

# Navy Retires Last EP-3E Electronic Reconnaissance Aircraft



EAST CHINA SEA (Sept. 24, 2020) An EP-3E Airborne Reconnaissance Integrated Electronic System (ARIES) II, assigned to the “World Watchers” of Fleet Air Reconnaissance Squadron 1 (VQ-1), transits over the East China Sea. (U.S. Navy photo by MC3 Andrew Langholf)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The Navy has retired its last EP-3E Aries II electronic reconnaissance aircraft after the type’s 45 years of service to the fleet.

In an informal Feb. 12, 2025, ceremony, at Naval Air Station Whidbey Island, Washington, Fleet Air Reconnaissance Squadron One (VQ-1), the sole remaining operator of the EP-3E, farewelled the last EP-3E. The aircraft was flown away on Feb. 13 for the last time.

The aircraft, BuNo 159893, was the last of 26 EP-3Es that

served the fleet beginning in 1970. Ten P-3A Orion patrol aircraft were converted to EP-3Es for operation by VQ-1 and VQ-1, joining two earlier EP-3B versions in service. This batch of EP-3Es were replaced beginning the 1990s by a new generation of EP-3Es converted from P-3C Orions, with ultimately 17 aircraft converted to sustain an operational fleet of 12 aircraft.

The EP-3E fleet provided multi-intelligence support to the fleets and to theater combatant commanders with near-real-time signals intelligence and full-motion video, the Naval Air Systems Command said. The aircraft was equipped with sensitive electronic receivers and high-gain dish antennas. The large crew was able to fuse the intelligence it collected with offboard intelligence and provide threat warning and situational awareness in support of suppression of enemy air defenses, anti-air warfare, anti-submarine warfare, and anti-surface warfare.

The EP-3E has been succeeded by the MQ-4C Triton high-altitude, long-endurance unmanned aerial vehicle operated by Unmanned Patrol Squadron 19.

VQ-1 has one P-3C remaining, which it used as a utility training and transport aircraft. The aircraft, BuNO 161588, will be retired in an informal ceremony to be held at NAS Whidbey Island on Feb. 20, 2025.

VQ-1 will hold its deactivation ceremony at Whidbey Island on March 28, 2025. The official date for the deactivation is March 31.

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# Marine Corps Updates F-35 Procurement, Transition Plan



Marine Fighter Attack Squadron (VMFA) 314 launch and recover F-35C as they work to renew their carrier qualifications onboard the USS Abraham Lincoln (CVN 72) (U.S. Marine Corps photo by 1stLt. Charles Allen)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The U.S. Marine Corps has adjusted its procurement and transition plan for its F-35 Lightning II strike fighter fleet. While the overall program of record remains at 420 F-35s, the balance between the numbers of short takeoff and vertical landing F-35B and the carrier launch capable F-35C has changed, with the number of F-35Cs increasing and the number of F-35Bs decreasing.

According to the 2025 Marine Corps Aviation Plan released Feb. 3, the Corps plans to procure a total 280 F-35Bs and 140 F-35Cs, as compared with the earlier program of record of 353

F-35Bs and 67 F-35Cs. These numbers will allow the Corps to support 12 F-35B fighter-attack (VMFA) squadrons and eight F-35C VMFA squadrons.

Before, the Corps had planned to support only four F-35C squadrons, VMFAs 314, 311, 251, and 115. With the change in the procurement profile, four other F/A-18 Hornet squadrons also will make the transition to the F-35C: VMFAs 232 and 323 and reserve VMFAs 112 and 134.

Currently, all but two operational F-35 squadrons are allowed to be equipped with 10 aircraft, with the other two, both based at Marine Corps Air Station Iwakuni, Japan, being allowed 12 aircraft each. Under the new plan, all operational F-35 squadrons will be equipped with 12 aircraft each beginning in 2030.

The Marine Corps F-35C squadrons will continue to support the TACAIR Integration Plan, in which they deploy as units of Navy carrier airwings.

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## **Lockheed Martin Offers Mk70 Launcher to Increase Lethality of LCS**



An SM-6 missile is launched from a containerized launcher on board USS Savannah (LCS 28) on Oct. 24, 2023. (U.S. Navy photo)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – Lockheed Martin has adapted its Mk41 vertical missile launcher into a scalable containerized system that can be deployed on U.S. Navy ships, including the littoral combat ships (LCS) and non-traditional platforms of opportunity to increase their lethality with mid-range precision strike and air defense capabilities, company officials said.

The system, called the Mk70 Payload Delivery System, is a 40-foot-long ISO container in which four VLS cells can be fitted. The Mk70 system, designed for and deployed with the U.S. Army in a land-based configuration, can launch any type of missile certified for the Mk41, including the Tomahawk cruise missile, the various Standard surface-to-air missiles, the antisubmarine rocket, and the Evolved SeaSparrow missile. The Mk70 container is transportable on a C-17 cargo aircraft.

Ed Dobeck, director for launching systems at Lockheed Martin, told Seapower that the Mk70 was developed two years ago in concert with the Defense Department's Strategic Capabilities

Office to provide the Army with the ability to deploy and fire the Raytheon-built SM-6 Standard missile.

The same container can be secured on the flight deck or helicopter landing pad of a Navy ship using helicopter tie-down chains, occupying 400 square feet of a flight deck. Power from the ship's electrical system can supply 400 volts to the Mk70. No modifications are required to the ship itself. The container can be installed within hours with a pier-side crane. A command shelter with virtual Aegis and Tomahawk control systems controls the launch of the missiles.

The flight deck of the Freedom-class LCS can accommodate three Mk70 containers, while the Independence-class LCS can accommodate four containers, Dobeck said. With one or more containers installed, the ships are unable to launch or land helicopters. The missile tubes can be reloaded horizontally, an advantage over the ship-installed Mk41's need for vertical re-load by cranes.

Lockheed Martin has demonstrated containerized launch of SM-6 missiles from two Navy ships. An SM-6 missile was fired from the USS Savannah (LCS 28) in October 2023 and before that another was fired from the Overlord medium unmanned surface vessel Ranger during an exercise.

Dobeck said that the Navy has shown great interest in the Mk70 system, which already has been delivered to the Army. Two full batteries – totaling eight missile cells – have been delivered to the Army and two have been delivered to other customers. The Army has deployed the Mk70 to the Philippines

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# Amphibious Coalition Forecasts Benefits of Multi- Ship Amphib Ship Buy



By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The industry association for suppliers for the builder of U.S. Navy’s amphibious warfare fleet sees immediate benefits this year and the next one for its member companies, the association’s survey said.

In its annual survey of 219 member companies, the Amphibious Warfare Industrial Base Coalition (AWIBC) said that a majority of its member companies affirmed that the Navy’s announcement last year of a multi-ship buy will benefit their companies.

The survey focused on the August 2024 announcement by then-Secretary of the Navy Carlos Del Toro that the Navy would procure four amphibious warfare ships – one America-class amphibious assault ship (LHA) and three Flight II San Antonio-class amphibious transport dock ships (LPDs) in a bundle

procurement according to the below schedule:

- LPD 33 in FY25
  
- LPD 34 in FY27
  
- LHA 10 in FY27
  
- LPD 35 in FY29

The four ships in the procurement would be built at the HII Ingalls Shipbuilding shipyard in Pascagoula, Mississippi.

“Our survey asked specifically about the impacts this bundle will have on the supplier base,” said Jack Feenick, a spokesman for the AWIBC. “We also included questions about the overall health of the industrial base, touching on key areas like workforce, training, inflation, and supply chain disruptions. Below are some of the key findings from our survey and attached is an infographic that provides some more insight on the data.”

### **Amphibious Warship Industrial Base Coalition (AWIBC) Survey**

*(Conducted survey from October – November 2024 from a sample of 219 total suppliers.)*

- 65% of amphibious warship suppliers say that the bundle buy will lead to immediate benefits starting in 2025 or 2026.
  
- 82% of suppliers that support both amphibious ships and

submarines agree that bundle buys benefit their capability to deliver on orders as well as their overall capacity.

- 52% say the bundle purchase will strengthen the shipbuilding industrial base to meet the demand of today and tomorrow
- 46% say the bundle purchase enables the hiring, retention, and training of a workforce
- 42% say the bundle purchase helps invest in equipment to ensure quality and on-time delivery
- Consistent with findings from our survey last year, the top three challenges facing suppliers are:
  - Inflation
  - Workforce training and retention
  - Supply chain disruptions
- Currently, only 10% of amphibious warship suppliers are operating at full capacity.
- 74% of suppliers who say they are sole-source/single-source supplier to the Navy are amphib suppliers.

- Suppliers say that multi-ship procurements and earlier AP [advance procurement] funding are most likely factors to drive down material costs, help meet delivery schedules and improve their workforce and facilities.

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## Raytheon is Cranking Out SPY-6 Radars for the Fleet



By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – Raytheon, a sector of RTX, is humming with production of its SPY-6 family of four naval radars as the first three variants are either operational or installed on

ships and the fourth variant enters production.

Scott Spence, Raytheon's vice president for Naval Integrated Solutions, told Seapower that the company is "now really cranking them out" – referring to production and delivery of shipsets of the radars from its Andover, Massachusetts, facility.

The SPY-6(V)1 Air and Missile Defense Radar, which became operational in 2024 on the Flight III Arleigh Burke-class guided-missile destroyer (DDG)USS Jack H. Lucas (DDG 125), is succeeding the SPY-1 as a sensor in new-production the Aegis Combat System and is the main sensor for the Flight III Arleigh Burke-class guided-missile destroyers (DDGs). Spence said that the flat-face fixed array(V)1 is in full-rate production and that Raytheon had delivered nine or ten shipsets so far for installation on the Flight III DDGs.

Spence said the Jack H. Lucas's (V)6 has been going through integrated combat testing with the Aegis Baseline.

The SPY-6(V)2 Enterprise Air Search Radar (EASR) is the rotating version of the radar that will be installed on amphibious platform dock ships, amphibious assault ships, and Nimitz-class aircraft carriers, replacing the SPS-48 and SPS-49 radars. The radar has been installed on future San Antonio-class amphibious platform dock ship USS Richard M. McCool Jr. (LPD 29) and has been accepted by the Navy following the ship's builder's and acceptance trials.

The first SPY-6(V)3 EASR – which included three fixed-face arrays – has been installed on the future Gerald R. Ford-class aircraft carrier USS John F. Kennedy (CVN 79), which is scheduled for delivery to the fleet in 2025. The (V)3 was selected in lieu of the SPY-3 Dual Band Radar that is installed on the Gerald R. Ford (CVN 78).

The SPY-6(V)4 is on contract by the Navy for backfit onto Flight IIA Arleigh Burke-class DDGs. The (V)4 features four

flat-face fixed arrays. The modularity of the system will ease the retrofit as the ships will have the same cooling and power systems of the (V)1. The Navy plans to equip 15 Flight IIA DDGs with the (V)4, the first being the USS Pinckney (DDG 91). Arrays are now being built for the (V)4.

Although unable to release details, Spence said that Raytheon continues to work “hand in glove” with the Navy to tweak the SPY-6 radars to be able to counter the latest threats. The lessons from the Navy’s combat with Houthi missiles and drones over the Red Sea over the last 14 months are being studied by Raytheon.

The SPY-6 “is clearly designed for that environment,” Spence said.

He also said that Raytheon has expand its supply chain to include companies in Japan to ensure reliable sources of some SPY-6 components.

Last summer year Raytheon entered contracts with MELCO (Mitsubishi Electric) and Sampa Kogyo to supply components of the SPY-6 for U.S. Navy ships and any potential future SPY-6(V) customers, said Briana Gabrys, a Raytheon spokeswoman.

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## **Operational Commitments Delay VQ-1’s Sundown Homecoming Ceremony**



EAST CHINA SEA (Sept. 24, 2020) An EP-3E Airborne Reconnaissance Integrated Electronic System (ARIES) II, assigned to the “World Watchers” of Fleet Air Reconnaissance Squadron 1 (VQ-1), transits over the East China Sea. (U.S. Navy photo by MC3 Andrew Langholf)

By Richard R. Burgess, Senior Editor

Oct. 8, 2024

ARINGTON, Va. – A planned homecoming ceremony for two U.S. Navy EP-3E electronic reconnaissance aircraft and their crews today has been postponed because of the Navy’s current operational commitments.

According to the Facebook account of Fleet Air Reconnaissance Squadron One (VQ-1), the ceremony was to welcome home the crews from the final operational deployments of VQ-1 and the EP-3E. The two crews were scheduled to return to the squadron’s home base of Naval Air Station Whidbey Island, Washington.

A Navy directive issued July 18, 2023, scheduled VQ-1’s deactivation for March 31, 2025, but that the squadron was to cease operations by Sept. 30, 2024. Apparently, operational

commitments initially delayed the cessation to Oct. 8, 2024, and now have required continued operations to an undetermined date. The operational commitments likely are related to the hostilities in the Middle East.

According to an Oct. 8 statement to Seapower from the Navy's maritime patrol reconnaissance program office, the last EP-3Es may not be retired until March 2025.

"Due to OPSEC [operations security] we cannot offer the number of aircraft, but there are sufficient aircraft to support the mission through the March 2025 date above," the statement said.

The EP-3Es that have been retired and those that will be retired in the future will be delivered to the 309th Aerospace Maintenance and Regeneration Group (309th AMARG) at Davis-Monthan Air Force Base, Arizona, for storage.

The Lockheed-built EP-3Es are being replaced by the Northrop Grumman MQ-4C Triton high-altitude, long-endurance unmanned aerial vehicles. The Tritons have been operating from Guam and from NAS Sigonella, Sicily, and on Oct. 1, a third Triton site was established in the U.S. Fifth Fleet area of operations. The Navy directive also said that the foreign signals intelligence capability executed by EP-3Es would be assumed by a VUP [special projects patrol squadron].

In addition to the EP-3Es, the Navy operates a handful of P-3C, NP-3C, and NP-3D Orion aircraft flown by Air Test and Evaluation Squadron 30 (VX-30) at NAS Point Mugu, California, and by Scientific Development Squadron One (VXS-1) at NAS Patuxent River, Maryland.

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# Navy to Pursue a Block Buy of 4 Amphibious Warfare Ships



August 15, 2024

By Richard R. Burgess, Senior Editor

WASHINGTON – The secretary of the Navy has notified Congressional leaders that the Navy will pursue a block buy of four amphibious warfare ships – one America-class amphibious assault ship (LHA) and three San Antonio-class amphibious transport dock ships (LPDs) – through fiscal year (FY) 2029.

The move potentially would save U.S. taxpayers “nearly \$1 billion through additional efficiencies,” said U.S. Senator Roger Wicker, R-Mississippi, the highest-ranking Republican on the Senate Armed Services Committee, who released the following statement in response:

“Today is a great day for American shipbuilding and our Navy’s ability to deter China in the years ahead,” Wicker said. “As I have long noted – including in my recent “Peace Through

Strength” report – the multi-ship buy of warships is a cost-effective way to provide stability for the industrial base on key shipbuilding programs. I look forward to seeing these contracts through to their execution, and I believe that additional benefits could be obtained if we increase funding for material procurement in bulk.”

Specifically, the block-buy would encompass the following ships:

- LPD 33 in FY25
  
- LPD 34 in FY27
  
- LHA 10 in FY27
  
- LPD 35 in FY29

Paul Roden, chairman of the Amphibious Warfare Industrial Base Council, issued the following statement regarding the block-buy decision:

“Today is a historic day for the amphibious warship industrial base. Our suppliers have been advocating for a multi-ship buy for years. So, we are thrilled to see lawmakers, the Navy and Marine-Corps listen to our concerns and reach this deal, which will provide the predictable funding that our suppliers urgently need. Not only will this block buy save the taxpayers nearly \$1 billion, but it will provide over 650 companies across 39 states with the stability we need to invest in our skilled workforce, get ahead of inflation and ensure on time deliveries. The companies of the amphibious warship industrial base are extremely proud of their contributions to our national security and will deliver the highest quality parts and services for these future amphibious

warships.”

The three LPDs would be built in the Block II configuration, which features the Raytheon-built SPY-6(V)2 Enterprise Air-Search Radar.

The four ships in the procurement would be built at the HII Ingalls Shipbuilding shipyard in Pascagoula, Mississippi.

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**Q&A: Vice Admiral Andrew J. Tjongson, Commander, Pacific Area and Commander, Defense Force West, U.S. Coast Guard**



U.S. Coast Guard Vice Adm. Andrew Tiongson, commander of Pacific Area, shakes hands with Gen. Angus J. Campbell, Chief of the Defence Force, Australian Defence Force, in Canberra, Australia, Feb. 6, 2023. Tiongson discussed partnerships with ADF to combine efforts to ensure the region is resilient and prosperous. *U.S. Coast Guard | Senior Chief Petty Officer Charly Tautfest*

*Vice Admiral Andrew J. Tiongson assumed command of Coast Guard Pacific Area in Alameda, California on July 8, 2022. He serves as the operational commander responsible for all Coast Guard missions westward from the Rocky Mountains across the Indo-Pacific, Arctic, and Antarctic regions, to the coast of eastern Africa. He concurrently serves as commander, Defense Force West and provides Coast Guard operational support to the Department of Defense and Combatant Commanders.*

*A 1989 graduate of the U.S. Coast Guard Academy, Tiongson has served on board five Coast Guard cutters and a U.S. Navy cruiser, serving as commanding officer of three of the*

*cutters.*

*Tiongson discussed the roles and missions of the Pacific Area with Senior Editor Richard R. Burgess. Excerpts follow.*

**How would you describe the roles of the Coast Guard in the expanse of the Pacific area?**

**TIONGSON:** The Coast Guard, in many ways, fills a little bit of a vacuum within the entire Indo-Pacific region the smaller nations in Oceania, and the Western Pacific for nations like the Philippines, Japan, South Korea, et cetera, and Taiwan, for that matter. That niche that we fill is maritime governance, basically the array of Coast Guard statutory missions: search and rescue, marine environmental response, maritime security law enforcement, fisheries, facilitating commerce, and the global marine transportation system. All of those things are missions that we do day in and day out and, frankly, what I see mostly is nations within the Indo-Pacific that see how we can do that for our country, and they want to copy that [and] learn from it. They want to work with us and emulate how we provide maritime governance to the United States. That's what we get from engaging with a lot of our partners throughout the Indo-Pacific region.

**How does the Coast Guard Pacific Area support U.S. Indo-Pacific Command (INDOPACOM)?**

**TIONGSON:** [Through] that niche that we fill. For example, a lot of what's happening out in the Western Pacific are the coast guards. We see tons of articles about the Philippines coast guard and the PRC [Peoples Republic of China] coast guard interacting with each other. We, as a coast guard, fit right in there and we have very similar missions. So, it makes it easier for us to talk back and forth and we do that with our larger national security cutters. In fact, one of them is departing Hawaii today [May 21] heading into the Western Pacific, and it will have our first trilateral exercise with

the [Republic of] Korea coast guard, Japan coast guard, United States Coast Guard working together to have a regional approach to maritime governance issues in that region.

In other places — Oceania or Blue Pacific Region — our smaller cutters are even more prevalent and better. These small nations' coast guards or navies are akin to these smaller vessels. It's not like we're overwhelming them with a large vessel that comes at your port. In fact, large vessels cannot even fit in some of these ports, but our smaller cutters can. We're able to do subject matter expert exchanges on things like maritime law enforcement, search and rescue, those types of things. In a competition phase, maritime governance is extremely important. To help nations and to work with nations to exhibit maritime governance and proper maritime behaviors is key. I think that INDOPACOM is extremely grateful and wired into all of the things that we do.

Our national security cutters that go into the Western Pacific, the vast majority of the time will be under the tactical control of 7th Fleet and they work with us directly to ensure that we're getting after our nation's strategic goals. And with all the activities we do in the Oceania of Blue Pacific region, we work hand-to-hand with INDOPACOM.

**What are the expectations of the trilateral agreement signed with the coast guards of Japan and the Republic of Korea?**

**TIONGSON:** The expectations are very simple: In a nutshell, we will work together to improve the security, the safety and the prosperity of our shared regions. We have sent [USCGC] Waesche to execute that first implementation with the Korea coast guard, Japan coast guard, and U.S. Coast Guard, but it's not our first trilateral that we've done. We've had great success working with Japan coast guard and Philippines coast guard, all working together, again, for the safety, security, and prosperity of the region as well as our nation, the United States.

As one example, there was an oil spill off of one of the Philippine Islands that rely upon the ocean for subsistence and their economy. The people that helped out the Philippine coast guard and the response to that [included] a five-person U.S. Coast Guard team and a Korea coast guard team, and Japan coast guard sent a couple of folks as well, so it's amazing what you can do with small groups of people in this region. The U.S. Coast Guard commander O-5 running a unified command cell was able to address the issue and help employ all of the resources in the right way to get after that threat to the livelihood of this Philippine island. That woman O-5 ended up being the key adviser to the commandant of the Philippine coast guard and the president of the Philippines.

Not only is it about big ships and aircraft, but it's also about small groups of people that go and provide such expertise, whether it's an exchange of ideas or assistance.



Coast Guard Vice Adm. Andrew Tiongson, commander of Pacific

Area, participates in an area familiarization boat ride in San Diego Harbor with Coast Guard Maritime Security Response Team-West members in San Diego, Feb. 16, 2023. Tiongson conducted an all hands and a unit visit to discuss the importance of MSRT-W missions and operations. *U.S. Coast Guard | Lt. Cmdr. Paul Jansen*

**What is the operational impact of the new Sentinel-class fast response cutters (FRCs) based in Guam?**

**TIONGSON:** The FRCs, first off, are game changers for the Coast Guard in general. Back in the day, we had patrol boats that were limited in terms of the sea states they could handle, the food that they could carry, the number of crew members and certainly their duration at sea. The FRCs have changed that. We are looking at FRCs giving new light on how we can employ those. So, for us, they're very much a game changer, particularly in the vastness of the Pacific Ocean. We have three that are stationed in Guam right now. We have sent them as far as Australia and the Philippines and, along the way, they provide IUU [illegal, unreported, and unregulated] fisheries enforcement. They will also pull into different partner nations and provide subject matter expert exchanges on things like search and rescue, maritime law enforcement, fisheries, humanitarian assistance and disaster response. In addition to that, what really makes them a big game changer for us is the 14 now bilateral agreements we have with nations in the Blue Pacific. Those are shiprider agreements that enable us to take one of their authorities that are underway with us and help that nation by enforcing their laws and regulations against anybody who is trying to take their sovereign resources in their exclusive economic zones [EEZs].

Our partnerships are becoming so strong that, now, in two countries, we have what is called an expanded and enhanced shiprider agreement in which we do not even need a physical human being on board the platform; all we need to do is call into the nation. An example could be a PRC fishing vessel that is in your EEZ fishing. Would you like us to enforce your laws

and regulations, the rules and regulations? A lot of times it comes back, yes, and we exercise that agreement.

And, really, what they are doing is sending a signal that the United States presence is here. We want to become a trusted partner with you and in order to be that trusted partner, we have to be there.

In addition to the three FRCs we have in Guam, the Coast Guard was just appropriated two more, and those two more will go hopefully to Guam. We want to build up Guam with three new FRCs. And then we want to put one in Honolulu, Hawaii.

**What has the USCGC Harriet Lane accomplished since it was based in Hawaii?**

**TIONGSON:** Harriet Lane is a complete game changer for us. Harriet Lane recently completed her inaugural patrol, visiting nations like Samoa, Vanuatu and Papua New Guinea. They have done exactly what I mentioned the FRCs are doing but on a larger scale.

**The Pacific Area is scheduled to receive the first of the offshore patrol cutters. What missions will they be performing?**

**TIONGSON:** We are extremely excited to have new offshore patrol cutters starting out in our AOR [area of responsibility]. This is an incredible program for the Coast Guard and the largest shipbuilding program that we have had since World War II. I had the great opportunity to watch the first one, Argus, being launched late last year. They will provide us with more offshore capacity. Think of all of those types of missions that I mentioned these platforms are going to be doing those types of missions for us globally. They are replacing our medium-endurance cutters, but I believe what we will see is that they will come with a great deal of capability and we will find new ways to employ them that we could not do with our 210-foot and even our 270-foot cutters.

**How have the new HC-130Js aircraft at Barbers Point, Hawaii, added capability to your aviation operations?**

**TIONGSON:** The cockpit avionics upgrades coupled with the efficiencies of the engines and a propeller-type design allow us to fly these HC-130J aircraft higher, get on scene faster and stay on scene longer. When you think in terms of maritime domain awareness and search and rescue, these things are definitely a game changer for our service compared with the HC130H model and the other fixed-wing assets we have had. Yes, we're excited to have those in Barbers Point as well as Kodiak, Alaska, and to be transitioning to them in Sacramento, California.

**What concerns do you have about sustaining your icebreakers until the polar security cutter comes online?**

**TIONGSON:** In a nutshell, there is more and more of a need for U.S. Coast Guard presence in the high latitudes than ever before. I see that in terms of great-power competition up in the Arctic region. I see that in Antarctica, with Chinese PRC research icebreaker vessels that are down there a great deal, and with Chinese expansion on that continent. The U.S. presence is needed. How that presence gets into those areas is via icebreaking. We need them [polar security cutters] fast and we needed them yesterday.

It is a challenge to sustain the two that we have right now. We have one heavy icebreaker, 1970s-vintage Polar Star, which provides icebreaking so that we can resupply our McMurdo station there, run by our National Science Foundation, and several other agencies there at are on that station for the scientific missions. After doing that, she goes right into the drydock and we try to fix everything. This is a vessel that works in the harshest of maritime environments. Am I worried about sustainment of it? Absolutely yes. The Coast Guard cutter Healy, that operates primarily for us in the Arctic, also is aging. She has done a trans-Arctic voyage and is set

up to do yet another one. She runs the same type of schedule as the Polar Star: operations for several months and then a major maintenance period to keep her running.

Recently we were appropriated a commercially available icebreaker. It will help us a great deal in our missions that are Arctic-related. A light icebreaker, it could not handle the thickness of ice in the Antarctic, but definitely will help us out with what the Healy's mission is.

**Is the commercial icebreaker going to be crewed by Coast Guardsmen or by a contract crew?**

**TIONGSON:** That's a great question and we are working through differing courses of action for that. The first thing is we've got to figure out what the crew is going to be and look like. The second thing that has to happen is we have to paint the icebreaker in U.S. Coast Guard markings on the vessel so that people are not confused when they see our American flag flying proudly from it. The third is, over time, we have to militarize the vessel, about it meeting military specifications: the flight deck for landing helicopters, things like that, and certain military specifications for safety and security reasons. It is really a phased approach that happens over time. Although it was just recently appropriated to us, we still have to procure the vessel. We have set up its home port in Juneau, Alaska, in terms of the pier space and then certainly maintenance activities.

**For your missions closer to home, are your forces sufficient or is the number of tasks overwhelming them?**

**TIONGSON:** We are not set up that we can handle all of these things all at once. Right now, the biggest example would be Operation Vigilant Century [OVS], [with Atlantic Area cutters] working on irregular migration coming from Haiti and Cuba for which a lot of Coast Guard resources are out on the seas, ensuring their safety and our security as we move forward. As

we surge into places like that off of Haiti in the Florida Straits area, that means that those assets can't go somewhere else, so that hinders us in looking at different places. Typically, the Atlantic area would provide some of those cutters over to the Eastern Pacific to conduct the counter-drug mission. But, right now, they are not, because they are doing this OVS mission set. And so, we have to come up with unique and innovative ways to try to fill those vacancies. So, yes, we got pressurized to do those things here in defense of the homeland.

I will also offer that the Coast Guard, like the other armed services, has personnel issues in terms of our workforce and recruiting. Although recently we have been having great success and we are doing pretty well, we are still down about 2,500 people and, in our organization, 2,500 is a lot. We have been working very hard to figure out what can we not do in terms of priority of the missions and platforms that will loosen up the pressures on our people so that our people and platforms can focus on the highest risks to our nation. That means that we have laid up some 87-foot coastal patrol boats and did an advanced decommissioning of one of our 50-plus-year-old 210-foot cutters. We have released some of the pressure on the personnel system because now we don't have to fill those billets and positions.



Tiongson speaks at a press conference before the crew of the Coast Guard Cutter Waesche offloads 18,219 pounds of cocaine, worth more than \$239 million, on Dec. 6, 2023. *U.S. Coast Guard*

**Is there anything you would like to add?**

**TIONGSON:** What I would emphasize is I was very specific in the words “a trusted partner.” That’s what we are trying to be throughout the Indo-Pacific region and everywhere from Central America and South America, Arctic nations, Antarctic, and then certainly, Western Pacific, Central Pacific and the Blue Pacific.

One of our key things is that we always want to see the threats and challenges through the eyes of our partners, always meeting them where they are and with what they need. That’s an important phrase there because sometimes, with the U.S. in all of our might, we overwhelm some of these smaller nations. So, always meeting them where they are at with what they need is a very important thing to how engage with different countries. We are getting good support from our

administration and Congress with what we talked about the Indo-Pacific and the Coast Guard. An example already was the Harriet Lane. We talked about the two additional FRCs that were appropriated to us in the FY24 budget. Previous to that, we've increased the number of liaison [personnel] and attaches we have in the region. We've stood up two other Centers of Expertise: The Marine Environmental Response Regional Activity Center and the IUU Fisheries Center of Expertise. These are all people. But again, it's not about scale and aircraft. People engage a lot, provide subject matter expert exchanges, provide training and then they make a big difference throughout the region in terms of us being a trusted partner. On our unfunded priorities list, we have a second kind of Harriet Lane or Indo-Pacific support cutter. And then in our FY25 budget we have two additional FRCs for the Indo-Pacific area. So, a lot of things are happening and it's very exciting to be part of this.

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**NAVCENT Commander: Difficult to Find Houthi Center of Gravity to Hold at Risk**



An F/A-18E Super Hornet from Strike Fighter Squadron (VFA) 211 launches from the Nimitz-class aircraft carrier USS Theodore Roosevelt (CVN 71) during flight operations in the U.S. 5th Fleet area of operations, July 31, 2024. (U.S. Navy photo)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – The Houthi forces who have been attacking shipping in the Red Sea and Gulf of Aden lack a center of gravity, making for deterrence by U.S and partner forces difficult, the commander of U.S. naval forces in the Middle East said in a webinar.

Since November, a few weeks after the October 7 attack on Israel by Hamas terrorists, the U.S. Navy's 5th Fleet, with cooperation from the navies of several allies and partners, has been engaged in protecting commercial shipping through the Red Sea and Gulf of Aden from attacks by ballistic missiles, anti-ship cruise missiles, unmanned aerial vehicles, unmanned surface craft, and unmanned underwater vehicles launched by the Houthi rebels in Yemen.

"We have certainly degraded their capability," said Vice Admiral George Wikoff, commander, U.S. Naval Forces Central Command, commander, U.S. 5th Fleet, and commander, Maritime Forces, speaking in an August 7 webinar sponsored by the Center for Strategic and International Studies and the U.S. Naval Institute and funded by HII.

“However, have we stopped them? No,” Wickoff said, noting Houthi recent attacks on shipping, one of which damaged a commercial ship. “But our mission remains to disrupt their ability and try to preserve some semblance of maritime order while we give an opportunity for policy to be developed against the Houthis.

“The challenge of the deterrence is, obviously, you have to have a center of gravity to hold at risk, and one thing we don’t really know that much about—and we find this through history—is it is very difficult to find a centralized center of gravity that we can hold at risk over time and use that as a potential point of deterrence,” he said. “So, to apply a classic deterrence policy in this particular scenario is a bit challenging.”

Wickoff said the continuing naval operations in the BAM (Babel-Mandeb) Strait region will act as a “shock absorber.”

He noted an almost 50% drop in commercial shipping through the BAM region in the September through December time frame, with a large drop until the beginning of February.

“The reflected the maritime industry’s ability to re-calibrate and re-initiate their routes,” he said. “It’s a couple-months process to take transit patterns that go through the Red Sea and re-route them around the Cape of Good Hope, etc.”

Since the beginning of February there has been a stabilization, with approximately 1,000 ships going through the BAM per month, compared with approximately 2,000 ships per month prior to the Israel-Hamas war, Wickoff noted.

“Right now, the idea is to continue to maintain that decision space, try to preserve where we are right now ... to allow other levers of government, other levers of the international community to pressurize the Houthis to stop what they’re doing in the maritime,” the admiral said.

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# IFS Enterprise Software Supports Shipbuilding, Aviation Management and Maintenance

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. – A global Information technology company has expanded its products in recent years to provide tailored digital enterprise software to shipbuilders, ship repair yards, air arms, and airlines.

IFS is a global enterprise software company “working with some of the biggest, advanced shipbuilders in the world, across portfolio products,” said Matt Medley, IFS global industry director for Aerospace and Defense (A&D), during an interview with *Seapower*.

“We focus on asset-centric and service-centric industries that tend to be highly regulated like aerospace and defense, one of our six core industries,” Medley said. “Shipbuilding here gets a special focus because we actually have two units that work on shipbuilding: the “gray” ships for defense that fall under Aerospace and Defense codes [and] the commercial – the “white ships” – under Engineering and Construction.

“Shipbuilding is always complex, and of course when you add the defense angle onto it, with working with the federal government with all of the contracting rules, [it] becomes incredibly complex,” he said.

IFS, a privately held company based in Sweden, has more than 6,000 employees. Topline revenues topped \$1 billion in 2022, and are set to go to \$2 billion in 2025, said Medley, a former Air Force C-130 pilot. The company's North American headquarters is based in Chicago. The company's products are used by more than 10,000 customer organizations.

The IFS A&D sector is headquartered in Ottawa, Canada. Medley said the company has been growing by a mixture of internal growth and acquisition of other companies, with the A&D sector formed by the 2017 acquisition of a company called MXI, which had developed an asset-management software product called Maintenix used by airlines such as Southwest Airlines. IFS A&D sells its products directly to government, militaries, and defense contractors.

IFS is teamed with Lockheed Martin beginning in 2021 to provide digital transformation of U.S. Navy's maintenance, repair, and overhaul (MRO) legacy systems into "a single, fully modernized and responsive logistics information system," according to a company release. IFS software enhances planning and execution of maintenance by using artificial intelligence, digital twins, and predictive analytics.

IFS is now in the limited-deployment phase for introducing its solutions for the U.S. Navy's aircraft fleet.

"The Navy decided to start with one of IFS's different applications for its first limited deployment," Medley said. "The final solution will be an IFS product. They wanted to crawl before you walk before you run, because Maintenix is incredibly complex, and complex for a reason and that's why it's the Number One in the world in this market, because it has come very, very sophisticated guardrails to make sure that you don't do things incorrectly."

The company's core ERP (enterprise resource planning) IFS Cloud software is used by the shipbuilding and ship repair

industry.

“The prime OEMs [original equipment manufacturers] and the prime contractors are our biggest customers,” Medley said, noting that the list included the three General Dynamics shipbuilders – NASSCO, Bath Iron Works, and Electric Boat – and BAE Ship Repair, Vigor Shipyards, and Austal.

IFS’s solutions for the ship industries include not only the core ERP functions such as accounting and management, but also materials management, subcontracting, project management, product development, engineering, procurement, constructed out-fit, operations, repair, and maintenance.

“We code these solution sets across the breadth of the life cycle of the large asset – everything from design all the way out to sea trials and commissioning, integrating your operations out the entire value chain, forward and backward, and then internally as well with all of your processes all the way down to the shop floor,” Medley said.

Medley said that the sale of a product is the beginning of a relationship, not the end, noting that it’s never “a sale and walk away.”

Like most software companies, IFS uses an “evergreen model” to provide subscription-based ongoing updated software to its customers. The company issues major updates twice per year, in the spring and the fall.