

April 6, 2026

MIR-26-10

Breakaway of Barges *MPC 907* and *MPC 644* and Subsequent Contact with Mooring Cells

On April 16, 2024, about 0445 local time, the barges *MPC 907* and *MPC 644* broke free from their moorings at the Marathon Petroleum Company terminal dock at mile 793.8 on the Ohio River, near Evansville, Indiana (see figure 1 and figure 2).¹ The two barges contacted mooring cells about 1,500 feet downstream at the TransMontaigne terminal at mile 794.1. The barges were later recovered with minor damage. There were no injuries, and no pollution was reported. Damage to the TransMontaigne dock structure was estimated to exceed \$2.5 million.



Figure 1. Barge *MPC 644* at unknown date. (Source: Marathon Petroleum Company)

¹ (a) In this report, all times are central daylight time, and all miles are statute miles. (b) Visit [nts.gov](https://www.nts.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA24FM034).

Casualty Summary

Casualty type	Contact
Location	Ohio River, mile 794.1, near Evansville, Indiana 37°58.01' N, 087°36.22' W
Date	April 16, 2024
Time	0445 central daylight time (coordinated universal time -5 hrs)
Persons on board	None
Injuries	None
Property damage	>\$2.5 million est.
Environmental damage	None reported
Weather	Visibility 10 mi, light winds, air temperature 68°F, sunrise 0613
Waterway information	River; width 1,800 ft at accident site, depth 9 ft in channel, current 3 mph



Figure 2. Area where the barges *MPC 644* and *MPC 907* contacted the mooring cells, as indicated by a circled X. (Background source: Google Maps)

1 Factual Information

On April 15, 2024, about 2300, the crews of towing vessels operated by Evansville Marine Services (EMS) moored two 297.5-foot-long steel tank barges, the *MPC 644* and *MPC 907*, alongside (in a string) the Marathon Petroleum Corporation (MPC) terminal dock at mile 793.8 on the right descending bank of the Ohio River, near Evansville, Indiana.² The *MPC 644* was carrying about 23,000 barrels of no. 2 ultra low sulfur (MV15) diesel fuel. The *MPC 907* was carrying about 27,328 barrels of no. 84 conventional-blend-grade gasoline. Discharge of cargo from the two barges was expected to take place the following morning.

River conditions at the time were high, with the gauge at Evansville at 38.8 feet and rising (the river peaked 4 days later, on April 19, at 39.8 feet).³ The current was about 3 mph. A total of six lock lines and four winch wires were used to moor the two barges (three lock lines and two wires on each barge). MPC told investigators that there was not a specified minimum number of lines to secure barges at their facility, but that industry standard was four lines and/or wires per barge in normal conditions. MPC expected enhanced measures beyond the minimum at high-wind and -water level conditions but did not specify how many additional lines should be used.

On April 16, about 0600, MPC terminal operations personnel arrived at the terminal and found the *MPC 644* and *MPC 907* missing. At 0610, terminal operations personnel called EMS to check on the status of the barges. After investigating, at 0645, EMS called MPC terminal operations personnel and stated that the barges had broken away overnight. About 0650, terminal operations personnel performed a visual inspection of the dock and found all six lock lines and four winch wires broken. Terminal operations personnel then notified all downriver facilities of potentially loose barges. MPC personnel reviewed terminal camera footage, which showed that, about 0445 on April 16, the two barges broke free from the dock.

EMS reported a drift pile of debris (100 feet by 200 feet) in the water about the time of the breakaway. According to MPC, terminal camera footage appeared to show a debris pile that followed the barges after the breakaway.

² (a) The inland towing industry refers to the shorelines of Western Rivers as the left and right banks when traveling (facing) downriver. The left bank is called the *left descending bank*, and the right bank is called the *right descending bank*. (b) The Ohio River runs 981 miles from Pittsburgh, Pennsylvania, to Cairo, Illinois, where it meets the Mississippi River.

³ Flood stage at Evansville is 42 feet.

The barges were recovered by EMS tugs near mile 802 about 0700 and returned to the MPC facility dock. No significant damage was noted to the barges, and all cargo was offloaded without issue.

The TransMontaigne terminal—located at mile 794.1, about 1,500 feet downstream of the MPC terminal—reported damage to its dock structure, which consisted of four mooring cells and a steel access walkway running from shore to cell nos. 2 and 3 (see figure 3). Cell no. 4, located farthest upriver, was no longer present. A sonar survey found that the cell piling was fractured at the river bottom and laid in the downstream direction at a 90° angle to the original vertical location (see figure 4). Cell no. 3 sustained significant damage to the upstream piling structure and concrete cell cap. Cell no. 2 sustained fracture damage to its concrete cap. Supports and steps for a spiral access stairway attached to cell no. 2 were deformed. No damage to cell no. 1 was noted. The steel access walkway to the mooring cells and associated piping was distorted in the downstream direction. TransMontaigne estimated the physical damage to the dock structure would exceed \$2.5 million.

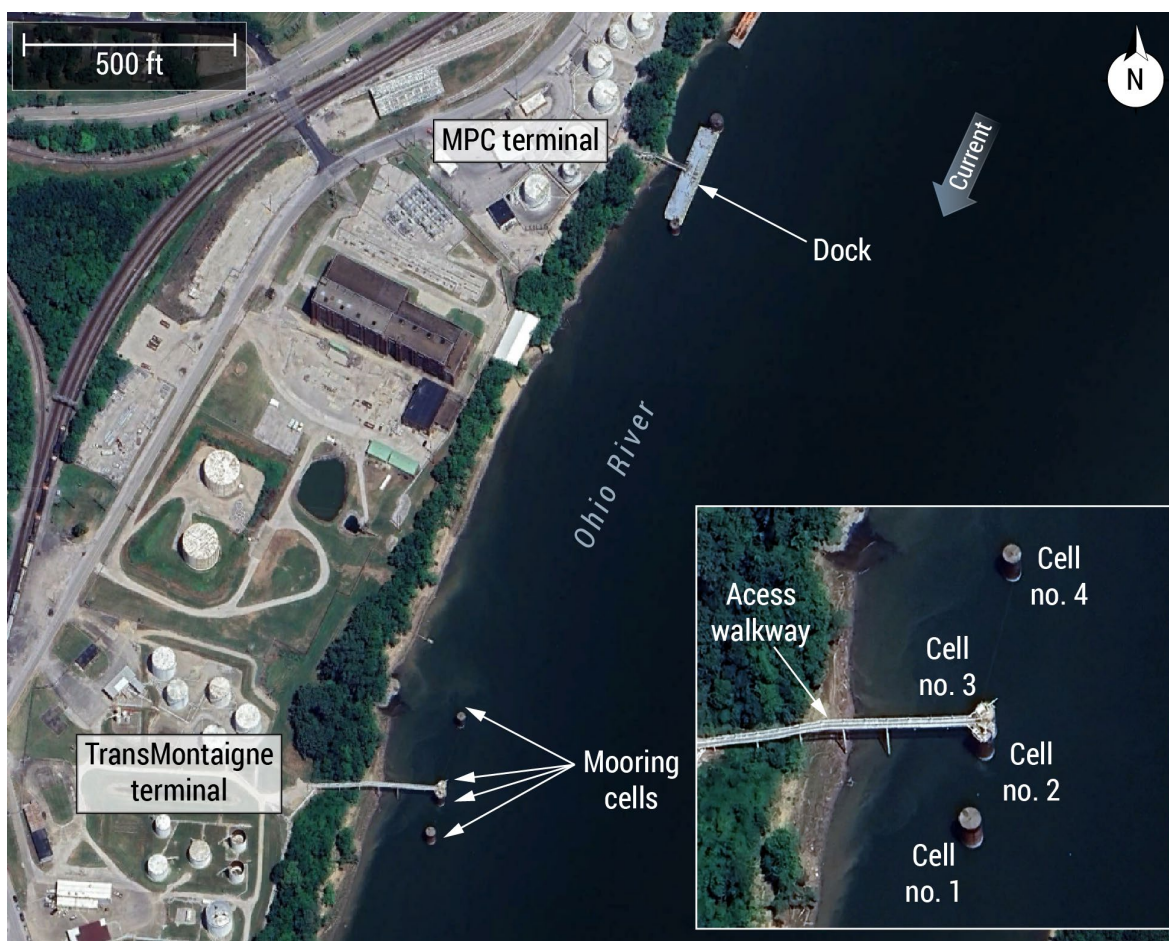


Figure 3. Mooring cells at TransMontaigne terminal before the barge breakaway and contact. (Background source: Google Earth)

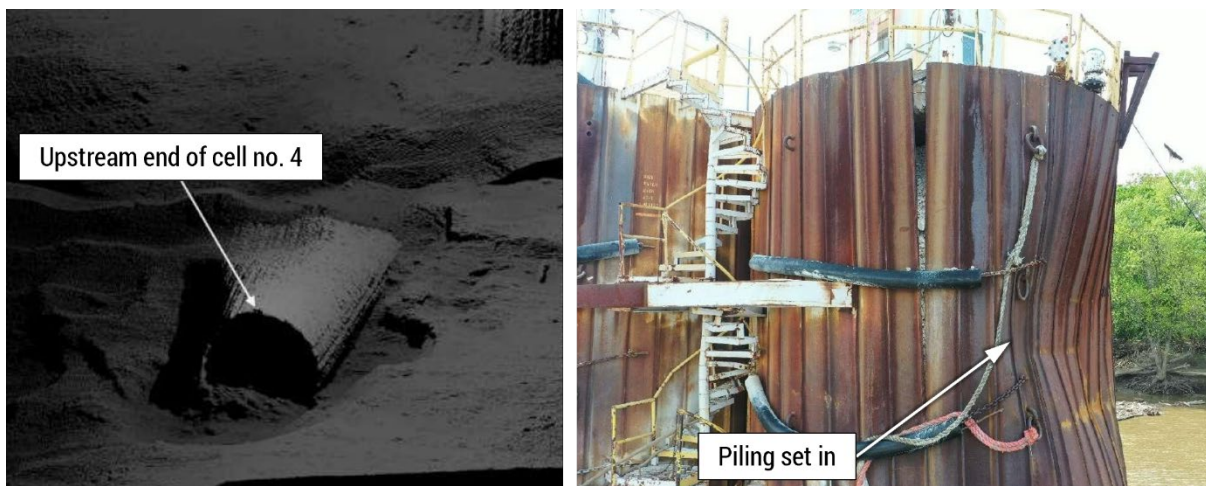


Figure 4. Left to right: Sonar image showing upstream end of cell no. 4 on the river bottom. Damage to mooring cell no. 3, with piling set in. (Background source: TransMontaigne)

The *MPC 907* was surveyed after the accident. The tow knee face was set in up to three-quarters of an inch over a 10-inch span on the starboard side. The surveyor found limestone aggregate and concrete fragments, which "appeared to be identical to the fill material and concrete cap of cell No. 3 at the TransMontaigne terminal facility," about the deck, starboard side, forward. The *MPC 944* was also surveyed, and no significant damage was noted.

The lock lines and wires used to moor the barges were not retained for examination or testing. MPC told investigators that wires were inspected weekly and all mooring connections were inspected before each cargo transfer. EMS personnel did not report any issues with the lines or wires used to moor the barges.

As a result of the accident, MPC reviewed its policies and procedures related to mooring barges at their facility and refined their process for transfer of custody during barge delivery. The fleet operator can now only deliver barges in a narrow window of time ahead of transfer operations, and a verbal handoff regarding the barge condition and mooring arrangement must be completed with MPC personnel.

2 Analysis

On April 16, 2024, two barges loaded with ultra low sulfur diesel fuel and gasoline broke away from their mooring location at the MPC terminal on the Ohio River. The barges, *MPC 907* and *MPC 644*, drifted away and contacted mooring cells at another facility, located downstream.

The breakaway occurred during high-water conditions. MPC expected third-party fleet providers—in this case, EMS—to use enhanced measures for mooring in such conditions. Standard mooring consisted of four lines and/or wires per barge. On the evening before the breakaway, EMS personnel had moored the two barges using 10 total lines (three lines and two wires for each barge), thus meeting MPC's expectations. Because the lines were not retained for examination or testing, investigators could not determine their condition at the time of the accident. However, the lines were inspected weekly, EMS personnel did not report any issues with the lines when they moored the barges, and additional lines were used to account for the high-water conditions. EMS personnel noted drift piles of debris in the river about the time of the breakaway. With high water and increased current, debris, such as tree trunks, tree limbs, and litter, can collect and drift downstream. Accumulating debris at the head of a barge can lead to an increased strain on its moorings, thus elevating the risk of lines or wires parting. Given the swift river current (3 mph) at the time, if debris contacted the moored barges, it could have contributed to the failure of the mooring arrangement and the barges breaking away.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the breakaway of barges *MPC 907* and *MPC 644* and their subsequent contact with downstream mooring cells was a failure of their mooring arrangement in high-water conditions due to an undetermined cause, possibly related to debris in the river.

Vessel Particulars

Vessel	<i>MPC 907</i>	<i>MPC 644</i>
NTSB Vessel Type	Towing/Barge (Tank barge)	Towing/Barge (Tank barge)
Owner/Operator	Marathon Petroleum Company (Commercial)	Marathon Petroleum Company (Commercial)
Flag	United States	United States
Port of registry	Ashland, Kentucky	Ashland, Kentucky
Year built	2009	2008
Official number	CG961173 (US)	CG961157 (US)
IMO number	N/A	N/A
Classification society	N/A	N/A
Length (overall)	297.5 ft (90.7 m)	297.5 ft (90.7 m)
Breadth (max.)	54.0 ft (16.5 m)	54.0 ft (16.5 m)
Draft (casualty)	10.0 ft (3.0 m)	10.0 ft (3.0 m)
Tonnage	1,619 GRT	1,619 GRT
Engine power; manufacturer	N/A	N/A

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

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For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA24FM034. Recent publications are available in their entirety on the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting—

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