

UNITED STATES COAST GUARD  
Washington, D. C.

8 December 1954

Commandant's Action

ON

Marine Board of Investigation; fire, explosion, ten tank barges,  
Memphis, Tennessee, 2 October 1954, with loss of life

1. Pursuant to the provisions of Title 46 CFR 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 1 October 1954, ten Esso tank barges of approximately 650 g.t. each, fully loaded with inflammable and combustible liquid cargo, arrived and were moored at the Esso Standard Oil dock, Memphis, Tennessee, for delivery of cargo. Discharge operations commenced at 2310 and continued without mishap until noon the next day, 2 October 1954. Barges Nos. 248 and 259 were so moored that a length of cargo hose was interconnected between the two for cargo discharge purposes. Apparently this cargo hose ruptured, spraying gasoline which, so far as ascertainable, was ignited by the exposed diesel engine exhaust line (pump) on Barge No. 248 alongside Barge No. 259. Fire and explosions ensued which resulted in the loss of one life, injury to three persons, and \$1,000,000 damage to the barges and cargo.
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 a

BOARD OF INVESTIGATION

convened at

Memphis, Tennessee

To inquire into the marine casualty involving an explosion  
and subsequent fire on board ten ESSO tank barge, Memphis,  
Arkansas, on 2 October 1954, with loss of life

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

FINDINGS OF FACT

1. On 1 October, 1954, at 2230, a tow consisting of ten (10) documented, certificated tank barges propelled by motor vessel ESSO LOUISIANA, O.N. 254430, arrived at the Esso Standard Oil Dock, Foot of Wisconsin Ave., Memphis, Tennessee. The barges were owned by the Esso Standard Oil Company, Baton Rouge, Louisiana. These barges were inspected and certificated as follows:

ESSO BARGE NO. 245, O.N. 176697, G.T. 685, on 2/5/54 at New Orleans, La.  
ESSO BARGE NO. 252, O.N. 176704, G.T. 685, on 1/18/54 at New Orleans, La.  
ESSO BARGE NO. 247, O.N. 176699, G.T. 645, on 6/11/54 at New Orleans, La.  
ESSO BARGE NO. 259, O.N. 176711, G.T. 620, on 7/22/54 at New Orleans, La.  
ESSO BARGE NO. 244, O.N. 176696, G.T. 645, on 2/22/54 at New Orleans, La.  
ESSO BARGE NO. 255, O.N. 176707, G.T. 620, on 7/22/54 at New Orleans, La.  
ESSO BARGE NO. 256, O.N. 176708, G.T. 620, on 7/22/54 at New Orleans, La.  
ESSO BARGE NO. 254, O.N. 176706, G.T. 620, on 5/24/54 at New Orleans, La.  
ESSO BARGE NO. 248, O.N. 176700, G.T. 645, on 3/12/54 at New Orleans, La.  
ESSO BARGE NO. 246, O.N. 176698, G.T. 620, on 9/24/54 at New Orleans, La.

2. The barges were moored as shown on Exhibit "A".

3. The crew of the motor vessel ESSO LOUISIANA proceeded to connect up the cargo discharge lines. Cargo pumping of all ten (10) barges was started at 2310, 1 October, 1954, using the diesel powered deep well pumps which were part of the barge equipment.

4. Cargo discharge was routine until approximately 1220, 2 October, 1954, at which time fire and explosions occurred on the tank barges causing the death of Michael Marchand; first and second degree burns to James D. Gaidry, Herbert Gomez and Laulace L. Landry, and an estimated damage to the barges and cargo of \$1,000,000.00.

5. The arrangement of the cargo discharge lines at 1200, 2 October, 1954, was as shown on Exhibit "B"; there was no change in the discharge lines between 1200 and 1220.

6. The Recorder of this Board was present at the scene of the casualty immediately after the casualty occurred and conducted a preliminary investigation. The weather as observed by the Recorder was clear, temperature 93°, wind west, six (6) miles per hour.

7. The remains of Michael Marchand were found on board ESSO BARGE NO. 259, after the fire was extinguished.

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

#### CONCLUSIONS

8. Since the testimony adduced indicated that there was a spray of petroleum product in the vicinity of the aft port corner of ESSO BARGE NO. 259, the Board is of the opinion that a fire was started by this spray coming in contact with the exposed exhaust line of the cargo pump engine of ESSO BARGE NO. 246 which was moored alongside ESSO BARGE NO. 259.

9. After the fire was extinguished the Board examined the remains of a length of cargo hose marked Esso 1105 on the coupling. This length of hose was laying on the aft port corner of ESSO BARGE NO. 259. Its position indicated that it had been used to connect cargo discharge lines between ESSO BARGE NO. 259 and ESSO BARGE NO. 248 for the purpose of discharging "Esso Regular" gasoline. Due to the condition of the hose, it was impossible for the Board to determine whether or not it had been ruptured. Since the Witness testified that the spray he observed was coming from the location previously mentioned and since there was no other cargo hose at this location, it is the Board's opinion that the length of cargo hose, Esso No. 1105, had ruptured. The witness testified that the source of the spray was ten (10) feet away from him when he secured the port deep well pump, which would indicate the position of the bight of the cargo hose.

10. It is the opinion of the Board that this casualty could have been averted had all cargo discharge hose been connected to the cargo pipe line at the connections provided on the opposite end of the barges from the cargo pumping units. The cargo piping system on these barges is so arranged that this method could have been used.

11. It is concluded that Michael Marchand came to his death by accident while in the performance of his duty.

RECOMMENDATIONS

12. In that there is no indication of any violation of 46 C.F.R., Parts 30 to 34, inclusive, it is recommended that no further action be taken and the case be closed.

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

(signed) Lewis A. Baker  
L. A. BAKER  
Commander, U. S. Coast Guard

(signed) Clinton Critchfield  
CLINTON CRITCHFIELD  
Commander, U. S. Coast Guard

The Board then adjourned at 1615 to await the action of the convening authority.

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

(signed) Clinton Critchfield  
CLINTON CRITCHFIELD  
Commander, U. S. Coast Guard, Recorder