President Trump,
Don’t Forget to Nominate a Tough Operational Testing Director

BY DAN GRAZIER

The following piece was first published by the Project On Government Oversight in November 2016. It has been excerpted and updated. The original can be found at http://www.pogo.org/straus/issues/military-reform/2016/call-to-nominate-tough-operational-testing-director-to-trump.html.

President Donald Trump is now looking for more than 4,000 individuals to fill all the appointed positions in the executive branch. Parlor speculation about his potential nominees began months ago, and there will be plenty of news coverage about his appointments as he continues to announce nominees and as the Senate moves through the confirmation process. As expected nominations for positions such as Secretary of State, Secretary of Defense, and Attorney General have received a great deal of attention. Overlooked, however, are the positions that seem minor but in fact are key to effective oversight.

One such position is of enormous consequence for military service members, as well as taxpayers, and will impact our military capabilities for decades to come: the Department of Defense’s Director of Operational Test and Evaluation (DOT&E). DOT&E is charged with ensuring that the major weapons we buy will be effective and suitable (i.e. reliable) in the hands of our troops in combat.

The operational testing process, when led properly, can head off some of these problems by identifying early in the process the systems that aren’t living up to expectations. The current DOT&E, Dr. Michael Gilmore, has proven himself to be a highly principled and dedicated public servant. But with the change of administration, there is no guarantee he will continue in his presiden-tially appointed, Senate-approved position.

Congress created DOT&E in 1983 because Members knew they weren’t getting the kind of oversight that was needed. As the Project On Government Oversight (then known as the Project on Military Procurement) reported in the 1980s, weapons systems like the Army’s M-1 tank and Air Force’s AWACS airborne radar plane were not being realistically challenged in tests. The results, even of compromised tests, were also not being accurately reported to Congress and the Secretary of Defense. The Government Accountability Office (GAO) estimates the Pentagon’s current weapon portfolio will cost taxpayers $1.44 trillion. The costs will likely grow as these systems are developed and the familiar pattern of cost and schedule overruns is repeated.

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2 Todd Harrison, Defense Modernization Plans through the 2020s: Addressing the Bow Wave, Center for Strategic & International Studies, January 26, 2016.
Any prospective testing director must first have a strong background in operational (i.e. combat-related) defense issues. An understanding of how military forces are organized and how they operate in combat is essential in order to evaluate how new weapons will work in the field.

A strong background in science and engineering is desirable, but not required. The weapons testing process produces reams of technical data which the director must not only understand, but also be able to explain to both Congress and the Secretary.

The director must also have upstanding moral character. Because of the high national security and fiscal stakes involved in the weapons buying process, the DOT&E can quickly accumulate enemies by delivering bad news that might imperil a system’s continued existence. Attacks on the person occupying that office can come from defense contractors who stand to lose money, lawmakers who stand to lose jobs and votes, and defense program advocates who stand to lose their credibility and future job prospects. It is one thing for a DOT&E candidate to say he or she will stand up to such pressure; it is quite another to demonstrate such character through past experience in dealing with political or corporate bureaucracies.

“He has to be ready to stand his ground,” said Tom Christie, who served as DOT&E from 2001 to 2005 after a four-decade career in the Office of the Secretary of Defense (OSD) bureaucracy. Before assuming the office, Christie repeatedly demonstrated his willingness to challenge service, corporate, and Congressional program advocacy. He warned that any potential nominee for this position must be braced to “be vilified and be ready to let that run off like water off a duck’s back.”

DOT&E nominees must be fully vetted to ensure there are no conflicts of interest. Past work with defense contractors doesn’t disqualify a nominee, but a record of repeatedly traveling through the revolving door between the government and the defense industry should. Contractors have been known to place their own people in influential positions within the government, even going so far as to reward employees with stock bonuses upon leaving their jobs for a government post.

Prior military service may appear to be an advantage, but parochial loyalties and personal relationships with people still in uniform could potentially lead to biases while assessing programs.

Phil Coyle, DOT&E during the 1990s, said it is also helpful for directors to
have a good understanding of the Pentagon’s acquisition culture. He said knowledge of the “games” program officials play during the process is important because managers will try to exploit an outsider’s unfamiliarity with the complex weapons buying process to delay or avoid testing.7

It is critical that whoever occupies this office is working on behalf of not just the taxpayers, but the men and women whose lives will depend on the weapons the DOT&E will be testing. “When I was DOT&E, I was trying to get not just my office, but the service’s operational test agency, to understand that your customer is not just the acquisition community,” said Christie. “Your customer is the troops in the field in combat.” A demonstrated record for standing up for the troops should be considered the criteria sine qua non for the DOT&E job.

**The Role of Operational Testing**

All new weapons systems are supposed to go through two separate test and evaluation processes before they are handed over to our troops in the field. The first is developmental testing, which occurs when components of the overall system are still being engineered. When these components don’t work according to their own specifications, engineers identify and implement fixes and then test again to ensure the problem has been resolved. This test-fix-test process is designed to work out as many kinks in the system as possible before moving to the next step. When the process works correctly, a full production model of the system is produced and the entire system is then handed over to the operational testers and DOT&E.

The services each have their own operational testing branches that conduct the actual tests. DOT&E’s role is to review and approve the testing plans and then evaluate the results. This is done to provide an independent assessment of whether a new weapon is usable, reliable, and capable of performing effectively in combat. For example, DOT&E will make sure a new rifle can not only hit a target on the range, but can also prove lethal and reliable against combat-realistic targets and be easily cleaned and maintained in the field.

Operational suitability is a vitally important concept: it is what generally determines the real-world effectiveness of any weapon system. Working in a controlled laboratory environment is helpful; operating in all the mud and dust and chaos typical of combat is essential. The Pentagon’s acquisition office acknowledged this in its latest annual report, saying that operational tests “show that major programs are often effective when they tested as operationally suitable, but the converse is not true.”8

A soldier in direct combat with the enemy will find little comfort in the knowledge that his rifle worked perfectly in the antiseptic conditions of a laboratory if it jams the instant it’s exposed to moisture and dirt on the battlefield.

After the tests are completed, DOT&E evaluates the results and writes a report about the weapons suitability that goes directly to the Secretary of Defense and Congress. These reports are supposed to include forthright analyses and reporting of problems encountered during the testing process. By law, a system can’t proceed to full production until DOT&E submits a report stating “the results of such test and evaluation confirm that the items or components actually tested are effective and suitable for combat and the test itself was deemed adequate to draw such conclusions.”9

DOT&E evaluation before production is supposed to prevent “buy before fly.” Sadly, the Pentagon has redefined “low rate initial production” in such a way that allows hundreds of systems to be produced without developmental or combat testing, as in the case of the F-35 Joint Strike Fighter.

**Defending the Authority and Integrity of Operational Testing**

The defense industry and status quo advocates in the Pentagon fiercely opposed the creation of DOT&E, and they can be expected to continue their efforts to undermine it. They fear honest, realistic operational testing evaluated by an independent office because this process can expose systems that aren’t performing as advertised and are not ready for production. The GAO highlighted this in a 2015 report:

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7 Interview with Phil Coyle, November 1, 2016.
9 10 U.S. Code § 2399 – “Operational test and evaluation of defense acquisition programs.”
Postponing difficult tests or limiting open communication about test results can help a program avoid unwanted scrutiny because tests against criteria can reveal shortfalls, which may call into question whether a program should proceed as planned.\(^\text{10}\)

Because of this, there have been many efforts over the years to undermine the office. Most recently, there have been attempts to include language in the defense authorization bill to require DOT&E to “consider” cost increases and schedule delays when creating test plans. Industry advocates try to blame increases and delays on testing, when the true cause is compromised tests held late in the process, often after full-rate production, that require extensive reworking, retesting, and even reproduction. Known as “concurrency,” this slows programs, increases costs, and results in fielding unworkable systems. A study by the Congressional Budget Office (CBO) confirmed that this contributes to weapon system cost growth, and in highly concurrent programs contributed to schedule delays.\(^\text{11}\) Concurrency has been specifically cited as causing cost increases and schedule delays for the C-17 transport aircraft, the Littoral Combat Ship, and the F-35 Joint Strike Fighter, among many others.\(^\text{12}\) The GAO recently evaluated 43 programs and found that “for the programs we assessed, as concurrency increases, so does total acquisition cost growth.”\(^\text{13}\)

### Undermining Operational Testing Through Infiltration

Legislative efforts aren’t the only way to cut the legs out from under the testing office. Another way system advocates can get what they want is by having one of their own installed as the director. Even if the director isn’t a stooge for the industry, anyone who is averse to the bureaucratic infighting that is often necessary to make sure problems are identified and fixed will seriously undermine the effectiveness of our weapon systems.

A Director can also undermine the operational testing process by approving a weak Test & Evaluation Master Plan (TEMP). The TEMP, created by the program office and DOT&E, serves as a guide for the specific tests throughout the life-cycle of the system. Because the TEMP must be approved by DOT&E, an industry insider can simply sign off on a less rigorous series of tests to guarantee success.

There is also the matter of rigging tests to produce positive outcomes. Perhaps the most notorious example of that occurred with the Army’s DIVAD, or Divisional Air Defense system, in the early 1980s.\(^\text{14}\) Designed to be a self-propelled radar-guided anti-aircraft gun, the DIVAD failed to spot a hovering helicopter drone flying in an empty sky during tests before DOT&E was up and running. It was only after several radar amplifiers were mounted to the drone that the DIVAD found it at all. As journalist Gregg Easterbrook said at the time, the test was like “testing a bloodhound’s ability to track a man covered with beefsteaks standing alone and upright in the middle of a parking lot.”\(^\text{15}\)

A Director could also simply submit incomplete or inaccurate reports to the Secretary of Defense and Congress. There have been cases, such as the MX missile program and the Navy’s Phalanx anti-missile gun system, where testing officials had signed off on results that were falsified or misrepresented.\(^\text{16}\) An even simpler tactic would be to bury poor results deep inside a lengthy report.


\(^{11}\) Congressional Budget Office, Concurrent Weapons Development and Production, August 1988.


Admiral La Rocque Leaves Legacy of Challenging the Military-Industrial Complex

BY DANIELLE BRIAN & MANDY SMITHBERGER

The following piece was first published by the Project On Government Oversight in November 2016. It has been excerpted. The original can be found at http://www.pogo.org/straus/issues/military-people-and-ideas/2016/admiral-la-rocque-leaves-legacy.html.

F ormer Center for Defense Information President and co-founder Admiral Gene La Rocque, U.S. Navy (ret.), passed away on October 31 at the age of 98. He was an extraordinary visionary and the Project On Government Oversight couldn’t be prouder to carry on his legacy.

Admiral La Rocque joined the Navy in 1940 and served in the Pacific throughout World War II. He participated in thirteen major naval battles for which he received several medals and citations. He rose to become one of the top strategic planners for the Joint Chiefs of Staff at the Pentagon and was awarded the Legion of Merit for his work there. He was ultimately passed over for further promotion, however, after he turned in a critical assessment of the Vietnam War.

Admiral La Rocque founded CDI with Rear Admiral Eugene Carroll in 1971 because he thought the public needed informed and independent information about the operations of the Pentagon. They took no money from defense contractors or the government, and became a powerful alternative to a Pentagon pushing self-serving data and analysis to decision-makers and the public.

At the time, CDI’s three primary goals were to avert a nuclear war with the Soviet Union, end the war in Vietnam, and monitor the influence of the military-industrial complex. Through the Defense Monitor newsletter and the weekly TV show America’s Defense Monitor, CDI offered fact-based research and policy advice about how our country would be much safer with a smaller defense budget and fewer nuclear weapons.

CDI’s work wasn’t always popular, and Admiral La Rocque’s criticism earned him a spot on President Nixon’s enemies list. In 1983, more than 500 retired admirals took out a full-page advertisement in the Washington Times condemning CDI and Admiral La Rocque after he spoke out against the Reagan administration’s military buildup. Afterward, he extended to each of them an invitation to chat over coffee and a subscription to the Defense Monitor.

Admiral La Rocque’s vision and influence are enduring. Last year we reestablished the Military Advisory Board to further our work of challenging those who seek to misuse taxpayer dollars in the name of national security. We also continue to publish the Defense Monitor as a compendium of analysis exposing excessive and wasteful Pentagon and nuclear weapon spending, and work with citizens and political allies to counter the defense industry’s corrosive influence in the Pentagon and Congress.

In prepared remarks last fall, Admiral La Rocque emphasized the continued need to challenge this influence. “[T]he military-industrial complex is not designed to create jobs. It is simply to defend the United States,” he said. “We have many opportunities to create jobs here in America by focusing our efforts in pursuing peaceful and nonmilitary goals. I am very pleased that CDI is undertaking efforts to counter the military-industrial complex.”

Since his passing, we’ve received an outpouring of notes and letters from individuals inspired by Admiral La Rocque’s leadership, letting us know that because of him they chose to dedicate their own lives to countering the military-industrial complex’s influence. We are proud to continue his work, and we appreciate your support of our efforts.
The Navy’s $29 billion Littoral Combat Ship (LCS) program provides a step-by-step case study in acquisition failures and the costs and risks of unacceptable levels of concurrency. Its design requirements were poorly conceived; the manpower planning was wildly unrealistic; Navy leadership and program managers repeatedly circumvented acquisition rules, increasing concurrency and cost risk; production was approved despite poor and rushed analysis; and production milestones were approved despite glaring program failures. Moreover, the program is an example of how unwilling Congress is to step in and hold defense acquisition programs accountable: Congress repeatedly failed to intervene despite warnings from the Government Accountability Office, Congressional Research Service, and experienced independent analysts that this program was grossly off track.

The program has been plagued with design failures and unreliability. In fact, the Naval Institute reported in September 2016 that just in the last year the LCS experienced six major losses of combat capability while deployed.\(^1\)

Now the Navy has announced that it is abandoning the LCS’s radically new manning concept as well as the fundamental concept of a multi-mission ship with swappable mission modules, completely overhauling the justification and total concept for this program.\(^2\) This necessitates large increases in crew size and a significant redesign of crew spaces and weapons installations, almost certain to significantly increase acquisition and operational costs.

In response to the mounting storm of criticism, on December 16, 2015, then-Secretary of Defense Ashton Carter announced that the original buy of 55 LCSs, already cut to 52, would be cut to 32 ships plus an additional 8 “frigate” versions of the original LCS.\(^3\) The Navy prefers to go even further by cutting the LCS buy to 28 ships plus 12 “frigate” LCSs—and is requesting approval of a 12 ship block buy to lock in the program’s production commitment with a concomitant large increase in concurrency.

Approval of a block buy committing the taxpayer to full production of a revamped $1.2 billion “frigate” LCS—one nearly immune to cancellation in the event of failed operational tests—is the largest LCS decision now facing the new Department of Defense and the new Congress.\(^4\) That decision needs to be considered carefully in light of what the “frigate” LCS actually represents—namely, a superficial redesign that leaves the LCS’s excessive vulnerability unaddressed, does little for improving the ship’s lethality, and results in a “frigate” that cannot accomplish traditional frigate missions due to lack of the requisite sustained speed, endurance, and survivability.

Ultimately, the upcoming Congressional and Pentagon decisions regarding the LCS program’s future, including the proposed block buy and frigate, will dictate whether American crews will be forced to risk their lives going to war in ineffective, excessively vulnerable ships.

**Risky Acquisition Strategy**

The Littoral Combat Ship program has been unnecessarily complicated from the beginning.

One of the more distinctive elements of the LCS program is that its seaframes and the three mission packages are being developed separately and concurrently, each

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with substantial risk. Compounding this, there are two versions of the seafame in production: Lockheed Martin's Freedom class and Austal's Independence class. Initially the Navy aimed for each ship to cost $220 million, but the Government Accountability Office (GAO) estimates procurement costs for the first 32 ships is currently about $21 billion, or about $655 million per ship—nearly triple what they were supposed to cost. The program’s three mission packages, according to the latest select acquisition report, add about $7.6 billion.6

In the decade and a half since the program was first sold to Congress, the LCS has already been forced into multiple major program changes, initially driven by large cost overruns, the lack of combat survivability and lethality discovered during operational testing and deployments, the almost crippling technical failures, and schedule delays in each of the three mission modules.7 The operating cost per ship-year has skyrocketed due to crew size increases, the continued unreliability of the ship systems, and the unprecedented need for expensive contractor support. In 2014 a GAO analysis of the Navy’s life-cycle cost estimates found LCS operating costs are 3.3 times greater than current minesweepers the LCS was supposed to replace, and amazingly, 90 percent of the operating cost of the 9,000-ton DDG-51 ballistic missile defense destroyer.8

“The miracle of the LCS didn’t happen,” Paul Francis of the GAO recently told the Senate Armed Services Committee. “LCS has taken longer, cost more, and delivered less capability than expected.”9

The Navy is now paying the costs of their buy before you fly approach. The concurrency in the program is so extreme that taxpayers will have paid for 90 percent of the LCSs before seafame operational testing is scheduled to be finished in 2019—in other words, before the Navy aimed for each ship to cost $220 million. This has caused a large number of problems, including a lack of combat survivability and lethality discovered during operational testing and deployments, the almost crippling technical failures, and schedule delays in each of the three mission modules.7

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As the table on page 9 shows, the current LCS fails to achieve even a single one of the “transformative” characteristics that were promised—and fails in each by substantial margins.

No Combat Survivability

In December 2011, the Pentagon’s Director of Operational Test and Evaluation (DOT&E) reported concerns about combat survivability. “LCS is not expected to be survivable in a hostile combat environment” Dr. Gilmore wrote. “[LCS design requirements] do not require the inclusion of the survivability features necessary to conduct sustained operations in its expected environment.”10

In 2012 POGO obtained documents showing that the Navy’s lack of oversight resulted in ships being delivered with significant cracking, and that there were over 80 equipment failures on the ship. “These failures were not

6 Department of Defense Selected Acquisition Reports (SARs) (As of December 31, 2015), p. 9.
10 Ronald O’Rourke, Navy Littoral Combat Ship (LCS)/Frigate Program: Background and Issues for Congress, Congressional Research Service, p. 3; Government Accountability Office, LITTORAL COMBAT SHIP: Need to Address Fundamental Weaknesses in LCS and Frigate Acquisition Strategies, June 9, 2016, Executive Summary; (Hereinafter Need to Address Fundamental Weaknesses in LCS and Frigate Acquisition Strategies)
trivial, and placed the crew of the ship in undue danger,” we wrote. In one instance, there was a darken ship event during a counter-drug trafficking operation that temporarily left the ship adrift at sea.13

A 2012 DOT&E report provided additional insight. “LCS is not expected to be survivable in that it is not expected to maintain mission capability after taking a significant hit in a hostile combat environment.” The Navy, due to the program’s concurrency-driven lack of survivability testing, has “knowledge gaps related to the vulnerability of an aluminum ship structure to weapon-induced blast and fired damage,” DOT&E wrote, referencing aluminum’s tendency to sag and melt in ordinary ship fires and to burn with nearly inextinguishable intensity when hit by shaped charge cannon shells or missile warheads.14

Navy Waives Key Requirements Even as Troubles in Mission Modules Mount

The Navy waived key acquisition requirements as the program progressed. At Milestone B, when a program is approved to proceed to Engineering and Manufacturing Development, a program must have approved requirements, an independent cost estimate, and a “program baseline” for cost, schedule, performance, and supportability. But the Navy, with approval from Pentagon acquisition officials, waived a number of these mandates, including using an independent cost estimate and certifying that “appropriate trade-offs among cost, schedule and performance objectives” had been made. Congress only learned about these waivers after the Senate had considered its authorizing bill. In the case of “appropriate tradeoffs,” the Navy initially didn’t even bother to write a justification for its waiver.15

Each LCS is supposed to be able to serve three different missions—surface warfare, mine counter-measures, and anti-submarine warfare—by swapping out in a few hours or days interchangeable weapon and sensor modules for each mission, together with their specialized mission crew.16

A 2012 report by the Pentagon’s testing office found that on the Freedom the surface warfare module was defective because the ship’s 30 millimeter gun “exhibit[s] reliability problems,” and that on both classes “ship operations at high speeds cause vibrations that make accurate use of the 57 mm gun very difficult.” Worse yet, the integrated weapons control and air/surface radar system on the Freedom has “performance deficiencies” that degrade the “tracking and engagement of contacts.”17

The surface warfare module wasn’t the only one in trouble—the mine counter-measure module was much worse. The AN/AQS-20A sonar was supposed to identify bottom mines in shallow water; detect, locate, and classify bottom, close-tethered and volume mines in deep water; and communicate all that information to the ship to avoid or destroy any identified mines. To do this the sonar needed to be towed either by Lockheed Martin’s Remote Multi-Mission Vehicle (RMMV) underwater drone or the MH-60S helicopter.18 In every test over the last decade, the RMMV drone proved grossly unreliable. Finally in 2016 the Navy officially cancelled the drone, which had cost taxpayers over $700 million and 16 years.19

The Navy now plans to choose among three substitute surface and underwater drones still in development—but testing and assessing the winner’s suitability cannot be completed until 2023, according to DOT&E.20

As for the helicopters towing the sonar, the 2012 DOT&E report found they were “not operationally effective or suitable.”21 The Navy’s own testing determined the helicopter cannot safely tow the sonar or the Organic Airborne Sweep and Influence System, used to aid mine-sweeping when the sonar can’t due to adverse environmental conditions, because the helicopter is underpowered for these operations. The helicopter will no longer be assigned these missions from any ship. Thus, the Navy predicts no LCS will have any mine counter-measure mission capability until 2020—and the 7 to 10 (or less) LCSs assigned permanent mine warfare duty may not be equipped with fully operational mine counter-measures.

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19 Senator John McCain, “Indefensible: $706 million and 16 years developing a Navy minehunting system that doesn’t really work.”
### Original and Reconfigured Requirements for the LCS's “Transformative” Characteristics

<table>
<thead>
<tr>
<th>“Transformative” Characteristic</th>
<th>Original Requirement</th>
<th>Where the LCS Program Stands Today</th>
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<tbody>
<tr>
<td>Draft (Distance between the surface of the water and the lowest point on the vessel)</td>
<td>10 foot draft to enable the LCS to patrol and fight in the shallow coastal waters that have been crucial in recent wars but that the Navy hasn’t been able to access.</td>
<td>Draft is now 15 feet for Independence and 14 feet for Freedom class LCSs and growing due to weight problems.</td>
</tr>
<tr>
<td>Capabilities and Mission Modules</td>
<td>Each LCS serves three different missions—anti-submarine warfare (ASW), mine counter-measures (MCM), and surface warfare (SW)—by swapping out in a few hours or days interchangeable weapon and sensor modules for each mission, together with their specialized mission crew.</td>
<td>Each LCS has only one permanent mission. Multi-mission swapping failed because it took as long as 12 to 29 days and caused insurmountable crew training problems.</td>
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<tr>
<td>Speed and Endurance</td>
<td>Be significantly faster than standard frigates and destroyers, with a 50-knot top speed with an endurance of 1,500 nautical miles at top speed. Also a cruising range of 4,300 nautical miles at the 20 knots needed to accompany naval task forces or convoys and to permit self-deployment across oceans.</td>
<td>In smooth-sea testing the Freedom class LCS only achieved 43.6 knots with an endurance of approximately 855 nautical miles. In moderately rough sea states (4 or more), speed slows well below current frigates due to slamming of the semi-planing hull, according to experienced US Navy naval architects. Endurance at 14.4 knot transit speed is 1,960 nautical miles, too slow to escort convoys or task forces, and too little range to cross oceans without a tanker. The Independence is even slower at 37.9 knots max in smooth water (endurance 1,000 nm) and only 14 knots transit speed (4,200 nm endurance).</td>
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<tr>
<td>Cost</td>
<td>Be far cheaper than standard frigates and destroyers, costing about $220 million, enabling a buy of 45 to 60 ships.</td>
<td>LCS program unit cost is $722 million program unit cost and growing to pay for fixing deficiencies; the “frigate” LCS cost is $1.2 billion. The buy is down to 28 to 32 LCSs plus possibly 8 to 12 “frigates.”</td>
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<tr>
<td>Weight</td>
<td>Be smaller than standard frigates and destroyers. Originally the Navy estimated each LCS would displace about 2,500 tons.</td>
<td>Now 3,450 tons for the Freedom class and 3,200 for the Independence class, (considerably larger than 2,500-ton World War II destroyers): the frigate will be heavier with deeper draft and slower speed.</td>
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<tr>
<td>Manning</td>
<td>A radically reduced manning concept to shrink operating costs with a core crew of 15 to 50 people plus 19 for mission modules, for a maximum crew size of 75 (versus a FFG-7 frigate crew of 250). It also included three interchangeable crews for every two ships, rotated freely across the fleet.</td>
<td>The manning concept has failed. The workforce was overloaded, which meant having to increase the ship’s core crew size to 70 and increase crews to two permanently assigned per LCS, along with expensive major increases in contractor support worldwide. Operating costs have skyrocketed to 3.3 times that of minesweepers and almost as much as a 9,000 ton DDG-51 ballistic missile destroyer.</td>
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*For sourcing, please see the original article at:* [http://www.pogo.org/straus/issues/weapons/2016/overhaul-of-littoral-combat.html](http://www.pogo.org/straus/issues/weapons/2016/overhaul-of-littoral-combat.html)
modules until 2025, if ever. It may be nearly a decade before a portion of the LCS fleet makes even a modest contribution to the Navy’s grossly inadequate mine-sweeping capability, currently the weakest it’s been since the beginning of WWII.

The third module, the anti-submarine warfare module, has been in trouble from the start: the waterjet propulsion built into both LCS variants is so much noisier than conventional propellers that it severely limits the sonar’s ability to detect submarines. Moreover, the module is years behind schedule because its components, particularly the large stern towing rig for the towed array sonar, are being reengineered to lighten them enough to meet the 105-ton weight constraint imposed by the LCS’s severe overweight problems. Testing has also been sparse and unrealistic: in 2014, testing had been “highly scripted,” so there was “full knowledge of the target submarine’s position throughout the test, and the operators focused their search only in the region where the submarine was known to be.” In 2015, according to DOT&E, there was no actual at-sea testing at all. In other words, no test data whatsoever exists for even estimating whether the LCS may have a combat-suitable anti-submarine mission capability.

As each of the LCS’s mission modules ran into serious trouble, Congress became more vocal about the expensive and risky concurrency throughout the LCS program. “The committee has significant concerns regarding the levels of concurrency associated with the mission modules and the expected delivery of the Littoral Combat Ship seaframes,” the House Armed Services Committee wrote in its report for the FY 2014 National Defense Authorization Act. “This dichotomy in capability development appears excessive.” But the “significant concerns” did not extend to slowing production or constraining funding, so the Committee requested GAO conduct another study.

**Failure of the LCS Manning Concept**

The most important factors impacting survivability are the skills and size of the crew. They are crucial for effectively employing weapons, preventing and repairing system failures while underway, controlling damage and fire when hit—and then continuing to “fight the ship.” That makes the LCS’s Manning and training concept just as crucial as the ship’s technical requirements. The Manning and training concept for the LCS was a new one: ultra-lean Manning and interchangeable crews uncommitted to single ships. And it was decided ill-considered. The Navy Times reported that the concept “creates a kind of super-sailor, where crewmembers take on jobs out of their rate and above their paygrade.”

To solve these easily foreseeable problems identified by the GAO and additional deployments, the Navy was

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28 CDR Salamander, “LCS Maintenance Stand down: This Isn’t a Sailor Problem,” September 6, 2016.
forced to make a number of significant changes, tripling the shore personnel, more than doubling the crew members per ship, and reducing days of deployment. The Navy also had to withdraw four ships for testing and six for training from the routinely deployable force, meaning that the LCS program cost per deployed day has increased enormously. Only 18 out of the first 28 LCSs are deployable—with only 9 of the 18 deployed at any one time—so the LCS fleet is putting on station less than a third of the ships bought and paid for.

Demands for Replacing the LCSs with Frigates—A Counter-Gambit from the Navy?

A mounting storm of criticism—focused on lack of survivability and lack of offensive punch—from Congress, the Office of the Secretary of Defense, the media, and even from within the surface Navy itself impelled then-Secretary of Defense Chuck Hagel to direct the Navy to study better-protected, more heavily armed LCS alternatives in February 2014. An independent study might have produced real alternatives. Instead Hagel effectively asked the Navy to grade its own work.

Unsurprisingly, after reviewing all the non-LCS alternatives, the Navy study concluded in July 2014 that none were as cost-effective as an LCS, minimally modified to be slightly more lethal and survivable and reclassified as a “frigate.”

The subsequent GAO review of the Navy study found the Navy had heavily biased the study to favor the LCS-based alternatives. This bias included making “assumptions related to crew size that resulted in the non-LCS options appearing more costly by comparison”: the Navy had assigned to the alternatives a worst-case scenario of crew sizes that was “considerably higher than even the upper range identified by the manning estimates.” For the LCS, the Navy picked an overly optimistic scenario, with a lower crew estimate for the modified LCS options, making any non-LCS design appear considerably more costly.

Even more troubling, the GAO found the minor configuration changes incorporated into the LCS “frigate” option would not provide much greater capability than what was offered by the earlier LCS—but they would add at least $190 million in procurement costs to the $720 million cost of each LCS (not including the R&D cost incurred in modifying or integrating the new or upgraded weapons systems). The Director, Dr. Michael Gilmore, told the House Armed Services Committee’s Oversight and Investigations subcommittee “it will be less survivable than the Navy’s previous frigate class.”

So far Congress has responded to these major effectiveness deficiencies and cost concerns by including money for an additional LCS beyond what the Pentagon requested, and a series of hearings.

When Is a Frigate Not a Frigate?

In the widespread urge to cure the LCS’s inadequate self-defense capability and lethality shortfalls by turning it into a frigate, few seem to have stopped to consider the actual missions a frigate needs to accomplish. Traditionally, frigates serve as anti-submarine warfare escorts for convoys, freeing up more expensive and scarcer destroyers for higher-priority missions. They also accompany task forces, either adding to the screening and scouting or air defense provided by destroyers, or substituting for them in lower-threat environments. By far the most common frigate missions in our conflicts of the last 65 years have been supporting small task force landings or insertions, interdicting enemy freighters, supporting tankers and smaller logistics craft, or countering pirates.

To escort convoys or task forces, a frigate needs to match their cruising speeds and have enough endurance for the transit, particularly in rough seas. For open-ocean escort duties the original LCS has neither the speed nor the seakeeping ability to do the job. Both merchant ship convoys and task forces make at least 18 to 20 knots. To maintain the endurance to cross oceans, the Independence LCS is limited to around 14 knots while the Freedom class has to slow down to 9 or 10 knots. In moderately rough seas at or above Sea State 4, the LCS is even more limited due to the slamming of the Freedom (an inevitable consequence of its semi-planing hull) and the need to avoid rear quartering seas for the Independence (because of the trimaran’s propensity to capsize when heavy rear seas lift the stern of one hull). The frigate version of the LCS will be even more restricted in speed and endurance in mod-

34 DOT&E Statement on the Navy’s Littoral Combat Ship Program, p. 28.
erately rough water because it will be heavier, slower, less stable, and less seaworthy. All of this applies equally to coastal zone operations. Shallow coastal waters are not necessarily smooth seas. In fact, the shallower the ocean bottom, the steeper and choppier the wave action.36

Put bluntly, no matter what armament is added to the LCS, it can’t accomplish the traditional missions of a real frigate.

**Navy’s “Frigate” Program Plan:**
**Even More Concurrency, Less Oversight, and Far Less Accountability**

The Navy’s plan for developing and buying the new “frigate” version of the LCS seems simple: sign a new contract with a block buy option this year for 12 standard LCSs, and issue a request for proposal at the end of the year—not for a new contract for a redesigned “frigate” LCS but instead for a vaguely specified set of engineering changes to the old LCS contract. This would be followed by picking a winning shipyard in 2018 to do the detail design of the engineering and production-line changes needed to switch from producing original LCSs to “frigate” LCSs.37

If implemented, this plan could set a new benchmark for what Under Secretary of Defense for Acquisition, Technology, and Logistics Frank Kendall has termed “acquisition malpractice.” First and foremost, signing a block buy for 12 ships this year commits taxpayers to 12 ships and $14 billion at least three years before operational testers have determined whether the original LCS seaframes are fit for combat. Since the Navy intends to convert these 12 into a new and unspecified design—with no plan for new developmental or operational testing in place—it will be at least six to eight years before developmental testing, fixing of problems, and then operational testing can be completed for the “frigate” LCS in order to determine its suitability for combat. As the GAO has observed, this approach “does not form a sound basis for a future frigate procurement; a robust frigate competition once designs are firm would be a more informed approach.” Committing to this procurement before designs are stable would commit taxpayers to 12 more $1.2 billion “frigate” LCSs “even though these ships have not demonstrated lethality and survivability capabilities.”38

The Navy also lacks any plans to revise key mission and performance effectiveness thresholds in order to have contractually binding requirements for new “frigate” contracting. As a consequence, no shipyard can be held accountable if the revised LCSs fail to deliver adequate capabilities. Cost oversight and accountability will also be further hindered because the Navy appears to have no plans to track costs for the acquisition of new “frigate” LCSs transparently and separately from the cost of the old LCS program and its ongoing and costly fixes.

The Pentagon’s chief tester has warned of exactly these problems. In a recent memo, he stated that the Navy’s contracting approach—relying on contractor-generated engineering design specifications rather than on key program requirements—“permits the combat capabilities desired in these follow-on ships to be traded away as needed to remain within the cost constraints.” In the worst-case scenario, the new ships could “be delivered with less mission capability than desired and with limited improvements to the survivability of the ship in a combat environment.” The ship could meet all of its key requirements “without having any mission capability.”39

The $14 billion program cost incurred by the modified “frigate” buy is so large that it should be monitored as a separate major defense acquisition program, not a routine add-on to the existing LCS program. But, the GAO warns, “there are no current plans for official DOD milestone reviews of the frigate program...In addition the Navy does not plan to develop key frigate program documents or to reflect frigate cost, schedule, and performance information in the annual” select acquisition reports.40 If this “frigate” acquisition approach is approved, the Navy will have further weakened accountability and oversight while significantly increasing concurrency, risk, and cost.

**Program Momentum Overcomes Common Sense in Congress**

In an unusual move for Congress’s auditors, the GAO’s most recent LCS report recommended that Congress zero out funding for 2017 to allow time to devise a responsible, well-thought-out approach to managing the new LCS. Usually Congress resists stopping programs because they are worried about the “industrial base”—code for

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38 Need to Address Fundamental Weaknesses in LCS and Frigate Acquisition Strategies, Highlights.
40 Need to Address Fundamental Weaknesses in LCS and Frigate Acquisition Strategies, Executive Summary.
jobs in their districts. But in this case, the GAO found, those concerns “are less compelling, as both yards will be building LCS currently under contract through fiscal year 2021.”

Despite the overwhelming failure and dangerous precedents of the LCS program, Congress is continuing to shovel money into this program. “Have we not done enough for the industrial base?” the GAO asked the Senate Armed Services committee recently. “Is it not time for the industrial base to come through for us? Can we get one ship delivered on time? Can we get one ship delivered without cost growth? Can we get one ship delivered without serious reliability and quality problems?”

**Recommendations**

The presidential election has brought a renewed call from the public to drain the swamp of Washington’s self-dealing habits. Congress has consistently failed to do so, egregiously so in the case of the LCS program where they have rewarded failure by adding money.

If Congress agrees with the Navy that 28 LCSs is enough, they should end production and fully fund an operational test that is as realistic as possible in order to uncover and fix the ship’s many remaining deficiencies. Even if they think more LCSs are needed, they should halt production until testing is complete.

Rejecting the Navy’s risky block buy approach will be a true test of the new Administration’s and the new Secretary of Defense’s commitment to reforming the Pentagon. The block buy approach is simply the foot in the door for committing the taxpayer to spending $14 billion more on LCSs thinly disguised as “frigates”—frigates that will be incapable of executing traditional frigate missions. Approving this acquisition malpractice when the industrial base already has plenty of work rewards concurrency, technical failures, and cost overruns while making contractor oversight and accountability nearly impossible.

Focusing our resources on thoroughly testing and fixing the LCSs we’ve already bought will send a clear and welcome signal to the sailors and grunts who have to fight our wars: we care more about their lives than about funding crony contracts and greasing revolving doors.

Pierre Sprey was part of a small, dedicated group of Pentagon and Congressional insiders who started the military reform movement in the 1970s.

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**PRESIDENT TRUMP / CONTINUED FROM PAGE 4**

Test results and reports have also been compromised by allowing system advocates to “score” the data. This occurs when a panel of “experts” (often industry representatives) is convened to determine which results are allowable (valid) and which are not, or what result is “successful” or not. The Army did this with the M-1 tank and ended up throwing out reliability results showing the early models were breaking down every 34 miles. A scoring conference later simply decided that some of the maintenance actions weren’t really that serious and the tank would only have to stop every 94 miles, which was conveniently just above the test standard of 90 miles. Such a panel could determine that testing results showing a system isn’t performing as advertised aren’t really that important and therefore should be left out of the report.

**Conclusion**

While DOT&E’s core mission is to ensure our military receives effective weapons, the office also provides an excellent return on investment for taxpayers. Uncovering problems with a weapons system early allows them to be fixed before the system moves into full-rate production. When those problems aren’t uncovered during development, large costs arise later when they have to be fixed after production. The high level of concurrency in the F-35 program has resulted in just that: the GAO has estimated it will cost $1.7 billion to “rework and retrofit aircraft with design changes needed as a result of test discoveries.” The DOT&E’s recommendations, properly followed, would protect our troops from faulty equipment and save hundreds of billions of dollars.

President Trump’s possible selections for lower-tier Cabinet positions are just as important as who he will choose to fill the top spots. Should he select as DOT&E an industry go-along or a military service system advocate who lacks a demonstrated history of fighting for objectivity, independence, and integrity, we cannot expect to see the reliable assessments we have come to expect from DOT&E. Ultimately, service members will suffer the consequences of ineffective weapons while taxpayers are stuck with the bill.

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Defense Policy Bill Includes Notable Victories

BY MANDY SMITHBERGER & LIZ HEMPOWICZ

The National Defense Authorization Act, the primary policy bill for the Pentagon, includes two significant wins for conducting oversight of the spending and operations of the Pentagon.

The first win was defeating Pentagon efforts to gain a special exemption from the Freedom of Information Act (FOIA). The exemption, opposed by a diverse group of nonprofit organizations, journalists, and individuals, was vague enough that it could have been used to hinder the public’s ability to get records on almost all of the operations of the Department.1 As some question the future of public and press access to information, this is an important stand by Congress to defend the public’s right to know about the spending and operations of the Pentagon.

DoD had asked for a special exemption separate from government-wide reforms in the FOIA Improvement Act of 2016, passed and signed into law in July 2016. The House, which marks its bill publicly, did not include the provision. But the Senate initially acceded to the Pentagon: the provision the Senate included in its version of the bill in a closed markup largely mirrored language proposed by the Defense Department to allow the DoD to withhold unclassified information related to its operations. The carve out could have been used to conceal information about the military’s interrogation and treatment of prisoners, handling of sexual assault complaints, oversight of contractors, the drone program, and other matters of compelling public interest. Senators Chuck Grassley (R-IA) and Patrick Leahy (D-VT), Chair and Ranking Member of the Judiciary Committee, led the successful efforts to remove the provision in the Senate.

The bill also included significant reforms that greatly expanded protections for military whistleblowers. POGO had testified in September 2016 before the House Oversight and Government Reform’s National Security Subcommittee about shortfalls in the treatment of military whistleblowers, including how misconduct, a toxic culture towards whistleblowers, and improper intervention in investigations resulted in questionable outcomes for whistleblowers.2 Now, one of the provisions in the bill protects military whistleblowers from retaliatory investigations, a tactic that has increasingly been used to intimidate and punish those who expose wrongdoing.

POGO most recently saw this in the case of Lieutenant Colonel Jason Amerine, a war hero who blew the whistle on the United States’ dysfunctional hostage recovery process to Representative Duncan Hunter (R-CA). Unable to retaliate against a committee or a Member of Congress for this embarrassing revelation, the FBI and the Army exacted revenge against Amerine by revoking his security clear-

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ance and launching a retaliatory investigation. Thanks to significant intervention from POGO, Representatives Hunter and Jackie Speier (D-CA), Senators Grassley and Ron Johnson (R-WI), and the Katz, Marshall & Banks law firm, that investigation happily concluded in 2015 with Amerine being allowed to retire from the Army with full honors, including the prestigious Legion of Merit medal.3

The inclusion of additional protections is an important step towards making sure service members like Amerine who expose waste, fraud, and abuse are protected from all forms of retaliation and have stronger protections to challenge retaliation when it occurs.

The new law also includes a number of reforms to improve the integrity of investigations into retaliation. One such reform requires the DoD IG and military service IGs to develop uniform and fair procedures for training staff about and conducting investigations into retaliation against military whistleblowers. It also requires the establishment of a uniform training curriculum for Boards for Correction of Military Records members and timely retraining. Additionally, in response to a 2015 Government Accountability Office (GAO) report that found the average investigation into retaliation took 526 days and provided no notice about the status of the cases for over 50 percent of whistleblowers, the bill strengthens notice requirements for the untimely completion of Department of Defense Inspector General (DoD IG) whistleblower reprisal investigations.4

The new protections also:

- Grant IGs the authority to notify the appropriate military service Secretary of all active investigations, providing the opportunity to shield service members from retaliation during investigations;
- Require the Secretary to determine the proper corrective action, if any, in response to a substantiated violation of retaliatory personnel actions—including referral to the Board for Correction of Military Records;
- Assist service members in filing claims by detailing the specific information or documents they must attach to make a claim reviewable;
- Require Correction Boards to make reasonable efforts to obtain medical or personnel records in order to correct those records to help a whistleblower be made whole if he or she is unable to obtain them;
- Remove the one-year statute of limitations for reconsideration of Correction Board decisions, allowing for the consideration of new evidence;
- Require the publishing of final Correction Board decisions, which will assist service members seeking to correct their own records and help build case law; and
- Clarify the right of service members to seek judicial review of Correction Board decisions in federal court.

Finally, the bill requires the GAO to review the integrity of the DoD IG’s whistleblower program. This provision was inspired by whistleblowers within the DoD IG, including former assistant DoD IG John Crane, who believed the office mishandled cases and improperly retaliated against whistleblowers.5

Unfortunately, the final bill does not include a provision to give military whistleblowers the same burden of proof afforded to civilians. In the military, the burden is placed on our service members to prove that they were illegally retaliated against, whereas in civilian cases the burden is on the agency to prove there was no retaliation. We believe this discrepancy in the law makes it more difficult for investigators to substantiate claims of retaliation against military whistleblowers.6

Taxpayers and whistleblowers have the House and Senate Whistleblower Caucuses to thank for these overdue whistleblower reforms. Co-chairs Representatives Speier, Mike Coffman (R-CO), Rod Blum (R-IA), and Kathleen Rice (D-NY) led the fight for enhanced protections in the House. In the Senate, the provisions were added and championed by Senators Barbara Boxer (D-CA) and Grassley, along with Senators Ron Wyden (D-OR), Edward Markey (D-MA), Jon Tester (D-MT), Kirsten Gillibrand (D-NY), Johnson, and Joni Ernst (R-IA).

Whistleblowers who report concerns that affect our national security must be lauded, not shunned or, worse, harmed. We look forward to making sure the reforms are interpreted and enforced as Congress has intended, which unfortunately has not always been the case. ■

Every once in a while, we include business reply envelopes in this publication as a gentle reminder to anyone intending to donate or to renew their subscription. Some of you have asked why we do this when you’ve requested only one solicitation per year. It’s less expensive to mail out to our entire list than to mail separate issues to those who wish to be unsolicited. If you’ve already sent in what you meant to, please accept our thanks and ignore the envelope!

Thank you for your understanding and enjoy the rest of the bulletin.