January 13, 2026 MIR-26-01

Engine Room Fire on Towing Vessel *Thor*

On February 18, 2025, about 0925 local time, the towing vessel *Thor* was pushing two barges downbound on the Delaware River, 1.5 miles downriver from New Castle, Delaware, when a fire broke out in the engine room (see figure 1 and figure 2).[1] Four crewmembers isolated the fire to the engine room and subsequently abandoned ship to a nearby tug. The fire was extinguished by shoreside fire department response personnel, and the vessel was towed to port. There were no injuries, and no pollution was reported. Damage to the vessel was estimated at about $1.5 million.

Figure 1. *Thor* underway in November 2023. (Source: W. Bransom, VesselFinder.com)

[1] (a) In this report, all times are eastern standard time, and all miles are nautical miles (1.15 statute miles). (b) Visit ntsb.gov to find additional information in the public docket for this NTSB investigation (case no. DCA25FM020).

Casualty Summary

NTSB casualty category	Fire/Explosion
Location	Delaware River, near New Castle, Delaware 39°37.92' N, 75°34.44' W
Date	February 18, 2025
Time	0925 eastern standard time (coordinated universal time –5 hrs)
Persons on board	4
Injuries	None
Property damage	$1.5 million est.
Environmental damage	None
Weather	Visibility 13 nm, overcast, winds northwest 14 kts, gusts 30 kts, air temperature 21°F, water temperature 32°F, morning twilight 0551, sunrise 0650
Waterway information	River; width 9,000 ft, depth 26 ft

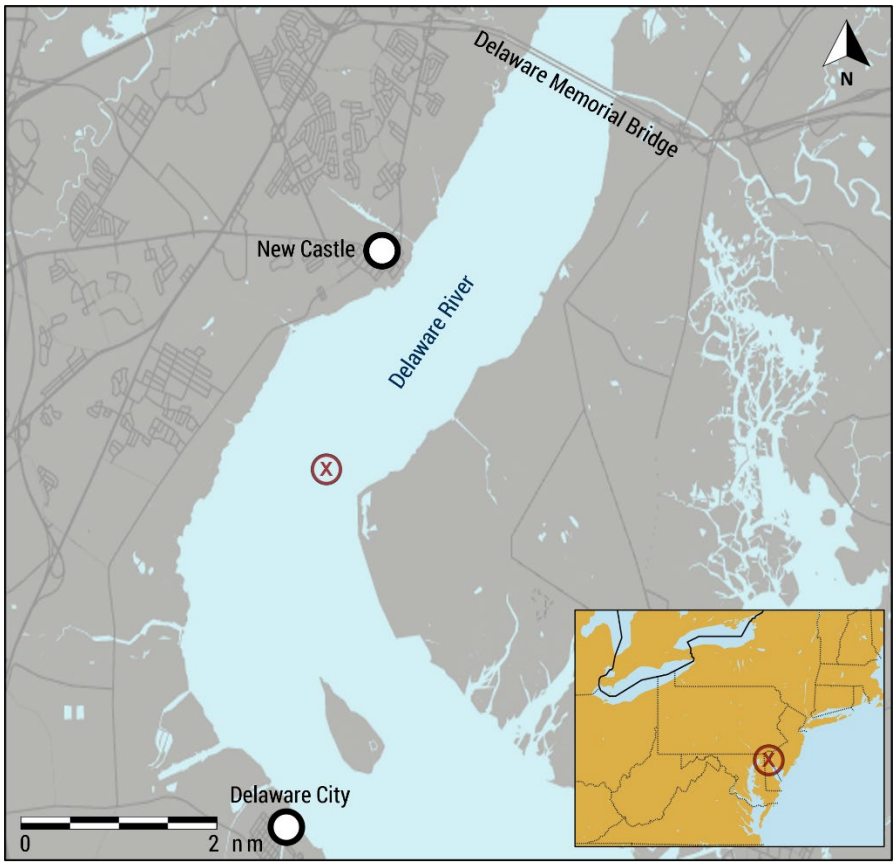

Figure 2. Area where the *Thor* fire occurred, as indicated by a circled *X*. (Background source: Google Maps)

1 Factual Information

The 71-foot-long towing vessel *Thor* was owned and operated by Allegiant Tug Company. The vessel had a valid US Coast Guard-issued certificate of inspection documenting compliance with Title 46 *Code of Federal Regulations* Subchapter M.

On February 18, 2025, about 0630, the *Thor* departed Fort Mifflin Army Corps of Engineers docks in Philadelphia, Pennsylvania, on the Delaware River. The tug was pushing two 65-foot-by-300-foot light material scows (barges) en route to Norfolk, Virginia.[2] The *Thor* was crewed by a captain, mate, engineer, and deckhand.

The *Thor* proceeded downriver with the captain and engineer on watch; the off-watch mate was in the wheelhouse with the captain for observational training. Shortly after passing under the Delaware Memorial Bridge, the engineer reported to the wheelhouse after doing a round in the engine room and reported that all conditions were normal.

About 0922, the captain noticed smoke billowing from a stack and a metallic smell in the air. The captain ordered the engineer and mate to go inspect the engine room. While en route to the engine room, the engineer heard the fire alarm, which was part of a hard-wired and interconnected alarm and monitoring (detection) system with a control panel in the wheelhouse. The engineer knocked on the deckhand's bunkhouse door as he passed by to wake him up. When they opened the engine room door, the space was filled with heavy black smoke. The mate reported their findings to the captain via radio, and the captain sounded the general alarm.

The captain ordered the engineer and mate to seal hatches and ventilation to the engine room in an attempt to contain the fire (the vessel was not equipped with a fixed fire extinguishing system, nor was it required to be). The captain made a mayday call on VHF channel 16 and positioned the tow outside the Delaware River Channel. The captain then ordered the mate and deckhand to evacuate forward onto the barges. Two good Samaritan towing vessels, the *Wye River* and *Magothy*, assisted the *Thor* with positioning the tow outside the channel. The captain told investigators that, as the fire intensified, he lost steering because the associated cabling was in the same location as the fire. After the tow was clear of the channel, the captain and engineer pulled the *Thor*'s emergency fuel stops for the generators and main engines before abandoning the tug to the barges. The four crewmembers then boarded the *Wye River* about 1000.

[2] A *material scow* is a flat-bottomed barge used for transporting dredged or other bulk materials.

The Coast Guard, the Wilmington (Delaware) Fire Department, and Delaware State Police responded to the scene. Wilmington Fire Department's *Fire Boat 7* arrived on scene and deployed fire teams to extinguish the fire (see figure 3). The captain of the *Thor* boarded *Fire Boat 7*, briefed the on-scene commander of the fire's location, and provided a sketch of the engine room layout. The fire was under control by about 1200. Damage was estimated at about $1.5 million.

Figure 3. Fire suppression on board the *Thor*. (Source: Wilmington Fire Department)

After the fire, Coast Guard and National Transportation Safety Board (NTSB) investigators examined the damage on the *Thor*. The Coast Guard also requested assistance from Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified fire investigators, who participated in the examination. According to the vessel's engineer, at the time of the fire, there were stacked paint cans outside the paint locker located in the port corner of the engine room, aft, and a 110-volt boot warmer was plugged into an extension cord that was positioned on top of an empty plastic trash can a few feet from the paint locker.[3]

During the postcasualty examination, investigators found heavily oxidized paint cans in the paint locker (see figure 4). In the area around the paint locker, a three-prong extension cord with its insulation burned away was found with the remnants of the boot dryer. The control switch of the boot warmer was found to be in the "on" position. The associated electrical breaker powering the extension cord was found in the tripped position.

[3] The "paint locker" was a prefabricated, metal flammable storage cabinet used by the crew to store paint and other flammable materials.

Figure 4. Paint locker located in the aft port corner of engine room.

Based on the fire damage patterns found within the engine room, investigators concluded that the fire most likely originated in the port corner of the upper level of the engine room, aft. However, due to the damage to that area of the engine room, ATF investigators could not determine the exact ignition source and ultimately classified the cause of the fire as "undetermined."

2 Analysis

While the towing vessel *Thor* was pushing two material scows downriver on the Delaware River, the crew discovered a fire in the engine room. The captain had the crew secure ventilation, fuel sources, and natural air openings to the engine room before abandoning the towboat. The fire was extinguished by a responding fire boat a few hours later.

ATF investigators determined that the fire originated in the upper level of the engine room, portside aft. A paint locker was located in the area of origin, and various combustible materials were stored inside and outside of the locker. Interviews with the vessel's engineer revealed a boot warmer was plugged into an extension cord a few feet from the paint locker. The boot warmer was stacked on a plastic trash can. The remnants of the boot warmer's control switch showed it to be in the "on" position. After the accident, the extension cord's insulation and plug were found burned down to the copper wiring. Additionally, the 30-amp breaker associated with the receptacle that the extension cord was plugged into was found to be in the tripped position. A breaker can trip due to overloaded circuits, shorts, or electrical faults. An electrical fault—such as a loose, broken, or frayed wire—within the plug or nearby boot warmer could have created excessive resistive heating. Resistive heating within electrical conductors can produce sufficient heat to ignite nearby combustibles. However, due to the extent of the fire damage, the exact ignition source and cause of the fire could not be determined.

Once an ignition source was produced, combustible materials in and around the paint locker, including paint cans and a plastic trash can, near the fire's origin caught fire. After these combustible materials caught fire, they provided a path for the fire to expand to the port side of the engine room, aft.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the fire aboard the towing vessel *Thor* was an undetermined ignition source in the upper level of the vessel's engine room.

Vessel Particulars

Vessel	*Thor*
NTSB vessel group	Towing/Barge (Towing vessel)
Owner/operator	Allegiant Tug Company (Commercial)
Flag	United States
Port of registry	Wilmington, Delaware
Year built	1972
Official number	541666 (US)
IMO number	8842246
Classification society	N/A
Length (overall)	71.0 ft (21.6 m)
Breadth (max.)	27.0 ft (8.2 m)
Draft (casualty)	8.0 ft (2.4 m)
Tonnage	163 GRT
Engine power; manufacturer	2 × 850 hp (634 kW); Cummins K38-M II diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Delaware Bay** throughout this investigation.