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.