



FILE: MVJ

21 NOV 1955

(DONNA LEE & TOW  
6-1-55)

## Commandant's Action

on

Marine Board of Investigation; fire and explosion involving  
MV DONNA LEE and tow at Chattanooga, Tennessee, 25 June 1955  
with loss of life

1. Pursuant to the provisions of Title 46 U.S.C. Part 136, the record of the Marine Board of Investigation convened to investigate subject casualty, together with its Findings of Fact, Conclusions, and Recommendations, has been reviewed.
2. On 25 June 1955 the motor tug DONNA LEE, of 201 g.t., built in 1941, with two loaded tank barges, moored to a terminal floating dock at Chattanooga, Tennessee, for discharge purposes. The necessary cargo line connections were made and under the arrangements, cargo from both barges was being pumped by connecting hoses to headers on the floating dock and from the floating dock via hoses which were partly submerged in the river to shore lines and tanks. During such discharge operations, one cargo hose leading from the floating dock to shore ruptured about three-fourths of its circumference in the bight of the hose submerged in the water and thus the entire gasoline cargo of one barge was being discharged into the river. Upon observing gasoline on the surface of the river, pumping was secured to determine the source of the leak and immediate efforts were made to shift the DONNA LEE from the tank barges, but before this could be effected, at about 1200 the vapors from the gasoline on the surface of the river were ignited by a source of ignition on board the DONNA LEE, engulfing the entire tow in fire which resulted in the death of seven members and injuries to five members of the thirteen-man crew aboard the DONNA LEE. The damage to property was estimated at \$165,000.00.
3. The Findings of Fact, Conclusions, and Recommendations of the Marine Board of Investigation convened to investigate subject casualty are approved.

(signed) J. A. Hirschfield

J. A. HIRSHFIELD  
Rear Admiral, U. S. Coast Guard  
Acting Commandant

REPORT OF INVESTIGATION

of a

BOARD OF INVESTIGATION

convened at

Chattanooga, Tennessee

To inquire into the facts and circumstances surrounding the marine casualty involving a fire aboard the motor vessel DONNA IRE and tow of tank barges MBI 601 and TETAGO 350 at approximately 12:00 noon (C.S.T.) on 25 June 1945, while said barges were in process of being unloaded at Tazewell River Terminal, Chattanooga, Tennessee and which resulted in loss of seven lives of members of the crew and serious or critical injuries to three other members of the crew on board the motor vessel DONNA IRE

After full and mature deliberation, the Board finds as follows:

#### FINDINGS OF FACT

1. On 25 June, 1955, at approximately 1030 (CST), a tow consisting of two documented, certificated tank barges, MBL 601 (O.N. 255206) and TEXACO 556 (O.N. 174817), propelled by motor vessel DONNA LEE (O.N. 240458), arrived at Texaco River Terminal, Chattanooga, Tennessee (mile 463.5, Tennessee River). The motor vessel DONNA LEE and tank barge MBL 601 are owned by A. L. Muehling Barge Lines, Inc., Joliet, Illinois and tank barge TEXACO 556 is owned by the Texaco Company, Wilmington, Delaware and was last inspected 10 August 1954 at Mount Vernon, Indiana. MBL 601 was last inspected 5 February 1955 at Memphis, Tennessee.
2. The tow was made up in tandem with TEXACO 556 being the lead barge and the MBL 601 made fast to this barge stern-to-stern and the DONNA LEE made up to the bow end of MBL 601. The entire tow was docked port-side-to with the motor vessel DONNA LEE being downstream. (See Exhibit "A").
3. The crew of the motor vessel DONNA LEE proceeded to connect up the cargo discharge lines to the headers on board the floating dock, the headers having previously been connected up to the shore lines by means of two cargo hoses which remained permanently in place. One of the Hercules gasoline powered pumping units aboard the TEXACO 556 was started approximately 1100 (CST). After some difficulty in obtaining a suction with the General Motors diesel powered pumping unit aboard the tank barge MBL 601, pumping was started at approximately 1150 (CST).
4. Cargo discharge was routine until approximately 1200 (CST), at which time the tankerman detected gasoline on the surface of the river between MBL 601 and the shore, whereupon he promptly stopped the cargo pump on MBL 601, checked the cargo hoses to determine the leak and then promptly notified the personnel aboard the towboat, and helped remove the towing lines from the bits on the tank barge MBL 601. At this time an instantaneous fire engulfed the towing vessel and tank barge MBL 601, eventually engulfing the entire tow.
5. The fire resulted in death and injuries to personnel of the motor vessel DONNA LEE, as follows:

Marbil Hill, Hoxie, Ark.	Captain	1st degree burns
Don Glasgow, Caruthersville, Mo.	Pilot	1st degree burns
Richard Aye, East St. Louis, Ill.	Chief Engr.	1st degree burns
Wm. Starnes, Jr., Black Rock, Ark.	Oiler	3rd degree burns
Quinton Blankenship, Ocoee, Tenn.	Deckhand	1st degree burns
Ferris Hynds, Bureau, Ill.	Oiler	3rd degree burns-deceased
Elsie McCann, Alton, Ill.	Cook	3rd degree burns-deceased
Louise Tilton, Godfrey, Ill.	Asst. Cook	3rd degree burns-deceased
Frank Decker, Tiline, Ky.	Deckhand	3rd degree burns-deceased
Warren Baughman, Black Rock, Ark.	2nd Engr.	Deceased-burned body recovered from river
Robert (Bobby) Taylor, Colt, Ark.	Deckhand	" " " "
James Bertucci	Deckhand	" " " "

Damages were estimated to MV DONNA LEE - \$90,000 to \$100,000; to tank barge MBL 601 - \$2,000; to tank barge TEXACO 556 - \$22,500; and to Texaco terminal, the asphalt terminal and other barges in nearby vicinity - \$47,000.

6. The arrangement of the tow and discharge lines at the time of the accident are shown in Exhibit "A".

7. A thunder shower occurred in the vicinity during the pumping operations but had subsided at the time of the casualty. A weather report for the Chattanooga area was obtained from the U. S. Weather Bureau and is shown as Exhibit "B".

After carefully considering the testimony and evaluating the results of its visit to the scene of the casualty, the Board concludes as follows:

#### CONCLUSIONS

8. The testimony of the witnesses and the examination by the Board indicated that one cargo hose, owned by the Texaco Company, leading from the floating dock to the shore was ruptured over about three-fourths of its circumference in a bight of the hose which was beneath the surface of the water at the time of the accident, thus feeding the entire output of the cargo pump on tank barge MBL 601 into the river, allowing it to drift on the surface of the water downstream around the towing vessel DONNA LEE where it evaporated in the atmosphere and was exposed to a burning galley range which was being fed air by a squirrel-cage type blower. It is the opinion of the Board that the fumes were drawn into the galley by a 24-inch exhaust fan and forced into the burning range by the blower, whereupon they ignited. Since the towing vessel was practically surrounded by raw gasoline floating on the surface of the water and since the weather was very humid following an electrical storm, the vapors were close to the surface of the water, creating an instantaneous fire throughout the entire vessel. The ignition could have occurred through other sources such as a crew member smoking, or from the main propulsion unit aboard the motor vessel which was running at the time, or through numerous electrical motors, which were being operated at the time on board the motor vessel. However, in the opinion of the Board, this is a remote possibility.

9. The ruptured section of the hose was not damaged as a result of the fire, as clearly indicated in Exhibits C(1), C(2), and C(3). Consequently, there is no question as to the source of the spill.

10. It is the opinion of the Board that there were a number of unsafe practices occurring during the process of pumping the barge, namely:

- (a) Failure on the part of the Texaco employees to inspect the ground cable between the float barge and the shore.
- (b) Failure on the part of the Texaco employees to take proper care of, and inspect cargo transfer hoses between the float barge and the shore pipelines.
- (c) Laxity on part of the Texaco employees in not maintaining proper vigil during pumping operations.

11. No personnel of the Coast Guard or any other Government agency contributed to the casualty.

12. The casualty could have been prevented or its effect minimized through proper inspection of the cargo hoses and by taking precautions to keep all sources of ignition clear of the vicinity of the pumping operations. Once the spill of gasoline was discovered, however, the master and crew made every effort in their attempt to avoid the casualty.

13. Due to the physical condition of the survivors other than those that have been interrogated, the Board is of the opinion that nothing further could be developed by postponing this case until such time as all the injured are able to testify.

## RECOMMENDATIONS

14. Since this casualty was caused by a ruptured hose, the installation of which is under cognizance of the terminal establishment, and since the employees thereof are not in possession of a license or document issued by the Coast Guard, no action under R.S. 4490 would be applicable in this case. It is the consensus of opinion of the Board that no further action be taken and the case closed.

(signed) W. E. Schweizer  
W. E. SCHWEIZER  
Commander, U. S. Coast Guard

(signed) John R. Silliman  
JOHN R. SILLIMAN  
Commander, U. S. Coast Guard

(signed) T. F. Dunham  
T. F. DUNHAM  
Lt. Comdr., U. S. Coast Guard

The Board then adjourned at 1300 (E.S.T.), 29 June 1955, to await the action of the convening authority.

(signed) W. E. Schweizer  
W. E. SCHWEIZER  
Commander, U. S. Coast Guard  
Chairman

(signed) T. F. Dunham  
T. F. DUNHAM  
Lt. Comdr., U. S. Coast Guard  
Recorder