June 17, 2025 MIR-25-25

Contact of *Duke* Tow with Power Transmission Poles and Pelican Island Bridge

On July 13, 2023, about 0130 local time, the towing vessel *Duke* departed the Texas International Terminal in Galveston, Texas, pushing two barges, when one of the barges in the tow contacted three power transmission poles near the Pelican Island Bridge, and the tug subsequently contacted the bridge (see figure 1 and figure 2).[1] There were no injuries, and no pollution was reported. Damage to the vessels, power poles, and bridge was estimated at over $300,000.[2]

Figure 1. *Duke* underway in Houma, Louisiana, on October 30, 2024. (Source: Tommy Matherne)

[1] In this report, all times are central daylight time, and all miles are nautical miles (1.15 statute miles).

[2] Visit ntsb.gov to find additional information in the public docket for this NTSB investigation (case no. DCA23FM043).

Casualty Summary

Casualty type	Contact
Location	Galveston Ship Channel, Galveston, Texas 29°18.71′ N, 094°49.35′ W
Date	July 13, 2023
Time	0130 central daylight time (coordinated universal time –5 hrs)
Persons on board	5
Injuries	None
Property damage	$250,000 (bridge and power poles), $50,000 (*Duke* and barge)
Environmental damage	None
Weather	Visibility 10 mi, winds southeast 10 kts, seas 00 ft, air temperature 88°F, water temperature 88°F
Waterway information	Harbor; depth 30 to 45 ft at mean lower low water, current 0.8-1.5 kts

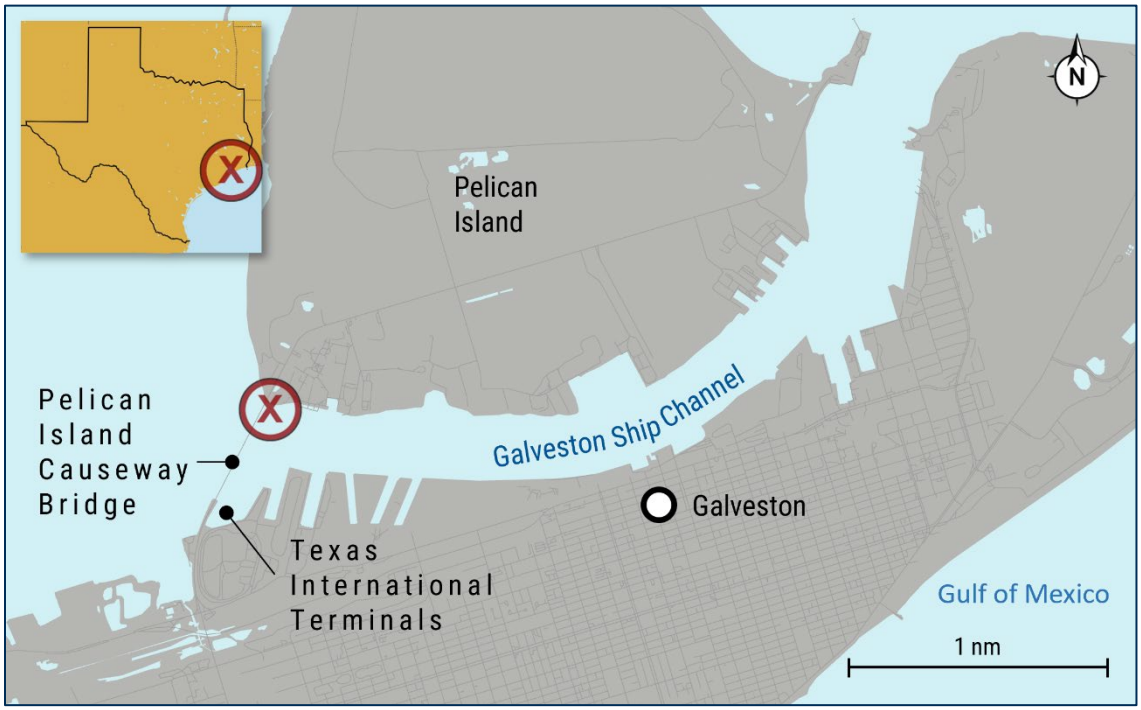

Figure 2. Area where the contact occurred, as indicated by a circled *X*. (Background source: Google Maps)

1 Factual Information

Duke, an 84.5-foot-long towing vessel (tug) operated by Magnolia Marine Transport, was built in 2013 at La Force Shipyard in Bayou LaBatre, Alabama. The vessel was powered by two Caterpillar 3512 diesel engines with Twin Disc 5560 reduction gears, turning two four-bladed, fixed-pitch propellors, each rated at 1,500 hp.

The Pelican Island Causeway Bridge (drawbridge) connected Pelican Island with Galveston Island. The causeway, which was 3,239 feet long with a span of 161.1 feet, opened to traffic in 1960. An additional breakwater was added on the west side of the Texas International Terminal basin in 2020, running parallel and adjacent to the bridge. Overhead electrical power lines with a vertical clearance of 85 feet also ran parallel to the causeway. The lines were supported by poles located in the water about 85 feet to the east side of the causeway.

On July 13, 2023, about 0100, the *Duke,* with five crew aboard, departed the Texas International Terminal, a liquid and dry bulk facility, pushing two empty red-flagged barges en route to Galena Park, Houston, eastbound in the Galveston Ship Channel. The two barges were made up abreast and bow to bow with the towboat. The captain, who was at the helm, told investigators he intended to back out with the barges and then shift position to make up to the aft end of the tow before proceeding outbound (see figure 3). Before the tow got underway, Vessel Traffic Service Houston/Galveston reported a 1.5-knot flood current. The captain later noted a 0.77-knot current setting the vessel down on the

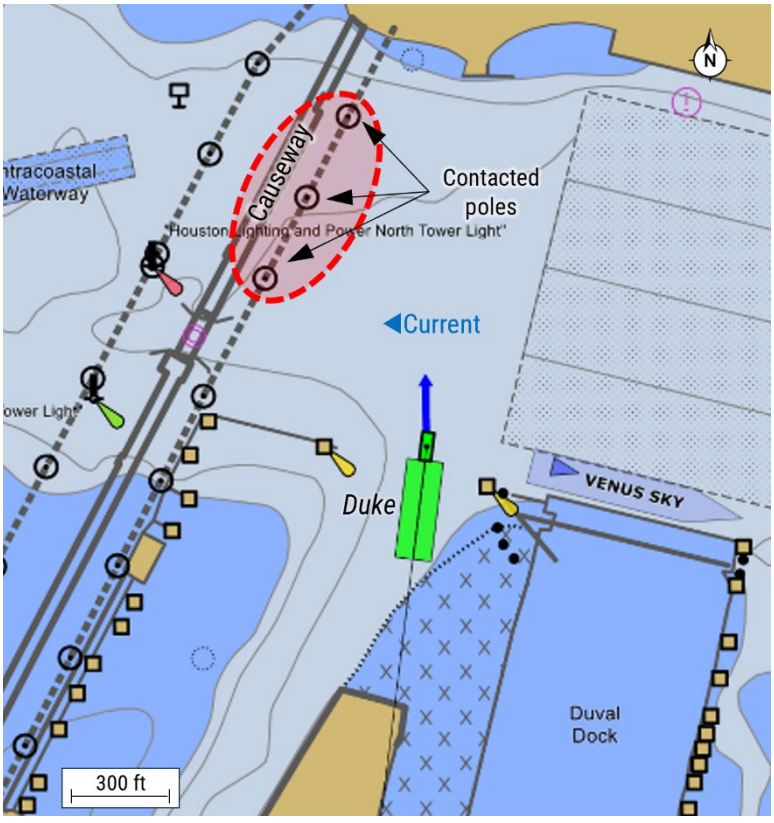

Figure 3. *Duke* tow departing the basin at 0120. The poles and section of the bridge contacted by the tow are circled. (Background source: Magnolia data as viewed on Rosepoint)

bridge from the east. The captain told investigators he had maneuvered barges out of the terminal "dozens" of times.

Moored starboard side to the dock face immediately east of the terminal was the 656-foot-long bulk cargo vessel *Venus Sky*. According to the captain of *Duke,* the positioning of the bulker required him to back the *Duke* out "further into the current" than he normally did. He also stated he was focused on avoiding the ship.

At 0123, the starboard-side barge (*MM-144*) in the *Duke*'s tow contacted the first of three Center Point Energy electrical poles adjacent (on the east side) to the Pelican Island Causeway Bridge. The barge drifted to starboard (west) into a second pole, then the bridge. As the captain moved the tow forward to extricate it from the poles, the barge made contact with a third pole. These contacts resulted in a power outage that extinguished the bridge streetlights.

After striking the poles, the tow's momentum carried the *Duke* into the bridge, where it contacted the bridge's pilings (see figure 4). The captain told investigators that, at the time, he could not tell if he had hit the bridge pilings. He said he was watching for the bridge but didn't see it in time to avoid it. After the contact, the *Duke* moored at Southwest Shipyard on Pelican Island, on the opposite side of Galveston Channel. Center Point Energy contacted the US Coast Guard to report the incident, and the Coast Guard closed the waterway (the causeway remained opened).

Figure 4. *Left to right*: The damaged power transmission poles, in the foreground and circled with a dotted line. The solid circle indicates the debris/damage to one of the bridge's piling clusters, seen right. (Source: Coast Guard)

Investigators later found cement debris consistent with missing portions of the bridge on *Duke*'s aft deck. The towing vessel suffered two broken windows and a damaged rescue boat, davit, handrails, and rub rail, while the barge *MM-144* sustained a damaged ladder and wire conduit. Combined, the tug and barge damages amounted to about $50,000. An electrical pole was knocked down and another left leaning. Two bridge piling clusters were destroyed, resulting in about $250,000 of damage. The Texas International Terminal and other businesses and residents were without electricity for one day.

2 Analysis

On July 13, 2023, the towing vessel *Duke*, pushing two barges, was backing into the Galveston Ship Channel away from the Texas International Terminal when the tow contacted multiple power transmission poles, and the tug subsequently contacted the Pelican Island Causeway Bridge. The vessels, electrical infrastructure, and bridge together sustained estimated damages of $300,000.

The *Duke* captain stated that he intended to back out with the barges made up abreast bow to bow with the towboat before flipping the barges around and proceeding outbound. He also stated that a bulk carrier moored to the end of the pier immediately east of the Texas International Terminal required him to back out farther than normal into the channel, and that he was focused on staying clear of the moored vessel while he was underway.

At the time, the flood current, as noted by the captain, was about 0.8 knots, which would have pushed the tow toward the bridge as he backed into the channel. Given the captain's focus on the moored vessel to the east, he likely did not recognize that the current was pushing the tow faster than he anticipated and toward the power poles and bridge until the tow struck them.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the *Duke* tow with power transmission poles and the Pelican Island Bridge was the captain's focus on staying clear of a nearby moored cargo vessel and not recognizing how close the tow was getting to the power poles and bridge.

Vessel Particulars

Vessel	*Duke*	*MM-144*
Type	Towing/Barge (Towing vessel)	Towing/Barge (Barge)
Owner/Operator	Campbell Transportation/Magnolia Marine Transport (Commercial)	Second Marine Logistics LLC/Magnolia Marine Transport (Commercial)
Flag	United States	United States
Port of registry	Pittsburgh, Pennsylvania	New Orleans, Louisiana
Year built	2013	2015
Official number	1247420 (US)	1259113 (US)
IMO number	N/A	N/A
Classification society	Towing Vessel Inspection Bureau	None
Length (overall)	84.5 ft (25.8 m)	297.0 ft (90.5 m)
Breadth (max.)	35.0 ft (10.7 m)	54.0 ft (16.5 m)
Draft (casualty)	10.8 ft (3.3 m)	2.5 ft (0.8 m)
Tonnage	388 GT ITC (294 GRT)	1,619 GRT
Engine power; manufacturer	2 x 1,500 hp (1,118.6 kW); Catepillar 3512C	N/A

NTSB investigators worked closely with our counterparts from **Coast Guard Marine Safety Unit Texas City** throughout this investigation.