



# National Transportation Safety Board

## Marine Accident Brief

### Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*

<b>Accident type</b>	Collision	<b>No.</b> DCA19FM038
<b>Vessel names</b>	<i>Century Queen</i> and <i>Kaytlin Marie</i>	
<b>Location</b>	Lower Mississippi River, mile 126, near Hahnville, Louisiana <sup>1</sup> 29°59.47'N, 090°25.17'W	
<b>Date</b>	June 8, 2019	
<b>Time</b>	1215 central daylight-saving time (coordinated universal time – 5 hours)	
<b>Injuries</b>	Two minor, one serious	
<b>Property damage</b>	\$1,375,198	
<b>Environmental damage</b>	About 8,954 gallons of diesel fuel released	
<b>Weather</b>	Visibility 10 miles, winds north-northwest 4 mph, air temperature 88°F	
<b>Waterway information</b>	The Mississippi River at the accident site is approximately half a mile wide. The nearest river gage (mile 126.9) was 20.95 feet and rising.	

On June 8, 2019, about 1215 local time, the upbound bulk carrier *Century Queen*, with a crew of 21, and the downbound towing vessel *Kaytlin Marie*, with 7 crewmembers on board, collided on the Lower Mississippi River at mile 126 near Hahnville, Louisiana, while transiting through a river bend. Three injuries were reported aboard the *Kaytlin Marie*, which spilled a reported 8,954 gallons of diesel fuel into the river. Damage to the *Century Queen* (\$383,990) and the *Kaytlin Marie* (\$991,208) amounted to \$1,375,198.



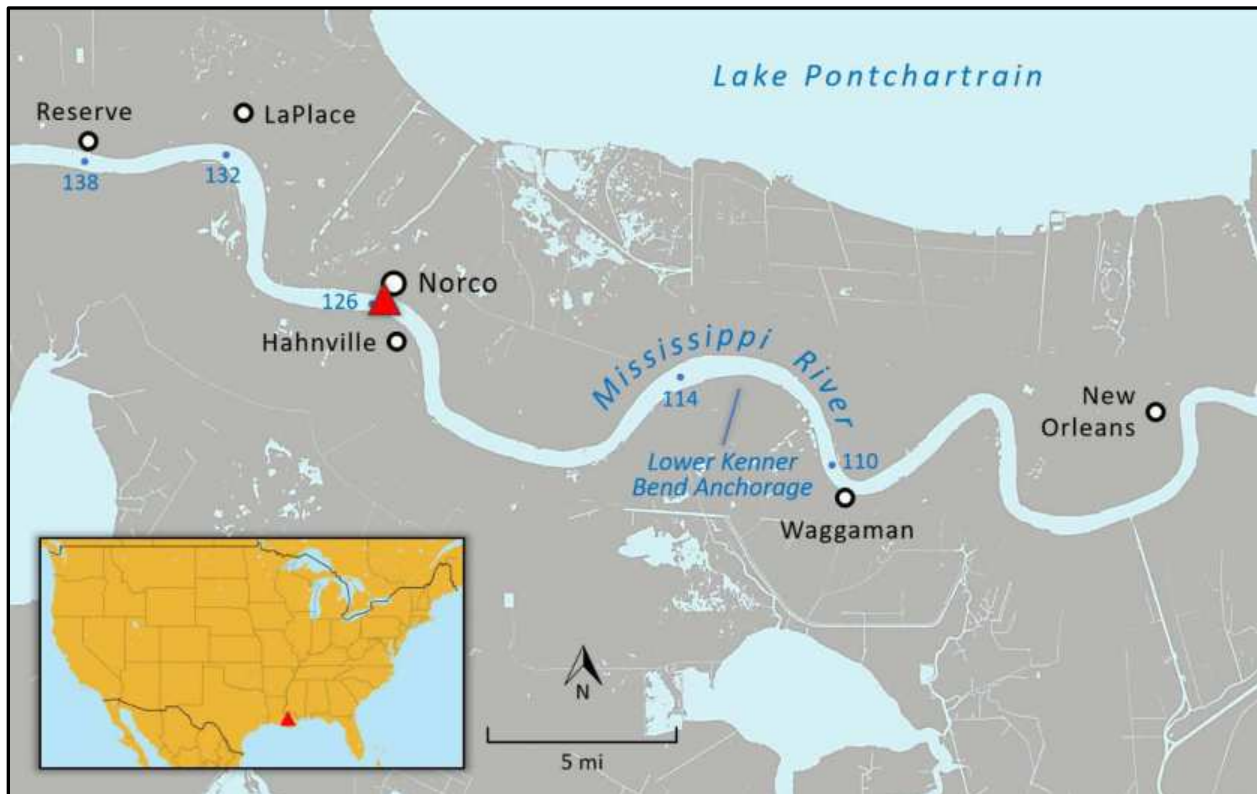
Bulk carrier *Century Queen* (left) and towboat *Kaytlin Marie* (right). (Source: C. Bustraan [left], Jeff L. Yates [right])

<sup>1</sup> All miles in this report are statute miles, unless otherwise noted.

## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*

### Background

The *Century Queen* was a bulk carrier built in 2018 in Japan. The 449-foot-long, Panama-flagged vessel was operated by Hiong Guan Navegacion Japan and classified by NKK. A few days before the accident, on June 5, the vessel had discharged cargo in Baton Rouge, Louisiana, and then transited down the Mississippi River to the Lower Kenner Bend Anchorage (mile 114, 12 miles upriver from New Orleans), where it anchored to await orders.



**Location where the *Century Queen* and *Kaytlin Marie* collided on the Lower Mississippi River near Hahnville, Louisiana, as indicated by the red triangle. (Background source: Google Maps)**

The *Kaytlin Marie*, a 126-foot-long towing vessel, was built in 1973 in Vicksburg, Mississippi, by Marathon Shipbuilding as the *John C. Byrd* for Ole Man River Towing, Inc. The vessel was renamed the *Thomas Golding* in 1989, the *Earl Jones* in 2006, and most recently the *Kaytlin Marie* in 2018 when it was purchased by Integrity Maritime Management. On the day of the accident, the vessel had departed LaPlace and headed downriver to Waggaman, Louisiana, to pick up barges destined for Mobile, Alabama.

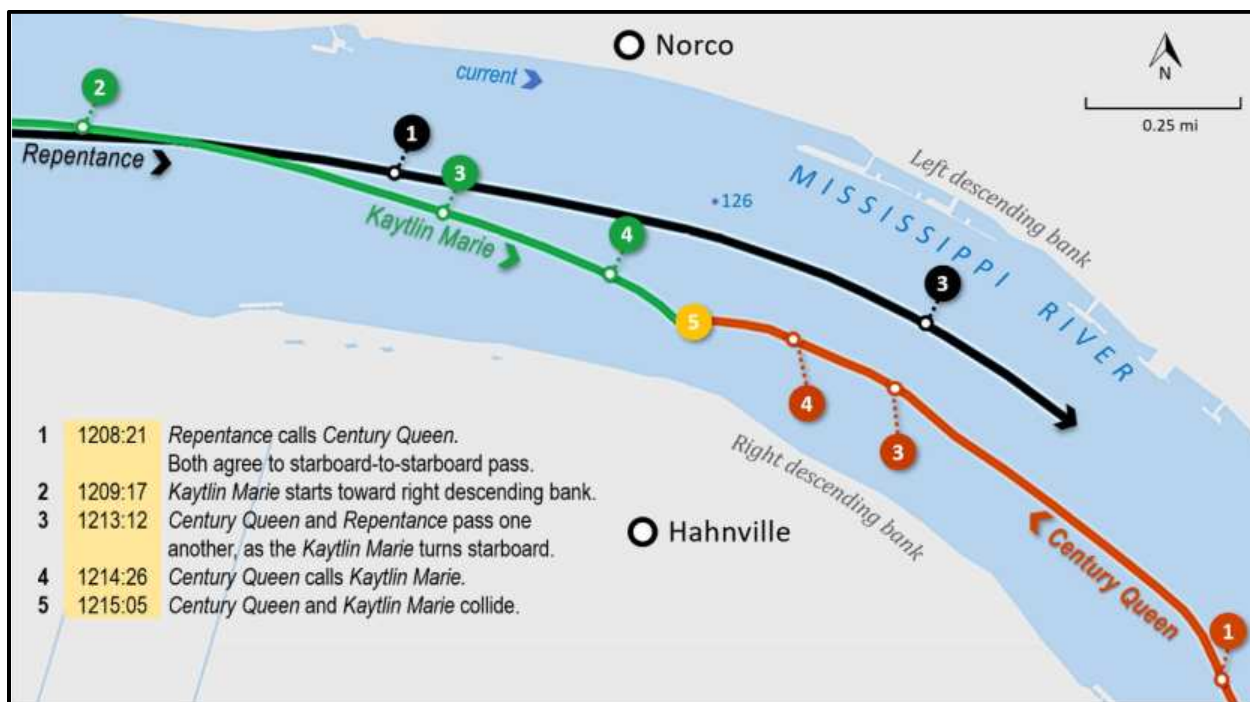
The Lower Mississippi River is a meandering waterway navigable by oceangoing ships as far inland as Baton Rouge (mile 229). The year 2019 saw record high-flood duration and total flow volumes on the Mississippi River. The Bonnet Carré Spillway (mile 126.9) was open at the time of the accident, diverting river water into Lake Pontchartrain. Based on a Vessel Traffic Service (VTS) Lower Mississippi River table using the river gage at mile 102.8, the speed of the river current was about 5.4 miles per hour. The weather was clear with light winds.

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### Accident Events

About 1035 on June 8, a New Orleans–Baton Rouge Steamship Pilots Association (NOBRA) pilot boarded the *Century Queen* at the anchorage at mile 114.<sup>2</sup> About half an hour later, the ship weighed anchor and headed upriver to load rice in Reserve, Louisiana (mile 138.6). The crew and pilot informed investigators the passage leading to their destination was uneventful: all navigational and engineering equipment were operational, and the pilot considered the crew's competence to be "very good." Prior to reaching Hahnville (near mile 126), the *Century Queen* met several vessels port-to-port, before easing over toward the right descending bank to avoid the higher current on the opposite bank.<sup>3</sup>

About 1142, the *Kaytlin Marie* dropped off two empty barges in LaPlace (mile 132). The captain then topped around (made a 180° turn) and headed downriver light boat (no barges), before being relieved by the pilot for his normal 1200–1800 watch. While on the way to Waggaman (mile 110), the *Kaytlin Marie* followed about 0.5 mile, and 5 minutes, behind the towboat *Repentance*, which was pushing one barge. The captains of both vessels favored the left descending bank before approaching the bend at Hahnville.



Tracklines of the vessels during the last 7 minutes prior to the collision. The *Century Queen* is represented in red, the *Kaytlin Marie* in green, and the *Repentance* in black. (Background source: Google Maps)

<sup>2</sup> Time and positions of vessels were compiled from their automatic identification system (AIS).

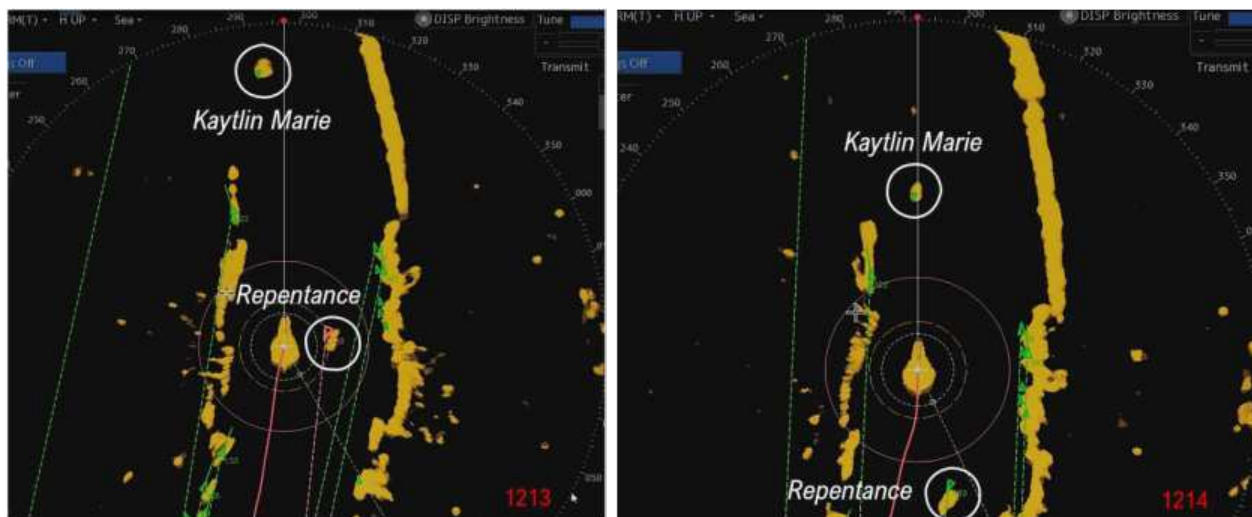
<sup>3</sup> The shorelines of the Western Rivers are referred to as the left and right banks when traveling downriver, because the river meanders and can flow in any direction—south, east, west, and even north. The left bank is called the *left descending bank*, and the right bank is called the *right descending bank*.

## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*

At 1208, the operator on the *Repentance* called the pilot on the *Century Queen* by radio. The pilot proposed a starboard-to-starboard passing, to which the *Repentance* operator agreed. Both VTS and *Century Queen*'s voyage data recorder (VDR) captured the conversation.

About 1209, the *Kaytlin Marie* made a course change to starboard, heading across the river toward the right descending bank, directly for the point at Hahnville. At 1213, the *Repentance* and the *Century Queen* passed each other, starboard-to-starboard. At the same time, the *Kaytlin Marie* and the *Century Queen* were about 0.6 mile apart.

After passing the *Repentance*, the bulk carrier continued to make incremental course changes to port. At 1213:40, the pilot on the *Century Queen* ordered the rudder to port 5°. The *Kaytlin Marie* had altered course to starboard another 10° in the previous minute, toward the right descending bank, as the towboat and bulk carrier headed almost directly toward each other.



Screenshots of the *Century Queen*'s radar on a 0.75 nautical mile scale on a head-up display. The *Kaytlin Marie* is shown fine-to-port at 1213 (left) and dead ahead with a port bow aspect at 1214 (right). The *Repentance*'s position is also identified.

At 1214:03, the *Century Queen*'s pilot gave another port 10° rudder command. Twenty-three seconds later, at 1214:26, the first radio contact between *Century Queen* and *Kaytlin Marie* ensued with a call from the *Century Queen*'s pilot, regarding passing arrangements, excerpted in text below. At this point, the vessels were 0.46 mile apart, as the distance between them was closing. The towboat's heading had not changed.

The pilot of the *Kaytlin Marie* answered the radio call but did not respond to the proposed passing agreement. He told investigators that it was the first time he realized that the *Century Queen* intended a starboard-to-starboard passing. He also stated that it was standard procedure for downbound vessels to have the right-of-way and for ships to round the bend at Hahnville in the middle of the river.

The *Kaytlin Marie* pilot then increased his turn to starboard toward the right descending bank. The *Century Queen* increased port rudder to 20° until 1214:58, when the pilot gave a "midship" command, followed immediately with "stop engines" (1215:01) and "hard starboard" (1215:04). The wheelhouse communications between the two vessels and aboard the *Century*



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*Queen* over the minute prior to the collision is excerpted below as recorded on the *Century Queen*'s VDR.

Time	Originator	Message
1214:24.9	<i>Century Queen</i>	Seventeen, <i>Kaytlin Marie</i> .
1214:29.9	<i>Kaytlin Marie</i>	<i>Marie</i> .
1214:31.7	<i>Century Queen</i>	Hey, you see me right here? Huh, cap? (The pilot follows with a midship helm command.)
1214:33.5	<i>Kaytlin Marie</i>	Whatcha doing?
1214:35.0	<i>Century Queen</i>	I guess I'ma see you on the two right?
1214:46.8	<i>Century Queen</i>	<i>Kaytlin Marie</i> , I'll see you on the two?
1214:49.1	<i>Century Queen</i>	[To helmsman] Port twenty.
1214:54.2	<i>Century Queen</i>	[To bridge team] Whistle, whistle.
1214:57.9	<i>Century Queen</i>	[To helmsman] Midship.
1215:00.7	<i>Century Queen</i>	[To mate] Stop engines.
1215:04.4	<i>Century Queen</i>	Hard starboard.
1215:05	<i>Century Queen</i>	(Sound of collision.)

At 1215:08, the *Century Queen*'s bulbous bow struck the *Kaytlin Marie* amidships at about a 90° angle. The towboat's number 4 and 5 port fuel tanks outboard of the engine room were holed. Eventually, an estimated 8,954 gallons of marine diesel oil were released into the river. The cover to the port aft slop tank was dislodged; an unknown amount of waste oil was released as well. The engine room, whose windows were shattered, was at risk of flooding through an open starboard (up-current) door. A cleat on the port side that had caught on the damaged bow of the bulk carrier prevented the towboat from capsizing, as the *Kaytlin Marie* was pushed sideways up-current until both vessels came to a stop. The *Century Queen*'s bulbous bow was torn open for approximately 6 feet, and the void space was filled with river water and the released diesel fuel.

## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*



**Both vessels shortly after the collision (Source: US Coast Guard)**

At the time of the accident, the pilot on board the *Kaytlin Marie* was alone in the wheelhouse and became pinned by furniture that had come loose. Four refrigerators in the galley broke free from the port bulkhead, slid across the mess deck, and pinned two deckhands, one of whom suffered internal injuries. The other had a minor injury.

The crew of the nearby towboat *Okaloosa* rescued the crew of the *Kaytlin Marie*, believing the vessel was in danger of capsizing. Other Good Samaritan vessels then worked together to successfully free the vessel from the *Century Queen*'s bow.

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*Kaytlin Marie* embedded in the *Century Queen*'s bulbous bow. (Source: Coast Guard)

### Additional Information

The NOBRA pilot aboard the *Century Queen* had worked in the marine industry since 1990 and had been a pilot since 1996. The *Century Queen*'s captain had worked in the industry for 24 years, had been with the operating company for 12 (of which the last 3 were spent as captain), and had been aboard the *Century Queen* since the ship was delivered. He told investigators he had called on New Orleans many times.

The NOBRA pilot stated that although he did not use the radar, *Kaytlin Marie*'s AIS was easily seen on his display. He also recalled hailing the *Kaytlin Marie* 3–5 minutes before the collision on his mobile radio. However, during a review of the audio recorded, neither the *Century Queen*'s VDR nor VTS captured this conversation. The NOBRA pilot also told investigators it was not normal to call light boats, given their multiple numbers and various directions on the river. Similarly, the *Kaytlin Marie* pilot stated that he does not normally call to initiate passing arrangements while navigating in a light boat condition.

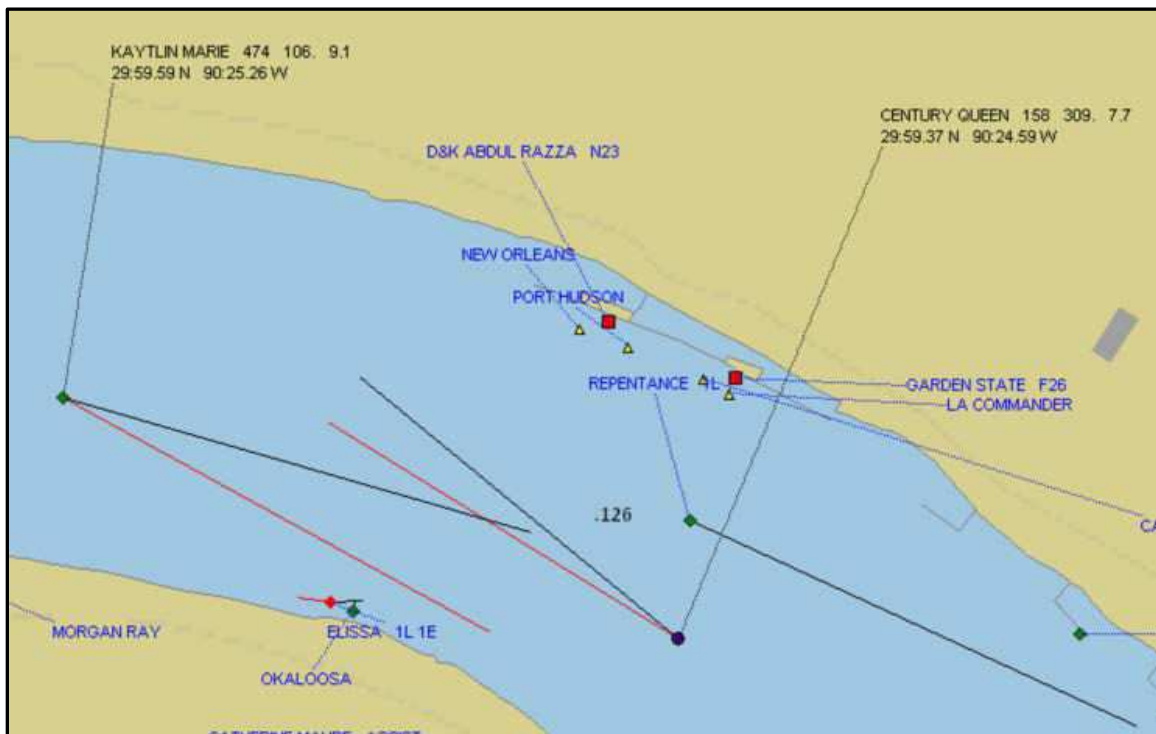
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The *Century Queen* captain told investigators that while he was working on reports on the starboard side of the bridge, he was aware of the *Repentance* passing. He did not hear, though, the pilot make passing arrangements. He stated the bridge was manned per company procedures, and the mate on watch was not required to calculate the closest point of approach of passing vessels in the river.

The pilot on the *Kaytlin Marie* had worked aboard towboats for 58 years and had worked for the vessel's operating company for 2 years, since its inception.

The *Kaytlin Marie*'s last voluntary Coast Guard-uninspected towing vessel exam was completed on May 20, 2010. The vessel had yet to be issued a certificate of inspection (COI) per Subchapter M regulations, which were effective in July 2018 for towing vessels. The first milestone for the phase-in period for the new regulations was in July 2019 (after this accident), when operators were required to have a COI for 25 percent of their fleet.

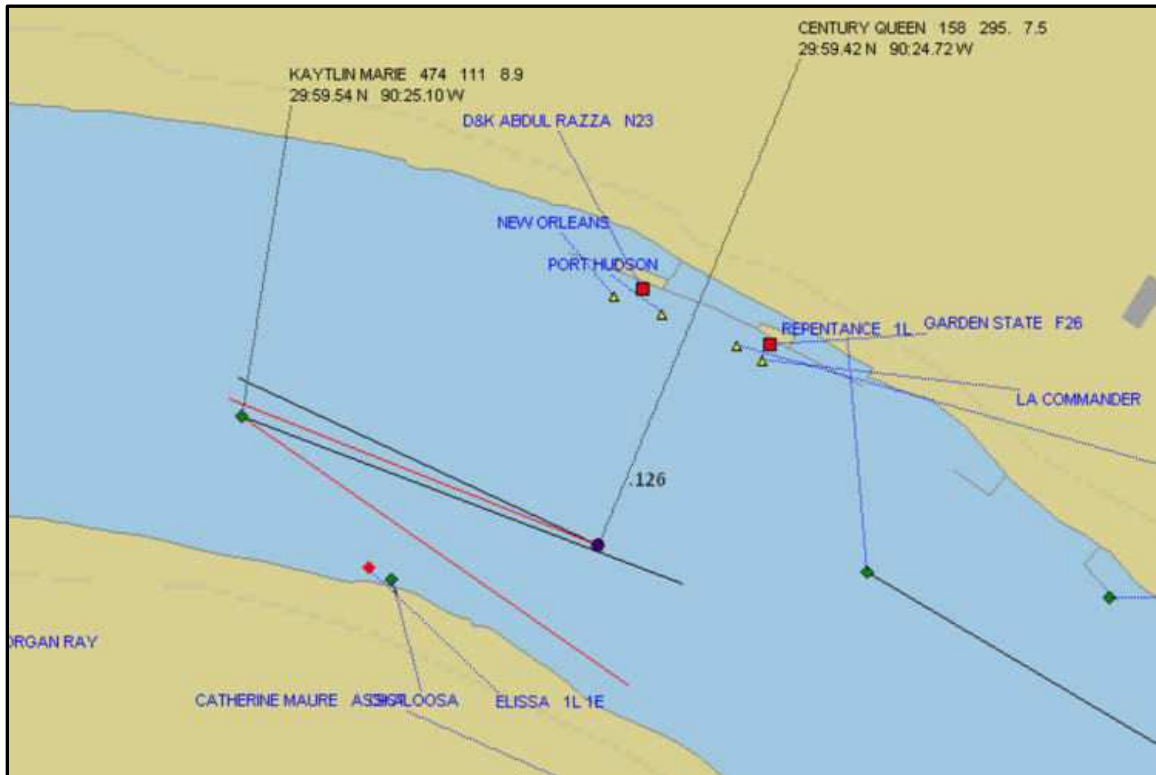
Playback software from VTS Lower Mississippi River provided heading and course over ground for vessels transiting the bend and correlates with the radar screenshots captured by the VDR.



Screenshot of the VTS Ports and Waterways Safety System (PAWSS) tracking the *Century Queen* and *Kaytlin Marie* at 1213. Red vectors indicate the vessels' heading, and black vectors indicate their course over ground.



## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*



Screenshot of VTS' PAWSS at 1214. The *Century Queen* had altered course 14° towards to port in the previous minute.

### Analysis

Investigators examined and correlated electronic data from *Century Queen*'s VDR, *Kaytlin Marie*'s electronic chart systems, and playback of VTS radio and video.

After having passed vessels port-to-port in the stretch of the river downstream of the point at Hahnville, the *Century Queen* maneuvered to the right descending bank to avoid the swift current. The towboat *Repentance*, downbound and pushing one barge, contacted the bulk carrier by VHF radio. The Inland Rules give the downbound vessel on the Western Rivers the right-of-way in head-on situations. The rules also require the downbound vessel to “propose the manner of passage” and “make the appropriate maneuvering signals.” After being hailed by the *Repentance*, who was following the left descending bank, the *Century Queen* suggested a starboard-to-starboard passing to which the *Repentance* agreed. The vessels passed safely at about 1213.

About 0.5 mile astern of the *Repentance*, the *Kaytlin Marie* was also downbound and favored the left descending bank prior to the accident bend. However, the pilot chose to maneuver to the right descending bank while rounding the point. The towboat started toward the point following the radio conversation between the *Repentance* and *Century Queen*. Per the rules, the *Kaytlin Marie* also had the right-of-way as the downbound vessel but, unlike the *Repentance*, did not contact the *Century Queen* to propose a manner of passing. The *Kaytlin Marie* pilot told investigators he preferred to maintain the right descending bank to avoid the current on the opposite bank and that in his experience deep draft ships typically kept to the middle of the channel, avoiding the fleets of barges on the right descending bank. He also told investigators he did not call the *Century Queen* because it appeared to him that the ship was maintaining the center of the channel and that light boats did not normally call to make passing arrangements.

## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*

The *Century Queen* pilot incorrectly assumed the *Kaytlin Marie* would follow in the track of the *Repentance*. The NOBRA pilot told investigators he talked to the *Kaytlin Marie* 3–5 minutes before the incident, which would have been between 1210 and 1212. However, no conversation was heard in the review of either the VTS or VDR audio. The fact that the *Kaytlin Marie* was fine-to-port and presenting a port bow aspect at 1213, when the *Century Queen* and *Repentance* passed each other, should have raised concern. Yet, the pilot did not contact the *Kaytlin Marie*, or indicate any doubt, as required by the Rules, for another 85 seconds to verify what, in his mind, would be a starboard-to-starboard passing. He told investigators it was not normal practice to call light boats.

The radio call to *Kaytlin Marie* at 1214:25 was the first indication to the *Kaytlin Marie* that the *Century Queen* anticipated a two-whistle passing. Unwilling to turn to port across the ship's bow as requested, the pilot immediately made an evasive maneuver that brought it further to starboard. In his efforts to avoid the collision, however, he did not communicate this intention to the *Century Queen*. By not replying to the ship's proposal or indicating his intention or inability to meet the request, the pilot aboard the bulker lacked information regarding the towboat's intentions and came further to port, exacerbating the situation.

Assumptions by both vessels as to the intent of the other created a dangerous situation. As the downbound vessel, the *Kaytlin Marie* was obligated to propose the passing arrangement. Early communication by either vessel would have ensured what should have been a safe starboard-to-starboard passing within a half-mile-wide section of the river. The local custom of light boats not calling to propose passage when required, or others not calling light boats when in doubt, created a dangerous scenario.

### Probable Cause

The National Transportation Safety Board determines that the probable cause of the collision between the bulk carrier *Century Queen* and the towing vessel *Kaytlin Marie* was the lack of early and effective communications to confirm a passing arrangement between the two vessels.

#### Establishing Passing Arrangements in Sufficient Time

When meeting or overtaking a vessel on the Western Rivers, especially within a bend where high-water conditions can increase the risk of collision, it is critical to establish early communications rather than make assumptions about the intentions of approaching vessels. Rules of the Road must supersede local practices or habits, such as light boats and deep draft vessels typically not contacting each other.

## Collision between Bulk Carrier *Century Queen* and Towing Vessel *Kaytlin Marie*

### Vessel Particulars

Vessel	<i>Century Queen</i>	<i>Kaytlin Marie</i>
Owner/operator	Naviera Florida Myers, Inc. / Hiong Guan Navegacion Japan	Three Rivers Boat and Barge Inc./ Integrity Marine Management
Port of registry	Panama City, Panama	Ledbetter, Kentucky
Flag	Panama	United States
Type	Bulk carrier	Towing vessel
Year built	2018	1973
Official number	N/A	548851
IMO number	9831531	None
Classification Society	NKK	None
Construction	Welded steel	Welded steel
Length	449 ft (137.0 m)	126 ft (38.4 m)
Draft	10.5 ft (3.2 m)	10.0 ft (3.0 m)
Beam/width	75 ft (23.0 m)	34 ft (10.5 m)
Tonnage	10,246 ITC	486 GRT
Engine power; manufacturer	5,230 hp (3,900 kW); Makita-Mitsui- MAN B&W 6S35MC7.1	4,200 hp (3,132 kW); GM 16-645E2
Persons on board	21	7