National Transportation Safety Board

Marine Accident Brief

Collision between *Dewey R* Tow and *P. B. Shah* Tow

Accident no.	DCA15LM034
Vessel names	*Dewey R* tow and *P. B. Shah* tow
Accident type	Collision
Location	Lower Mississippi River, mile marker (mm) 937, near Columbus, Kentucky
Date	September 2, 2015
Time	1959 central daylight time (coordinated universal time − 5 hours)
Injuries	None
Property damage	$1.1 million est.
Environmental damage	120,000 gallons of clarified slurry oil were released into the river; 3,392 tons of dewatered oily sediment were later recovered
Weather	Visibility 10 miles at twilight, northeast winds 2 mph, air temperature 80°F
Waterway information	Downbound on the Mississippi River in the accident area, the river bends 40 degrees to the right, from south to west, at Belmont Point. The US Army Corps of Engineers maintains the navigation channel at 9 feet deep and 300 feet wide at low water. Fleeting and provision operations take place between mm 936 and mm 942. Current at the time of the accident was 2.5 mph.

On September 2, 2015, at 1959 central daylight time, the uninspected towing vessel *P. B. Shah* was upbound pushing 24 barges on the Lower Mississippi River at mile marker (mm) 937, near Columbus, Kentucky, when two of its barges collided with two of four barges being pushed downbound by the uninspected towing vessel *Dewey R*. No one was injured; however, the accident resulted in the discharge of 120,000 gallons of clarified slurry oil into the river and an estimated $1.1 million in damages.

Uninspected towing vessel *P. B. Shah*

*All distances in this report are statute miles.

Accident Events

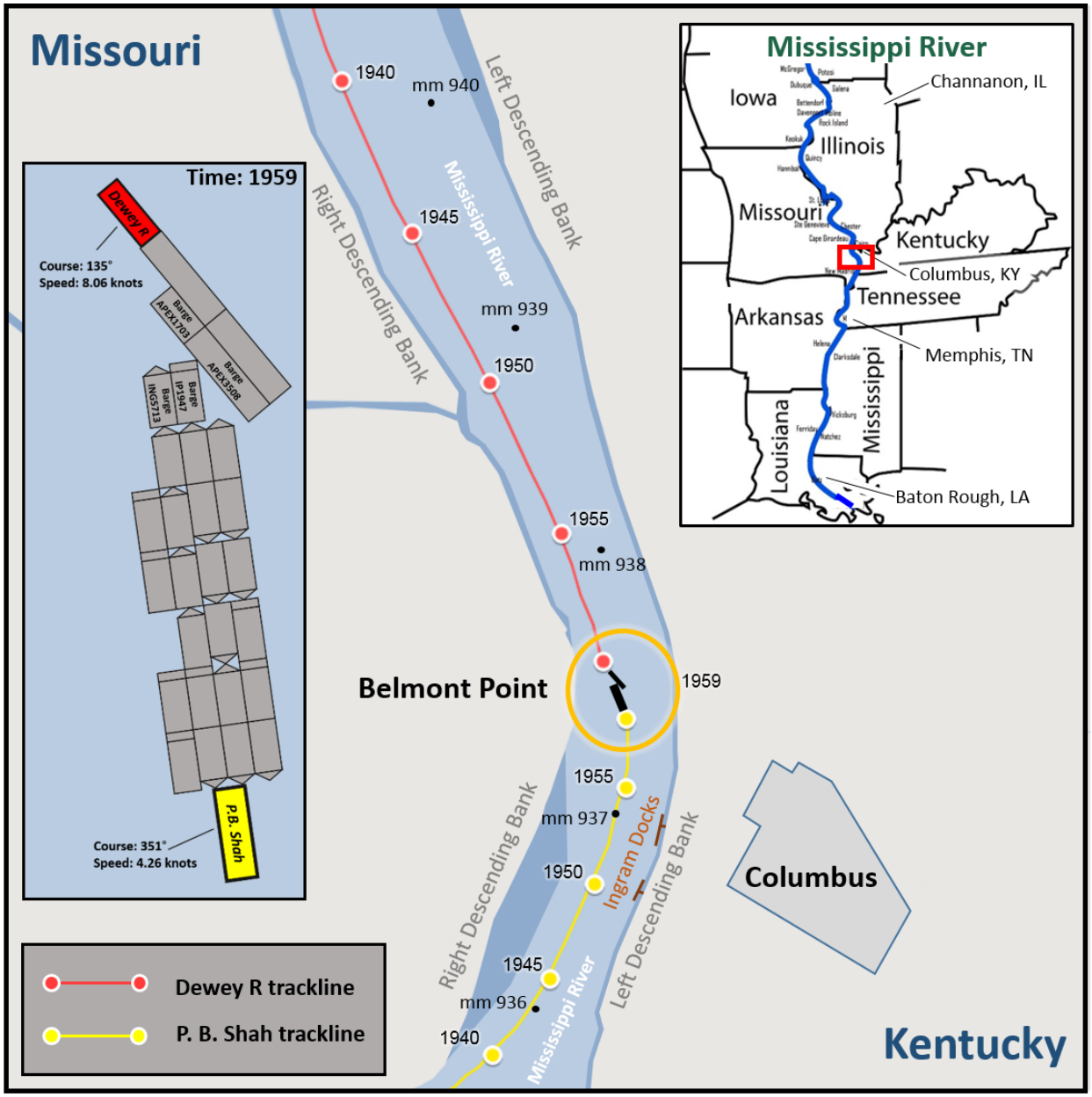
On the day of the accident, the *P. B. Shah* was pushing its 24 loaded barges in four strings up the Lower Mississippi River en route to Columbus, Kentucky, from Baton Rouge, Louisiana. At 1831, the captain pushed his tow into the right descending bank at mile marker (mm) 934.3 to wait for southbound traffic to pass.[1] At 1910, the *P. B. Shah* got under way heading northbound towards the Ingram Columbus fleet located at mm 937.8 on the left descending bank.

At 1912, the *P. B. Shah* captain contacted the *Dewey R* via VHF radio. The *Dewey R* was downbound on the river pushing four loaded tank barges in two strings en route to Baton Rouge from Channahon, Illinois. The *P. B. Shah* captain informed the *Dewey R* captain that he was at the head of Wolf Island (mm 934.3, to the south of the accident site) and that he would contact the *Dewey R* at a later time to determine passing arrangements.

Uninspected towing vessel *Dewey R*.

At 1940, the *P. B. Shah* captain called the *Dewey R* again and requested a port-to-port passing arrangement. Under the inland navigation rules, a vessel proposing a passing arrangement sounds one short blast of the ship's whistle to indicate "I intend to leave you on my port side"—a portside-to-portside meeting. (A vessel would sound two whistles if proposing a starboard-side-to-starboard-side passage.) If in agreement, the meeting vessel responds with the same whistle signal. In place of whistle signals, vessels may use VHF radio to make passing arrangements, and it is common for operators to refer to the whistle signals when making these arrangements via radio. For instance, a vessel proposing a port-to-port passage may request to "meet me on *one whistle*" or simply "meet me on *the one*." In the radio exchange between the two towing vessels (captured in a wheelhouse recording on *P. B. Shah*), the *P. B. Shah* captain asked the *Dewey R* captain, "*The one* gonna work for you? We'll be right underneath Belmont, probably." The *Dewey R* captain responded, "That'll be great."

[1] The banks of the Western Rivers are referred to as *left* and *right* when traveling downstream because the rivers meander and can flow in any direction—south, east, west, and even north. Thus, when a section of the river flows from north to south, the east bank of the Mississippi River is referred to as the left bank and the west bank as the right bank. To avoid confusion, commercial river traffic often calls the left bank the *left descending bank* and the right bank the *right descending bank*.



The *Dewey R* captain, who had been steering his vessel along the right descending bank as he approached Belmont Point, continued to follow this course based on the agreed passing arrangement.

As the *P. B. Shah* neared its destination at mm 937.8, the captain maneuvered his tow the final 2.8 miles through Ingram's busy barge fleeting facility. (A fleeting facility is an area on the river where barge flotillas are moored or assembled.) The Ingram facility located between mm 936 and mm 942 in Columbus, Kentucky, primarily serviced Ingram-owned vessels. In addition to fleeting work, the facility also provided other internal services, including dry cargo barge repair and cleaning, crew changes, and delivery of parts and other goods. As the captain transited the area, he heard a constant flow of conversations on the radio and maintained a dialogue with Ingram dispatch and Ingram fleet vessels concerning groceries, paperwork, barge drop-offs and pick-ups, leaking barges, and engine inspections. The captain was also discussing upcoming tasks with his lead deckhand who was in the wheelhouse.

Collision between *Dewey R* Tow and *P. B. Shah* Tow

As the vessel approached Belmont Point and began its turn around the bend in the river, the *P. B. Shah* tow was positioned just off the center of the channel, favoring the right descending bank. At 1952, seven minutes before the collision when the vessels were less than two miles apart, the *P. B. Shah* captain made visual contact with the *Dewey R* tow and observed the *Dewey R* was close to the right descending bank—the same bank that the *P. B. Shah* was favoring.

Investigators confirmed during a review of a wheelhouse recording that the captains had agreed to a port-to-port meeting, but the *P. B. Shah* captain believed he had proposed a starboard-to-starboard passage. The *P. B. Shah* captain called the *Dewey R* captain and said, "Got 'em pulling around a little bit more for you there, *Dewey R,* if you needed two…two whistles."

The *Dewey R* captain then asked the *P. B. Shah* captain if he "was going to be on the one" as previously agreed.

P. B. Shah: "No, I'm on the two, Skipper."

Dewey R: "[Expletive], I thought we agreed on the one, Bro."

P.B. Shah: "Ah, I hope this will work out for you."

Dewey R: "I'll make it work out, just give me a minute."

P.B. Shah: "Okay, no, I said the two earlier, that'll be alright."

Dewey R: "I'll make it happen, buddy. I'll make it happen. I guess I misunderstood you, Brother."

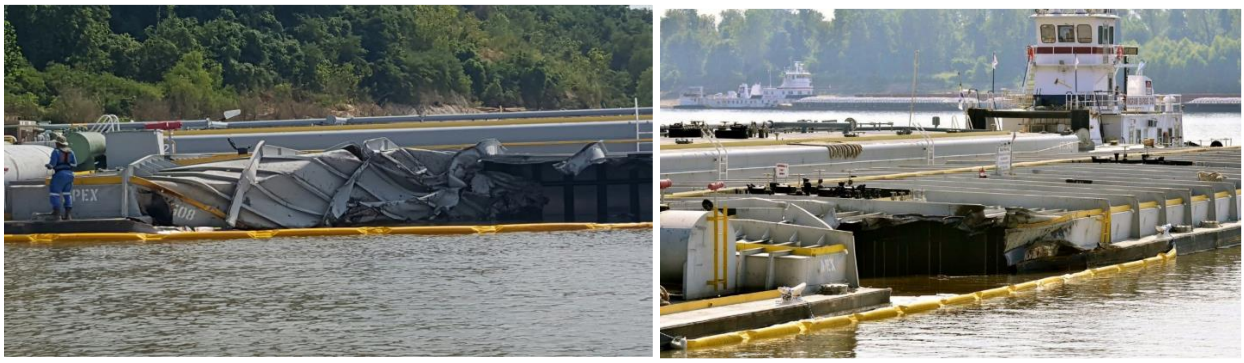
P.B. Shah: "Okay."

When interviewed after the accident, the *Dewey R* captain mistakenly believed he had misheard the initial passing agreement and began to steer hard to his port in an attempt to swing his tow toward the left descending bank. The *P. B. Shah* captain did not take immediate action but continued to maintain his speed and course with the head of his tow swinging slightly to port. At 1953:38, the *P. B. Shah* captain asked the *Dewey R* captain if he wanted him to "shut off for a minute." The *Dewey R* captain responded, "It wouldn't hurt a thing." At 1954, the *P. B. Shah* captain began backing to slow the swing of his tow; at 1954:38, he put his engines full astern.

Despite the actions of both captains to prevent a collision, at 1959 the tank barges *IB1947* and *ING 5713*, at the front of the flotilla pushed by *P. B. Shah*, collided with the tank barges *APEX 3508* and *APEX 1703* in the tow of the *Dewey R*.

The collision breached the no. 3 starboard wing void and the no. 3 starboard cargo tank on the barge *APEX 3508*. The breach resulted in a discharge of 120,000 gallons of clarified slurry oil into the river.[2] Barge *APEX 1703* sustained damage to its deck cargo piping, and its cargo heater was dislodged from its mounts. The *ING 5713* sustained damage, including two punctures, over a 20-foot-wide area amidships, 6 feet from the deck knuckle, as well as a puncture near the port side of the rake. *IB1947*'s starboard bow corner was crushed and holed over a 9-foot-by-9-foot area from the 9-foot draft line down to the bottom knuckle. This damage extended about 6 feet to port from the starboard bow corner and 3 feet back on the side shell.

[2] *Slurry oil* is a heavy aromatic by-product of an oil refinery's fluid catalytic cracking process that forms a small part of global fuel oil supply. Generally, it is mixed into heavy fuel oil as a viscosity cutter.



At left, damaged barge *APEX 3508* from *Dewey R* tow; at right, its shell and deck plate have been removed. (Photo by US Coast Guard)

In response to the slurry oil discharge, the US Coast Guard established an Incident Command in Paducah, Kentucky, to oversee operations to locate and recover the oil. Using specialized equipment, an estimated 3,392 tons of dewatered oily sediment were recovered from the river. The 11-day operation was completed on September 24, 2015.

Damaged barges from *P. B. Shah* tow: at left, barge *ING 5713*; at right, barge *IB1947.*

Accident Analysis

The *P. B. Shah* captain erred when he initiated a port-to-port (one whistle) passing on the radio with the *Dewey R* captain. He had meant to arrange a starboard-to-starboard (two-whistle) passing, but the captain was distracted by the many tasks associated with preparing for his arrival at the Ingram facility. This included having a cell phone conversation with the boat store to discuss a grocery delivery and meeting with the mate to discuss upcoming tasks, both around the same time the passing arrangement was made with the *Dewey R*. "Sliding underneath the point" is an action, as described by pilots with larger tows coming upbound around Belmont Point, that allows equal or smaller southbound tows to come around Belmont Point with a following current without worrying about their vessel sliding across the river into the upbound tow. The *P. B. Shah* captain's radio transmission saying he would "be underneath Belmont Point" and the AIS position data showing the tow's movement towards the right descending bank are consistent with a starboard-to-starboard passing, indicating that this was the captain's intention.

As the operator of a downbound vessel on the Western Rivers, the *Dewey R* captain made a mistake by not following the inland navigation rules. Per the rules, the downbound vessel "shall have the right-of-way over an upbound vessel…[and] shall propose the manner and place of

passage."[3] The *Dewey R* captain should have assessed the risk of collision presented by the two alternative meeting arrangements, chosen the option that did not include passing in front of the *P. B. Shah* tow, and then used his privilege as the downbound vessel to overrule the *P. B. Shah* captain's change to a two-whistle meeting arrangement. Instead, because the *Dewey R* captain doubted his understanding of the original agreement, he made the decision to cross the river based on the *P. B. Shah* captain saying he was bringing his tow around to the port, in an attempt to steer clear of the *P. B. Shah* and to conduct a two-whistle pass.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the collision between the *P. B. Shah* tow and the *Dewey R* tow was the impact of distraction upon the decision-making and recollection of the captain of the *P. B. Shah*. Contributing to the collision was the failure of both captains to monitor the progress and effectiveness of the meeting proposal and take appropriate action to avoid the collision.

[3] 33 *Code of Federal Regulations* 83.09(a)(2)

Vessel Particulars

Vessel	*P. B. Shah*	*Dewey R*	*APEX 3508*	*APEX 1703*	*ING 5713*	*IB1947*
Owner/operator	Ingram Barge Company	Apex Towing Company	Apex Towing Co./Winterville Marine Services, Inc.	Apex Towing/Winterville Marine Services, Inc.	Corporate Trust Administration/Ingram Barge Company	JO Equipment II LLC/Ingram Barge Company
Port of registry	Cincinnati, Ohio	St. Louis, Missouri	St. Louis, Missouri	St. Louis, Missouri	St. Louis, Missouri	St. Louis, Missouri
Flag	United States	United States	United States	United States	United States	United States
Type	Towing Vessel	Towing Vessel	Tank Barge	Tank Barge	Freight Barge	Tank Barge
Year built	1975	1974	1975	1974	1993	2013
Official number (US)	566553	554261	567136	557584	989790	1247572
IMO number	NA	NA	NA	NA	NA	NA
Construction	Steel	Steel	Steel	Steel	Steel	Steel
Length	167 ft (51 m)	136 ft (41.5m)	297.6 ft (90.7m)	147.6 ft (45 m)	200 ft (61 m)	200 ft (61 m)
Draft	9.2 ft (2.8 m)	10 ft (3 m)	297.6 ft (90.7 m)	9.9 ft (3 m)	12 ft (3.7 m)	12 ft (3.7)
Beam/width	47 ft (14.3 m)	40 ft (12.2 m)	54 ft (16.5 m)	35 ft (10.7 m)	35 ft (10.7 m)	35 ft (10.7 m)
Gross and/or ITC tonnage	754 gross tons	587 gross tons	1716 gross tons	825 gross tons	705 gross tons	705 gross tons
Engine power; manufacturer	7200 hp (5369 kW); Two GM 20-645E5 Diesel engines	3800 hp (2834 kW); Two GM 16-645E2 Diesel engines	NA	NA	NA	NA
Persons on board	9	8	0	0	0	0

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

For more details about this accident, visit www.ntsb.gov and search for NTSB accident ID DCA15LM034.

Adopted: October 26, 2016

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*, 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." Title 49 *Code of Federal Regulations*, 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*, 1154(b).