

UNITED STATES COAST GUARD



ADDRESS REPLY TO:

MVI
4 April 1957
(RUSSELL 29 - a-3 Bd)

Commandant's Action

on

Marine Board of Investigation; explosion and fire on
RUSSELL NO. 29 at Linden, N. J., on 25 November 1956
with loss of life

1. Pursuant to the provisions of Title 46 C.F.R. 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 November 1956 the tank barge RUSSELL 29 of 721 g. t. was moored at the Cities Service Dock at Linden, New Jersey, for the purpose of receiving a cargo of gasoline. The dock was constructed of corrugated sheet piling, back-filled, faced with wooden log fenders on approximately ten-foot centers with no horizontal components to the fender system. The tank hatch covers were opened for visual inspection to determine the cleanliness of the tanks and were left open during loading operations. No. 4 and No. 2 tanks, port and starboard, were being laden with gasoline which evidently, when nearing completion, had a spill. Apparently, the spill poured toward the in-shore after corner of the barge which, due to the heading and motion of the barge against the unprotected sheet steel bulkhead, caused the ignition of the spilled gasoline. Within two minutes the fire resulted in an explosion, causing the loss of life of two tankermen on board.
3. The Board recommended that where sheet steel bulkheading is used to form a pier at petroleum terminals, that a system of horizontal and vertical fenders be suggested to such terminal operators to lessen the possibility of vessels striking the steel bulkheading causing a spark. A copy of this report including the recommendation shall be furnished to the American Petroleum Institute for appropriate attention and action.
4. The Findings of Fact, Conclusions, and Recommendations of the Marine Board of Investigation convened to investigate subject casualty are approved.

(signed) A. C. Richmond

A. C. RICHMOND
Vice Admiral, U. S. Coast Guard
Commandant

REPORT

OF A

MARINE BOARD OF INVESTIGATION

Convened at the

OFFICE OF THE COMMANDER

THIRD COAST GUARD DISTRICT

80 Lafayette Street

New York 13, N. Y.

on

29 November 1956

By order of

THE COMMANDANT, UNITED STATES COAST GUARD

To inquire into the circumstances surrounding the fire and explosion at Cities Service Terminal, Linden, N. J. on 25 November 1956, resulting in a casualty to the Tank Barge RUSSELL 29 and loss of life.

Subj: Loss of tank barge RUSSELL 29 on 25 November 1956 at Linden, N. J., with loss of life

FINDINGS OF FACT

1. At approximately 0310, 25 November 1956, the tank barge RUSSELL 29 ignited, exploded and burned at the Cities Service Dock, Linden, N. J., with loss of life to Albert L. Garrett and the presumptive loss of life to Lewis W. Garrett. The barge sank by the stern with the bow above water.
2. The tank barge RUSSELL 29, O. N. 174088 was a steel barge of 721 gross tons owned by the Newtown Creek Towing Co. and Chester A. Poling Inc., and operated by Russell-Poling & Co. of N. Y. Her home port is New York, N. Y. The RUSSELL 29 arrived at the Cities Service Dock, Linden, N. J., at approximately 0110, 25 November 1956 to receive a mixed cargo of three grades of gasoline. The barge had, immediately prior to this arrival, discharged a cargo of JP 4 fuel at Bayonne, N. J. Upon arrival at the Cities Service Dock, an inspection of the eight tanks was jointly undertaken by the pumpman employed by Cities Service and the master of the tank barge. This inspection was made by opening each tank hatch cover for a visual inspection to determine the cleanliness of each tank. The tank hatch covers were left in the open position after inspection. The first grade of gasoline loaded was Mileage-Master, the quantity to be taken was 220,000 gallons. No. 4 tanks port and starboard and No. 2 tanks port and starboard were the tanks to be so laden; 220,000 gallons was the capacity of these four tanks. Slightly in excess of 200,000 gallons had been loaded into the tanks when a belch of flame was first observed at the after end of the tank barge by the pumpman and his helper. This flame shot toward the forward end of the barge completely obscuring the barge from the view of the shoreside personnel. The fire burned for a period of more than two minutes before the barge was rent by explosion. The fire continued to burn until nearly 0700 the same morning.
3. The Cities Service Dock is a corrugated, sheet piling bulkheaded dock, back-filled with dirt to make a dirt-surfaced dock. In the vicinity of the RUSSELL 29 berth, the dock is equipped with wooden log fender piles on approximately ten-foot centers. These pilings are secured to the corrugated sheet piling in the lands by through bolts about 2 feet from the top and at a point slightly above

the low water mark and a steel crown band of $\frac{1}{2}$ " x $2\frac{1}{2}$ " iron. The offshore tangent of the fender piles extends approximately 3 inches out from the ridge of the sheet piling. There is no horizontal component to the fender system except for the cap log atop the sheet piling.

4. Prior to the commencement of loading, both crewmembers of the tank barge, Albert L. Garrett, and Louis W. Garrett, were seen engaged aboard at various duties. At approximately 0225 the terminal pumpman's helper, John Bettinger, observed one of the tank barge crew engaged at checking tanks. On 30 November 1956, the after end of the barge was raised; inspection of the living space disclosed a torso of a male therein. This body was identified as Albert L. Garrett by elimination, due to certain recognizable dental work. Louis W. Garrett did not have similar dentures, thus the Police Department of Linden, N. J. concluded that the torso was that of Albert L. Garrett. No trace was found of Louis W. Garrett though one crewmember was last seen in the vicinity of No. 2 tanks. The barge deck in way of No. 3 tank was broken, a portion of which laid across the dock by the explosion.

5. The weather was clear, wind northeast approximately 20 M.P.H.; the sea, smooth, and the tide was ebbing at the time of the casualty.

6. Albert Garrett, Z-393809 was the holder of an MMD endorsed as tankerman, all grades. Louis Ward Garrett was the holder of BK 77655 which was endorsed able seaman, any waters, unlimited, and tankerman all grades. These ratings were in accordance with the requirements of the Certificate of Inspection issued at New York, N. Y., on 29 June 1956.

CONCLUSIONS

7. It is concluded that the tank barge RUSSELL 29 had a spill of gasoline from the vicinity of No. 4 tank as the cargo of Mileage-Master gasoline was being topped off. The sounding covers were opened during this operation. As the barge was riding bow into an ebbing tide, this motion, coupled with the wash from any traffic in the channel caused the spill of the possibly nearly topped tank or tanks. The gasoline poured toward the in-shore after corner of the barge. This motion of the barge struck the unprotected sheet steel bulkheading generating the spark of static electricity which ignited the gasoline.

8. The fire and explosion resulted in the loss of life of Albert L. Garrett, Z-393809 and the presumed loss of life to Louis W. Garrett, BK 77655. Both men were known to be aboard the tank barge RUSSELL 29 immediately prior to the fire. The identification of the male torso as that of Albert L. Garrett was made by dental examination, which eliminated the possibility that this torso was Louis W. Garrett. The position of the torso in the cabin area lends credence to the opinion that Louis W. Garrett was the crewmember on deck at the time of the fire and that he perished in the explosion, with his body being completely consumed in the ensuing fire.

9. No actionable fault of licensed or documented personnel, nor failure of inspected equipment was discerned.

RECOMMENDATIONS

10. It is recommended that where sheet steel bulkheading is used to form a pier at petroleum terminals, that a system of horizontal and vertical fenders be suggested to such terminal operators to lessen the possibility of vessels striking the steel bulkheading causing a spark. It is recommended that this board of investigation be closed with no further action. Case closed.

(signed) F. K. ARZT
F. K. ARZT
Commander, USCG
Chairman

(signed) K. A. BERGMAN
Commander, USCG
Member

(signed) E. G. McCARTHY
Lieutenant, USCG
Member and Recorder