USS Abraham Lincoln Deploys with First Marine Corps F-35C Squadron

An F-35C Lightning II, assigned to the “Black Knights” of Marine Fighter Attack Squadron (VMFA) 314, prepares to land on the flight deck of the aircraft carrier USS Abraham Lincoln (CVN 72). Abraham Lincoln is underway conducting routine operations in the U.S. 3rd Fleet. *U.S. NAVY / Mass Communication Specialist 3rd Class Michael Singley*

SAN DIEGO – The USS Abraham Lincoln (CVN 72) departed on a regularly scheduled deployment Jan. 3 as the centerpiece of a carrier strike group that included the Marine Corps’ first F-35C Lightning II squadron.

The Abraham Lincoln Carrier Strike Group (CSG) is led by the command staff of CSG 3 and consists of Nimitz-class aircraft carrier USS Abraham Lincoln (CVN 72), Carrier Air Wing Nine (CVW-9), the Ticonderoga-class guided-missile cruiser USS

Mobile Bay (CG 53), and the Arleigh Burke-class guided-missile destroyers of Destroyer Squadron 21 (DESRON 21) – USS Fitzgerald (DDG 62), USS Gridley (DDG 101), USS Sampson (DDG 102) and USS Spruance (DDG 111).

CVW-9 includes Marine Fighter Attack Squadron 314 (VMFA-314), the Corps' first F-35C squadron. The deployment marks the second carrier deployment of the F-35C.

The Marine Corps plans to field a total of four F-35C squadrons and have committed two of them to the Tactical Air Integration program of deploying with CVWs.

The USS Carl Vinson (CVN 70) currently is deployed to the Indo-Pacific region with the Navy's first fleet F-35C squadron, Strike Fighter Squadron 147 (VFA-147), on board.

CVW-9 also includes VFA-14, equipped with F/A-18F Super Hornet Strike Fighters; VFAs 14 and 151, equipped with F/A-18Es; Electronic Attack Squadron 133 (VAQ-133), with EA-18G Growler electronic attack aircraft; Airborne Command and Control Squadron 117 (VAW-117) with E-2D Advanced Hawkeye aircraft; Helicopter Sea Combat Squadron 14 (HSC-14) with MH-60S Seahawk helicopters; Helicopter Maritime Strike Squadron 71 (HSM-71) with MH-60R Seahawk helicopters; and a detachment of Fleet Logistics Multi-Mission Squadron 30 (VRM-30), equipped with the CMV-22B Osprey carrier-onboard delivery aircraft.

"The entire CSG 3 team is trained and ready to deter and, if necessary, win conflicts as called upon by our nation's leaders," said Rear Adm. J.T. Anderson, commander, Carrier Strike Group 3, in a release from U.S. 3rd Fleet. "As we leave today on this routine, scheduled deployment, I know the Sailors and Marines of this team will continue to serve this great nation and its people. It is our honor to do so."

NAVSEA Orders Two More Mark VI Patrol Boats for Ukraine

A Mark VI is launched from the amphibious dock landing ship USS Ashland (LSD 48) in the Philippine Sea in February 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Madysson Anne Ritter*

ARLINGTON, Va. — The U.S. Navy has ordered two more Mark VI patrol boats for the government of Ukraine, the Defense Department said.

The Naval Sea Systems Command awarded SAFE Boats International of Bremerton, Washington, a $25.6 million firm-fixed-price modification "for the exercise of options for construction, outfitting, reactivation, and training of two Mark VI patrol boats," the Dec. 30 announcement said.

The order is funded with some of the $125 million Ukraine Security Assistance Initiative funds through the fiscal year 2021 Building Partner Capacity initiative.

In June 2020, the U.S. State Department has approved the possible foreign military sale of up to 16 Mark VI patrol boats and related equipment to Ukraine for an estimated cost of $600 million, the Defense Security Cooperation Agency said. The December order brings the total ordered to date to 12 boats.

“This action reaffirms the U.S. commitment to providing defensive lethal weapons to enable Ukraine to more effectively defend itself against Russian aggression,” the Defense Department said of an earlier sale of Mark VI boats to Ukraine.

The patrol boats will be operated by the Ukrainian navy to defend territorial waters and other maritime interests. They each will be armed with two MSI Seahawk A2 gun systems and two Mk44 cannons and equipped with electro-optical/infrared sensors and loud-speaker systems.

Mark VI patrol boats are used by the Navy Expeditionary Combat Command for escort of high-value ships, coastal patrol, and other maritime security missions.

The boats will be built in Tacoma, Washington, and deliveries are expected to be completed by March 2026.

NAVSEA to Proceed with COBRA

II Littoral Mine-Countermeasures System

COBRA Block II is planned for installation on MQ-8C Fire Scout unmanned aerial vehicles, such as the one shown here on littoral combat ship USS Jackson (LCS 6) in April, 2021. *U.S. NAVY / Ens. Alexandra Green*

ARLINGTON, Va. – Naval Sea Systems Command announced it intends to solicit bids for a contract to design, develop and build a Block II version of the Coastal Battlefield Reconnaissance and Analysis system.

The COBRA Block I is a mine- and obstacle-detection multispectral sensor that is a modular component of the mine warfare mission package for littoral combat ships. It is designed to detect mines from the beach through the surf zone. The COBRA is the intelligence, surveillance and reconnaissance technology component of the planned Assault Breaching System. In March 2009, COBRA Block I was rated mature enough to enter

low-rate initial production. The COBRA was tested on an MQ-8B Fire Scout unmanned helicopter in October 2010. Initial operational capability was achieved in July 2017. Operational testing was completed in April 2018. The Block I was built by Arete Associates.

Block II, planned for installation on the MQ-8C Fire Scout unmanned helicopter, will add night operation capability and full-detection capability of mines in the surf zone out to 200 feet of water depth during a single pass with a high coverage rate.

The COBRA Block II system, when fully developed, will be a battlefield reconnaissance and analysis system designed to conduct aerial tactical reconnaissance in the littoral battlespace for the detection and localization of individual mine-like objects, minefields, minelines and obstacles in the surf zone and beach zone; for the detection and localization of surface and near-surface mine-like objects in very shallow water; and for the detection and localization of surface and near-surface mine-like objects, moored or drifting in shallow water through deep water in day or night, the NAVSEA announcement said.

NAVSEA anticipates the contract award will be for up to three engineering and manufacturing development models and up to five low-rate initial production units of the COBRA Block II.

NAVSEA anticipates releasing a request for proposals in the second quarter of fiscal 2022.

Marine Corps to Cease Deployments, Water Ops of AAV7 Vehicles

An AAV7A1 assault amphibious vehicle conducts a wet-gap amphibious crossing as part of a company-sized infiltration on Camp Lejeune, North Carolina, Aug. 10, 2021. *U.S. MARINE CORPS / Lance Cpl. Jacqueline C. Arre*

ARLINGTON, Va. — The Marine Corps has decided to cease deploying AAV7 assault amphibious vehicles as well as operating them in water during exercises, the Corps said in a release.

The decision is a consequence of a fatal mishap on July 30, 2020, with the sinking of an AAV7 off California, resulting in the deaths of eight Marines and a Navy corpsman.

The AAV7, which entered service in 1972, is the prime amphibious vehicle of the Marine Corps. It has gone through upgrades since. It is being replaced by the Amphibious Combat Vehicle.

The following statement was released by Maj. Jim Stenger, a Marine Corps spokesman:

“The Marine Corps stands by the efficacy of the recommendations that came from the multiple investigations into the AAV mishap from the summer of 2020, and with those recommendations implemented and sustained, the AAV is a safe and effective vehicle for amphibious operations.

“That said, given the current state of the amphibious vehicle program [the program that manages both AAVs and ACVs], the commandant of the Marine Corps has decided the AAV will no longer serve as part of regularly scheduled deployments or train in the water during military exercises; AAVs will only return to operating in the water if needed for crisis response. This decision was made in the interest of the long-term health of the amphibious vehicle programs and future capabilities. The AAV will continue to operate on land; 76% of its tasks are land-based. In doing so, we reserve the capability to reverse this decision should the need arise.

“The Marine Corps will continue deployments with myriad lethal capabilities which currently exist, and we remain committed to fielding the Amphibious Combat Vehicle.

“ACVs were temporarily suspended from open-ocean waterborne operations as we worked to solve an issue that was identified with the towing mechanism. We expect that issue to be resolved soon and for ACVs to return to the water early in the New Year.”

Navy Down-Select for Compact Rapid Attack Weapon Expected in February

The U.S. Navy is expected to soon down-select for the Compact Rapid Attack Weapon, an offensive version of the Very Light-Weight Torpedo, shown here. *NORTHROP GRUMMAN*

ARLINGTON, Va. — The Navy's down-select of a company to manufacture the Compact Rapid Attack Weapon is expected in February 2022, a defense industry official said.

David Portner, Northrop Grumman's senior program manager for undersea weapons, said during a Dec. 15 interview with *Seapower* he expects the contract for building the CRAW will be awarded in March 2022 after the down-select decision. Northrop Grumman in competing for the production contract.

The CRAW is an offensive version of the Very Lightweight Torpedo developed by Penn State Applied Physics Lab. The defensive version is known as the Counter Anti-torpedo Torpedo, which differs from the CRAW only in its software.

Northrop Grumman submitted its response to the October request for proposals at the end of November. At issue is the selection of the company with the best readiness and capability to build the CRAW in production quantities, taking the non-production-designed VLWT prototype – designed by Penn State Applied Physics Lab – into a production design and developing it as an All-Up Round CRAW suitable for manufacturing. Other Transactional Authority will be used to deploy the torpedo to the fleet.

The nine-foot-long VLWT is one third of the size of the Mk54 – the Navy's most advanced light-weight torpedo – and weighs just over 200 pounds, compared with the 608-pound Mk54. With this weight advantage, a platform can carry more torpedoes or carry the same number at longer ranges and give the platform more endurance. The VLWT could be carried by surface, airborne, and undersea platforms, manned and unmanned.

Portner said in an earlier interview the VLWT could be carried by such anti-submarine aircraft as P-8A maritime patrol aircraft, MH-60R helicopters and MQ-8 Fire Scout unmanned aerial vehicles. During an Advanced Naval Technology Exercise in 2018, Northrop Grumman demonstrated the deployment of a VLWT from a surrogate helicopter simulating a Fire Scout.

The torpedo is fitted with a parachute to reduce the shock of impact with the water. The VLWT also could be fitted with a glide wing kit similar to the one on Boeing's HAAWC (High-Altitude Anti-submarine Weapon Concept), which is in development to extend the launch range and altitude as well as precision guidance for the Mk54 torpedo.

Portner said the VLWT also could be deployed from a vessel

such as a littoral combat ship by way of an unmanned surface vehicle or unmanned underwater vehicle. He said the light weight of the CRAW, compared with the MK54, would enable a platform to carry more weapons the same distance or the same number of weapons to a greater range or endurance.

If selected, Northrop Grumman would build the CRAW components in Salt Lake City, Utah, with a key supplier in Colorado. Final integration would be accomplished in Annapolis. Maryland, Portner said.

Reliability Most Challenging Aspect of Large, Medium USV Designs

L3Harris' concept of a medium unmanned surface vessel. *L3HARRIS*

ARLINGTON, Va. — The most challenging aspect of designing

large unmanned surface vessels for the Navy is building reliability of its systems, a senior defense industry official said.

“We can solve the autonomy challenge,” said Kevin Knowles, senior manager of strategic growth and USV team lead for Northrop Grumman Mission Systems, in a Dec. 14 interview with Seapower, discussing the company’s participation in the concept designs for the Navy’s Large USV and Medium USV. “How do we improve reliability, to put a ship to sea without a crew.”

Knowles noted an Arleigh Burke-class guided missile destroyer has a crew of about 300, with a third of those devoted to keeping the ship running. Without a crew preforming the routine preventative maintenance and repairs, reliability of systems in a USV becomes even more paramount, he said. Even when optionally manned, most of the personnel on board would oversee force protection.

The Navy is planning on adding to its fleet the LUSV and MUSV. The LUSV essentially will be a missile shooter, with banks of vertical launch systems. The smaller MUSV is intended for a reconnaissance and surveillance role, with an array of sensors, many of them in containers that can be switched out.

Northrop Grumman is teamed with two of the design teams awarded concept design contracts for the LUSV. Not a shipbuilder, its contributions would be most notable in mission systems and payloads. The team lead primes are Austal USA, Huntington Ingalls, Lockheed Martin, Fincantieri, Bollinger and Gibbs & Cox.

Knowles said a second challenge is the deliberate pace at which the Navy is proceeding with the programs, keeping the defense industry pressed to keep up. He noted some in Congress think the Navy is moving too fast, encouraging it to prove the technology before production.

He said the Navy will use a land-based test site at the Naval Surface Warfare Center Philadelphia Division to integrate and test the propulsion and other systems planned for the LUSV.

Developments in aviation also are being factored in as solutions to design challenges. Knowles said components of systems developed for the F-35 Lightning II strike fighter can be adapted to the USVs, offering the advantages of light weight and low energy usage.

The LUSV and MUSV likely will emerge with a common control system, he said, possible with many aspects of the Common Control System in work for the Navy's unmanned aerial systems.

Another challenge for LUSVs and MUSVs is repair at sea. Such concepts as fly-away teams dispatched to the vessel could be considered.

Knowles praised the Navy's program office, PMS-406, for keeping the prime contractors informed with the latest data and requirements needed for their designs.

Schultz: Two FRCs Soon to Depart for Basing in Persian Gulf

The U.S. Coast Guard commissioned the USCGC Emlen Tunnell (WPC 1145), Patrol Forces Southwest Asia's fourth 154-foot Sentinel-class cutter, into service at Penn's Landing in Philadelphia on Oct. 15. The ship will soon be bound for basing in Bahrain along with the USGCG Glenn Harris (WPF 1144). *U.S. COAST GUARD / Clinton Muir*

ARLINGTON, Va. — The second pair of Sentinel fast-response cutters are soon to depart U.S. waters on a voyage across the Atlantic Ocean bound for permanent basing in the Persian Gulf.

Coast Guard Commandant Karl Schultz, speaking Dec. 8 at a Navy League Special Topic Breakfast, said the two 154-foot-long FRCs will be escorted across the ocean by the USCGC Thetis (WMEC 910), a Famous-class medium-endurance cutter that was topping off with fuel in Puerto Rico. Schultz said that after the escort mission the Thetis will be operating off Africa.

The two FRCs, USCGC Glenn Harris (WPC 1144) and USCGC Emlen Tunnell (WPC 1145), will replace two of the four remaining

Island-class 110-foot-long patrol boats in Patrol Forces Southwest Asia at their base in Bahrain.

Earlier this year, the first two FRCs assigned to the Persian Gulf, USCGC Charles Moulthrope (WPC 1141) and USCGC Robert Goldman (WPC 1142), were escorted across the Atlantic by the national security cutter USCGC Hamilton (WMSL 753).

The first two FRCs in the Gulf replaced the Island-class patrol boats USCGC Adak (WPB 1333) and USCGC Aquidneck (WPB 1309), which were decommissioned on June 15 for transfer to Indonesia.

Patrol Forces Southwest Asia conducts maritime security patrols in the Persian Gulf in concert with the U.S. 5th Fleet and other allies and partners

The voyage to Bahrain from the U.S. East Coast covers 9,000 nautical miles.

Planning Underway for Pearl Harbor Naval Shipyard Detachment Guam

The U.S. Navy is planning to establish a detachment of the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility in Guam. *NAVAL SEA SYSTEMS COMMAND*

ARLINGTON, Va. – Planning is underway for the establishment in Guam of a detachment of the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY & IMF), the yard's assistant project superintendent for Execution Planning said Nov. 30.

The need for the detachment in Guam is to "close the existing maintenance gaps in executing submarine maintenance in Guam," said Brandon Wright, the assistant project superintendent.

The naval base in Apra Harbor, Guam, is the home to five Los Angeles-class attack submarines and two submarine tenders which support U.S. Pacific Fleet operations in the Western Pacific and Indian Ocean. The establishment of a PHNSY & IMF detachment underscores the growing importance of Guam in countering the growing Chinese naval power in the region.

Wright said in September 2019 "a comprehensive 221-page study,

released by Beth Kuanoni and her team, identified the workforce, training, facilities, and equipment requirements needed to provide the capacity and capabilities for a PHNSY & IMF detachment in Guam."

The detachment was approved in December 2019, which led to Phase I of the Guam 2025 Plan, Wright said, and the formation of the Guam Implementation Team (GIT).

"Under the leadership of GIT director Alex Desroches, the team is identifying facility needs that include shop workspaces, administrative and management spaces, equipment, information technology, material spaces and storage. In parallel with the temporary facility build-up, military construction projects are in place for permanent detachment facilities with a target end date of 2028," Wright said.

"The biggest challenge is the grand scope of requirements necessary to stand up a shipyard detachment in a remote location," Desroches said. "This includes everything from an organizational change request and approval through the Office of the Chief of Naval Operations to identifying and securing the resource requirements in the program objective memorandum and budget, to developing strategies to recruit and fill billets in Guam, and developing local processes for material, work execution and work certification."

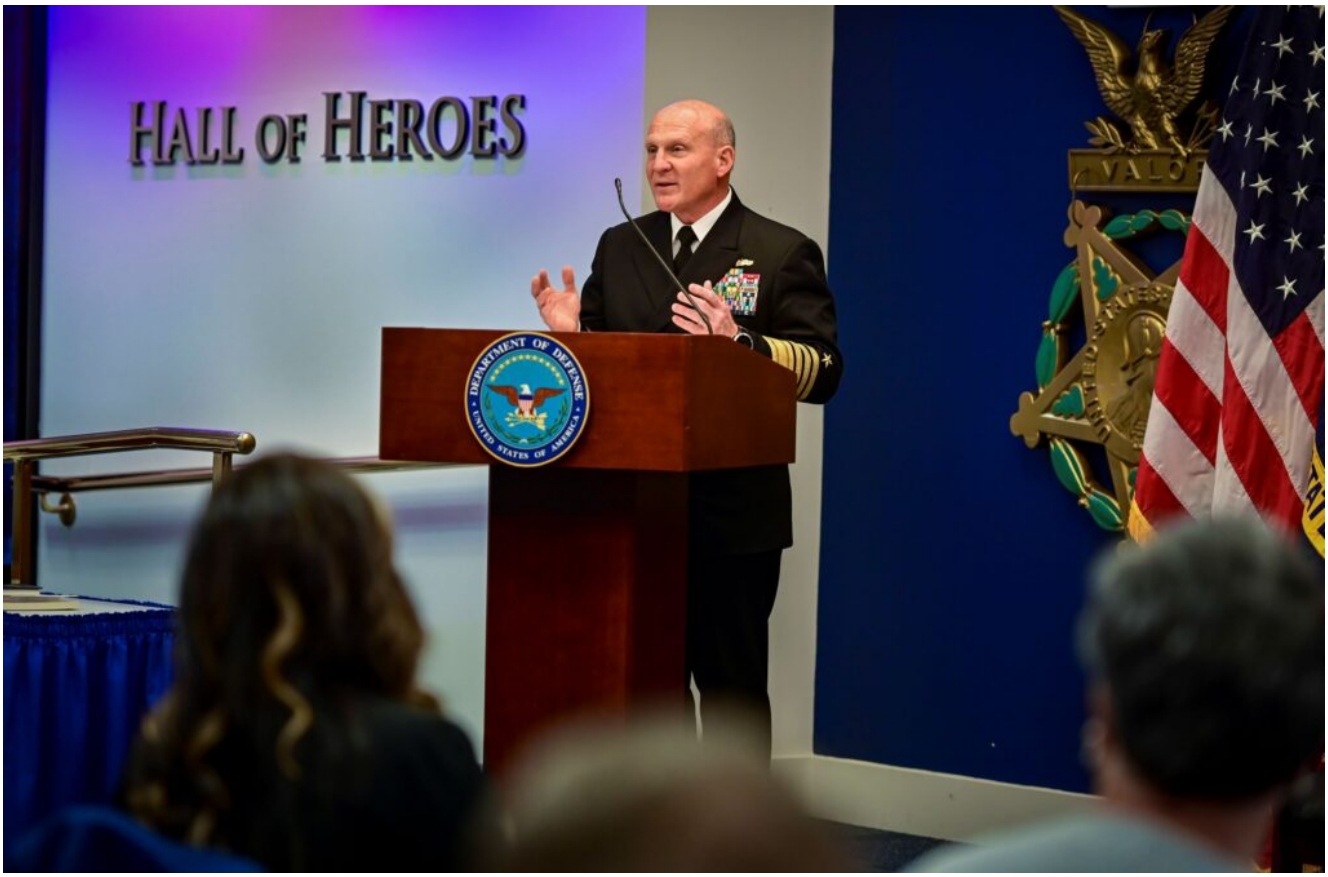
When fully manned, the Guam detachment will include 170 civilian workers and 400 military personnel.

"Civilian employees will provide management, guidance, training, mentoring and development of Sailors, who will be the primary wrench-turning workforce, Wright said.

"The Guam Detachment is unique and we can't use the current templates being used at Fleet Maintenance in Pearl Harbor, Portsmouth Naval Shipyard Detachment in Point Loma or the Puget Sound Naval Shipyard Detachment in Yokosuka," Desroches said. "The primary workforce will consist of active-duty

Sailors who have transferred from the ship tenders to the shipyard detachment, as well as expeditionary maintenance support needs and additional issues associated with Guam's remote location. We are building a new organization from scratch that is at the tip of the spear, supporting five forward-deployed submarines with the highest optempo in the fleet."

CNO, CMC: Training Systems Need to Be Linked Like Operational Systems



Chief of Naval Operations Adm. Mike Gilday, shown here delivering remarks during the Vice Adm. James Bond Stockdale Leadership Award ceremony in the Pentagon. *U.S. NAVY / Mass*

Communication Specialist 1st Class Sean Castellano
ARLINGTON, Va. — The systems used to train Sailors and Marines need to be linked like their operational counterparts to make training realistic and relevant, the uniformed leaders of the Navy and Marine Corps said.

Chief of Naval Operations Adm. Michael M. Gilday and Commandant of the Marine Corps Gen. David H. Berger were participating Nov. 30 in a fireside chat at the Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) in Orlando, Florida. They covered a wide range of topics related to training and simulation.

The two service chiefs said as their services proceed with increased integration and distribution and work together as a naval force, their training systems need to be linked to provide the realism needed to develop warfighting proficiency.

Berger pointed out that proprietary training systems pose the same challenge to integration as operational systems.

"How do we link them together?" he asked the audience.

Gilday pointed out the need for getting better at integrating lessons learned in exercises. He referred to the insights gained over the past year in fleet battle problems and fleet exercises, including a global large-scale exercise involving five fleets and 30,000 Sailors and Marines.

"As we develop those capabilities, there needs to be a continuous feedback loop … getting real-time feedback from operators," Gilday said, noting the services also need the capability to record the training to enhance critiques and learning from the training.

What "live virtual constructive [LVC] training has allowed us to do is to test ourselves, to mature our warfighting concepts, to hone our skills, to sharpen those skills, to

learn from them," he said.

"We need the training capabilities that we're going to invest in to be realistic and relevant," he said. "So, to that end, they need to be based on physics-based performance aspects, not only of our forces but of potential adversaries.

"We need to rely on LVC more and more," Gilday said, noting the increasing encroachment on training ranges "is just a fact of life" that can be accommodated by increased use of LVC.

He said it "is easy to take your eye off the training piece" in the competing demands of manning, training, equipping and supplying a warfighting force.

Berger stressed the urgency of increasing the pace of improving training capabilities, arguing, "we cannot be comfortable going at a comfortable, deliberate pace."

The CMC also said training must be elevated in priority from its current state, and personnel must not only train to become proficient on their platforms but be able to out-think adversaries.

Berger pointed out in aviation training, student pilots start together in training but proceed at different paces toward graduation according to their proficiency. He said other warfare communities may need to adopt the same concept. He also pointed out that in many training pipelines, there are no incentives to learn faster or learn more, saying "we're not built for that right now."

Marine F-35B Squadron Completes Historic Deployment on HMS Queen Elizabeth

U.S. Marines with Marine Fighter Attack Squadron (VMFA) 211 conduct pre-flight checks on an F-35B Lightning II on the flight deck of HMS Queen Elizabeth in the Mediterranean Sea on Nov. 24. VMFA-211 aircraft landed at Naval Station Rota as the first stop on their redeployment to Marine Corps Air Station Yuma, Arizona. *U.S. MARINE CORPS / 1st Lt. Zachary Bodner*

ARLINGTON, Va. — The U.S. Marine Corps F-35B squadron that deployed on board the U.K. Royal Navy aircraft carrier departed the ship last week for Naval Station Rota, Spain, from which the squadron would return to its home base of Marine Corps Air Station Yuma, Arizona.

Marine Fighter Attack Squadron 211 (VMFA-211) — known as the Wake Island Avengers — completed a six-month deployment on board HMS Queen Elizabeth to the Western Pacific, Indian

Ocean, and Mediterranean Sea as a unit of the U.K. Carrier Strike Group.

According to a spokesperson of the HMS Queen Elizabeth, VMFA-211 and its Royal Air Force/Royal Navy counterpart, the Dambusters of 617 Squadron, flew 1,278 sorties, "clocking up more than 2,200 hours in skies around the globe. They also carried out 44 missions in support of the U.S.-led Operation Inherent Resolve – conducting air strikes against Daesh [Islamic State]."

"The 10 F-35B of VMFA-211 undertook their final launch from HMS Queen Elizabeth bringing to a close 16 months of integration with the United Kingdom Carrier Strike Group," said Capt. James Blackmore, Royal Navy Air Wing and Strike Warfare Commander. "Embarked for the whole of CSG21, forging ever-greater links between the U.K. and the U.S., VMFA-211 and the 200-plus Marines have been an integral part of the inaugural deployment. Operating with a range of allies, especially the U.S., provides an invaluable opportunity to gain further experience of the highly capable Lightning F-35B with Merlin and Wildcat helicopters from the Queen Elizabeth-class carriers. I wish the Wake Island Avengers well with their future operations."

"The CSG21 deployment has seen VMFA-211, a U.S. Marine Corps F-35B squadron, integrated throughout," said Commodore Steve Moorhouse, commander, U.K. Carrier Strike Group. "It has been the most tangible demonstration of the U.K. and U.S. special relationship and our united efforts to ensure stability, security and freedom of the seas. As the U.K. Carrier Strike Group says farewell to our Marine Corps colleagues, I wish to thank them for their commitment, loyalty, professionalism and great humor. The achievements on this deployment have been ground-breaking and raised the bar in terms of integration. As the saying goes; if you want to go fast, go alone but if you want to go strong then go together. Semper fidelis."