

Coast Guard, Multiple Partners Responding to Bridge Collapse in Baltimore

U.S. Coast Guard 5th District, March 26, 2024

BALTIMORE – The U.S. Coast Guard is coordinating with local, state, and federal agencies in response to the Francis Scott Key Bridge collapse in Baltimore Tuesday morning.

Coast Guard watchstanders received a report into the Coast Guard Sector Maryland – National Capital Region command center at 1:27 a.m. reporting a 948-foot Singapore-flagged containership collided with the Francis Scott Key Bridge.

Additionally, it was reported that the bridge collapsed and there were reports of persons in the water.

Response boat crews from Coast Guard Stations Curtis Bay and Annapolis have crews deployed to the incident for active search and rescue.

A Coast Guard Air Station Atlantic City MH-65 Dolphin helicopter crew and Coast Guard investigators and pollution responders are also en-route to the incident.

An Urgent Marine Information Broadcast is issued regarding the incident and there has been a 2000-yard safety zone issued for the surrounding waters. Mariners are urged to avoid the area.

HII Celebrates 2023 Graduates of The Newport News Shipbuilding Apprentice School



From HII, Mar. 25, 2024

NEWPORT NEWS, Va., March 23, 2024 (GLOBE NEWSWIRE) – HII (NYSE: HII) hosted commencement exercises today, celebrating 133 graduates of the company’s Newport News Shipbuilding Apprentice School. The ceremony was held at Liberty Live Church in Hampton with U.S. Rep. Bobby Scott, D-Va., NNS leadership, and local shipbuilding supporters, alongside family and friends of the graduates.

Thomasina Wright, NNS vice president of fleet support programs, and a 1986 graduate of The Apprentice School, delivered the keynote commencement address.

“Newport News Shipbuilding is the best place to be to support

our national defense and become a leader,” Wright said. “Graduates, please focus on continuous learning, setting goals and priorities, and giving back to your community.”

NNS President Jennifer Boykin addressed the graduates as the shipyard’s newest leaders.

“You were chosen to complete a truly rigorous program – and you succeeded,” Boykin said. “Hold your head high, and consider your impact on those around you. Our future is brighter with you in it.”

Photos accompanying this release are available at: <https://hii.com/news/hii-newport-news-shipbuilding-apprentice-school-graduation-2024/>.

The Newport News Shipbuilding Apprentice School has been accredited since 1982. Students can earn academic degrees through its partnerships with institutions of higher education. Certification to grant associate degrees and confer degrees on its own came in July 2020, after the school was approved by the State Council of Higher Education for Virginia to operate as a postsecondary institution.

This year’s commencement exercises marked the first time the school has conferred an associate’s degree in the field of applied science maritime technology. Adam Ryan West, a welding equipment repairer, is the first to earn the degree, which became an option at the same time he was accepted to the school.

West initially chose welding equipment repair for his apprenticeship, but through his shipyard work and classroom study, he was able to expand his scope of skills to earn the degree.

“There is a satisfaction in fixing something that wasn’t working,” West shared. “It is an honor to be the first to earn this degree from The Apprentice School and I am thankful I get

to apply what I learned every day while working in the shipyard.”

Scott Sinowitz received the Homer L. Ferguson Award, which recognizes the apprentice graduating with the highest average in combined required academic and craft grades.

Sinowitz joined NNS in 2020 with a bachelor’s degree in health sciences from James Madison University and currently serves as an electrician supporting the refueling and complex overhaul of the aircraft carrier USS *John C. Stennis* (CVN 74).

During his address, Sinowitz asked graduates to reflect on the knowledge and craftsmanship learned in their apprenticeships that set them up for success as shipyard leaders.

“Those skills take time to develop and even longer to refine. So, while we continue to improve ourselves, I can’t emphasize enough the importance of a strong work ethic, good attitude, desire to learn, and preparedness,” Sinowitz shared. “With one another’s support, we create the culture Newport News Shipbuilding deserves.”

Replay coverage of the ceremony is available at:
<https://hii.com/events/apprentice-school-graduation/>

- The following is a profile of the graduating class:
- Fourteen graduates completed an optional advanced program, earning an associate or bachelor’s degree. The program includes coursework in subjects such as marine design, modeling and simulation, production planning and marine engineering.
- Fifty-nine graduates earned honors, a combination of academic and craft grades that determine overall performance.
- Two graduates completed the Advanced Shipyard Operations

Program, allowing them to continue their postsecondary education, expand their experience in waterfront operations and develop leadership skills to improve the quality and efficiency of production, manufacturing and maintenance processes.

- Forty-five graduates completed Frontline FAST, an accelerated skills training program for potential foremen.
- Twenty-seven graduates were inducted into The National Society of Leadership Success.
- Nine graduates completed the World Class Shipbuilder Curriculum and advance optional program with a perfect 4.0 grade point average.
- Seven graduates are military veterans or are currently serving in the armed services as reservists and guardsmen.
- Twelve graduates earned Gold Athletic Awards. One graduate, Logan David Mize, earned a Gold Athletic Award in two sports.

The Apprentice School accepts more than 200 apprentices per year. The school offers four- to eight-year, tuition-free apprenticeships in 19 trades and eight optional advanced programs. Apprentices work a 40-hour week and are paid for all work, including time spent in academic classes.

Through partnerships with Virginia Peninsula Community College, Tidewater Community College and Old Dominion University, The Apprentice School's academic program provides the opportunity to earn associate degrees in business administration, engineering and engineering technology and bachelor's degrees in mechanical or electrical engineering.

USF Opens Cutting-Edge Lab Aimed at Rapidly Providing Military Solutions



The state-of-the-art facility is part of a five-year, \$85 million contract with the Department of Defense

TAMPA, Fla. (March 25, 2024) – The University of South Florida has opened a cutting-edge lab aimed at providing quick, innovative solutions to the different challenges facing the U.S. Department of Defense. Managed by USF's Institute of Applied Engineering, the new Rapid Experimentation Lab (REL) provides a unique, collaborative space to rapidly test concepts.

As one of nation's [most research-intensive universities](#), USF is helping to solve problems throughout society, and the facility is a key part of those efforts.

“Our new lab will further enhance the University of South Florida’s focus on developing technologies and providing innovative solutions that address critical global and national security challenges,” USF President Rhea Law said. “This facility will provide research opportunities for our faculty, hands-on learning experiences for our students and help grow important partnerships with governmental agencies and private industry.”

The state-of-the-art facility is part of a five-year, \$85 million contract with the Department of Defense. It aims to streamline the prototyping process by bringing together engineers from a wide range of disciplines under one roof, significantly reducing development timelines.

“The lab provides the necessary infrastructure, tools and collaborative environment to enable the curious and inspired to design, build and test technologies for today and tomorrow,” said Peter Jorgensen, the associate director of engineering for the IAE. “More than just a makerspace, the REL is a playground for mechanical, electronics, sensors, communications, and software teams to quickly iterate on designs to solve problems, invent new products and rapidly deliver cutting-edge capabilities.”

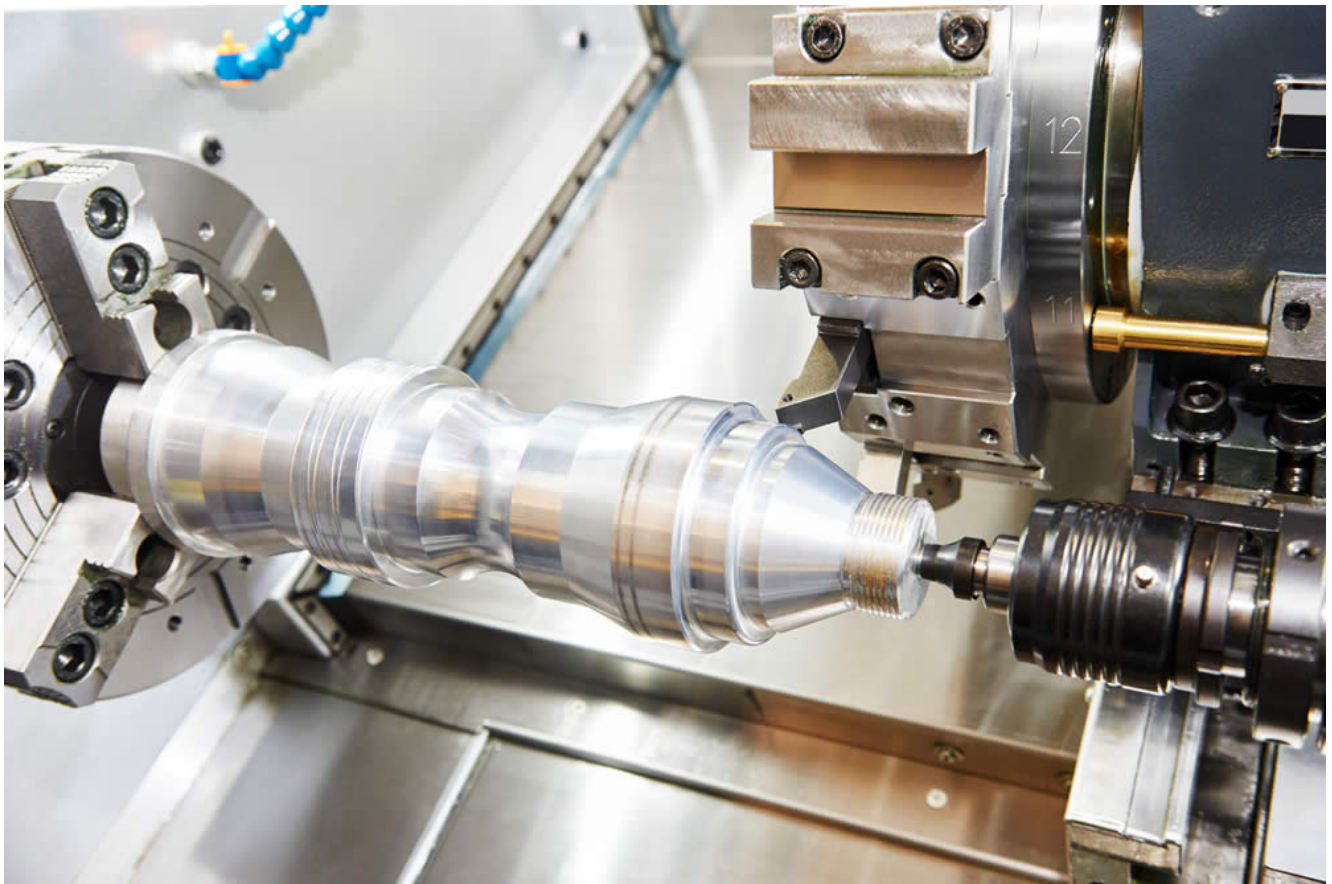
The new 8,000-square-foot facility will be utilized not just by USF faculty and student engineers, but also partners in the Department of Defense and private industry, who are working to support missions ranging from the battlefield, to the oceans and to space. The lab houses various equipment, including electrical and mechanical computer design and analysis tools, communications networks to support testing, electronics and circuit boards, as well as manufacturing technology. It will allow multiple engineers to collaborate, test and retest an idea or product before presenting it to the Department of Defense for consideration.

The IAE also plans to work with the USF Technology Transfer

Office to identify start-up companies interested in utilizing the lab for development of their own inventions.

Partners who would like more information can email info-iae@usf.edu.

Fairbanks Morse Defense Continues Expanding Turnkey Solutions with AMMCON Acquisition



In addition to adding fittings and assembled components to the FMD product portfolio, AMMCON provides FMD with the infrastructure required to produce fittings through additive

manufacturing (3D printing), as illustrated here. *Fairbanks Morse Defense*

BELoit, Wisconsin – Fairbanks Morse Defense, a portfolio company of Arcline Investment Management, has acquired AMMCON Corp., a Jacksonville, Florida-based fittings and assembled components manufacturer. The defense contractor's acquisition continues its expansion and commitment to providing critical components to the U.S. Navy and other marine defense customers.

"Fairbanks Morse Defense is working to build fully integrated products and services that will meet every need of maritime defense, and to accomplish this, we must continue to identify cutting-edge providers who share our commitment to serving as a defense contractor of the first rank," said George Whittier, FMD CEO. "Working together, we are delivering value far beyond the cost of our services and, in the process, ensuring our marine fleets are always mission ready."

AMMCON provides critical fittings and other products used on the Virginia- and Columbia-class submarine programs, as well as the Ford-class aircraft carrier program. FMD's acquisition enables AMMCON to expand its products to additional platforms and customers across the U.S. Navy, Coast Guard and Military Sealift Command.

"Over the past 50 years, we have built our business as a defense contractor by honing our quality to pinpoint accuracy to the needs of defense," said Darrell Grow, AMMCON CEO. "This strategic acquisition convergence with FMD strengthens our capabilities and gives us reach and resources that will allow us to continue our commitment to excellence."

This announcement marks FMD's 11th acquisition since beginning its expansion in December 2020 to serve the maritime defense industry with turnkey solutions.

Coast Guard to Commission New FRC in New London, Connecticut



NEW LONDON, Connecticut – The Coast Guard Cutter Melvin Bell (WPC-1155) is scheduled to be commissioned during a ceremony March 28 at 10 a.m. at the Coast Guard Academy in New London.

The Coast Guard's newest cutter was accepted by the Coast Guard on November 16, 2023, and will be the sixth and final fast response cutter homeported in Boston.

The Sentinel-class fast response cutter (FRC) is designed for multiple missions, including drug and migrant interdiction; ports, waterways and coastal security; fishery patrols; search

and rescue; and national defense. The Coast Guard has ordered a total of 65 FRCs to replace the 1980s-era Island-class 110-foot patrol boats. The FRCs feature advanced command, control, communications, computers, intelligence, surveillance and reconnaissance equipment; over-the-horizon cutter boat deployment to reach vessels of interest; and improved habitability and seakeeping.

All Coast Guard fast response cutters are named after an enlisted Coast Guard hero who distinguished themselves in the line of duty. Melvin Kealoha Bell was a master chief electronics technician and served in the Coast Guard from November 1938 to December 1958. ETCM Melvin Bell distinguished himself during World War II by transmitting the first warning messages to military installations in Pearl Harbor on the morning of December 7, 1941, when the Japanese attacked. He continued to prove instrumental throughout the war as he helped break enemy codes leading to numerous victories, including the Battle of Midway and in an operation to break up a Nazi espionage network in New York City. ETCM Bell became the first Pacific Islander to achieve the rank of chief petty officer, the first master chief electronics technician and the first master chief petty officer of color.

Red Sea Update

SEAPOWERR

The Official Publication of the Navy League of the United States

From U.S. Central Command

March 23, 2024

TAMPA, Fla. – From 2:50 to 4:30 a.m. (Sanaa time) March 23, the Iranian-backed Houthis launched four anti-ship ballistic missiles (ASBM) into the Red Sea in the vicinity of M/V Huang Pu, a Panamanian-flagged, Chinese-owned, Chinese-operated oil tanker.

At 4:25 p.m. (Sanaa time), a fifth ballistic missile was detected as fired toward M/V Huang Pu. The ship issued a distress call but did not request assistance. M/V Huang Pu suffered minimal damage, and a fire on board was extinguished within 30 minutes. No casualties were reported, and the vessel resumed its course. The Houthis attacked the M/V Huang despite previously stating they would not attack Chinese vessels.

Between 6:50 and 9:50 a.m. (Sanaa time), U.S. forces, including USS Carney (DDG 64), engaged six Houthi unmanned aerial vehicles (UAV) over the southern Red Sea. Five crashed into the Red Sea, and one flew inland into Houthi-controlled areas of Yemen.

It was determined these UAVs presented an imminent threat to U.S., coalition, and merchant vessels in the region. These

actions are taken to protect freedom of navigation and make international waters safer and more secure for U.S., coalition, and merchant vessels.

March 22, 2024

TAMPA, Fla. – On March 22, between approximately 4:22 a.m. and 11:10 p.m. (Sanaa time), United States Central Command (CENTCOM) forces successfully engaged and destroyed four unmanned aerial vehicles (UAV) in Houthi-controlled areas of Yemen in self-defense.

During this timeframe, Iranian-backed Houthi terrorists fired four anti-ship ballistic missiles (ASBM) from Houthi-controlled areas of Yemen toward the Red Sea. There were no injuries or damage reported by U.S., coalition, or commercial ships.

Additionally, CENTCOM forces conducted self-defense strikes against three Houthi underground storage facilities in Iranian-backed Houthi terrorist-controlled areas of Yemen. These strikes targeted capabilities used by the Houthis to threaten and attack naval ships and merchant vessels in the region. Illegal Houthi attacks have killed three mariners, sunk a commercial vessel lawfully transiting the Red Sea, disrupted humanitarian aid bound for Yemen, harmed Middle East economies, and caused environmental damage.

These weapons storage facilities presented a threat to U.S. and coalition forces and merchant vessels in the region. These actions are necessary to protect our forces, ensure freedom of navigation, and make international waters safer and more secure for U.S., coalition, and merchant vessels.

U.S., Seychelles Conduct Bilateral Maritime Security engagements



March 24, 2024

[By U.S. Naval Forces Europe-Africa Public Affairs and U.S. Coast Guard Atlantic Area Public Affairs](#)

NAPLES, Italy –

Over the course of 7 days from March 14-21, 2024, United States Coast Guard Law Enforcement Detachment (LEDET) personnel worked alongside their counterparts in the Seychelles Coast Guard during multiple bilateral maritime security engagements in Seychelles' Exclusive Economic Zone (EEZ).

These events included identifying vessels suspected in

engaging in illicit activity or illegal, unreported and unregulated (IUU) fishing in Seychelles' EEZ, which extends into significant portions of East Africa and the Western Indian Ocean. After identification, the U.S. and Seychelles teamed up to intercept vessels of interest to conduct compliant boardings of Seychelles-flagged vessels, ensuring adherence to Seychelles Maritime law.

"Our cooperation on maritime security is a visible sign of our mutual goal of a more secure and prosperous Indian Ocean Region," said U.S. Embassy Seychelles Chargé d'Affaires, Adham Loutfi. "It gives me enormous satisfaction to know that Seychelles and the United States continue to work side by side—demonstrating great dedication, courage, and sacrifice—to ensure the safety and security of our maritime spaces."

These bilateral engagements come immediately after the East African maritime exercise Cutlass Express 2024, which was hosted by Djibouti, Kenya and the Seychelles. Cutlass Express focused on a variety of maritime security and stability issues, providing invaluable training and realistic scenarios for partners and Allies that they can then apply in real world operations, as is the case here.

"The 2024 enactment of the U.S.-Seychelles Bilateral agreement is the second major operation performed with our key Indian Ocean partner, Seychelles Coast Guard, since the agreement was signed in 2021," said Cmdr. Beau Powers, Chief of law enforcement operations at U.S. Coast Guard Atlantic Area. "Seychelles is a distinctly maritime nation, committed to meeting obligations to counter Illegal, Unreported, and Unregulated Fishing as well as deterring illicit maritime activity. The U.S. Coast Guard is committed to performing combined operations with our highly capable counterparts in the Seychelles Coast Guard to stem such global problems. Training on law enforcement tactics, practicing information exchange, and then working together in operational law enforcement patrols, bolsters maritime security in a perfect

demonstration of the U.S. and Seychelles' commitment to keeping the international rules-based order in this region."

Seychelles Special Forces, agents from Seychelles Maritime Safety Authority, the Seychelles Fishery Authority, and the U.S. Coast Guard kicked off the bilateral engagement on March 14. From day one, the team completed joint small boat sorties and maritime operations center communication rehearsals as part of a harmonization period to bring the team together. Once underway aboard the Seychelles Coast Guard ship SAYA DE MALHA, their meticulous planning and pre-underway coordination was evident as their efforts led to eight vessel boardings and over 700 nautical miles steamed throughout the West Indian Ocean.

This also continues a history of maritime cooperation between the United States and the Seychelles, as both nations are committed to preserving peace and stability, upholding freedom of the seas in a manner consistent with international law, maintaining the unimpeded flow of commerce, and opposing any attempt to use coercion or force to settle disputes. In addition to Coast Guard operations and the Cutlass Express series of exercises, the Lewis B. Puller-class expeditionary sea base USS Hershel "Woody" Williams (ESB 4) conducted a port visit in Victoria in July 2022, and U.S. Navy Divers have collaborated with Seychellois Divers to conduct survey and salvage missions in the Seychelles as recently as January 2023, demonstrating the diversity of cooperation between the two nations in the maritime domain.

The Coast Guard Atlantic Area located in Portsmouth, Virginia, is responsible for overseeing all Coast Guard operations from the Rocky Mountains to the Arabian Gulf.

For over 80 years, U.S. Naval Forces Europe-U.S. Naval Forces Africa (NAVEUR-NAVAF) has forged strategic relationships with Allies and partners, leveraging a foundation of shared values to preserve security and stability.

Headquartered in Naples, Italy, NAVEUR-NAVAF operates U.S. Naval forces in the U.S. European Command (USEUCOM) and U.S. Africa Command (USAFRICOM) areas of responsibility. U.S. Sixth Fleet is permanently assigned to NAVEUR-NAVAF, and employs maritime forces through the full spectrum of joint and naval operations.

Pratt & Whitney Receives Full Funding for Engine Core Upgrade in FY 2024 Defense Bill

The logo for SEAPOWER, with "SEA" in blue and "POWER" in red, in a bold, sans-serif font.

The Official Publication of the Navy League of the United States

EAST HARTFORD, Connecticut – Pratt & Whitney, an RTX business, has received full funding in the recently passed fiscal year 2024 Defense Appropriations bill for its F135 Engine Core Upgrade, which will modernize the F-35's propulsion system to increase durability and fully-enable Block 4 capabilities and

beyond starting in 2029.

“This bill will allow Pratt & Whitney to deliver the current and future propulsion capabilities that will keep the United States and its allies on the cutting edge of fighter engine technology,” said Jill Albertelli, president of Pratt & Whitney Military Engines. “We are incredibly thankful to our congressional allies for their steadfast commitment to supporting these programs.”

\$497 million was allocated to the F135 ECU, which will move into detailed design later this year. The ECU is compatible with all three variants of the F-35, will be retrofittable, and will be available to all F-35 operators. The ECU will utilize the same F135 global sustainment network and domestic workforce already in place, supporting more than 57,000 jobs and 225 suppliers that contributed more than \$2.2B to the U.S. economy in 2023.

“We are thankful that Congress has embraced and enacted the Defense Department’s decision to upgrade the F135 with the Engine Core Upgrade, the lowest-risk, most cost-effective solution to modernizing the F-35,” said Jeff Shockey, senior vice president, RTX government relations. “We are fortunate to enjoy continued bipartisan and bicameral support and leadership from our congressional advocates on this critical capability for the warfighter; particularly Sen. Susan Collins, Rep. Rosa DeLauro, and many other members that continue to be staunch advocates of the F135 program.”

The defense bill also includes continued support for the Next-Generation Adaptive Propulsion program, a portion of which will be provided for Pratt & Whitney’s XA103 adaptive engine to continue moving toward detailed design review for the prototype engine. Pratt & Whitney remains well-positioned to support concurrent development programs with the capacity and expertise to meet customers’ evolving propulsion needs.

AUKUS Trilateral Statement



ROCKINGHAM, Australia (March 10, 2024) The Los Angeles-class fast-attack submarine USS Annapolis (SSN 760) moors alongside Diamantina Pier at Fleet Base West in Rockingham, Western Australia, March 10, 2024. (USN photo by MC Kaitlyn E. Eads)

March 21, 2024 [_____](#)

From The Honourable Richard Marles MP, Deputy Prime Minister and Minister for Defence, Australia; the Right Honourable Grant Shapps, Secretary of State for Defence, United Kingdom; and Lloyd J. Austin III, Secretary of Defense, United States.

“One year ago, on 13 March 2023 in San Diego, the Leaders of Australia, the United Kingdom, and the United States announced the Optimal Pathway. The Optimal Pathway outlines an ambitious plan to deliver a conventionally armed, nuclear-powered submarine capability (SSNs) for the Royal Australian Navy

(RAN) – a plan that will strengthen our three countries' combined military capabilities, boost our collective industrial capacity, set the highest non-proliferation standard and enhance our ability to promote stability and security in the Indo-Pacific and beyond.

AUKUS is built on the bedrock of decades of close defense, capability and technology cooperation between our three nations and is a natural progression of our partnership. Today, AUKUS partners welcomed the announcement of the selection of ASC Pty Ltd and BAE Systems to build Australia's SSN-AUKUS submarines, and the selection of ASC as Australia's nuclear-powered submarine sustainment partner.

The formation of these strategic partnerships with industry is a significant milestone in the AUKUS endeavour. It is a demonstration of our trilateral industry supporting the Optimal Pathway becoming a reality and will underpin Australia's role as a capable security partner and responsible steward of a conventionally armed, nuclear-powered submarine capability for decades to come.

The enduring trilateral partnership between the governments of Australia, the United Kingdom and the United States supports these commercial relationships and further enables the close industrial collaboration across our three countries in support of AUKUS.

ASC and BAE Systems will build the SSN-AUKUS submarines for the Royal Australian Navy. BAE Systems has been at the heart of the UK's submarine enterprise for generations. SSN-AUKUS is being trilaterally developed, based on the United Kingdom's next-generation design and incorporating technology from all three nations, including cutting edge United States submarine technologies. Also to be built by the UK and operated by the Royal Navy, SSN-AUKUS will be equipped for intelligence, surveillance, undersea warfare and strike missions, and will provide maximum interoperability among AUKUS partners.

ASC has been at the centre of Australia's sovereign submarine program for decades as Australia's sovereign submarine sustainment partner, and the builder of Australia's Collins-class submarines. ASC will build its sustainment capability for SSNs, including through partnering opportunities with UK and US industry. Sustainment capability is critical to the Optimal Pathway, accelerating Australia's ability to operate and sustain its own Virginia class submarines as soon as possible and contribute to regional security, together with AUKUS partners.

The Optimal Pathway was always designed to create a stronger, more resilient trilateral submarine industrial base, supporting submarine production and maintenance in all three countries. The announcements today are a testament to that – the build of SSN-AUKUS will increase opportunities for industrial base collaboration, strengthen our collective industrial base capacity, and generate economic growth in defense and national security sectors in all three countries. Similarly, the announcement of Australia's sovereign sustainment partner is a key milestone to build Australia's capacity to operate and sustain nuclear-powered submarines. ASC will, in time, develop robust industry partnerships with UK and US businesses to gain the technical skills, know-how and capacity to sustain nuclear-powered submarines.

All AUKUS partners are investing significantly to ensure success of the Optimal Pathway and are working at pace to transform and integrate our trilateral industrial bases to support SSN cooperation.

- Australia has agreed an AUD\$1.5 billion investment for early priority works at HMAS Stirling, to put in place the enablers for the safe and secure rotational presence of United Kingdom and United States SSNs through Submarine Rotational Force-West from 2027. Australia has also commenced enabling works at the future nuclear-

powered submarine construction yard at Osborne Naval Shipyard in Adelaide. All up, Australia has committed at least AUD \$18 billion in infrastructure upgrades across South Australia and Western Australia over the next 10 years to enable critical milestones for the Optimal Pathway.

- The United States has announced the intended investment of USD \$11.4 billion in its submarine industrial base across the five-year defense budget period starting in 2025 to increase the production rate of Virginia class submarines as quickly and effectively as possible, to meet its own fleet requirements and support U.S. commitments under AUKUS.
- The United Kingdom also announced last year that it would inject GBP £3 billion into its Defence Nuclear Enterprise, including the construction of submarine industrial infrastructure that will help to deliver the SSN-AUKUS program. Subsequently, Rolls-Royce has announced that it will double the size of its Derby site to support the delivery of the UK and Australian programs, which will include building all of Australia's nuclear reactors.

Australia, the United Kingdom, and the United States remain fully committed to this shared endeavor. These steps to grow Australia's submarine construction and maintenance capability are critical to the AUKUS partnership, expanding trilateral industrial capacity and building the collective resilience of AUKUS partners to produce and sustain conventionally armed nuclear-powered submarines for decades to come."

U.S. Navy Achieves Significant Engine Testing Milestones for LUSV Program



The Official Publication of the Navy League of the United States

By Program Executive Office Unmanned and Small Combatants,
March 22, 2024

WASHINGTON – The U.S. Navy's Large Unmanned Surface Vessel (LUSV) program reached pivotal milestones earlier this year after several industry teams successfully completed extended reliability demonstrations of four different engine configurations, officials announced today.

The four 720-hour tests demonstrated the capability and durability of different engine plants to operate for extended periods without human intervention – a critical enabler for advancing unmanned maritime operations and the Navy's manned-unmanned Hybrid Fleet concept.

Mandated by a congressional requirement in the 2021 National Defense Authorization Act, the engine testing milestones must be completed before the LUSV can proceed into a formal

development phase. An engine system only qualifies for use in the program after successful demonstration events.

Demonstrations of each engine configuration took place over 720 continuous hours. No human intervention or preventative/corrective maintenance on the equipment was permitted during this time. Successfully completing the demonstration meant that an engine system could not exhibit any failures or issues that would require maintenance of any kind during operations on an unmanned ship for 30 days.

Four teams have successfully completed their separate 720-hour testing milestones. The successful teams include:

- Bollinger and Carter Machinery on behalf of Caterpillar in Chesapeake, Virginia was the first team to achieve this milestone in December of 2023. They demonstrated sufficient mechanical reliability of the 1550 kw Caterpillar 3512C model engine.
- Fincantieri Marinette Marine (FMM) and Carter Machinery on behalf of Caterpillar in Chesapeake, VA demonstrated mechanical durability of the Caterpillar 2300 kW rated 3516 main propulsion diesel, lube oil and fuel system.
- Gibbs & Cox and Southwest Research Institute in San Antonio, Texas on behalf of Cummins also validated the reliability of the QSK95 diesel engine paired with an ABB AMG 0560M04 LAE generator.
- Huntington Ingalls Incorporated (HII), in partnership with the U.S. Coast Guard, conducted a successful 720-hour demonstration on behalf of MTU of the MTU 20V 4000 M93L, a Main Propulsion Diesel Engine configuration.

Each of these respective engine configurations are all now eligible for use on the LUSV program.

“These successful test events mark a significant milestone for

our team and brings us one step closer to delivering the Large Unmanned Surface Vessel to the Navy,” said Capt. Scot Searles, program manager of the Unmanned Maritime Systems (PMS 406) program office. “The completion of these rigorous engine tests is a testament to the hard work and collective expertise of both our Navy team and our industry partners. We are pleased with the results and look forward to continuing our work with industry to forge the future Hybrid Fleet.”

LUSVs will supplement the Fleet’s missile magazine capacity as part of the Navy’s Distributed Maritime Operations (DMO) concept. Currently, the LUSV is envisioned as a vessel greater than 200 ft. in length with a full load displacement of approximately 1,500 tons. LUSVs are intended to be low cost, high endurance, modular USVs that can employ a variety of payloads.

The Navy in 2020 awarded six LUSV conceptual design contracts to industry teams to refine program requirements and to provide informed feedback on the Navy’s LUSV requirements. As part of these contracts, each of these teams have been pursuing propulsion plant efforts, culminating in these engine test demonstrations.

PEO Unmanned and Small Combatants leads the Navy’s efforts to develop, deliver and sustain capable and affordable unmanned maritime systems to meet Fleet requirements.