PEO Ships and NSWC Philadelphia Mark Major Milestone with the Next Generation Guided-Missile Destroyer (DDG(X)) Land Based Test Site

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By Gary Ell

Philadelphia – Program Executive Office (PEO) Ships and Naval Surface Warfare Center, Philadelphia Division (NSWCPD) marked a major milestone with the new DDG(X) Land Based Test Site (LBTS) during a ribbon cutting ceremony on March 21, 2023. The test site program will be used to support and improve reliability and capability, and will also assist with risk reduction efforts and technical oversight for DDG(X) critical systems.

“Today we mark the beginning of a unique test site that will be used to advance the design, reliability and capability of our Nation’s next-generation guided-missile destroyer, the DDG(X), the successor to the supremely successful DDG 51 Arleigh Burke-class,” NSWCPD Commanding Officer Capt. Joseph Darcy said. “The DDG(X) Land Based Test Site is an evolutionary engineering test and evaluation asset that will help build the future: Our Nation’s newest and most advanced destroyers.”

Darcy also focused on the critical role people bring to the development of such advanced U.S. Navy technology.

“NAVSEA’s dedicated and diverse workforce designs, builds, delivers, and maintains the most powerful Navy in the world,” Darcy said. “Our team at NSWCPD has an unrivaled passion to support the Fleet at a time when naval presence and capability is essential to our national security.”

The keynote speaker for the event, Rear Adm. Fred Pyle, Director, Surface Warfare Division (N96), Office of the Chief of Naval Operations and DDG(X) resource sponsor, spoke on the significance of the programmatic milestone.

“Since 1972, many successful applications of land-based testing have proven highly successful for the Navy. Ship classes such as Spruance, Oliver Hazard Perry, Arleigh Burke, and Zumwalt used sites like these to understand new technologies in both the combat system and the HM&E domains,” Pyle said.

Pyle continued, “The LBTS allows us to deliberately reduce risk in advance of construction and write requirements from a place of knowledge instead of uncertainty. We are aligned with Congress on the needs for this important test site, because we know the most expensive place to have discovery is in the shipyard during construction. We need and want to avoid that and these investments allow us to do that.”

“Right here in this complex, you can see Philadelphia’s involvement in DDG 51 acquisition and sustainment from lead ship to our recent DDG 125 crew training in support of Flight III. Our DDG(X) Land Based Test Site will continue that legacy,” NSWCPD Technical Director Nigel C. Thijs (SES) said during his closing remarks.

Along with increased capability and capacity, DDG(X) will provide significant increases in range, efficiency, and time-on-station, providing Fleet Commanders with increased operational flexibility while also decreasing the demand on Fleet logistics.

“Taking an evolutionary vice revolutionary approach, incorporating lessons learned from other major shipbuilding programs and integrating elements of the DDG 51 Class allows DDG to efficiently and smoothly transfer into production as the country’s next enduring guided missile destroyer,” DDG(X) Program Manager Katie Connelly said, “DDG(X) will provide the flexibility and margins needed for readiness today and for decades to come.”

NSWCPD is also home to the DDG 51 Class Land Based Engineering Site (LBES), which is a full scale propulsion system testing experience. LBES testing has been a specialty of NSWCPD since 1943.

“We’ve leveraged experience across our land based test and engineering sites to integrate our significant knowledge of and history with DDG 51 with the lessons learned from more recent test site builds,” Thijs said. “We will continue to share knowledge gleaned from motor and other equipment under test evolutions by holding deliberate engagements across the LBES enterprise to foster a culture of learning and are committed to continually self-assessing and correcting.”

DDG(X) is currently in concept refinement, prior to entering the preliminary design phase.

As one of the Defense Department’s largest acquisition organizations, PEO Ships is responsible for executing the development and procurement of all destroyers, amphibious ships, special mission and support ships, boats and craft.

NSWCPD employs approximately 2,800 civilian engineers, scientists, technicians, and support personnel. The NSWCPD team does the research and development, test and evaluation, acquisition support, and in-service and logistics engineering for the non-nuclear machinery, ship machinery systems, and related equipment and material for Navy surface ships and submarines. NSWCPD is also the lead organization providing cybersecurity for all ship systems.