

4  
Log # M-327



# National Transportation Safety Board

Washington, D.C. 20594  
**Safety Recommendation**

**Date:** June 15, 1987

**In reply refer to:** M-87-21 and -22

Admiral Paul A. Yost, Jr.  
Commandant  
U.S. Coast Guard  
Washington, D.C. 20593

---

On July 31, 1986, the U.S. tank barge TTT 103 exploded and sank while loading gasoline at the Chevron Oil Refinery in Pascagoula, Mississippi. The tank barge, partially loaded with diesel fuel, burned and spilled the fuel into Bayou Casotte. The fuel ignited and fire spread under the refinery's pier rupturing pipelines and engulfing the shore end of the pier in flames.

A tankerman aboard the TTT 103 at the time of the explosion was thrown into the water. He suffered numerous burns to his face, arms, and back, but managed to make his way to shore and was subsequently taken to a hospital for treatment.

Immediately after the explosion, the Chevron operator on the pier actuated the emergency shut-down system, stopped the flow of products to the pier, and notified refinery officials. He then activated the water and foam fire monitors on the pier and directed them toward the barge. Within 5 to 6 minutes, the refinery's firefighting team was on scene and started to fight the fire.

The TTT 103 sank alongside the pier and was declared a constructive total loss. It was valued at \$500,000. Damage to the terminal facilities was estimated to be \$4,500,000. <sup>1/</sup>

Two fishermen in a boat tied to a mooring dolphin close to Chevron's product wharf when the explosion occurred were not injured by the explosions or by the fire that followed. Despite the lack of injury, fishing or boating activities in close proximity to the product wharf where dangerous flammable products are transferred should be prohibited. Coast Guard regulations (33 CFR 126.15(0)(2)(i)) require that warning signs be posted at the facility which state, along with other restrictions: NO VISITORS. The signs, however, should be visible from the waterside. This regulation should include the waterway in the immediate area as well as on the wharf. The Mississippi Marine Fisheries Resources enforcement officer recognized the need for such a restriction at the waterside of the terminal as well as on the refinery's property.

---

<sup>1/</sup> For more detailed information, read Marine Accident Report—"Explosion Aboard the U.S. Tank Barge TTT 103, Pascagoula, Mississippi, July 31, 1986" (NTSB/MAR-87/06).

Furthermore, the National Transportation Safety Board believes that the establishment of a safety zone by the Coast Guard around the Chevron wharves in Pascagoula would deter unauthorized persons from being exposed to potential hazards found in the vicinity of oil terminals. Moreover, such a restriction would reduce the dangers of smoking in an area where there are flammable vapors. Innocent persons can unwittingly be the cause of or become victims in an accident because of ignorance of the activities at the wharves. Although such restrictions around the wharves are enforced by the Coast Guard, the local enforcement agencies including Chevron's Security Force should be made aware of the existence of such a safety zone.

Therefore, as a result of its investigation, the National Transportation Safety Board recommended that the U.S. Coast Guard:

Establish a safety zone around the wharves of the Chevron refinery in Bayou Casotte, Mississippi, when there are vessels moored at the facility. Examine the conditions at other facilities that transfer hazardous materials and, where risks are evident, establish similar safety zones to exclude unauthorized persons. (Class II, Priority Action) (M-87-21)

Amend the regulation at 33 CFR 126.15(o)(2)(i) to include a requirement that warning signs displayed at a designated waterfront facility also face seaward in addition to facing the shoreline and each way along the shoreline. (Class II, Priority Action) (M-87-22)

Also as a result of its investigation, the Safety Board issued Safety Recommendations M-87-23 through -25 to Chevron, U.S.A., M-87-26 to the Petroleum Services Corporation, and M-87-27 to the American Petroleum Institute.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and LAUBER, NALL, and KOLSTAD, Members, concurred in these recommendations.

By:   
Jim Burnett  
Chairman