Fire Breaks Out on Icebreaker Polar Star 650 Miles North of Antarctica

ALAMEDA, Calif. – The 150-member crew of the U.S. Coast Guard Cutter Polar Star fought a fire at about 9 p.m. PST Feb. 10 that broke out in the ship's incinerator room about 650 miles north of McMurdo Sound, Antarctica, the Coast guard Pacific Area said in a Feb 28 release.

After initial response efforts using four fire extinguishers failed, fire crews spent almost two hours putting out the fire. Fire damage was contained inside the incinerator housing, while firefighting water used to cool exhaust pipes in the surrounding area damaged several electrical systems and insulation in the room. Repairs are already being planned for the Polar Star's upcoming maintenance period. The incinerator will need to be fully functional before next year's mission.

No injuries were reported, and the cause of the fire is under investigation.

"It's always a serious matter whenever a shipboard fire breaks out at sea, and it's even more concerning when that ship is in one of the most remote places on Earth," said Vice Adm. Linda Fagan, commander of the U.S. Coast Guard's Pacific Area. "The crew of the Polar Star did an outstanding job – their expert response and determination ensured the safety of everyone aboard."

Commissioned in 1976, the 43-year-old icebreaker is operating beyond its expected 30-year service life. The Polar Star crew recently completed Operation Deep Freeze, an annual joint military service mission in support of the National Science Foundation, the lead agency for the United States Antarctic Program. Since 1955, U.S. Indo-Pacific Command has assisted in

providing air and maritime support throughout the Antarctic continent.

This year marks the 63rd iteration of the annual operation, and the Polar Star crew departed their homeport of Seattle Nov. 27 for their sixth deployment in as many years and traveled more than 11,200 miles to Antarctica.

Upon arrival, the Polar Star broke nearly 17 miles of ice, 6 to 10 feet thick, to open a channel through McMurdo Sound. Once complete, the crew refueled at McMurdo Station, the main U.S. logistics hub in Antarctica. The ship also provided a six-hour familiarization cruise in McMurdo Sound to 156 randomly selected station personnel.

On Jan. 30, the Polar Star escorted the containership Ocean Giant through the channel, enabling a 10-day offload of nearly 500 containers with 10 million pounds of goods that will resupply McMurdo Station, Amundsen-Scott South Pole Station and other U.S. field camps.

The Feb. 10 fire was not the first engineering casualty faced by the Polar Star crew this deployment. While en route to Antarctica, one of the ship’s electrical systems began to smoke, causing damage to wiring in an electrical switchboard, and one of

the ship’s two evaporators used to make drinkable water failed. The electrical switchboard was repaired by the crew, and the ship’s evaporator was repaired after parts were received during a port call in Wellington, New Zealand.

The ship also experienced a leak from the shaft that drives the ship’s propeller, which halted icebreaking operations to send scuba divers into the water to repair the seal around the shaft. A hyperbaric chamber on loan from the U.S. Navy aboard the ship allows Coast Guard divers to make external emergency repairs and inspections of the ship’s hull at sea.

The Polar Star also experienced shipwide power outages while breaking ice. Crewmembers spent nine hours shutting down the ship's power plant and rebooting the electrical system to remedy the outages.

The U.S. Coast Guard maintains two icebreakers – the Coast Guard Cutter Healy, which is a medium icebreaker, and the Polar Star, the only U.S. heavy icebreaker. If a catastrophic event, such as getting stuck in the ice, were to happen to the Healy in the Arctic or to the Polar Star near Antarctica, the Coast Guard is left without a self-rescue capability.

Russia by contrast operates more than 40 icebreakers – several of which are nuclear-powered.

Reserved for Operation Deep Freeze each year, the Polar Star spends the Southern Hemisphere summer breaking ice near Antarctica, and when the mission is complete, the Polar Star returns annually to dry dock to complete critical maintenance and repairs in preparation for the next Operation Deep Freeze mission. Once out of dry dock, the ship returns to Antarctica, and the cycle repeats.

The Coast Guard has been the sole provider of the nation's polar icebreaking capability since 1965 and is seeking to increase its icebreaking fleet with six new polar security cutters to ensure continued national presence and access to the Polar Regions.

"While we focus our efforts on creating a peaceful and collaborative environment in the Arctic, we're also responding to the impacts of increased competition in this strategically important region," Coast Guard Commandant Adm. Karl Schultz said. "Our continued presence will enable us to reinforce positive opportunities and mitigate negative consequences today and tomorrow."

After leaving Antarctica, the Polar Star crew arrived in New Zealand for a port call, and they are now en route to their

homeport of Seattle.

Navy to Commission Littoral Combat Ship Charleston

ARLINGTON, Va. – The Navy will commission its newest Independence-variant littoral combat ship, the future USS Charleston (LCS 18), during a 10 a.m. ceremony on March 2 at Columbus Street Terminal in Charleston, S.C., the Defense Department said in a Feb. 27 release.

U.S. Sen. Tim Scott (R-S.C.) will deliver the commissioning ceremony's principal address. Charlotte Riley, wife of former Charleston Mayor Joe Riley, is the ship's sponsor and she will continue the time-honored Navy tradition of giving the first order to "man our ship and bring her to life!"

"The future USS Charleston is proof of what the teamwork of all of our people – civilian, contractor and military – can accomplish together," Navy Secretary Richard Spencer said. "This ship will extend the maneuverability and lethality of our fleet to confront the many challenges of a complex world, from maintaining the sea lanes to countering instability to maintaining our edge against renewed great power competition."

The name Charleston has a long and storied history in the Navy. The first Navy ship to bear the name Charleston was a row galley that defended the coast of South Carolina during the Quasi-War with France. The second Charleston (C-2) was a protected cruiser that received the surrender of Guam during the Spanish-American War. The third Charleston (C-22) was a St. Louis-class protected cruiser that performed escort and troop transport duties in World War I. The next Charleston (PG

51) was an Erie-class patrol gunboat that earned the Asiatic-Pacific Campaign Medal with one battle star for her service in the northern Pacific during World War II. The fifth Charleston (AKA 113/LKA 113) was an amphibious cargo ship that served during the Vietnam War.

The future USS Charleston is a fast, agile, focused-mission platform designed for operation in near-shore environments yet capable of open-ocean operation. It is designed to defeat asymmetric “anti-access” threats such as mines, quiet diesel submarines and fast surface craft. The ship will be homeported in San Diego.

The LCS class consists of two variants, the Freedom variant and the Independence variant, designed and built by two different industry teams. The Freedom team is led by Marinette, Wis.-based Lockheed Martin (the odd-numbered hulls). The Independence team is led by Mobile, Ala.-based Austal USA (LCS 6 and the subsequent even-numbered hulls).

The commissioning ceremony, using hashtag #USSCharleston, can be viewed on the Navy Live blog at http://navylive.dodlive.mil.

AN/AQS-20C Sonar System Completes Developmental Testing

PANAMA CITY, Fla. – The Navy completed developmental testing for the AN/AQS-20C mine-hunting sonar system at Naval Surface Warfare Center, Panama City Division (NSWC PCD), on Feb. 26, the Program Executive Office Unmanned and Small Combatants

Public Affairs announced in a Feb. 27 release.

The AQS-20C is the next generation of the AN/AQS-20 system designed to be incorporated into the Littoral Combat Ship Mine Countermeasures Mission Package. The system consists of four sonar arrays: two side-looking arrays, a gap-filler sonar array and a forward-looking sonar array, all providing simultaneous detection, localization and classification of bottom mines, close-tethered moored mines and volume-moored mines.

The system delivers high-definition images of bottom mines, providing the operator with both range and contrast data that combine to form a three-dimensional image during post-mission analysis to aid in mine identification.

Developmental testing verifies that a system's design meets all technical specifications and that all contract requirements have been met. During testing, the Raytheon-developed towed sonar sensor conducted 12 underway missions in various operational modes and at different depths at four separate NSWC PCD test ranges. The missions were conducted aboard the test vessel M/V Patriot.

The AQS-20C will be integrated with and deployed from the Mine Countermeasures Unmanned Surface Vehicle (MCM USV), a long-endurance, semi-autonomous, diesel-powered, all-aluminum surface craft that supports the employment of various mine countermeasure payloads.

The MCM USV can be launched and recovered by the LCS, from other vessels of opportunity or from shore sites to provide minesweeping, mine-hunting and mine neutralization capabilities. The MCM USV is undergoing developmental testing as a component of the Unmanned Influence Sweep System at the South Florida Test Facility in Fort Lauderdale, Fla.

Test results will undergo scoring and performance assessment, leading up to a final developmental testing report that is

expected to be finished this spring. Findings from this report will be used for future performance improvements of the system.

Mercury Systems Receives $5.5M in Follow-on Orders from Navy for DRFM Jammers

ANDOVER, Mass. – Mercury Systems Inc. announced that it received an additional $5.5 million in follow-on orders against its previously announced $152 million five-year sole-source basic ordering agreement to deliver advanced Digital RF Memory (DRFM) jammers to the U.S. Navy.

The orders were received in the second and third quarters of the company's fiscal 2019 are expected to be delivered over the next several quarters.

"These orders reflect the U.S. Navy's continuing commitment to the advancement of our electronic warfare test and training capabilities," said Mark Bruington, vice president and general manager of Mercury's electronic warfare and mission solutions group.

"Recent electronic attacks by known adversaries have sparked a renewed commitment to maintaining U.S. superiority in electronic warfare. Our ongoing efforts to design, develop and produce innovative DRFM jammers directly supports the growing need to effectively train U.S. warfighters and keep U.S. electronic protection technology at the leading edge."

BAE Systems Updates F-35 Electronic Warfare Systems

NASHUA, N.H. – BAE Systems reached a critical program milestone with the successful insertion of new technology into its electronic warfare (EW) systems for the global fleet of Lockheed Martin F-35 Lightning II fighter aircraft, the company announced in a Feb. 28 release. Upgrades to the AN/ASQ-239 system position it to meet future capability requirements and improve warfighters' ability to conduct critical missions in contested airspace.

The improved EW system delivers the world-class functionality of the previous system in a smaller footprint, reducing volume and power requirements – creating space for Block IV modernization upgrades. The system update also resolves issues with manufacturing obsolescence that would have otherwise required costly redesign work.

The company's capacity expansion strategy – including a $100 million investment in 80,000 square feet of state-of-the-art manufacturing space, process automation and the growth of its highly skilled electronic warfare workforce by more than 23 percent – enabled BAE Systems to become the first F-35 supplier to insert updated technology into its systems at full production speeds, delivering 11 systems monthly and ramping production to match aircraft production.

The Digital Channelized Receiver/Techniques Generator and Tuner Insertion Program (DTIP) technology was introduced into BAE's manufacturing process in 2018, with the first deliveries starting in July. The team is consistently providing 11 shipsets per month, enabling the company to continue on-time

delivery to its customer.

“We’ve delivered almost 400 EW systems to date, and now we’ve updated the architecture and are manufacturing it at a high rate of production. This technology insertion gives the EW system room to grow and will help the F-35 maintain its dominance of the electromagnetic spectrum,” said Deborah Norton, vice president of F-35 Solutions at BAE Systems. “The successful insertion of DTIP was the result of the outstanding focus, dedication and teamwork of our engineering and production teams working in close coordination with our customer.”

The advanced F-35 EW system is a proven digital electronic warfare/countermeasures suite that provides pilots with real-time battlespace situational awareness and rapid-response capabilities. The ASQ-239 system provides fully integrated radar warning, targeting support and self-protection capabilities to engage, counter, jam or evade threats to improve survivability and mission effectiveness. The system builds on BAE Systems 60-plus years of EW experience and legacy of providing 13,500 tactical systems for more than 80 different platforms, including F-22, F-16, F-15, B-1, B-2 and classified platforms.

Corps, DoD Test Office Differ on Effectiveness of New JLTV

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

said Feb. 27.

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

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

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

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

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

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

Oshkosh Defense in 2015.

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

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

for maintainers and a 56-hour package for vehicle operators. Operator training and electronic technical manuals also have been completed.

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

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

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

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

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

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

Rodgers said he expects to have fielded 250 to 300 JLTVs by

end of this fiscal year and to deliver about 1,000 in fiscal 2020.

Coast Guard Cutter Vigilant Crew Returns Home After Caribbean Patrol

CAPE CANAVERAL, Fla. – The crew of the Coast Guard Cutter Vigilant returned home Feb. 26 to Cape Canaveral after a two-month Caribbean patrol.

Vigilant's crew returned to their homeport of Cape Canaveral, concluding a patrol in which the crew enforced U.S. federal laws by conducting numerous boardings throughout the Caribbean while working with other government agencies and international partners to increase national security.

While at sea, the crew disrupted the illegal and perilous voyages of 100 Haitian migrants and ensured their safe return to their home country. Vigilant's crew also saved the lives of three men who had been lost at sea for four days without food and water and returned the survivors to their home country after providing necessary medical attention.

"Maintaining and operating a 54-year-old ship requires great effort and a lot of dedication from everyone onboard," said Cmdr. Jerome Dubay, Vigilant's commanding officer. "This crew continuously meets the challenge, making mission success possible. I am proud of the compassion and professionalism our crewmembers displayed during every boarding and while assisting the migrants back to their country."

The Vigilant is a multimission 210-foot Medium Endurance Cutter whose missions include illegal drug and migrant interdiction as well as search and rescue. The Vigilant patrols throughout the Caribbean basin and Atlantic seaboard to ensure safety of life at sea and enforce international and domestic laws.

Navy Picks BAE Systems to Develop Cyber Defenses

MCLEAN, Va. – The Navy has chosen BAE Systems to compete for future cyber-engineering task orders awarded under a seven-and-a-half-year, indefinite-delivery/indefinite quantity (IDIQ) contract, according to a BAE release.

The contract is intended to be used by naval, joint and national agencies seeking lifecycle service support for command, control, communications, computers and combat systems. Additional task orders may be awarded to improve the capabilities and security of various signals intelligence, imagery intelligence, electronic warfare, surveillance and reconnaissance systems.

“This award creates new opportunities for us to showcase our expertise in cyber-threat exploitation and analysis, computer network defense and security-focused systems engineering,” said Kris Busch, who is vice president of BAE Systems’ Integrated Defense Solutions business.

“We are also introducing new advanced analytics, artificial intelligence and machine-learning solutions that will further improve our nation’s ability to defend against future land, sea, air, space, cyber and electromagnetic warfare threats.”

The award also may be used to develop, test, produce and field next-generation autonomous and unmanned missions systems, according to BAE Systems, which is one of 10 companies chosen to compete for task orders awarded under the IDIQ, managed by Space and Naval Warfare Systems Center Atlantic. The maximum value for all future task orders awarded under the contract is $898 million.

Coast Guard Cutter Returns Home After Seizing $43 Million in Cocaine

VIRGINIA BEACH, Va. – The crew of Coast Guard Cutter Dependable returned home to Virginia Beach, Va., on Feb. 25 after a 59-day patrol in the eastern Pacific Ocean, the Coast Guard 5th District said in a Feb. 26 release.

While deployed, Dependable's crew aided Joint Interagency Task Force South in conducting counter-drug and alien migrant interdiction operations.

During their patrol, Dependable's boarding team intercepted a go-fast vessel off the coast of Mexico that was specially fitted to smuggle contraband. Once on scene, the boarding team confirmed that the vessel was carrying narcotics along with three suspected drug smugglers. The interdiction resulted in the seizure of about 1,235 pounds of cocaine worth an estimated street value of $18 million.

Dependable's crew also worked alongside four partner assets to patrol an operational area roughly the size of the U.S. The cutter's crew worked with the U.S. Navy and Customs and Border

Protection Maritime Patrol Aircraft to conduct aerial surveillance alongside other Coast Guard cutters patrolling the region. As a result of these collaborations, Dependable's crew was able to assist Coast Guard Cutter Alert's crew with a transfer of drugs and suspected smugglers apprehended in previous interdictions.

The Dependable crew also leveraged the cutter's embarked Helicopter Interdiction Tactical Squadron (HITRON), the members of which launched in an MH-65 Dolphin helicopter and disrupted a drug-smuggling operation. The squadron seized an estimated 1,653 pounds of cocaine worth about $25 million and intended for delivery to Mexico.

The Dependable crew sailed 12,904 miles and traveled nearly as far south as the Galapagos Islands and as far west as Acapulco, Mexico. In addition to the cutter's permanent crewmembers, teams from Tactical Law Enforcement Team South, based in Miami, and HITRON, based in Jacksonville, Fla., were aboard for the patrol. Each team provided expertise regarding maritime law enforcement and aerial use of force.

The Virginia Beach-based Cutter Dependable is a 210-foot Reliance-class medium-endurance cutter with a permanent crew of 77. They conduct homeland security missions in the offshore waters of the Western Hemisphere, from New England to the Caribbean Sea and Eastern Pacific.

Having surpassed its 50th year of service to America last November, Dependable and the other 26 medium-endurance cutters are slated for replacement by new Offshore Patrol Cutters beginning in 2021.

NNSA Completes First Low-Yield W76-2 Nuclear Warhead for Trident Missile

WASHINGTON – The Department of Energy's National Nuclear Security Administration (DOE/NNSA) successfully completed the First Production Unit (FPU) of the W76-2 warhead on Feb. 22 at the Pantex Plant in Amarillo, Texas, according to a NNSA release on Feb. 25.

The W76-2 FPU represents NNSA's ability to achieve a significant program milestone in support of a national security initiative requested by the president in the 2018 Nuclear Posture Review.

"NNSA is fully committed to meeting the requirements of our partners at the Department of Defense," said Dr. Charles P. Verdon, NNSA's deputy administrator for defense programs. "The W76-2 will allow for tailored deterrence in the face of evolving threats."

The W76-2 program is a modification of the W76-1 warhead to provide a low-yield, sea-launched ballistic-missile warhead capability.

NNSA is on track to complete the W76-2 Initial Operational Capability warhead quantity and deliver the units to the Navy by the end of fiscal 2019.