Naval Reactors Awards Naval Nuclear Laboratory Contracts to Fluor Marine Propulsion

WASHINGTON – Naval Reactors, a joint program of the Department of Energy (DOE) and the Department of the Navy (DON), has selected Fluor Marine Propulsion LLC (FMP) as the new DOE and DON contractor for the Naval Nuclear Laboratory (NNL), Naval Reactors Public Affairs said in July 13 release. FMP, a limited liability company, is a wholly owned, special-purpose subsidiary of Fluor Corp.

Naval Reactors conducted a full and open competition for the new NNL contracts. The estimated combined award value of these contracts is approximately $30 billion over ten years if all options are exercised.

The current DOE and DON contracts for the NNL with Bechtel Marine Propulsion Corp. expire on Sept. 30. An approximate three-month transition period commenced on July 12, which will provide stability for the workforce employed under the Bechtel NNL contracts and ensure essential continuity of operations for vital Naval Reactors work. The contracts awarded to FMP represent the best value to the government and will provide 10 years of stability for the NNL.

The NNL comprises the DOE-owned locations and personnel responsible for developing advanced naval nuclear propulsion technology, providing technical support to ensure the safety and reliability of our nation’s naval nuclear reactors, and training the Sailors who operate those reactors in the U.S. Navy’s submarines and aircraft carriers. The NNL includes the Bettis and Knolls Atomic Power Laboratories, the Kenneth A. Kesselring Site and the Naval Reactors Facility, which have supported the nation since 1946.

Zumwalt DDG's Gun Munition Still on Hold

ARLINGTON, Va. – The Navy's program executive offer in charge of most shipbuilding said that development of a new munition for the Advanced Gun System (AGS) on the DDG 1000 Zumwalt-class ship continues to be on hold.

Speaking July 11 at a Navy League Special Topic Breakfast, Rear Adm. William J. Galinis, program executive officer, Ships, said a replacement for the Long-Range Land-Attack Projectile (LRLAP) developed for the AGS "is on hold at this point."

The LRLAP was canceled in part for its high cost given economies of scale when the DDG 1000 program was reduced from 32 planned ships to only three, leaving the AGS without a round available in quantity.

"Last fall, the Navy made the decision that we were going to transition [the Zumwalt] from a primary land-attack mission to more of a surface strike mission set," Galinis said. "As we brought this platform on line and learned about the capability of the platform, it fits that mission requirement very well. There are some changes we need to make to the ship, but they are not significant."

Galinis said the Navy has had challenges with getting the desired ranges from rounds fired from the AGS.

"Last summer, we had essentially a fly-off of four or five different rounds," he said. "We've taken the analysis of those test firings. It's kind of on hold at this point as we transition to surface strike."

Galinis said that USS Zumwalt is expected to return to sea at the end of next month following installation of its combat systems in San Diego. The second hull, Michael Monsoor, is in Bath Iron Works shipyard in Maine for a post-delivery availability. One of its main turbine engines suffered a casualty and will be replaced.

The third hull, Lyndon B. Johnson, is expected to be launched by the end of the year and to begin sea trials by the end of 2019.

PEO Ships: 'A Little Risk,' 'Evolutionary Approach' to Shipbuilding Needed

ARLINGTON, Va. — The Navy admiral in charge of building most of the Navy's ships advocates taking a bolder approach to ship design, but one that also leverages existing hulls and technology to incrementally develop new ship classes.

Speaking July 11 to an audience at a Navy League Special Topic Breakfast, Rear Adm. William J. Galinis, program executive officer (PEO), Ships, said the Navy spending "far too much time studying a problem in trying to minimize risk really gets us to an unresponsive [acquisition] system."

Galinis said that the Navy's top leadership is encouraging the acquisition community to "take a little bit of risk" given the current sense of urgency in the renewed climate of great power competition.

"Include that in your business practices," he urged the

defense industry representatives at the event.

Galinis said the Navy is taking a more “evolutionary approach to new ship classes [and] introducing new technology, leveraging parent designs.”

He cited the DDG 51 Flight III program, the new guided-missile frigate program and the Flight II of the San Antonio-class amphibious platform dock ship as examples of the evolutionary approach. Another example he mentioned is the evolution of the America-class amphibious assault ships, the most recent of which – Bougainville – will feature restoration of a well deck and be equipped with the new Enterprise Air Search Radar that uses technology in common with the Air and Missile Defense Radar being installed on the DDG 51 Flight III.

Galinis pointed out the success of incrementally modernizing ships in the example of the third Arleigh Burke guided-missile destroyer USS Barry (DDG 53), which emerged from a recent modernization availability with the same capability of USS John Finn (DDG 113), a new ship commissioned last year.

He said Navy’s Future Large Surface Combatant design will represent “more of an evolutionary approach as we migrate from the DDG 51 Flight III to the Large Surface Combatant” [and] will be “operationally driven.”

The first two ships of DDG Flight III are under construction by Huntington Ingalls and Bath Iron Works.

“The revolutionary piece certainly plays a part,” Galinis said, referring to new technologies that are being developed for shipboard use. The Navy has been developing laser weapons, electromagnetic rail guns and integrated power systems for newer ships.

AUVSI Launches Unmanned Maritime Systems Advocacy Committee

ARLINGTON, Va. – The Association for Unmanned Vehicle Systems International (AUVSI), the world's largest nonprofit organization dedicated to the advancement of unmanned systems and robotics, has formed an Unmanned Maritime Systems (UMS) Advocacy Committee to focus on the development of policy positions to support the advancement of the industry, the association announced in a July 9 release.

"Unmanned maritime systems allow military and commercial operators alike to go farther and deeper than ever before," said Brian Wynne, president and CEO of AUVSI. "The input provided by the UMS Advocacy Committee will help us speak with a unified voice and enable all our members to advocate for the growth of the industry."

The UMS Advocacy Committee will be chaired by Thomas Reynolds, vice president of Business Development for Hydroid Inc./Kongsberg Maritime. Reynolds, who currently leads all Kongsberg Maritime business with the U.S. government, previously served as a commissioned officer in the U.S. Navy, where he served as commander of the Explosive Ordinance Disposal Task Group, U.S. Fifth Fleet, among other roles.

Wayne Prender, vice president for Applied Technology and Advance Programs at Textron Systems, will be the committee's vice chair. In his role at Textron, Prender is responsible for engineering development programs, advancing areas such as the Common Unmanned Surface Vehicle and Cased-Telescoped Weapons

and Ammunition, as well as emerging capabilities and development programs. He is a former commissioned officer in the U.S. Army, where he was deployed to Iraq and awarded the Bronze Star.

The committee includes representatives from BAE Systems, L3 Technologies, Leidos, Lockheed Martin, Northrop Grumman and Seaborn Defense.

The UMS Advocacy Committee recently formalized a set of Policy Priorities to help guide the committee's legislative and regulatory actions. The priorities state that the UMS Advocacy Committee shall:

■ Establish the UMS Advocacy Committee as the preeminent industry voice influencing acquisition and regulatory policies and processes.

■ Facilitate the growth of UMS through active engagement with the government and commercial sectors.

■ Collaborate with ship owners, operators, shipyards, ports, federal maritime agencies, technology developers, classification societies and academia to further integrate advanced automation for maritime platforms into the domestic market.

■ Develop the future of the UMS workforce through technology-focused education.

Coast Guard Opens Forward

Operating Location Kotzebue for Arctic Shield 2018

JUNEAU, Alaska – The Coast Guard opened forward operating location (FOL) Kotzebue, Alaska, in support of Arctic Shield 2018 operations throughout the Arctic region July 1, the Coast Guard 17th District said in a release.

As part of operation Arctic Shield 2018, Coast Guard Air Station Kodiak deployed two MH-60 Jayhawk helicopters and crews to Kotzebue to give the Coast Guard an opportunity to leverage existing infrastructure and strategically positions its crews to effectively respond to maritime emergencies in the Bering Strait and the Northern Slope.

In addition to FOL Kotzebue, the Coast Guard will have cutters Healy, Stratton and Douglas Munro engage in operations encompassing a variety of missions from Dutch Harbor through the Bering Strait and along the North Slope including the Northern Alaska Outer Continental Shelf.

Operation Arctic Guardian is also a part of Arctic Shield, and it is an exercise that will conduct outreach with community responders in the Arctic by teaching basic oil spill response tactics and sub-area planning. Several Coast Guard personnel and the Alaska Department of Environmental Conservation will conduct Operation Arctic Guardian in Bethel.

“The Forward Operating Location in Kotzebue helps mitigate several of the major challenges when operating in the Arctic including the environment, vast distances and limited infrastructure,” said Rear Adm. Matthew Bell, commander, Coast Guard 17th District. “Arctic Shield 2018 operations and activities will include performing multiple missions, leveraging partnerships and increasing maritime domain awareness to reduce risk and promote safe, secure and

environmentally responsible maritime activity. “

Arctic Shield operations began in 2009 to support Coast Guard missions in response to increased maritime activity in the Arctic. Arctic Shield operations and activities include focusing on promoting national interests and sovereignty throughout the Arctic. Arctic Shield 2018 operations and activities will include performing multiple missions, leveraging partnerships and increasing maritime domain awareness to reduce risk and promote safe, secure and environmentally responsible maritime activity.

Arctic Shield 2018 focuses on understanding and responding to the risks to the sea, risks to those on the sea, and risks from those who might use the sea to do us harm. Increasing maritime domain awareness, building and strengthening partnerships with both national and international Arctic stakeholders, and having an active presence in the region will enhance the safety, security and stewardship of the nation’s Arctic waters.

Boeing to Build 28 Super Hornets for Kuwait

ARLINGTON, Va. – The Navy has awarded to Boeing $1.5 billion for 28 F/A-18E/F Super Hornet strike fighters for the Kuwaiti Air Force.

According to a June 27 Defense Department contract announcement, Boeing will build 22 single-seat F/A-18E and six two-seat F/A-18F versions for Kuwait.

The sale of the Super Hornets was approved by the U.S.

Department of State in February.

Deliveries of the strike fighters to Kuwait is expected by January 2021.

Kuwait's air force previously ordered 32 older F/A-18C and eight F/A-18D Hornets during the 1980s. It will be the second foreign nation to order the Super Hornet, Australia being the first.

MDA Director: Ship-based Missile Defense More Capable, Flexible than Land-based Options

WASHINGTON – The director of the Missile Defense Agency (MDA) accepted the declaration by Chief of Naval Operations (CNO) Adm. John M. Richardson that he wants to get his Aegis-equipped warships out of the missile defense patrol missions, but noted that the Navy ships provide better capabilities than available land-based alternatives.

Air Force Lt. Gen. Samuel A. Greaves, the MDA director, said June 26 that he understood the concern over the limited number of the multimission ships and "the strain on the crews and equipment" of keeping the multimission-capable destroyers and cruisers deployed on the ballistic missile defense (BMD) missions.

Greaves was asked at a Mitchell Institution breakfast session about Richardson's June 12 complaint that he had six

multimission ships that could go anywhere quickly to address security threats but were tied up “in a tiny little box, defending land.” The CNO said those ships could be used in emergencies, but “I want to get out of the long-term missile defense business.”

Richardson said the BMD mission could be taken over by land-based systems.

Greaves noted that “the CNO did verify that he is supportive of the Aegis BMD mission.”

“The existing ground facilities is Aegis Ashore,” Greaves said, and there is a “question if you could deploy additional capabilities. THAAD also could do some of that,” he said, referring to the Army-operated Terminal High Altitude Area Defense antimissile system.

“But the Aegis weapon system has more capability” and can reach higher altitude targets, Greaves added. He also noted the “flexibility of the (Navy) platform to respond to the threat.”

“But, if the nation decides that we need to balance out, or increase the number of land-based capabilities,” Greaves said that with “the demonstrated ability we have, we can do it with Aegis Ashore.”

The first Aegis Ashore site in Romania was declared operational in May 2016 with a Spy-1D radar and 24 Mk 41 vertical launch systems holding Standard Missile-3 (SM-3) missiles. But the planned second site in Poland that was expected to be operational by early 2019 has run into major problems with site construction. Greaves estimated it would take another 18 months to complete.

In his address, Greaves cited his priorities of increasing the reliability of the existing BMD capabilities, increasing the engagement capabilities and keeping pace with the rapidly

improve threats.

“The times for delays and studies are over,” he said.

A top priority in keeping up with the emerging threats, Greaves said, was fielding a capability against hypersonic weapons. That threat is real, based on what has been seen in actions by others, he said, apparently referring to China and Russia, which have claimed to have demonstrated ultra-high-speed weapons.

Among MDA’s planned projects, Greaves listed an upcoming retest of the SM-3IIA missile, which failed an intercept trial last year. He said officials have isolated the problem to a part that worked nine out of the 10 previous tests and were working to ensure it will work in the future.

Virginia-Class Submarine Indiana is Delivered to U.S. Navy

NEWPORT NEWS, Va. – Huntington Ingalls Industries’ Newport News Shipbuilding division delivered the newest nuclear-powered fast-attack submarine to the U.S. Navy, the company said in a June 25 release.

The future USS Indiana (SSN 789) is the 16th Virginia-class submarine built as part of the teaming agreement with General Dynamics Electric Boat and the eighth delivered by Newport News.

“We are proud to deliver Indiana to the Navy,” said Dave Bolcar, Newport News’ vice president of submarine

construction. “For the nearly 4,000 shipbuilders who participated in construction of the boat, there is nothing more important than knowing that this vessel will support the Navy’s missions.”

Indiana, which began construction in September 2012, successfully completed sea trials earlier this month. The vessel will be commissioned later this year.

Virginia-class submarines are built for a broad spectrum of open-ocean and littoral missions to replace the Navy’s Los Angeles-class submarines as they are retired. Virginia-class submarines incorporate dozens of new technologies and innovations that increase firepower, maneuverability and stealth and significantly enhance their warfighting capabilities. These submarines are capable of supporting multiple mission areas and can operate at submerged speeds of more than 25 knots for months at a time.

Navy Developing Ship Coatings to Reduce Fuel, Energy Costs

ARLINGTON, Va. – It can repel water, oil, alcohol and even peanut butter. And it might save the U.S. Navy millions of dollars in ship fuel costs, reduce the amount of energy that vessels consume and improve operational efficiency.

The Office of Naval Research (ONR) is sponsoring work by Dr. Anish Tuteja, an associate professor of materials science and engineering at the University of Michigan, to develop a new type of “omniphobic” coating. This chemical coating is clear, durable, can be applied to numerous surfaces and sheds just about any liquid.

Of particular interest to the Navy is how omniphobic coatings can reduce friction drag – resistance created by the movement of a hull through water – on ships, submarines and unmanned underwater vessels.

Compare friction drag to jogging through a swimming pool. Because of the water's resistance, each stride is more difficult and requires more energy and effort.

"A significant percentage of a ship's fuel consumption [up to 80 percent at lower speeds and 40 to 50 percent at higher speeds] goes toward maintaining its speed and overcoming friction drag," said Dr. Ki-Han Kim, a program officer in ONR's Sea Warfare and Weapons Department. "If we could find a way to drastically reduce friction drag, vessels would consume less fuel or battery power, and enjoy a greater range of operations."

Tuteja's omniphobic coating could be a solution. Picture two ships sailing at the same speed – one dealing with friction drag and the other covered in a coating that causes water to bead up and slide off the hull easily. The coated vessel theoretically would guzzle less fuel because it doesn't have to fight as much water resistance while maintaining speed.

While repellent coatings aren't new, it's hard to create one that resists most liquids and is tough enough to stick to various surfaces for long periods of time. Take a Teflon-coated pan, for example. Water will bead up and roll off the pan, while cooking oil will spread everywhere.

"Researchers may take a very durable polymer matrix and a very repellent filler and mix them," said Tuteja. "But this doesn't necessarily yield a durable, repellent coating. Different polymers and fillers have different miscibilities [the ability of two substances to mix together]. Simply combining the most durable individual constituents doesn't yield the most durable composite coating."

To engineer their innovative coating, Tuteja and his research team studied vast computer databases of known chemical substances. They then entered complex mathematical equations, based on each substance’s molecular properties, to predict how any two would behave when blended. After analyzing hundreds of combinations, researchers found the right mix.

The molecular marriage was a hit during laboratory tests. The rubber-like combo can be sprayed, brushed, dipped or spin-coated onto numerous surfaces, and it binds tightly. The coating also can withstand scratching, denting and other hazards of daily use. And the way the molecules separate makes the coating optically clear.

Besides reducing friction drag, Tuteja envisions other Navy uses for the omniphobic coating – including protecting high-value equipment like sensors, radars and antennas from weather.

In addition to omniphobic coatings to lessen friction drag, ONR is sponsoring other types of coating research to prevent corrosion on both ships and aircraft and fight biofouling (the buildup of barnacles on hulls). Similar coatings can also prevent ice from forming on ships operating in cold regions, or make ice removal much easier than conventional methods like scraping.

Tuteja’s team is conducting further tests on the omniphobic coating, but they plan to have it ready for small-scale military and civilian use within the next couple of years.

Coast Guard Cutter Campbell Returns with $209 Million Cocaine Seizure

BOSTON – The Coast Guard Cutter Campbell returned to its homeport in Kittery, Maine, June 15 after an 80-day counternarcotic patrol in the Caribbean Sea and Eastern Pacific Ocean, the Coast Guard 1st District said in a release.

Campbell's crew disrupted six narcotic smuggling ventures, seized about 12,000 pounds of cocaine worth $209 million and detained 24 suspected smugglers.

Equipped with an MH-65 Dolphin helicopter crew deployed from the Helicopter Interdiction Tactical Squadron unit based in Jacksonville, Florida, Campbell patrolled known narcotic transit zones in the Eastern Pacific Ocean off the coast of Central and South America in support of Joint Interagency Task Force-South, which facilitates international and interagency interdiction to enable the disruption and dismantlement of illicit and converging threat networks in support of national and hemispheric security.

Campbell's crew also rescued three sea turtles found entangled in loose fishing gear.

"During this challenging deployment, the crew excelled in all assigned missions and should be exceptionally proud of their accomplishments," said Cmdr. Mark McDonnell, Campbell's commanding officer. "Our efforts to integrate with partner agencies and nations are key to the safe and successful execution of these complex interdiction operations as we work together to remove cocaine bound for the United States and help dismantle criminal networks."

Campbell is a 29-year-old Famous-class medium-endurance

cutter, with a crew complement of 100.