



National Transportation Safety Board

Marine Accident Brief

Fire on Board Towing Vessel *Shanon E. Settoon*

Accident no.	DCA13NM011
Vessel name	<i>Shanon E. Settoon</i> (towing the barge <i>SMI 572</i>)
Accident type	Fire
Location	Bayou Perot, Louisiana 29°38.03 N, 90°10.63 W
Date	March 12, 2013
Time	1745 central daylight time (coordinated universal time – 5 hours)
Injuries	1 fatality
Damage	Total loss of vessel, estimated at more than \$500,000
Environmental damage	Release of high-pressure liquefied petroleum gas from ruptured pipeline, and release of 1,000 gallons of diesel fuel from the vessel. Clean-up and salvage costs estimated at \$166,000.
Weather	Clear; 10-mile visibility; 66°F; north-northwest winds at 8 knots
Waterway information	Bayou Perot Canal in the Intracoastal Waterway, mile marker 20

On March 12, 2013, at 1745 local time, the towing vessel *Shanon E. Settoon* was pushing a loaded tank barge in Bayou Perot (about 20 miles south of New Orleans, Louisiana) when it struck a submerged pipeline. The collision caused a release of liquefied petroleum gas, which entered the air intake for the main propulsion engines and ignited. The *Shanon E. Settoon* was destroyed by the fire; the tank barge had limited fire damage and did not release any of the 93,000 gallons of crude oil it was carrying. The four crewmembers on board the *Shanon E. Settoon* escaped from the vessel, but one of them sustained second- and third-degree burns from which he died 1 month later.



The *Shanon E. Settoon* ablaze after the gas from the ruptured pipeline ignited. Tank barge *SMI 572* is positioned forward of the vessel. (Photo by the United States Coast Guard)

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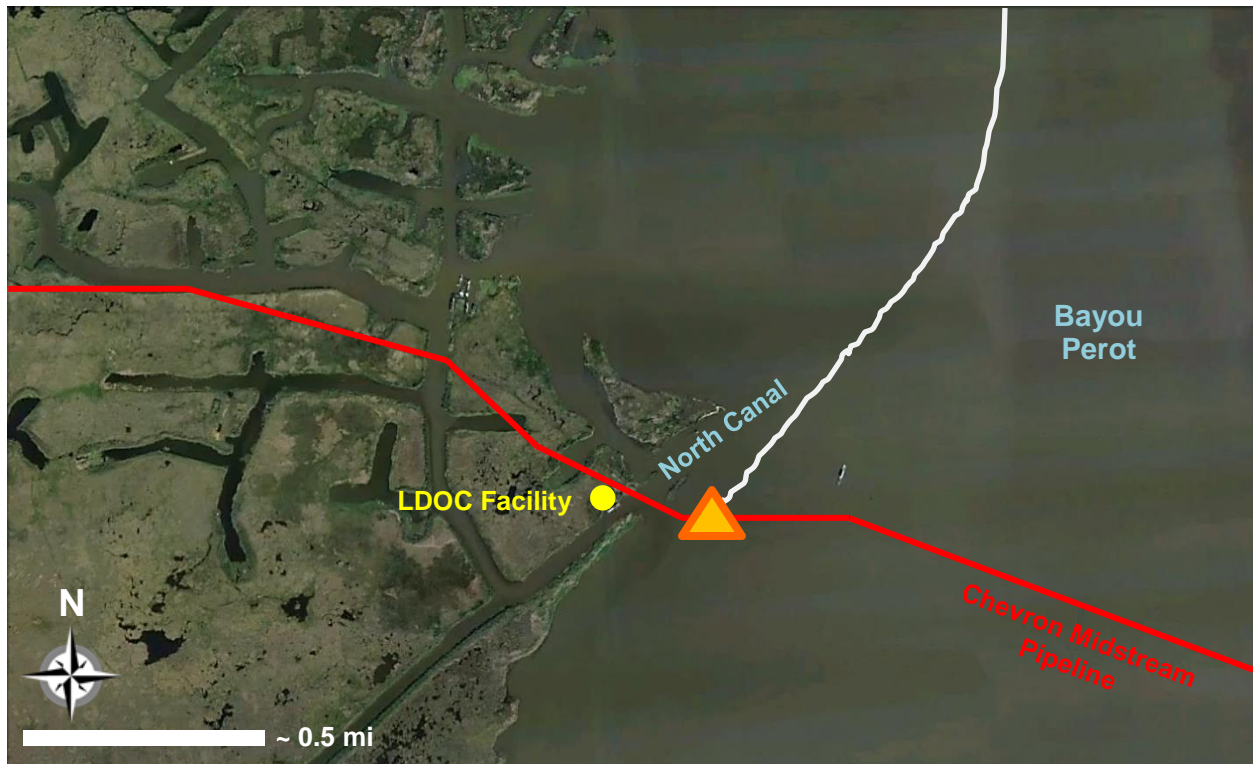
On the day of the accident, the *Shanon E. Settoon* was transiting from the Square Mile Energy facility on Lake Salvador, pushing the tank barge *SMI 572* loaded with 93,000 gallons of crude oil. Four crewmembers were on board the vessel. That afternoon, the captain called the Louisiana Delta Oil Company (LDOC) facility on Bayou Perot to determine if the facility had additional crude oil available to load to top off the *SMI 572*. The tank gauging contractor at LDOC confirmed that the facility had 1,600 barrels available to load, and about 1330, the captain told him that the vessel would arrive later that evening for loading the following morning.



Satellite image of the accident area, located about 20 miles south of New Orleans, Louisiana. (Background by Google Earth)

According to the LDOC contractor, a couple of hours later, about 1600, he again heard from the *Shanon E. Settoon* captain, who this time had the vessel's regular captain on the phone as well. (The captain who was piloting the vessel that day was a relief captain; the regular captain was not on board the vessel.) The two captains asked the LDOC contractor for directions to the Bayou Perot facility. The LDOC contractor told both captains that, after the vessel had come south from Lake Salvador, it could approach the facility either by turning directly into the North Canal, or go slightly farther to the southeast and then turn toward the facility. About 1.5 hours later, about 1730, the relief captain called again asking about directions to the facility. The LDOC contractor told him that if he felt uncomfortable with the approach, he could wait until the morning. The captain chose to proceed that evening, and he took the more southeast route in his approach to the LDOC facility. As the tow was inbound, the captain saw two obstructions in the water ahead, and he turned to starboard to avoid them. The vessel and barge then passed over a submerged Chevron pipeline that contained petroleum gas at 250 pounds per square inch of pressure. About 1744, the tow struck the pipeline.

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Close-up satellite image of Bayou Perot. The white line represents the vessel's approximate trackline and the approach slightly farther to the southeast that the captain chose. The red line represents the approximate location of the submerged pipeline. (Background by Google Earth)

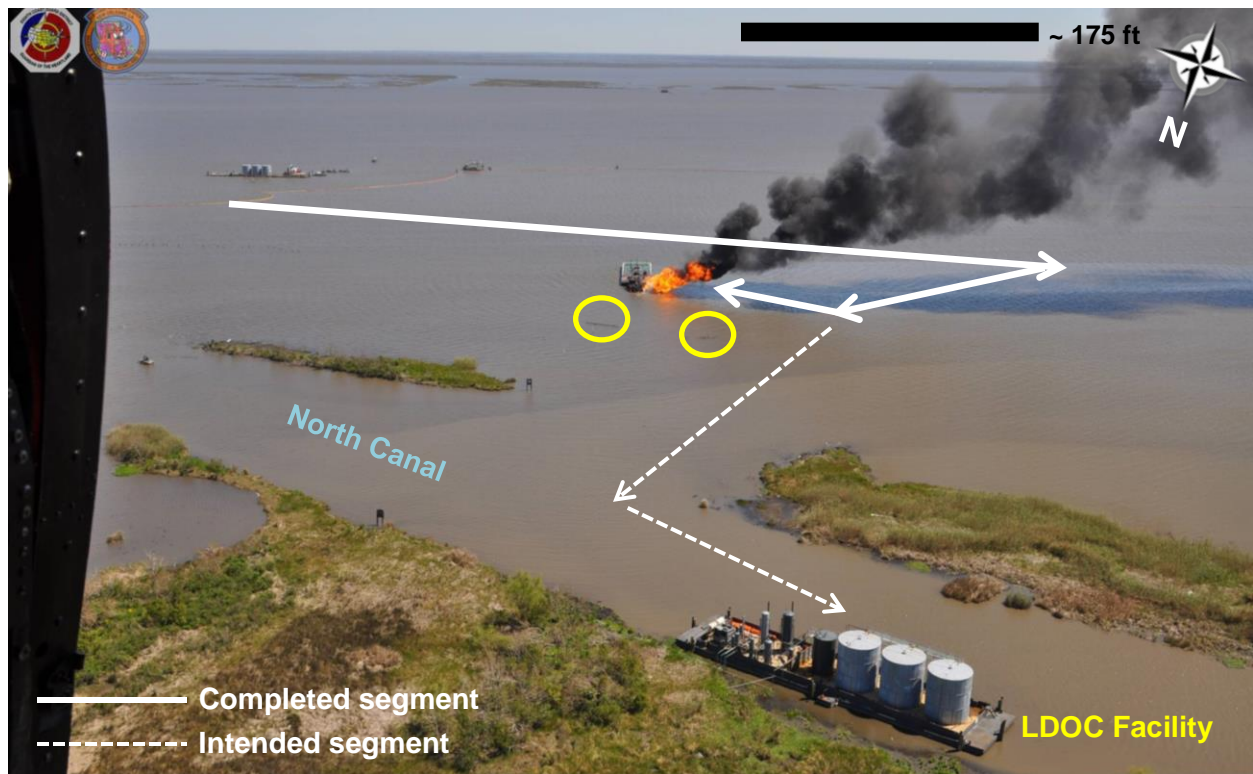


Photo of the area near the LDOC facility to which the tow was headed, looking southeast. Overlaid in solid and dashed white lines are the vessel's completed and intended transit segments (approximate). Overlaid in yellow circles are the obstructions in the water that the captain tried to avoid just before striking the submerged pipeline. (Photo by the United States Coast Guard)

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Numerous active or abandoned oil and gas pipelines traverse this Louisiana region. When installed, the pipelines are surveyed to ensure that they are buried at an appropriate depth. However, over time their coverage can decrease due to storms, shoreline changes, etc., which makes voyage planning challenging and particularly reliant on up-to-date, accurate information. Many pipelines in the region do not appear on standard navigation charts and mariners do not know their exact locations.

On realizing that the tow had struck an object, the captain notified the LDOC contractor and tried to maneuver away from the obstruction. A crewmember told investigators that, about that time, he twice heard a noise and saw a disturbance in the water that pushed the stern of the vessel upward. He and another crewmember began to head forward on the vessel toward the barge when he heard the captain say that he needed help shutting down the main engines to prevent a spark. The crewmembers began to walk aft when the main engines exploded and fire engulfed the *Shanon E. Settoon*. The captain and the three crewmembers abandoned the vessel. Two of the crewmembers retreated to the barge, while the captain—who was badly burned—and another crewmember ended up in the water and made their way to shore. Chevron shut off the pipeline; however, the remaining gas in the pipeline continued to burn for several days.



The ablaze *Shanon E. Settoon* and the barge *SMI 572*. An oil sheen can be seen on the water extending out from the tow. (Photo by the Coast Guard)

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Left, the *Shanon E. Settoon's* damaged propeller blade during postaccident survey; right, the damaged pipeline and its protective casing. (Photos by the Coast Guard)

The *Shanon E. Settoon* was completely burned and declared a total loss. A survey revealed that the vessel's portside propeller had struck and penetrated the pipeline. When the gas reached the surface of the water, it was drawn into the main engines, where it ignited. The explosion caused an intense fire, which was fed by the escaping gas under pressure. The *Shanon E. Settoon* had about 1,000 gallons of diesel fuel on board, which was spilled in the accident.

About 1 month later, the captain died from the second- and third-degree burns he sustained in the accident.

Given the numerous pipelines in the area that present submerged hazards, and given that the locations of oil and gas facilities may be temporary and subject to change, it is essential that vessel companies provide their operators with up-to-date, well-researched information to ensure safe navigation. The *Shanon E. Settoon* captain attempted to avoid a visible hazard, but inadvertently struck a submerged one.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the explosion and fire on board the *Shanon E. Settoon* was the introduction of petroleum gas into the main engines after the vessel struck and ruptured a submerged pipeline due to incomplete navigational information provided to the captain by the vessel company.

Vessel Particulars

Vessels	<i>Shanon E. Settoon</i>	<i>SMI 572</i>
Owner/operator	Settoon Towing, LLC	Settoon Towing, LLC
Port of registry	Belle River, Louisiana	Belle River, Louisiana
Flag	United States	United States
Type	Towing vessel	Tank barge
Year built	1975	2007
Official number (US)	566684	1195182
Construction	Steel	Steel
Length	46.8 ft (14.2 m)	154 ft (46.8 m)
Draft	6 ft (1.8 m)	3.5 ft (1.06 m)
Beam/width	20 ft (6 m)	42 ft (12.7 m)
Gross and/or ITC tonnage	55 gross tons	N/A; 5,700 bbl capacity
Engine power; manufacturer	700 hp (521 kW); Cummins 855	N/A
Persons on board	4	0

For more details about this accident, visit www.nts.gov/investigations/dms.html and search for NTSB accident ID DCA13NM011.

Adopted: December 10, 2014

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 49 *United States Code* 1131. 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.” 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. 49 *United States Code*, Section 1154(b).
