

LAV Anti-Tank Weapon System to Reach FOC By End of 2019

MARINE CORPS BASE QUANTICO, Va. – The Marine Corps continues to upgrade the turret system for one of its longest-serving fighting vehicles – the Light Armored Vehicle-Anti-Tank (LAV-AT).

In September 2017, Marine Corps Systems Command's (MCSC's) LAV-AT Modernization Program Team achieved initial operational capability by completing the fielding of its first four Anti-Tank Light Armored Vehicles with the upgraded Anti-Tank Weapon Systems (ATWS) to Light Armored Reconnaissance Battalion Marines.

The ATWS fires the tube-launched, optically tracked, wire-guided – or TOW – missiles. It provides long-range standoff anti-armor fire support to maneuvering Light Armored Reconnaissance companies and platoons. The ATWS also provides an observational capability in all climates, as well as other environments of limited visibility, thanks to an improved thermal sight system that is similar to the Light Armored Vehicle 25 mm variant fielded in 2007.

“Marines using the new ATWS are immediately noticing the changes, including a new far target location capability, a commander/gunner video sight display, a relocated gunner's station, and an electric elevation and azimuth drive system, which replaced the previous noisy hydraulic system,” said Steve Myers, LAV program manager.

The ATWS also possesses a built-in test capability, allowing the operators and maintainers to conduct an automated basic systems check of the ATWS, he said.

The LAV-ATM Team continues to provide new equipment training (NET) to units receiving the ATWS upgrade, with the final two

training evolutions scheduled for early this year. Training consists of a 10-day evolution with three days devoted to the operator and seven days devoted to maintaining the weapon system. Follow-on training can be conducted by the unit using the embedded training mode within the ATWS.

“This vehicle equips anti-tank gunner Marines with a modern capability that helps them maintain readiness and lethality to complete their mission,” said Maj. Christopher Dell, LAV operations officer.

Full operational capability for the ATWS is expected at the end of fiscal year 2019.

“Currently, there are 58 in service within the active fleet,” said Myers. “The original equipment manufacturer delivered 91 of the 106 contracted kits and is ahead of schedule. Now MCSC’s focus is directed at the Marine Corps Forces Reserve, ensuring they receive the same quality NET and support as their active counterparts.”

Marine Special Task Force Deployed with Colombian Deputy Commander

ARLINGTON, Va. – A Special Purpose Marine Air-Ground Task Force (SP-MAGTF) returned from a five-month deployment to Latin America last month as the first to deploy with a deputy commander from a partner nation.

“We were the first SP-MAGTF to incorporate a partner-nation officer into our formation,” said Col. Michael H. Oppenheim,

commanding officer of SP-MAGFT-Southern Command for the 2018 deployment, speaking Jan. 11 at the Potomac Institute. "He was a lieutenant in the Colombian Marine Corps, [recently] out of battalion command."

The unnamed officer in the Personnel Exchange Program joined the SP-MAGTF at Camp Lejeune, North Carolina, for predeployment training and returned to Colombia last week.

"We were able to effectively incorporate him into the formation," Oppenheim said, noting that the Colombian officer was very helpful in untangling bureaucratic and diplomatic situations that cropped up and smoothed the way.

"He was able to dovetail right into our efforts," Oppenheim said.

The SP-MAGTF-Southern Command deployed to several Central American nations from June to December, operating mostly in small teams for Theater Security Cooperation, such as weapons training and humanitarian aid. The U.S. Marines and Sailors in the force consisted of 113 active-duty and 117 Reserve personnel, plus one U.S. Army officer and the Colombian officer. The force included four CH-53E heavy-lift helicopters and one KC-130 tanker/transport aircraft.

The deployment was timed for hurricane season to be available to provide disaster relief, but no hurricanes savaged the region. There was one volcano eruption in Guatemala that caused hundreds of casualties. A group of Marine engineers working with the SP-MAGTF was deployed to aid in the relief efforts.

This deployment also was the first of an SP-MAGTF-Southern Command to venture into South America, operating with the armed forces of Chile, Argentina, Brazil, Peru and Colombia.

The Colombian officer "helped seal the deal for us in many cases," Oppenheim said.

“He has more combat experience than I have,” Oppenheim said, noting the officer’s long experience fighting guerrillas in Colombia’s long counter-insurgency war in-country.

Oppenheim pointed out that deployments like the one recently concluded helped to build readiness as the Marines were “doing real-world things,” and that the interaction with partner nations would yield immeasurable benefits in the future by building trust among the militaries and civil officials and providing material assistance in the form of humanitarian and disaster relief.

Coast Guard, Partners Recover Section of Downed Jet off Oahu

HONOLULU – Personnel from the Coast Guard and the State of Hawaii oversaw local salvor’s recovery of a section of the fuselage from a Hawker Hunter aircraft, downed initially in December, off Honolulu, Jan. 8.

“Using a blend of local salvage assets, remote engineering guidance, and advanced sensing technology sourced from the mainland, the locally based salvage company Parker Marine Corp. has completed the next stage of the aircraft salvage,” said Chief Warrant Officer Russ Strathern, a marine safety specialist, and response officer at Sector Honolulu. “The main section of the fuselage containing residual oil and potentially hazardous substances has been salvaged and transported to a staging location for the ongoing National Transportation Safety Board-led investigation.”

Strathern also noted, "Because of the incident complexity and operational environment, this evolution was technically challenging. The aircraft owners worked tirelessly with the salvor and jurisdictional authorities to safely mitigate the threat to the public and environment, all while preserving evidence critical to future root-cause analyses. I'm pleased to note that there were no reported injuries after the initial accident or impacts to wildlife, these are great measures of success, and indicative of the hard work of the involved parties."

Following exhaustive searches, the fuselage was positively identified in 260-feet of water by a remotely operated vehicle (ROV) in early January. After analyzing the data from the ROV, the salvor consulted with an engineer, formulated a plan, and received concurrence from the Coast Guard to proceed.

Using the ROV, the salvage company lassoed the tail of the aircraft wreckage with line and slowly raised it to the surface. The team towed the section to a haul-out point designated by the State's Department of Land and Natural Resources Division of Boating and Ocean Recreation Division. Following the section's removal from the water, it was transported by truck to Marine Corps Base Hawaii, where the National Transportation Safety Board will continue its investigation into the cause of the crash.

Throughout the operation, the Coast Guard worked closely with representatives from the Hawaii State Department of Health Hazard Evaluation and Emergency Response and Department of Land and Natural Resources offices to monitor the salvage and recovery efforts.

"With the removal of this section, which contained the aircraft's engine, any oil or hazardous substances from the aircraft has either been removed or naturally dissipated and the remaining pieces do not pose a significant or substantial threat to the public or environment," Strathern said. "Any

future actions related to the crash site or remaining debris will be coordinated with the State's Department of Land and Natural Resources."

The privately owned aircraft crashed in December while participating in the Hawaii Air National Guard-sponsored training exercise Sentry Aloha. The pilot ejected before the crash and was rescued by the Coast Guard with the assistance of nearby good Samaritans.

Additional TROPHY Active Protection Systems Provided to Army and Marine Corps

ARLINGTON, Va. – Leonardo DRS Inc. has been awarded an undefinitized contract action initially worth \$79.6 million to provide the U.S. Army and Marine Corps with additional TROPHY Active Protection Systems, Rafael Advanced Defense Systems Ltd. said in a Jan. 9 release. This brings the total funded value of the program to over \$200 million.

Developed by long-time partner Rafael Advanced Defense Systems Ltd. of Israel, TROPHY provides combat-proven protection against anti-armor rocket and missile threats, while at the same time locating and reporting the origin of the hostile fire for immediate response.

"Leonardo DRS is proud of the confidence shown by the Army in deciding to field TROPHY to even more U.S. combat brigades," said Aaron Hankins, vice president and general manager of the Leonardo DRS Land Systems division. "Together with our Rafael partners, we are fully committed to meeting our customers'

demands and are working in parallel to further address the urgent protection needs of other U.S. platforms.”

The DRS and Rafael team led a successful demonstration featuring a new, lighter TROPHY VPS variant on a Bradley Fighting Vehicle in Israel in August. The team will also be participating in the Army’s Stryker Expedited APS demonstration “rodeo” in February.

“Rafael does not stand still. TROPHY VPS provides the same capabilities and performance as TROPHY in a significantly smaller package,” said Moshe Elazar, executive vice president and head of Rafael’s Land and Naval Division. “We are also leveraging our global leadership in both active protection (close to 1,500 TROPHY systems) and medium-caliber remote weapons systems (over 1,000 systems), to offer the mature, reliable, lightweight Samson turret, which combines both capabilities. Given our wide customer base and existing production lines for both, Samson is a capable, affordable, low-risk solution for the U.S. Army’s Next Generation Combat Vehicles, other programs in Israel and other markets.”

ONR Recognizes 2019 Young Investigators

ARLINGTON, Va. – The Office of Naval Research (ONR) recognized 25 awardees of the 2019 Young Investigator Program (YIP) Dec. 17. These recipients will share \$16.5 million in funding to conduct naval-relevant scientific research with direct benefits for Sailors and Marines.

“To meet the demand signal from the National Defense Strategy, we must attract the best and brightest minds to work on naval

warfighting challenges. The Young Investigator Program does just that, and I'm honored to announce the recipients for 2019," said Chief of Naval Research Rear Adm. David Hahn. "Since 1985, this program has attracted outstanding scientists and engineers from across academia to support our Navy and Marine Corps – and in this era of great power competition, that is more important than ever before."

The ONR YIP is a highly competitive program in which academic achievements and potential for scientific breakthroughs are major factors in the evaluation process. The winning candidates were selected from more than 260 applicants – all of whom are college and university faculty and obtained a PhD within the past seven years.

Awardees represent 23 academic institutions nationwide, supporting efforts related to aerodynamics, autonomy, energetics, power and energy, machine learning, sensing and sensors, quantum materials and undersea-breathing technologies. The YIP awards support laboratory equipment, graduate student stipends and scholarships, as well as other expenses critical to ongoing and planned research. Typical grants range between \$500,000 to \$750,000 over a three-year period.

Established in 1985, the ONR YIP is one of the nation's oldest and most selective basic research early career awards in science and technology. Its purpose is to fund tenure-track academic researchers, or equivalent, whose scientific pursuits show outstanding promise for supporting the Department of Defense, while also promoting their professional development.

Marine Task Force Operates Across Africa During 'New Normal' Mission

ARLINGTON, Va. – A relatively small Marine Corps task force spent seven intense months operating across the vast expanse of Africa, focusing on the “New Normal” mission of ensuring there would be no repeat of the deadly 2012 attack on the American diplomatic compound in Benghazi, Libya, that killed the U.S. ambassador and three other Americans.

“New Normal dominated. ... That’s why we were there,” to support the State Department’s missions, Col. Adam L. Chalkey, commander of the recently returned Special Purpose Marine Air-Ground Task Force (SPMAGTF) Crisis Response-Africa 18-2, said Dec. 14.

The task force’s “No. 1 operational priority,” and what he considered would be “the minimal mission success,” Chalkey said, was “we could not have another Benghazi,” with a loss of American lives.

Focusing on that mission, one of the SPMAGTF’s five infantry platoons rotated on 24-hour alert status prepared to fly wherever needed to reinforce or evacuate a U.S. diplomatic facility that was threatened. That response force would have been augmented as required by additional personnel and transported by some of the unit’s six MV-22 tiltrotor Ospreys, with aerial refueling and communications support by its three KC-130 tanker-transports.

Asked if he was confident that they could have met their primary mission, Chalkey noted that “there always is uncertainty” and some places in Africa are more unstable than others. But, he said, “I’m confident we’re not going to have another flashpoint incident” like Benghazi.

He attributed that confidence to the fact that organizations that might think of attacking a U.S. installation “know we are there, able to respond,” which serves as a deterrent.

And it was not just the SPMAGTF that could respond. The Marine unit was tied closely in with the U.S. European/Africa commands and the conventional and special operations forces under their authority, he said.

But while part of his force was standing that fly-away alert, the rest were conducting a staggering array of cooperative security exercises across most of Western and Central Europe and the vast expanse of Africa, as far from its European operating bases as Madagascar, which is nearly twice the east-west distance across the United States. Those operations required a total of 3,077 flight hours, with no mishaps.

And he had to maintain a balance between standing alert and doing unit training, Chalkey said.

“If all we did was standing alert, we would not be able to train and stay mission-ready,” he said.

They were able to maintain that balance through the security cooperative arrangements and access to allied training areas. As a result, the colonel said his units returned home better trained than when they deployed.

“Even though our mission was New Normal, we were operating out of Europe ... taking full advantage of Europe and our strategic partners,” to keep his own force well trained and to help improve the combat capabilities of U.S. allies in Europe and Africa, Chalkey said at a Potomac Institute briefing.

The unit, which averaged about 850 Marines and Sailors, rotated between out of Moron, Spain, and Sigonella, Italy, with most of its time at the latter facility on the island of Sicily.

“The efforts of and the relationships built with our host nations, Spain and Italy, gave us the opportunity to train,” he said.

And they also were conducting security cooperation missions across Africa, “helping our partners mature their skills, to the point where they could export those skills to other African nations.” That was in keeping with the intentions of Marine Gen. Thomas D. Waldhauser, commander of the U.S. Africa Command.

L3 OceanServer Awarded Contract for UUV to Support the Marine Corps

FALL RIVER, Mass. – L3 OceanServer was awarded a contract to support the U.S. Marine Corps Systems Command with an Iver3 unmanned underwater vehicle (UUV) to be used for testing and evaluation, the company announce in a Dec. 13 release.

Over the past four years, L3 OceanServer has leveraged hundreds of thousands of operational hours on Iver vehicles to build a system with warfighter-driven attributes. With more than 300 vehicles sold to various customers worldwide, the Iver is a commercial, off-the-shelf product that delivers the latest advances in technology with proven performance in real-world situations.

The Iver is a purpose-built UUV that carries the highest-performance, man-portable sensor package available, including the iXBlue PHINS Compact Inertial Navigation System and the EdgeTech 2205B Bathymetry and Side Scan Sonar. The longer

runtimes of the Iver, paired with its precise navigational accuracy, enable long ingress/egress missions to allow the operator greater standoff distances, increasing overall mission safety.

“L3 OceanServer has been focused on supporting the Marine Corps’ total mission profile,” said Daryl Slocum, general manager, L3 OceanServer. “We have incorporated their direct feedback into two of our vehicle platforms, the Iver3 and Iver4, to build a premier product that supports nearshore and very shallow hydrographic surveys.”

The Iver is an open platform and often the vehicle of choice for development programs interested in designing and testing new behaviors to be used across the fleet. Many of the recent mine countermeasure behaviors and automatic target recognition algorithms were originally designed and validated on the Iver platform. Today, there are more than 50 Iver systems in use by the U.S. Navy.

L3 OceanServer is part of the Maritime Sensor Systems sector within L3’s Communications & Networked Systems business segment.

Marine Corps Awards OTAs to Assess Handheld Targeting Capabilities

MARINE CORPS BASE QUANTICO, Va. – Marine Corps Systems Command (MCSC) has awarded four Other Transaction Authorities (OTAs) to assess industry’s capability to produce a Next Generation Handheld Targeting System (NGHTS) that is compact, rugged and

lightweight.

The use of OTAs were approved by Congress in 2016 as a procurement method to pay for prototypes and to use nontraditional defense companies to spur innovation. The OTAs were awarded to BAE Systems, Elbit Systems of America, Fraser Optics and Northrop Grumman Systems Corp. The four companies will explore possibilities focused on the following criteria:

- The system's overall ergonomics for supporting forward deployed, foot mobile users.
- Target recognition, location and designation ranges during day and night operations.
- The ability to integrate the system with the Target Handoff System Version 2 to view and manipulate target information.
- Technological maturity, manufacturability and value engineering.
- Sustainability at the operational user level.

NGHTS is a single, lightweight, man-portable system that enables Marines to quickly acquire targets; perform guidance of against targets; and generate target location data during combat operations.

"During the first phase, the four awarded companies will explore potential system capabilities and provide Marine Corps Systems Command with an in-depth study of the best solution for our Marines at the best price," said Megan Full, contract specialist supporting Program Manager (PM) Fires at MCSC. "We will collect the findings by the second quarter of fiscal year 2019 and choose one or more vendors to move onto phase two where they will develop and demonstrate prototypes."

Currently, the Marine Corps uses four legacy systems: the Portable Lightweight Designator Rangefinder, Joint Terminal Attack Controller, Laser Target Designator and Thermal Laser

Spot Imager. The intent is for NGHTS to replace all four systems.

“For the last four years, we have worked diligently to explore an option that condenses the legacy versions into one lightweight system with a reliable power supply that is rugged enough to throw onto a Marine’s pack,” said Jeff Nebel, Fire Support Coordination Team lead, PM Fires.

“The NGHTS will combine all of the legacy capabilities into one system that is compatible with both current and future fire support systems, and will support the Marine Corps for the next 15 to 20 years.”

“The NGHTS will be an important advancement because it is planned to reduce the current weight of the laser designation and laser spot imaging capability by 60 percent, which will increase the mobility and lethality of our fire support-focused Marines,” said Maj. Nathan Morales, Targeting Systems project officer, PM Fires. “This capability is focused on our ability to fight in the compartmentalized terrain outlined in the Marine Operating Concept.”

Marine Corps Declares Remaining Marines Involved in Aviation Mishap Deceased

MARINE CORPS BASE CAMP BUTLER, Okinawa, Japan – The Marine Corps has pronounced the five remaining Marines involved in the F/A-18 and KC-130 aviation mishap deceased, the III Marine Expeditionary Force said in a Dec. 10 release. The change in status comes at the conclusion of search and rescue

operations.

The next-of-kin for the five deceased Marines have been notified.

“Every possible effort was made to recover our crew and I hope the families of these selfless Americans will find comfort in the incredible efforts made by U.S., Japanese, and Australian forces during the search,” said U.S. Marine Corps Lt. Gen. Eric Smith, commanding general, III Marine Expeditionary Force.

“Our most valued asset is the individual Marine. We remain faithful to our Marines and their families as we support them through this difficult time. We ask for members of the public to please respect the family and allow them privacy.”

The KC-130 Hercules was assigned to Marine Aerial Refueler Transport Squadron 152 (VMGR-152, call sign “Sumo”), 1st Marine Aircraft Wing.

“All of us in the Sumo family are extremely saddened following the announcement of the conclusion of search and rescue operations,” said U.S. Marine Corps Lt. Col. Mitchell T. Maury, commanding officer of VMGR-152. “We know this difficult decision was made after all resources were exhausted in the vigorous search for our Marines. Our thoughts are heavy, and our prayers are with all family and friends of all five aircrew.”

The F/A-18 Hornet involved was assigned to Marine All-Weather Fighter Attack Squadron 242. The aircraft were conducting regularly scheduled training. It is not confirmed that aerial refueling was ongoing when the mishap occurred.

The Marine Corps rigorously investigates all aviation mishaps to identify the causes, learn from them, and mitigate future incidents. The circumstances of the mishap are currently under investigation. There is no additional information available at

this time. The identities of the Marines will be provided 24 hours after next of kin have been notified.

ODU, LAVLE USA Announce New Marine Electric Propulsion Laboratory for Newport News

NORFOLK, Va. – Old Dominion University (ODU) is collaborating with LAVLE USA Inc. to establish a new Marine Electric Propulsion Simulation (MEPS) Laboratory, the university announced in a Dec. 8 release. The \$12 million, 22,000-square-foot lab will be built on 1.33 acres in the heart of downtown Newport News, Virginia.

The lab will house state-of-the-art equipment to develop marine electric propulsion, advanced energy storage, autonomous systems and associated technologies to advance marine vessels for military and commercial applications. It will also focus on training the current and next-generation workforce supporting the shipbuilding and ship repair industry.

ODU President John R. Broderick sees the partnership in Newport News as an ideal opportunity for hands-on learning, particularly in one of the region's key industries.

"The university is excited about this project, which has grown from of our digital shipbuilding initiative and aligns with our partners' collective vision for America Builds and Repairs Great Ships," Broderick said. "It is exactly the sort of collaborative research with which ODU wants to be affiliated – it is cutting edge, makes a significant economic impact to the

region, supports the region's military, maritime and industrial bases, and provides hands-on training and education for students, industry and naval personnel."

The lab is expected to create at least 25 high-paying jobs including designers, engineers, programmers, and analysts.

LAVLE will design the lab's engineering and building plans for city approval in the first half of 2019. Construction is expected to begin in the summer with occupancy anticipated in summer 2020.

"The advantages of workforce development in Newport News cannot be overstated. In addition to the technical advantages of partnership with ODU and the MEPS Lab, LAVLE USA is extremely excited about the workforce development opportunity where our business will become even more heavily invested. Vessel electrification and hybridization within the region is a critical future market," said Jason Nye, LAVLE CEO.

"We are pleased LAVLE and ODU have selected Newport News as the site of the MEPS Lab," said Mayor McKinley L. Price. "The research and development that will be conducted at MEPS will bring new technology to the commercial and military markets and expand Newport News' role as a center of excellence for maritime innovation and construction."

"The city and EDA are excited to host MEPS," said Florence G. Kingston, the city's director of development and secretary/treasurer of the EDA. "We have been impressed by the entrepreneurial approach LAVLE and ODU have displayed during the site-selection process for the lab."