



National Transportation Safety Board

Marine Accident Brief

Fire aboard Fish Tender *Logger*

Accident type	Fire/Explosion	No.	DCA18FM030
Vessel name	<i>Logger</i>		
Location	Bering Sea, about 55 miles west of Port Moller, Alaska 55°54.10' N, 162°10.59' W		
Date	July 28, 2018		
Time	0500 Alaska daylight time (coordinated universal time – 8 hours)		
Injuries	None		
Property damage	\$450,000 est.		
Environmental damage	None reported		
Weather	Visibility 10 miles, light rain, winds west-southwest 17 knots, seas 6–8 feet, air temperature 54°F, water temperature 51°F, sunrise 0646		
Waterway information	The Bering Sea is north of the Alaska Peninsula and the Aleutian Islands, which form an island chain in the north Pacific Ocean.		

On July 28, 2018, about 0500 local time, the fish tender *Logger* caught fire while under way in the Bering Sea off the coast of the Alaska Peninsula, about 55 miles west of Port Moller, Alaska.¹ The crew of three attempted to fight the fire with portable extinguishers; however, unsuccessful, they evacuated to a nearby fishing vessel that had been sailing with them. There were no reports of injuries or pollution. The *Logger*, valued at an estimated \$450,000, eventually sank and was declared a total loss.



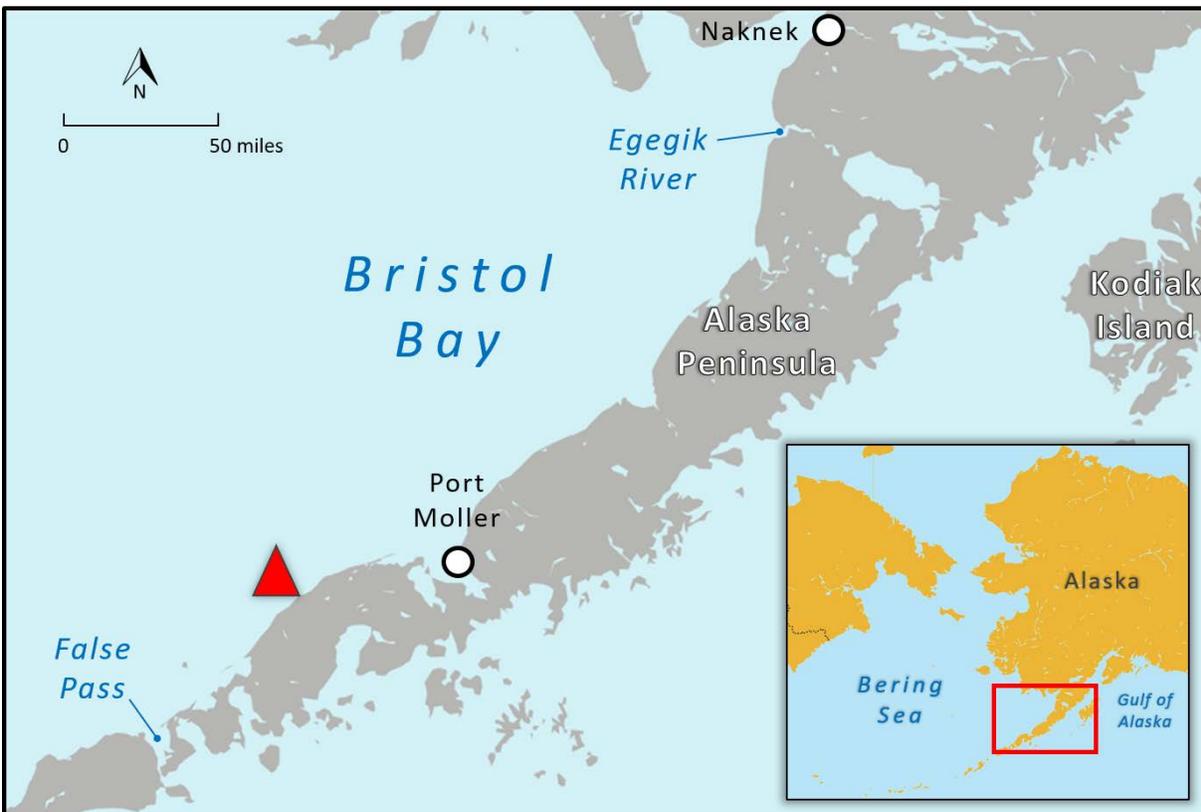
Logger before accident. (Photo by Charlie Allen, MarineTraffic.com)

¹ All miles in this report are nautical miles (1.15 statute miles).

Fire aboard Fish Tender *Logger*

The *Logger*, a 105-foot-long, wooden-hulled fish tender, was built in 1944.² Originally constructed as a self-propelled barge to carry military cargo, it was purchased from military surplus and converted for use as a fishing vessel and fish tender.³ The twin-propeller vessel was fitted with two Cummins 855 main engines in its engine room. Two larger generators (175 and 100 kilowatts), located in the generator room on the main deck above the engine room, powered the deck and refrigeration equipment, while a smaller one (22 kilowatts) in the engine room provided power to the accommodation space. The *Logger* had three fuel tanks: two main tanks, each with a capacity of about 1,500 gallons, on the port and starboard sides of the engine room; and a smaller 800-gallon aluminum fuel tank on the outside deck behind the deckhouse. At the time of the accident, there were an estimated 2,600 to 3,000 gallons of diesel fuel on board.

The *Logger* was employed in the salmon fishery tendering out of the Egegik River in Bristol Bay, the easternmost arm of the Bering Sea, just before the accident. It was crewed by the captain, who was also the owner of the vessel, and two deckhands. The captain, who had been operating the *Logger* for about 19 years, informed investigators that all documentation, logs, and drawings were lost with the vessel.



Map of Alaska Peninsula shows approximate location of *Logger* sinking after vessel caught fire, as indicated by red triangle. (Map data from Google Maps)

² A *fish tender* is a commercial fishing industry vessel that supplies, stores, refrigerates, or transports fish, fish products, or materials directly related to fishing or the preparation of fish to or from a fishing, fish processing, or fish tender vessel or a fish processing facility.

³ A self-propelled barge, or BSP, was one of the various types of barges built for the US Army during World War II. At least 6,600 barges were constructed by 130 or more barge builders. Source: Shipbuildinghistory.com (accessed June 13, 2019).

Accident Events

On the pre-dawn morning of July 28, the *Logger* was traveling between 5 and 6 knots from Naknek, Alaska, to the next segment of the vessel's fish tender contract in Petersburg, Alaska. The route would take the vessel on a southwesterly course toward False Pass (located between the Alaska Peninsula and the Aleutian chain), through which it would transit before crossing the Gulf of Alaska. Neither fish nor refrigerated seawater was in the vessel's fish holds. On the same voyage with the *Logger* was the fish tender *Arctic Dawn*, operated by the son of the *Logger*'s captain. While under way, the captain and two deckhands on the *Logger* each rotated through a single-person navigation watch in the wheelhouse while the other two rested. The captain established a routine for the person on watch to make a round through the engine room every 30 minutes.

The newer of the two deckhands started watch in the wheelhouse about 0400. He stated that about 0410 he made a round through the engine room and about 0430 he smelled smoke from beneath the wheelhouse. The deckhand departed the wheelhouse, leaving the vessel in autopilot, and went down the stairs into the galley area to investigate. While there, he met the other deckhand who was walking back to his stateroom from the bathroom. From a wooden door in the galley that led down into the engine room, both deckhands saw smoke. They opened the door and saw a fire progressing up the stairs.

Asleep in his bunk, the captain was awakened by the deckhands calling out to him that there was a fire on board. The captain opened the door to the engine room (which was next to his stateroom) and, upon seeing the flames and smoke, grabbed a portable dry chemical fire extinguisher and discharged it down the stairs. After closing the door to prevent more smoke from filling the galley, he and the deckhands went to the wheelhouse. From there the captain got a fire extinguisher grenade and instructed one of the deckhands to throw it into the engine room from a door on the outer main deck that led into the engine space. The deckhand complied with the captain's instructions, but the grenade had little effect. The crew continued to discharge portable dry chemical fire extinguishers into the engine room from the main deck door until there were none left. The captain stated that they could not see from where the fire originated.

In the wheelhouse, the *Logger*'s captain contacted the crew on the *Arctic Dawn*, which was about a half mile ahead, to inform them of the fire on board and request assistance. Right after completing his radio call to the *Arctic Dawn*, the captain said he heard an explosion and then the radios lost power. Shortly afterward, he heard the halon fire extinguishing system that protected the engine room activate. Both the main engines and the accommodation generator stopped running at that time, leaving the vessel drifting and completely in the dark. (The last recorded automatic identification system transmission from the *Logger* was at 0454.) The halon system, consisting of two tanks between the main engines, could not be activated remotely; they were heat activated by an automatic discharge valve on the halon tanks in the engine room. There were ventilation closures for the engine room, but they were manually operated and could not be closed due to the smoke and heat in the area where they were located.

As the heat and smoke continued to fill the deckhouse and wheelhouse the captain and deckhands exited to the main deck and made their way forward to the bow. When the captain looked back, the wheelhouse, galley, and lower deck were engulfed in flames. He recalled that smoke was emanating from wooden planks fitted onto the main deck (which he referred to as the false deck) forward of the house, an indicator that the fire was in the space below the main deck

Fire aboard Fish Tender *Logger*

in addition to the engine room. He estimated that about 5 to 7 minutes had passed between the time he was awakened to the time they reached the bow.

On the *Arctic Dawn*, the captain pulled his vessel up to the port side of the *Logger*, allowing the *Logger* crew to evacuate their burning vessel. According to the *Logger's* captain, they were unable to gather their immersion suits or lifejackets because of the darkness and smoke in the accommodation spaces.

After pulling away from the *Logger*, the *Arctic Dawn* remained on scene until about 0700, when the weather deteriorated; resuming the voyage, the *Arctic Dawn* then proceeded to False Pass. The captain of the *Logger* stated that when they departed, the *Logger* was still burning on the surface of the water. The US Coast Guard was notified of the fire at 0511. The next day, the Coast Guard conducted a flyover of the area but did not find any sign of the wreckage. No oil sheen was observed.

Additional Information

The captain of the *Logger* stated that he had 35 years of sailing experience, most of which was fishing in Alaskan waters. He did not hold a Coast Guard credential, nor was he required to. He had received training as a fishing vessel emergency drill conductor as well as a volunteer firefighter.

Drug testing was not conducted on the captain or deckhands. The captain attributed the absence of testing to the lack of drug test kits on board the *Arctic Dawn* or nearby vessels. Furthermore, the inclement weather during the voyage to the next port prevented the crew from obtaining one within the required 32-hour window. Specimens for alcohol tests taken within 2 hours of the accident yielded negative results for the captain and deckhands.

According to the captain, there were no issues with the vessel in the time leading up to the accident. He told investigators that during the last layup (from October 2017 to May 2018 in the Seattle area), the turbochargers for the main engines were replaced, pumps were rebuilt, the gear box was worked on, and four new submersible backup bilge pumps were installed. A self-described “proficient mechanic,” he conducted all the work on the vessel except for the replacement of a radar, which was contracted to a marine electronics company. Regarding the electrical system, the captain stated that he checked cable terminals, circuit breakers, and amperage every year; new charging units for the 12- and 24-volt batteries were also installed during the layup.

The captain indicated that the main engines functioned properly and that there were no fuel or lube oil leaks. Both engines were last rebuilt by Cummins, one in 2012 and the other in 2015, according to the vessel’s last survey report, which was completed in 2016. The report described the *Logger* as being “well maintained throughout” and showing “continuing care and diligence on the part of the owner and master in the maintenance and operation of the vessel.”⁴

The *Logger* was fitted with a fire detection system, which according to the captain was wired into the vessel’s 24-volt electrical system. A series of heat detectors was mounted on the overhead of the engine room and throughout the vessel. Additionally, a battery-operated, household-type smoke detector was installed in the tool room adjoined to the engine room on the

⁴ Survey performed by Waypoint Marine Surveyors, Edmonds, Washington, May 13, 2016.

Fire aboard Fish Tender *Logger*

main deck that would sound an audible alarm when activated. During the accident, no one recalled hearing an alarm sound. The captain noted that the siren worked when the fire detection system was tested 2 to 3 days earlier.



Photo from 2016 survey report documenting condition of *Logger* shows wooden deck boards (false deck) on the main deck, from where captain saw smoke emanating.

Analysis

The deckhand on watch did not know the source of the fire when he first saw it in the stairs leading down to the engine room. He did not notice any problems during the time he had completed a round in the engine room, about 20 minutes prior to smelling the smoke. No fire detection alarms sounded, which would have given an indication of the compartment in which the fire originated. Since the vessel burned completely and sank in an unknown location, and underwater survey or recovery efforts were not undertaken, investigators were unable to determine the source and cause of the fire.

When the captain was asked by investigators where the fire started and what may have ignited it, he surmised that it may have been wiring that led to the forepeak for the fish hold pumps. His reasoning for that potential source was based on the smoke he saw emanating from the main deck and the wooden planks of the false deck, which indicated to him that there may have been a fire below the deck. He noted that the fire had to be substantial in size for smoke to penetrate the deck. However, he stated that the propagation of the fire was so rapid that he could not confirm this possibility with certainty.

Probable Cause

The National Transportation Safety Board determines that the fire aboard the fish tender *Logger* likely originated in the engine room from an unknown source.

Vessel Particulars

Vessel	<i>Logger</i>
Owner / operator	Log West Trust
Port of registry	Juneau, Alaska
Flag	United States
Type	Fish tender
Year built	1944
Official number (US)	253631
IMO number	None
Construction	Wood
Classification Society	None
Length	105 ft (32 m)
Draft	8 ft (2.4 m)
Beam/width	30 ft (9.1 m)
Gross / Net tonnage	192 / 162
Engine power; manufacturer	2 X 400 hp (298 kW), Cummins 855, twin propeller
Persons on board	3

NTSB investigators worked closely with our counterparts from Coast Guard Sector Anchorage throughout this investigation.

For more details about this accident, visit www.nts.gov and search for NTSB accident ID DCA18FM030.

Issued: June 26, 2019

The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under Title 49 *United States Code*, Section 1131(b)(1). This report is based on factual information either gathered by NTSB investigators or provided by the Coast Guard from its informal investigation of the accident.

The NTSB does not assign fault or blame for a marine casualty; rather, as specified by NTSB regulation, “[NTSB] investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, Section 831.4.

Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by conducting investigations and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. Title 49 *United States Code*, Section 1154(b).
