

Experts Voice Concerns at Forum Over Navy's 30-Year Shipbuilding Plan

The Navy's current 30-year plan to achieve a 355-ship fleet may be unworkable because it does not account for the rapidly growing cost of manning and sustaining the force, the almost certain cost overruns for new ship classes it plans to develop and the erosion of shipyard skills from not refueling the aircraft carrier USS Harry S. Truman and delaying purchase of the next amphibious assault ship.

Those were among the problems with the Navy's shipbuilding plan and fiscal 2020 budget presented by five government and private-sector experts on naval issue at a Heritage Foundation forum April 15.

The speakers, who included Ronald O'Rourke and Eric Labs, the highly regarded naval analysts at the Congressional Research Service and the Congressional Budget Office, also cited concerns about the increased maintenance costs for the Arleigh Burke destroyers the Navy plans to keep in service an extra 15 years and the proposal to buy 10 large unmanned surface vessels without any firm idea of how they would be equipped or would operate.

Bryan Clark, senior fellow at the Center for Strategic and Budgetary Assessments and a retired submarine officer, said the cost of manning and sustaining the fleet is growing faster than the rising cost of building a larger force, due to the concerns about gaps in ship manning and reduced ship readiness.

Because the planned future fleet will cost "way more to man and sustain ... this plan may be unachievable or undesirable," Clark said.

O'Rourke also cited the growing cost of sustaining the fleet and Jerry Hendrix, vice president of the Telemus Group and a retired Navy officer, noted that the latest 30-year plan promises to reach the 355-ship fleet based on extending the service life of the early DDG-51s from 30 to 45 years, despite the historic record that for ships kept past year 30 the maintenance cost "increases significantly."

Labs said another problem with the ambitious shipbuilding plan was the history of significant cost overruns for all the recent first ships in a new class of vessels, while the Navy wants to introduce six new ship types in the next five years.

O'Rourke and Labs listed the proposal to retire the Truman in 2024 rather than conducting the usual midlife nuclear refueling and overhaul to keep it in service for another 25 years as a major change in this year's budget. Labs said that would take the carrier force down temporarily to nine and then back to 10 but would not sustain the 12 required by law for decades.

Labs said skipping the Truman refueling would deplete the Newport News Shipbuilding workforce's knowledge on how to do that work and would reduce their ability to do refueling in the future. He also warned that the plan to delay the next LHA amphibious ship until 2024 would create a seven-year construction gap that would "impact the efficiency of the shipbuilding workforce."

Early congressional hearings on the Navy's budget indicated that Congress was not likely to allow the Truman's early retirement.

Bryan McGrath, managing director of the FerryBridge Group and another retired Navy officer, said the plans to buy unmanned surface vessels and more small manned combatants, such as the new guided-missile frigates, would be a way to offset the higher costs of manning and sustaining the larger fleet. But

he noted that the budget proposal for the large unmanned ships did not include any details on what sensors or weapons they would carry and no concept of operations showing how they would be deployed.

O'Rourke and others said buying the unmanned ships was part of the new acquisition policy of acquiring new technology and putting it into the fleet quickly for testing.

House Committee Again Confronts Navy Leaders Over Truman's Retirement, Troubled Ship Programs, Long-Term Planning

The U.S. Navy's shipbuilding plans and programs came under attack in the House Armed Services Committee on April 10, with concerns about the accelerated development of a new large surface combatant and unmanned vessels, early retirement of the aircraft carrier USS Harry S. Truman and constant changes in long-term plans.

House Armed Services Chairman Rep. Adam Smith (D-Washington) cited numerous failed or troubled ship programs while questioning new proposals, a retired Navy officer doubted the Navy had "a long-term vision" for its fleet and other committee members voiced concerns about meeting combatant commanders' needs with a reduced carrier force.

Questions and concerns also came up about delays in building

two amphibious warships, the badly aged strategic sealift fleet, the cybersecurity of the supply chain and the operational impact on the Marine Corps from the hurricane damage to two North Carolina installations.

Navy Secretary Richard V. Spencer and Chief of Naval Operations Adm. John M. Richardson said that, with the need to balance requirements and limited resources, they prioritized modernization to meet rising peer competitors and were working more with industry to match desired requirements with what is achievable and affordable.

The plan to retire USS Truman at midlife was a “hard choice” made to allow investments in future technologies, they said. Those investments would suffer if Congress insisted on refueling Truman for another 25 years of service, which committee members indicated they would.

Challenged by Rep. Elaine Luria (D-Virginia), a retired commander, that the frequent changes in the 30-year shipbuilding plan indicated a lack of vision, Richardson said, “yes, we have a long-term vision,” but the changes are “reflective of how much the security landscape has changed.” Spencer said the revised shipbuilding program “doesn’t bother me one bit” because it was necessary to adapt to changed conditions.

Smith, in his prepared opening statement, cited a long list of troubled Navy programs, including the planned new cruiser CG(X), which was canceled, the DDG-1000, which was cut from 21 to three ships, and the littoral combat ships (LCS), which were bought in blocks without firm requirements and have yet to be deployed with a full capability.

“I’m concerned that we do not repeat the mistakes of the past,” Smith said, listing Richardson’s “arbitrary” goal of starting construction on the new surface combatant by 2023 and the plan to buy 20 large unmanned vessels “without any

requirements review, understanding of the concept of operations or how to employ weapons on unmanned vessels, including the application of the law of armed conflict." Smith's concerns about the unmanned vessels was echoed by Rep. Joe Courtney (D-Connecticut), chairman of the Seapower subcommittee, who asked, "Are we getting ahead of our skis?"

Spencer told Courtney: "One of things you have charged us with is to go quicker, go smarter. ... We think what we have is the smart way" to put the unmanned ships into the fleet, try them, break them and learn. Richardson said the Navy leaders do have a concept for the 20 unmanned ships. But, he said, "we have to learn how to use those to go forward," which is why the ships are in research and development.

Spencer said the Navy is determined to work closer with industry to match capabilities with what can be produced and to adopt commercial best practices. On cybersecurity, he said the Navy is good at protecting its information but is demanding that its industrial suppliers do a better job of protecting data.

Marine Corps Commandant Gen. Robert B. Neller said that despite the heavy damage inflicted by Hurricane Florence on Camp Lejeune and Marine Corps Air Station Cherry Point last year, the II Marine Expeditionary Force is operational but working in badly degraded conditions. He thanked Congress for reprogramming \$400 million to start repairs but warned that, without supplemental appropriations for the remaining \$3 billion, readiness would suffer.

Civilian, Uniformed Navy Leaders Again Face Questions About Truman's Retirement, Ford Carriers, Diversion of Funds for Border Wall

Senate Armed Services Committee members expressed concerns about the Navy's planned early retirement of the aircraft carrier Harry S. Truman and the impact of use of military funds and troops to secure the southwest border and questioned the operational status of the new Gerald R. Ford carrier.

During an April 9 hearing with the Navy Department's top civilian and uniformed leaders, the senators also questioned the delay in building two new amphibious warships and suggested moving that procurement ahead by authorizing incremental funding for the first of the Amphibious Transport Dock (LPD) Flight IIs and the next America-class Amphibious Assault (LHA) ship.

In his opening statement, Navy Secretary Richard V. Spencer announced that the three U.S. service members killed by a suicide car bombing April 8 in Afghanistan were Marines. He provided no details.

SASC Chairman Sen. James M. Inhofe (R-Oklahoma) said there was no other Navy weapon system that matches "the reach and lethality of the carrier and its air wing" and said he was "highly skeptical" of Pentagon claims that early retirement of the Truman will result in savings.

That view was echoed by other committee members.

Questioned about the Truman decision, Chief of Naval

Operations Adm. John M. Richardson estimated savings of \$16 billion to \$17 billion if officials follow through on plans to skip the normal midlife nuclear refueling and overhaul of the carrier and retire it with 25 years of expected service life remaining.

Richardson said the Navy is completing a new future fleet study and could reverse the Truman decision if needed.

Inhofe responded: "You may need to do that."

The Navy has heard similar views from other influential members of Congress.

Inhofe and others also questioned progress on the Ford, the first ship in a new class of nuclear-powered carriers, which is in the shipyard three years after it was expected to be operational and billions of dollars over budget.

Spencer said all 11 of the advanced weapons elevators would be installed and the other mechanical and structural problems with the Ford would be resolved when the carrier is expected to leave the shipyard in October.

Questioned later by Sen. Tom Cotton (R-Arkansas), Spencer insisted that "the Ford will work" and noted that it will be able to produce 30% more aircraft sorties a day than the Nimitz-class carriers and do it with fewer Sailors.

"We have a much more capable, much more lethal asset," which was "the primary factor" in moving to the new carriers, Spencer said.

Asked if Congress provided additional money to cover refueling Truman, Spencer said he "would not turn it down."

Questioned later by Sen. Roger Wicker (R-Mississippi) on whether the Navy could purchase the LPD Flight II and the LHA-9 a year earlier than the planned 2021 and 2024 starts if Congress authorized incremental funding, Spencer said they

could.

Incremental funding normally is used for the most expensive ships, including carriers.

Asked about the response to growing Russian activities in the Arctic, Richardson said the Navy is conducting more exercises there, including a planned Marine amphibious landing in September to seize an airfield on the Aleutian island of Adak to allow Navy aircraft, including P-8A patrol planes, to operate.

Several senators expressed concern about the impact of the Trump administration's plans to divert military construction funds to building the wall at the U.S.-Mexico border and the expense of sending active-duty troops there.

Spencer said he has not been given a list of Navy construction projects that would be affected by the diversion of \$3.6 billion in MilCon funds but would provide his best advice on any such proposal.

Questioned about his leaked memos to Spencer about the threat to Marine readiness from several programs, Marine Corps Commandant Gen. Robert B. Neller said the border deployment was only one of the eight factors he cited and represented only 2% of the funding shortfalls. He said he knew of no exercise that was canceled because Marines were sent to the border, although the size of one was reduced, and only one unit may have suffered reduced readiness from the border deployment, while other units gained readiness from duties there.

C2, Air Defenses Against UAS Attack Among Corps' Top Acquisition Priorities, Berger Says

Some of the top acquisition priorities for the Marine Corps to prevail against the emerging security threats are maintaining the ability to command and control a naval expeditionary force in a degraded electronic environment and acquiring air defense capabilities against unmanned aerial systems, senior officials said April 4.

Meeting the requirement for assured command and control (C2) is complicated by the continuing dependence on legacy systems that are so far out of date they can't be upgraded, Lt. Gen. David H. Berger, the commanding general of the Marine Corps Combat Development Command, told the House Armed Service Tactical Air and Land Forces Subcommittee.

Although a lot of C2 systems will be fielded in the next few years, "the challenge for us, as a naval force, is how to do that in a degraded electro-magnetic spectrum environment. That's not easy work," Berger said.

There is the challenge of integrating the sensor and communications systems of fourth- and fifth-generation aircraft, he said, referring to the Marines' mix of legacy F/A-18 Hornets and new F-35B joint strike fighters.

Then there is the basic requirement of processing and distributing that information so the Marines can get it. That's hard enough to do if it wasn't in a contested environment," Berger said. "But we absolutely expect the threat to go after our C2 systems first ... because they believe that's our Achilles' heel."

“For us, the Navy and Marine Corps, it’s No. 1,” because they cannot operate successfully “if we can’t have the network that we need,” he said. “A fair portion of [budget] requests this year addresses that.”

Jimmy Smith, deputy assistant secretary of the Navy for research, development, and acquisition, echoed that point, telling the panel that “competing with a peer threat is the theme of our 2020 request.” The budget prioritizes modernization, in C2, long-range precision fires, enhanced maneuver and logistics.

Asked how they would deal with legacy equipment, Berger said they have started writing the need for retrofitting into requirements. “It wasn’t so necessary before, but now it absolutely is,” he said, citing a commonly used radio system, the Humvee vehicles and the M1A1 main battle tank, which he noted has analog, not digital electronics.

“Some of the legacy systems, there’s a point that we reach, like the M1A1, that we can’t go any farther, and the LAV [light armored vehicle],” he added.

For the new Amphibious Combat Vehicle that will begin fielding this summer, modern technology is built into it, he said.

Berger noted that the 2020 budget includes “cancellation of some legacy systems in order to upgrade others.”

To deal with the rapidly growing threat of armed unmanned aerial systems (UAS), Berger emphasized the new Ground/Air Tactical Oriented Radar, as “a huge advance for us in identifying and tracking targets. ... Plus, it’s expeditionary.”

He also cited the Light Marine Air Defense Integrated System, being fielded in “very limited quantities.” It is “an integrated, modular package” that can be mounted on two small vehicles and includes sensors, controls and an electronic attack system to disable small UASs.

“For longer range, we’ll need a medium range interceptor” missile, he added.

Lt. Gen. Steven Rudder, Marine Corps deputy commandant for aviation, also mentioned offensive UASs to counter enemy drones and some small guided munitions that can loiter and be guided into enemy UASs. Defensive drones could be particularly useful against swarms of aerial drones, Rudder said.

Asked about the need for long-range fires, Smith said the Marines “are closely tied in with the Army,” which has a much larger force, and a larger budget and already is working on those things. “The Marine Corps benefits greatly from leveraging their work, working together.”

In response to a question from subcommittee chairman David Norcross, Berger joined other witnesses in warning that a return to sequestration, which would cut defense spending far below the budget request, would force the Marines to sacrifice modernization to ensure that “the next units deploying, or one already deployed, have what they need.”

Proposed 2020 Budget Promises Major Funding for Marine Aviation and Ground Combat Programs, Hurricane Repair



The fiscal year 2020 national defense budget unveiled March 12 provides substantial funding for the Marine Corps’ major aviation and ground combat programs and promises help in

repairing the heavy damage inflicted on its East Coast bases by hurricanes last year.

The proposed defense funding would buy 10 more fifth-generation F-35B strike fighters for the Marines, six CH-53K heavy lift helicopters, 56 Amphibious Combat Vehicles to replace the aged AAV-7s, additional Joint Light Tactical Vehicles, the advanced Ground/Air Task Oriented Radar, HIMARS rocket artillery systems and an early attempt to provide defenses against unmanned aerial vehicles.

Despite a robust Navy shipbuilding fund that would buy 12 ships and two large unmanned vessels, the proposed \$205.6 billion total Department of the Navy (DON) budget does nothing to advance the Marines' decades-long quest for 38 amphibious combat ships, holding the gator fleet at the current 33 ships. The five-year budget plan shows the next America-class amphibious assault ship, LHA-9, would not be bought until fiscal 2024, despite an urgent appeal by the amphibious shipbuilding coalition to avoid an eight-year construction gap that could wreak havoc on the shipyard.

The total proposed Marine Corps funding of \$45.9 billion provides for an end-strength increase of only 100, for a total of 186,200 active-duty Marines, and holds the Marine Corps Reserves at the current 38,500. But that small gain in personnel is in keeping with Marine Corps Commandant Gen. Robert B. Neller's goal of focusing his resources on accelerated improvements in modernization and combat readiness, rather than more people.

And within the stable end-strength numbers are substantial changes in specialties, with some shifts from basic ground combat capabilities to "Marines with special skills," including special operations, and intelligence, electronic, information and cyberwarfare, the DON's budget book said. That reflects Neller's drive to produce "a more experienced, better trained and more capable force," the budget said.

Those personnel realignments are in response to the U.S. military's overall shift from nearly two decades of anti-terrorism and counter-insurgency fighting to preparing for the return of great power competition against peer adversaries.

Corps Committed to National Defense Strategy While Continuing to Fill Traditional Missions, Including Counter-Insurgency, Commandant Tells Defense Forum



WASHINGTON – Although the Marine Corps is responding to the National Defense Strategy's focus on preparing for the return to great power competition, "we still have to operate across the full range of military operations," the Marines' top officer said March 13.

While the potential risk from a major regional fight against a peer competitor is high, it's hard to say what is the probability of that occurring, Marine Corps Commandant Gen. Robert B. Neller said.

"How much of your force do you focus on that? How much of your force do you focus on the day-to-day capacity" for missions such as humanitarian assistance, disaster relief, crisis

response, Neller asked rhetorically.

In addition to explaining the major changes in training the Corps is making to prepare for a possible high-end conflict against a great power rival, Neller noted that the counter-insurgency, counter-terrorism fights the Marines have been waging for 18 years “is still going to go on.” The “physical caliphate” created by the ISIS extremist in Iraq and Syria may be about to be eliminated, “but ISIS is not going to go away.”

“Ninety percent of what we do will not be against peer competitors, it will be against somebody else,” Neller told the audience at the McAleese/Credit Suisse defense forum.

Working from that conclusion, Neller made a strong argument for the amphibious force, which he said was “the capability that allows you to do 80 to 90 percent of everything you do day to day,” to get where needed, to do exercises with allies and friends, to establish strong presence and to go ashore if needed without worrying about sovereignty issues.

With a strong amphibious fleet “you can operate across nearly 90 percent of the range of military operations,” up to a high-end conflict. “At the end of the day, it gives the nation one of two forcible entry capabilities,” he said. The other being an Army airborne assault.

“I think the value it brings to the nation is incredibly important.”

The question then is how many amphibious ships are needed, what capabilities they have, and that debate is going on, Neller added.

Asked his reaction to the fact that the Navy’s requested fiscal 2020 shipbuilding budget, which would buy 12 ships, does not contain any amphibs and there are only three in the five-year budget plan that seeks 51 ships, Neller said: “We know we have to compete against other capabilities.”

He said the Marines would have liked to have the first amphibious transport dock (LPD) Flight II, which will replace the aged and low-capability dock landing ships, moved forward. The LPD is planned for fiscal 2021. Neller said he would “make my case as best I can” to the House Armed Services Seapower and

Projection Forces subcommittee chairman, U.S. Rep. Joe Courtney (D-Conn.), and the subcommittee’s ranking member, U.S. Rep. Rob Wittman (R-Va.).

The budget plan also delays the next amphibious assault ship, LHA-9, until 2024, despite concerns from the amphibious shipbuilding industry that the delay would make it difficult to maintain skilled workers and suppliers.

Asked in a separate session with reporters about the low priority for amphibians, Chief of Naval Operations Adm. John M. Richardson said the shipbuilding budget reflected “warfighting priorities.” And he said the LHA-9 “is good where it is.”

Neller described in considerable detail what the Marines are doing to prepare for a potential high-end fight, including developing capabilities to engage in information warfare, offensive and defensive cyber, training to operate in an information-denied environment and conducting intense force-on-force exercises. The Corps also is seeking better long-range, precision-fire weapons, air and missile defenses and the capability to help the Navy fight for sea control against a peer adversary.

He also said he did not ask for an increase in personnel because “I want to be able to train the Marines I have” and did not want to grow the force during a time of rising budgets and then “have people who don’t have the gear they need” if funding was cut.

House Panel's Dissatisfaction With President on Afghanistan, Syria, Africa Cuts Across Party Lines

Members of the House Armed Services Committee expressed bipartisan concern and opposition to President Donald Trump's policies and statements on Afghanistan, Syria and Africa, with Republicans and Democrats throwing critical questions and opinions at the commanders of those crucial areas on March 7.

The criticism started at the top, with committee Chairman Adam Smith (D-Wash.) saying the "decisions by the administration appear to be uninformed, without the consultation of senior leaders in the [Defense Department] and – importantly – without consulting our allies and partners," which "are clearly impacting our alliances and partnerships."

U.S. Rep. Mac Thornberry of Texas, the top Republican, said he "shared" Smith's concerns about "where we are going from now" in the fight against the ISIS extremists in Syria and Iraq. "We need to keep pressure on the terrorist networks," despite the liberation of most of the ISIS territory, Thornberry said.

That line of questions and statements continued down to the most junior members of the panel, many of whom are veterans of those conflicts.

Army Gen. Joseph Votel, commander of U.S. Central Command, and Marine Corps Gen. Thomas Waldhauser, commander of Africa Command, tried to strike a positive tone in assessing conditions in their areas of responsibility, but conceded

under the persistent questioning that some of the president's decisions and statements could have negative effects.

Votel, who is set to relinquish his command later this month, was particularly concerned about the president's repeated declarations that ISIS has been defeated in Syria and Iraq, which justified major reductions in U.S. forces there.

While noting that the U.S.-led coalition had reduced ISIS' self-proclaimed caliphate from 243,000 square miles to less than one mile, "the fight against violent extremists is far from over," Votel said.

What we are seeing now is not a surrender of ISIS" in the shrinking pocket of land in Syria, but "a calculated decision" to protect its fighters "while waiting for a chance to re-emerge," he said.

Votel, who has said he was not consulted before Trump declared ISIS beaten and ordered all U.S. forces withdrawn from Syria, said he is proceeding with a phased withdrawal of his forces with a primary focus of protecting the small number who now are expected to remain.

Asked how the Russians reacted to Trump's decision to leave Syria, Votel said it was "positive" as the Russians believed they would be "filling the vacuum" and perpetuating their relations with Syrian President Bashar Assad.

Votel said he was "confident" that the small U.S. force, now expected to be about 400, that Trump later decided to retain in Syria could keep ISIS from regaining ground. But, he added, it would be "not just U.S. forces, but our partners."

Asked if he agreed with the president's decision to remove most U.S. forces from Syria and at least half of its troops from Afghanistan, Votel said, "most of us would say these decisions have to be based on conditions at that time."

As for Afghanistan, he said his advice would be that any decision on forces “should be done in full consultation with our partners.” He added: “We have not received any orders to withdraw” forces from Afghanistan.

Pressed repeatedly about the negotiations with the Taliban, conducted by Zalmay Khalilzad with no involvement by the Afghan government, Votel said those talks are in the early stages and any agreement would have to be made by Kabul. U.S. goals in the negotiations are to protect U.S. interests and ensure the security of the Afghan government.

Waldhauser was more sanguine about the troop reductions ordered in his command, noting that his initial instructions were to withdraw about 10 percent of his counter-terrorism forces, which are primarily special operations personnel, while keeping the 6,000 conventional troops advising and assisting local forces. Those troops would be distributed based on the status of efforts to improve the capabilities of local forces, he said.

Asked if he considered that enough of a force, he said, “adequate.”

Marine Warfighting Lab Develops Roadmap on Robotic Experiments



Recognizing the impact that the rapidly expanding capabilities of robotic systems will have in all the warfighting domains, the Marine Corps Warfighting Laboratory (MCWL) has developed a

draft roadmap to prioritize its experimentation on the most immediate threats in a resource-constrained environment.

"We prioritize based on the perceived threat. ... And the biggest threat right now is to the infantry squad," said Jeff Tomczac, the deputy director of the science and technology division at MCWL.

The roadmap emphasizes interoperability, modularity and providing "enhancements" to the squads, because "we don't want to go after something that will be a liability. You want a battle buddy and you want something that is as good or better than what you have," Tomczac said in a conference call with two reporters.

In the quest for interoperability, MCWL has created the Tactical Robotic Controller, "the universal controller for all the unmanned, robotic, or autonomous systems that we experiment with," for air, ground, water surface and subsurface systems, he said.

To illustrate the scope of that controller, Tomczac said, "we have an effort down in Norfolk with our connectors. It's an LCM-8, a Mike boat, that is now fully autonomous." They are working with the landing craft because "we see an important role for autonomy," with surface connectors, Tomczac said.

The Marine Corps is working with the U.S. Army on the controller "to create a set of standards that industry is going to have to adhere to for different robotic systems," he said.

Tomczac said MCWL is working closely with the Army on other programs, which is important because the Army can buy systems in larger numbers, which increases the support for programs and reduces the cost for the Marines.

The need for a common controller has been recognized for years, he said, "otherwise your squad leader can have 10

different controllers in his pocket for each different type of system out there.”

The infantry squads already are operating a small quadcopter unmanned aerial system.

Part of the focus on interoperability is to ensure the various robotic systems can communicate with each other, know where the others are and “can work sometimes in tandem.”

The MCWL strategy also emphasizes “working on systems that are modular, so you can put systems on, take them off, depending on the mission, depending on what you want to do,” he said.

An example of that is a current program called the Expeditionary Modular Autonomous Vehicle (EMAV), which is a tracked, flattop vehicle, that can carry up to 7,000 pounds of supplies or infantry gear, Tomczac said. It also “allows us to put on different types of sensors, communications equipment, different kinds of weapons.”

It also can carry casualties from the battle line to a safe area or aid station, with only one Marine ensuring the wounded are “taken care of and protected,” rather than the two or more Marines needed to manually transport a casualty, he said. The unwounded Marine then “can return with supplies, ammunition and gear.”

MCWL has two EMAVs, will get two more shortly and has asked for another 10, which “will go out to an operational unit to conduct an extended user evaluation,” to help refine the requirements to move the prototypes into a program of record for acquisition, he explained.

MCWL already has deployed the vehicle multiple times with operational units for limited evaluations, mounting sensors and even weapons on it, he said.

The EMAV can be controlled by an operator or programmed to

make runs between supply spots and infantry Marines forward. But the emphasis is on using artificial intelligence and machine learning to develop greater autonomy, Tomczac said.

However, when the robotic system is armed, “the goal is always a man in the loop. A man will make the decision whether an engagement occurs,” he said.

While MCWL works toward new robotic systems, Marine explosive ordnance disposal specialists and engineers already are using five unmanned ground systems, which range from a 600-pound ordnance neutralizer down to the Ultra-Light Robot, a seven-pound remote sensor that can be thrown into a room or sent into a tunnel to look for enemy soldiers or improvised explosive devices.

Corps, DoD Test Office Differ on Effectiveness of New JLTV

The Marine Corps is beginning to field its new Joint Light Tactical Vehicle and, after improved training and some physical adjustments, the Corps believes JLTVs are “operationally suitable and effective,” the program’s manager said Feb. 27.

That conclusion is quite different than the findings released last week by the Defense Department’s Operational Test and Evaluation office (DOT&E), which said all four variants of the JLTV were “not operationally suitable because of deficiencies in reliability, maintainability, training, manuals, crew situational awareness and safety” and that the close combat weapons carrier was “not operationally effective for use in combat and tactical missions.”

The DOT&E findings were “directly lifted from data” collected during joint Army and Marine Corps operational testing done a year ago and “does not take into account the effort and work that’s been done since then,” said Andrew Rodgers, program manager for Light Tactical Vehicles at Marine Corps Systems Command.

“As we are fielding, we have shown that they are operationally suitable and effective. As we push forward with our training, we will be able to validate that,” Rodgers said.

His responses to the DOT&E report came during a telephone conference call with reporters to announce the fielding of the first JLTVs to the Marines’ School of Infantry, West, at Camp Pendleton, Calif., the next day.

The JLTV is intended to replace most of the 1980s-era High Mobility Multipurpose Wheeled Vehicle, or Humvee, to provide greater crew protection, tactical mobility and high-tech communications. Oshkosh Defense will produce 49,099 of the vehicles for the Army, 9,091 for the Marine Corps and 80 for the Air Force.

Rodgers said the problems cited in the DOT&E report had been identified by the Army and the Marines during their testing and most of them reflected decisions made early in the program’s development to delay creation of training programs and manuals until the production contract was awarded to Oshkosh Defense in 2015.

“We were very aware that our training material was not mature enough,” he said.

After rushing to make up for the late start, the Marine Corps produced a 40-hour maintenance training package but quickly realized that “we were not imparting enough information to the maintainers.” There is now an 80-hour training program

for maintainers and a 56-hour package for vehicle operators.

Operator training and electronic technical manuals also have been completed.

That has “gone a long way to help beef up the training,” which should improve reliability, Rodgers said.

He said the problems in operating the anti-tank TOW missiles on the close combat weapons carrier “can be solved with improvement in tactics, techniques and procedures (TTPs).

Once the Corps has the vehicle and begins working with it, Marines will modify their TTPs to account for the physical changes to the JLTV from the Humvee.”

Rodgers said the Army is testing larger rear windows and a front-mounted camera to address the problems with poor visibility and situational awareness cited in the DOT&E report, and problems with getting in and out of the JLTV can be corrected with adjustments to the doors.

Marines also are provided a secondary emergency exit in the new JLTV, he said.

The Feb. 28 delivery to Camp Pendleton is the beginning of fielding 55 JLTVs to supporting units by mid-May, followed by the first deliveries to operational units in July, starting with II Marine Expeditionary Force (MEF) at Camp Lejeune, N.C.

Rodgers said he expects to have fielded 250 to 300 JLTVs by end of this fiscal year and to deliver about 1,000 in fiscal 2020.

Corps Asks Industry for Longer Range, Mobile Fires Technologies for LAR Battalions

ARLINGTON, Va. – The Marine Corps is asking industry to show which technologies could be ready shortly to give its armored scout units a long-range, precision, on-the-move fires capability that could include unmanned aerial sensors, loitering guided munitions and command-and-control systems.

“We’re looking to give the Light Armored Reconnaissance (LAR) battalions this capability. What does industry have out there with range from 7,000 meters out to 100 kilometers?” Lt. Col. Bradley Sams, program manager for fires at Marine Corps Systems Command, said Feb. 25.

The Corps wants something with greater range and precision than the 81mm mortars that are carried by one version of its light armored vehicles (LAV). “Whether that [is] loitering munitions or a missile,” Sams told reporters in a conference call. “We’re asking industry to tell us what they have now or in development.”

The program, called Organic Precision Fires-Mounted (OPF-M), would be integrated into LAR battalions, probably co-located with the 81mm mortars company, with the weapons mounted on a LAV, a lightly armored, highly mobile eight-wheel vehicle that comes in multiple variants, said Jeff Nebel, the fires team leader. The new system would “take advantage of the sensors that already exist in the battalion. But we’re also interested in exploring other sensors that could support this capability.”

The combined systems “would support the LAR platoons up

forward," Nebel said.

The weapons employed by the OPF-M system could include loitering munitions, which are tube-launched, small rockets with optical or other sensors that can stay airborne for limited periods while the controller finds a suitable target. Later munitions might feature artificial intelligence and target-recognition capability to search for and strike defined targets, Nebel said.

Systems Command has issued requests for information (RFI) and an invitation to attend industry days March 13 and March 14 at Mary Washington University's campus in Dahlgren, Va.

"We are looking for what's in the realm of possibilities, what's available in the next year, year and a half," to help them clarify the requirements and the concepts of operations, Sams said.

The RFIs and industry days are "kind of a transition from work that's already been done on the capabilities side" at the Marine Corps Warfighting Laboratory (MCWL), which has been doing some experiments and demonstrations the last couple of years, he said. "This is a hand-off from experimentation to acquisition."

Sams said the U.S. Army has been working with the warfighting laboratory and has been helpful in sharing some of its developments in precision fires.

The current plan is to award a contract in the first quarter of fiscal 2020, with a demonstration of the proposed technologies eight to 12 months later, leading to low rate production and fielding an initial capability in the first quarter of fiscal 2022, Nebel said. Then an incremental approach would be followed to field newer technologies to enhance and upgrade the system, he said.

Marine Corps Systems Command said in a statement that the

program was part of Commandant Gen. Robert B. Neller's emphasis on rapidly fielded, longer-range precision fires in preparation for a conflict with a peer competitor, such as Russia or China.