fuel are critical during contingencies, crises response or humanitarian assistance and disaster relief.”

Adak offered challenging and variable wind and sea conditions. “The winds and seas dictated changes almost faster

that we could execute," Pringle said. "One day we had winds up to 50 knots, with 15-foot waves and a ceiling below 1,000 feet, and the next day it was clear and calm, with 2-foot seas."

Pringle said the equipment held up well in the harsh surroundings. "We had one issue with a helicopter, but that actually was a good thing, because we got to flex our maintenance capability."

He said the Navy and Marine Corps learned a great deal from their Air Force and Coast Guard counterparts. "The Air Force and Coast Guard are always here. They know the environment better than we do."

> *"Alaska … is tremendously strategic when it comes to protecting the homeland, and training here is extremely important to the Navy's Arctic strategy. We need to conduct exercises like AECE to continue pushing our joint force into the future and continue pursuing innovation within the force."*
>
> *Navy Secretary Richard V. Spencer*

Apart from the periodic submerged Ice Exercise (ICEX) submarine transits of the Arctic Ocean, the sea services do not have a significant amount of current experience in extreme latitudes. The Navy and Marine Corps participated in the multinational exercise Trident Juncture last fall in and around Norway, and the Marines work with their Norwegian counterparts on a regular basis. But the last major exercise in Alaska was Kernel Potlach in 1987, and that was the first winter amphibious operation in the Aleutian Islands since the end of World War II.

Navy Secretary Richard V. Spencer, Chief of Naval Operations Adm. Michael Gilday and Coast Guard Commandant Adm. Karl Schultz all visited Alaska to see AECE firsthand.

“Alaska is one of the best training venues we have,” Spencer said while in Seward. “The location is tremendously strategic when it comes to protecting the homeland, and training here is extremely important to the Navy’s Arctic strategy. We need to conduct exercises like AECE to continue pushing our joint force into the future and continue pursuing innovation within the force.”

Vice Adm. John B. Alexander, commander of the U.S. 3rd Fleet, also came to Alaska to see the exercise. “AECE provided our Navy and Marine Corps team an opportunity to test our collective ability to plan, communicate and conduct complex amphibious and expeditionary combat support operations in a challenging austere environment,” he said. “The training and experience we gained from AECE will help ensure that we remain a lethal and capable fighting force and that we are able to conduct defense support of civil authorities in the event of a crisis or disaster at home.”

While the conditions in and around Alaska were more challenging that what might be encountered off California, Pringle admits it could have been worse. “This is September. We understand it’s not this nice here in winter.”

But, he said, that’s the point.

“We need to find hard venues and prove we can do it.”

Naval Aviation Achieves Readiness Target, Shifts Focus to Sustainment

An F/A-18E Super Hornet launches from the flight deck of the aircraft carrier USS Abraham Lincoln. The Super Hornet has reached an 80% mission-capable rate, as has the EA-18G “Growler,” the commander of Naval Air Forces announced on Sept. 24. U.S. Navy/Mass Communication Specialist 3rd Class Michael Singley

SAN DIEGO — The commander of Naval Air Forces announced on Sept. 24 that Naval Aviation has achieved its secretary of defense-mandated readiness target of an 80% mission-capable rate for both its operational F/A-18 E/F “Super Hornet” and EA-18G “Growler” fleets.

After a year of reforms across Navy squadrons, maintenance and supply depots and other key readiness-enabling commands, Super Hornet and Growler readiness each stand above 80% of primary mission aircraft inventory — 343 for Super Hornet and 95 for Growler, respectively.

Last year, with the Navy’s mission-capable rate hovering near 50%, then-Secretary of Defense James Mattis directed the Air Force, Navy and Marine Corps to reach an 80% rate across their fighter and strike fighter aircraft squadrons.

To achieve this goal, the Naval Aviation Enterprise (NAE) implemented the Naval Sustainment System-Aviation (NSS-A). The NSS-A initiative leverages best practices from commercial

industry to update and improve aspects of Naval Aviation's maintenance practices in squadrons as well as at intermediate and depot fleet readiness centers.

Additional reform efforts greatly improved supply chain management, engineering practices, governance activities and safety. Initially, NSS-A focused on getting the Navy F/A-18 Super Hornet fleet healthy, but quickly grew to include the Navy's EA-18G Growler fleet due to the similarities in the two platforms. Ultimately, the Navy and Marine Corps will apply NSS-A reforms to recover and sustain readiness and improve safety for each type, model and series of aircraft.

According to Vice Adm. DeWolfe H. Miller III, the Navy's "Air Boss," after a decade of regularly maintaining between 250 and 260 mission-capable F/A-18s, the Navy is now sustaining more than 320 Super Hornets and surged to attain service goals of 341 mission-capable Super Hornet and 93 mission-capable Growler aircraft this month.

"This has been a year of results for Naval Aviation," Miller said. "I am incredibly proud of our Sailors, civilian teammates and industry partners. They developed and implemented the NSS and then drove readiness numbers that haven't been seen in over a decade. Their results are incredible and their passion for improvement is inspirational."

"The tremendous efforts of our fleet readiness centers were vital to achieving our readiness goals," said Vice Adm. Dean Peters, commander of Naval Air Systems Command. "I am extremely proud of the accomplishments of the Sailors and artisans that keep us mission-focused."

Rear Adm. Roy Kelley, commander of Naval Air Forces-Atlantic, pointed to the leading indicator of aviation readiness moving in the right direction: aviator flight hours.

"This is the first year in some time that we have executed our

allocation of flight hours completely," Kelley said. "That stands as a sign of health that we have a lot of 'up' aircraft, and that the parts are moving. We're getting healthy, and we're on the right track."

Miller agreed, adding that achievement of the 80% goal was an important milestone, but not a completed mission.

"To be clear, there is no finish line to the NSS effort," he added. "We don't get to choose when we are called to fight. Sustainment is the key. Continuously improving the reforms implemented by our military, civilian and industry teams will be critical in maintaining our advantage in this age of great power competition."

Navy Official: Amphibs Provide Presence, Reassurance, Deterrence

The Navy's amphibious ships and their embarked Marines, aircraft and landing craft – like this one leaving the well deck of the amphibious assault ship USS Wasp – provide an array of power that can influence world events and reinforce U.S. interests in a region, a Navy official says. U.S. Navy/Mass Communication Specialist Seaman Apprentice David Glotzbach

QUANTICO, Va. – The Navy's amphibious ships and their embarked aircraft, landing craft and Marines provide an array of power that can influence world events and reinforce U.S. interests in a region, a Navy official said, listing five roles of the forces.

The primary purpose of an amphibious ready group (ARG) is to provide a means for a Marine Air-Ground Task Group to conduct amphibious assault, Frank DiGiovanni, deputy director of expeditionary warfare, Office of the Chief of Naval Operations, last week at the Modern Day Marine expo at Marine Corps Base Quantico, Virginia.

DiGiovanni said the second role was presence, noting that "[t]he fact that you have a three-ship ARG with a bunch of firepower on it and 2,000 Marines" tells nations in the region that the power of the United States is present, "that there is someone else here, too."

Third, he said, is reassurance.

"The people in this region need to know the United States of America is on watch, and we have combat capability within our reach," DiGiovanni said.

Deterrence is the fourth role, one that discourages aggression from nations intent on aggression or harassment.

The fifth is logistics.

DiGiovanni mentioned "not only the logistics to support the Marines ashore by the ship to shore, but once that ship is empty, and the Marines are being sustained, what should we do with those ships? Do they serve a purpose to support other logistics needs, particularly in a contested environment? It's a hypothesis we're thinking about it."

Navy Lays Keel of USS

Savannah at Austal USA

WASHINGTON – The U.S. Navy held a keel-laying and authentication ceremony on Sept. 20 for the future littoral combat ship USS Savannah at Austal USA's Mobile, Alabama, shipyard, according to a release from Program Executive Office for Unmanned and Small Combatants.

The ship's sponsor, Dianne Isakson, wife of Sen. Johnny Isakson (R-Ga.), authenticated the keel for the 14th Independence-variant LCS during the ceremony.

"We are honored to lay the keel of what will one day be a magnificent combat ship that will defend our great country as our Sailors operate her around the globe," said Capt. Mike Taylor, LCS program manager.

While the keel laying traditionally represents the formal start of a ship's construction, fabrication begins months in advance. However, keel laying continues to symbolically recognize the joining of the ship's components and the ceremonial beginning of a vessel.

Four other Independence variant LCSs are undergoing construction at Austal USA with five additional ships in pre-production planning.

Coast Guard Cutter Interdicts Semi-Submersible in the

Eastern Pacific

U.S. Coast Guard boarding team members climb aboard a suspected smuggling vessel. U.S. Coast Guard

JACKSONVILLE, Fla. – The Coast Guard Cutter Valiant crew intercepted a drug-laden semi-submersible in the eastern Pacific, the Coast Guard 7th District said in a release.

While on routine patrol in the eastern Pacific, Valiant's crew interdicted a self-propelled semi-submersible in international waters carrying about 12,000 pounds of cocaine, worth more than $165 million, and apprehended four suspected drug smugglers.

The semi-submersible was originally detected and monitored by maritime patrol aircraft, and the Valiant crew was diverted by Joint Interagency Task Force South to interdict the semi-submersible, arriving after sunset.

The Valiant crew launched two small boats with boarding teams made up of Valiant crew and two members of the Coast Guard Pacific Tactical Law Enforcement Team, successfully interdicting the semi-submersible in the early morning hours. They then led and conducted a full law enforcement boarding with the assistance of Colombian naval assets that arrived on scene shortly after.

About 1,100 pounds of cocaine were recovered and offloaded to the Valiant during the operations. The remaining cocaine on the semi-submersible could not be safely extracted due to stability concerns of the vessel.

According to Valiant's commanding officer, the interdiction coincided with a time-honored mariner's milestone and tradition of crossing the equator, which made both events even more meaningful part of the ship's patrol.

“There are no words to describe the feeling Valiant crew is experiencing right now,” said Cmdr. Matthew Waldron, Valiant’s commanding officer. “In a 24-hour period, the crew both crossed the equator and intercepted a drug-laden self-propelled semi-submersible vessel. Each in and of themselves is momentous events in any cutterman’s career. Taken together, however, it is truly remarkably unprecedented This interdiction was an all-hands-on-deck evolution, and each crew member performed above and beyond the call of duty.”