

MVI

17 September, 1961

(LOGAN'S FORT - a-5 Rd)

From: Chief, Merchant Vessel Inspection Division
To: Commandant

Subj: Marine Board of Investigation; SS LOGAN'S FORT explosion
Hampton Roads, Va. 20 January, 1961, with loss of life

1. Pursuant to the provisions of Title 46 C.F.R., Part 156, the record of the Marine Board convened to investigate subject casualty, together with its Findings of Fact, Opinions and Recommendations, has been reviewed and is forwarded herewith.

2. The SS LOGAN'S FORT, a tank vessel of 10,296 g.t., on 20 January, 1961, was discharging a cargo of gasoline and kerosene into barges alongside at Hampton Roads, Va. At about 2140, upon making preparations to secure discharge of kerosene from No. 4 cargo tanks, an explosion from undetermined origin occurred in No. 4 center cargo tank which resulted in a fire in the forward part of the vessel. This fire was extinguished with assistance from shore facilities with no major damage to the vessel. The third mate and pumpman onboard the SS LOGAN'S FORT and the tankerman onboard the barge GATCO 106 lost their lives in this casualty.

3. The Board made the following Findings of Fact:

"1. That on 19 January, 1961, the tank vessel LOGAN'S FORT arrived in Hampton Roads, Virginia en route from Lake Charles, Louisiana to Norfolk, Virginia.

"2. That the vessel was loaded with a full cargo of kerosene and gasoline destined for the Cities Service Oil Terminal at Norfolk, Virginia.

"3. That the LOGAN'S FORT: O.N. 247573; rig St.s.; type T-2 tank vessel; home port New York, N.Y.; gross tons 10,296; built 1945; hull steel; last inspected 9 February, 1960 at Jacksonville, Fla., was owned and operated by the Cities Service Oil Co. of 70 Pine St., New York 5, New York.

"4. That the master was [redacted] home address [redacted] New York, N.Y., and forty-one (41) men were carried in the vessel's crew.

17 September, 1961
(LOGAN'S FORT - a-5 Pl)

- "5. That the vessel anchored in Hampton Roads anchorage "D" where lightering operations were begun to enable the vessel to berth at the Cities Service Oil Terminal at Norfolk, Virginia.
- "6. That the LOGAN'S FORT was loaded with kerosene in Nos. 1, 2, 3 and 4 tanks and gasoline in Nos. 5, 6, 7, 8 and 9 tanks.
- "7. That vessels operated by the Gulf Atlantic Transportation Co. of Norfolk, Virginia were engaged to lighter the LOGAN'S FORT.
- "8. That the vessels used for lightering were the motor tank vessel MARLIN and the barges GATCO 104 and GATCO 106 which were attended by the diesel tugs REGIS and LOUISIANA III.
- "9. That at 1915 hours, E.S.T., 19 January, the first lightering operations were begun.
- "10. That the barges were taken to the Cities Service Terminal and discharged then returned to the vessel for another load.
- "11. That at 2000 hours E.S.T. on 20 January, the M.V. MARLIN was secured on the port side of the vessel loading gasoline while the barges GATCO 106 and GATCO 104 were secured on the starboard side, forward and aft respectively waiting to be loaded.
- "12. That the towing vessel M.V. REGIS was secured on the after outboard corner of the barge GATCO 104 with the towing vessel LOUISIANA III secured alongside.
- "13. That kerosene was being discharged into the barge GATCO 106 at the same time gasoline was being discharged into the M.V. MARLIN.
- "14. That the 8 to 12 p.m. watch on duty on the LOGAN'S FORT consisted of the following crew members: Basil J. Cubitt-Smith, third mate, [redacted] able seaman, [redacted], able seaman and [redacted] ordinary seaman.
- "15. That the pumpman on duty at the time was [redacted]
- "16. That the tankerman on duty aboard the barge GATCO 106 attending the loading of same was [redacted]

17 September, 1951
(LOGAN'S FORT - a-5 3d)

- "17. That the discharge of gasoline into the M.V. MARLIN was completed at 2035 hours E.S.T. and said vessel departed at approximately 2115 hours E.S.T.
- "18. That the lightering of the vessel was expected to be completed during the 8 to 12 p.m. watch.
- "19. That kerosene was the only grade of oil being discharged after the M. V. MARLIN departed from the vessel's port side.
- "20. That the weather at this time was clear, wind southerly, force two, sea slight, visibility good.
- "21. That the wind was from the port side of the LOGAN'S FORT.
- "22. That the loading manifold of the barge GATCO 106 was abreast of the starboard discharge manifold aboard the SS LOGAN'S FORT, located immediately aft of the midship house.
- "23. That at about 2138 hours E.S.T. the only tanks being discharged into the barge GATCO 106 were No. 4 starboard wing, No. 4 center and No. 4 port wing.
- "24. That No. 2 port wing tank was being stripped into No. 4 center.
- "25. That at about this time the pumpman, [REDACTED], had gone to the forward deck where tanks No. 1, 2, 3, and 4 were located.
- "26. That the third mate Cubitt-Smith and the three seamen on watch were aft of the midship house on the after deck at this time.
- "27. That the barge GATCO 106 was about loaded and discharging into same was to be stopped.
- "28. That the third mate inquired of [REDACTED] the O.S., as to the pumpman's whereabouts and was told that he was believed to be aft drinking coffee.
- "29. That the third mate directed [REDACTED] to notify the pumpman he was wanted on the forward deck.
- "30. That [REDACTED] started aft to notify the pumpman as directed.

17 SEPTEMBER, 1951
(LOGAN'S FORT - a-5 Bd)

"31. That [REDACTED], A.B., advised the third mate that the pumpman had already gone forward.

"32. That the third mate directed the two seamen, Huffman and Bossert, to stand by forward preparatory to shutting down on valves.

"33. That [REDACTED] preceded the third mate through the shelter deck, starboard side, from the after deck to the forward deck.

"34. That [REDACTED] was following immediately in back of the third mate in the shelter deck when he stopped to call to the ordinary seaman, [REDACTED], that the pumpman was forward.

"35. That [REDACTED] had proceeded to a point between No. 2 and No. 3 starboard tanks preparatory to crossing to the port side of the forward deck when he heard a noise like air escaping suddenly from a hose.

"36. That he turned, looking aft, but saw nothing unusual.

"37. That he did not observe the third mate at that time.

"38. That he had noted the pumpman in the vicinity of No. 1 port tank.

"39. That an instant after hearing the noise similar to escaping air he heard the noise again and observed a flash in the general vicinity of No. 4 center tank.

"40. That an explosion occurred simultaneously, and the forward deck was immediately engulfed in flames.

"41. That the seaman, [REDACTED] was at this instant about midway through the shelter deck on the starboard side.

"42. That the third mate had taken but a few steps onto the forward deck at this instant.

"43. That a sheet of flame rushed into the shelter deck through the forward starboard door to same.

"44. That [REDACTED] turned and rushed aft followed by a second burst of flame from the forward deck.

17 September, 1951
(LOGAN'S FORT - a-5 Bd)

- "45. That the master aboard the towing vessel REGIS was standing at the pilot house window of same watching tankerman McLean walking toward the after end of the barge GATCO 106.
- "46. That at the instant of explosion flaming oil was observed to pour over the side of the SS LOGAN'S FORT and land on [REDACTED].
- "47. That the master of the tug REGIS immediately cast off from the side of the barge GATCO 104 fearing further explosion.
- "48. That the tankerman [REDACTED] was not seen again after the explosion and fire.
- "49. That the only persons on the forward deck of the SS LOGAN'S FORT at the time of the explosion were the pumpman Sheldrick, able seaman [REDACTED] and third mate Cubitt-Smith.
- "50. That the time of explosion was noted by the master of the LOGAN'S FORT to be approximately 2140 hours L.S.T.
- "51. That the master of the SS LOGAN'S FORT was in the midship saloon discussing the draft of the vessel with the chief mate at the time of the explosion.
- "52. That the master ran to the pilot house two decks above by the inside stairways.
- "53. That he turned on the general alarm which did not function.
- "54. That the electric lights in the midship house had gone out as he mounted the stairway to the pilot house.
- "55. That the forward deck was a wall of flames as viewed through the pilot house ports.
- "56. That the master rushed to the after fore-and-aft bridge ordering all hands to the after part of the vessel as he feared another explosion.
- "57. That the master ordered the chief mate to prepare the No. 4 lifeboat for lowering.
- "58. That on the master's orders steam was put on the steam smothering system to the cargo tanks.

17 September 1951
(LOGANS)

"59. That crew members rushed from the crew's quarters aft due to the explosion.

"60. That a Citios Service employee, Mr. [REDACTED], heard the cry of a man overboard on the port side aft of the midship house and brought it to the attention of the boatswain who was near by.

"61. That the boatswain, [REDACTED], immediately threw a life ring with lanyard attached to one of two persons that were observed in the water.

"62. That the boatswain immediately obtained another life ring with an automatic water light attached and lowered it to within a few feet of the water before releasing same to the second man in the water.

"63. That the boatswain shouted to the second man to grab the life ring.

"64. That the boatswain immediately turned and ran to obtain another life ring with a lanyard attached.

"65. That upon returning to the side of the vessel with the life ring with lanyard attached, the boatswain was told by Mr. [REDACTED] that the second man had disappeared without grabbing the life ring thrown to him.

"66. That the darkness was such that the persons in the water could not be identified.

"67. That [REDACTED] was one of the two persons in the water, and he was recovered by the crew members.

"68. That the chief engineer had rushed from the engine room to the after pump room and then to the midship house to determine the source of the explosion and smoke.

"69. That he walked to the forward starboard side of the midship house and observed a man lying at the foot of the ladder on the forward deck with his clothes burning.

"70. That the chief engineer ran to the after fore-and-aft bridge where he met the master and advised him of the man lying on the forward deck.

"71. That the master and chief engineer proceeded to the starboard side of the midship house.

17 September, 1951
(LOGAN'S FORT - a-5 Bd)

"72. That the master descended to the forward deck beating out the fire on the man's clothing and lifting him up the ladder assisted by the chief engineer.

"73. That they laid the man's body (later identified as Cubitt-Smith) down on the deck of the midship house.

"74. That the master and chief engineer led out a fire hose from the port side of the midship house and put out several small fires burning on the forward deck.

"75. That the steam smothering had extinguished any fire in the cargo tanks at the time the fires on deck were extinguished.

"76. That boats were dispatched to the SS LOGAN'S FORT by the tug office at the Naval Operating Base, the Coast Guard District Office and other private interests to assist.

"77. That the Navy tug YT-222 removed the third mate, Cubitt-Smith and able seaman [REDACTED] from the SS LOGAN'S FORT delivering them to pier 7, N.O.B., Norfolk, Virginia.

"78. That emergency treatment was rendered by naval personnel before removing them from the SS LOGAN'S FORT and upon arrival at Pier 7, Naval Operating Base.

"79. That the two men, [REDACTED] and Cubitt-Smith, were transferred to the U. S. Marine Hospital, Norfolk, Virginia from Pier 7, N.O.B.

"80. That Navy fire fighters boarded the SS LOGAN'S FORT at about 2230 hours E.S.T. and sprayed foamite into No. 4 starboard wing tank.

"81. That a search was made for the tankerman, [REDACTED] by the master of the towing vessel REGIS and Navy personnel after the fire had been extinguished.

"82. That the pumps aboard the SS LOGAN'S FORT were shut down by engine room personnel shortly after the explosion.

"83. That the only tank valves on the forward deck to be found open after the fire was extinguished were No. 2 port wing tank, No. 4 starboard, No. 4 center and No. 4 port.

"84. That a static wire had been connected between the barge GATCO 106 and the LOGAN'S FORT.

17 September, 1961
(LOGAN'S FORT - a-5 Bd)

"85. That the barge GATCO 104 was loaded through the manifold of the GATCO 106 after the fire had been extinguished.

"86. That the SS LOGAN'S FORT proceeded to the Cities Service Terminal at Norfolk, Virginia on the following morning, 21 January, 1961.

"87. That Basil J. Cuttitt-Smith died at the U. S. Marine Hospital, Norfolk, Virginia on the early morning of 21 January, as a result of burns received.

"88. That examination of the vessel revealed that the explosion and fire had emanated from the forward deck of the SS LOGAN'S FORT in the vicinity of No. 4 tanks.

"89. That the tank tops of all three No. 4 tanks were distorted outward.

"90. That the tank top holding down dogs were bent on said tanks.

"91. That evidence of fire was indicated inside the No. 4 center tank top.

"92. That internal damage to the vessel in No. 4 tanks indicated the greatest force of the explosion to have been in No. 4 center tank.

"93. That the longitudinal bulkheads in No. 4 center tank and hull plates port and starboard were bulged outward.

"94. That the forward part of the midship house was burned more on the starboard and center portion than on the port side of same.

"95. That the vent lines on the forward deck leading from the Nos. 1, 2, 3, and 4 tanks were independent from the after tanks.

"96. That the samples of kerosene from the Nos. 1, 2, 3 and 4 tanks were taken as well as samples of kerosene from the barge GATCO 106.

"97. That said samples were tested and showed no evidence of gasoline being mixed with same.

"98. That no damage was sustained by any vessel alongside the SS LOGAN'S FORT as a result of the explosion and fire.

17 September, 1951
(LOGAN'S PORT - a-5 Bi)

"99. That a portion of a flashlight found on the forward deck after the explosion was the same as the approved plastic case type flashlight supplied the vessel.

"100. That only approved type flashlights were supplied by the vessel for crew members to use.

"101. That a lengthy search was conducted for the bodies of [redacted] and [redacted] following the explosion and fire, but same have not been recovered.

"102. That the only means of gasoline vapor entering No. 4 tanks before the explosion would have been through the steam smothering lines which were open.

"103. That no evidence relative to the origin of any spark which could have initiated the explosion and fire was discovered.

"104. That as a result of the explosion the bulkhead between No. 4 and No. 5 center tanks was fractured permitting a leak from No. 5 to No. 4 tank.

"105. That No. 4 tank across was gas freed and the damage surveyed by the American Bureau of Shipping and Coast Guard Inspectors.

"106. That a seaworthy certificate was issued the vessel to proceed to Galveston, Texas for needed repairs.

"107. That the vessel proceeded from Norfolk, Virginia after the board of investigation had interrogated crew member witnesses.

"108. That the injured crew member, [redacted], was interrogated at the U. S. Marine Hospital and again later at the District Coast Guard Office, Norfolk, Virginia.

"109. That [redacted] is recovering from the severe burns received.

"110. That no definite cause for the explosion and fire could be given by said witness.

"111. That the record of repairs effected at Galveston, Texas did not reveal any fact which would explain the cause of the explosion and fire.

17 September, 1961
(LOGAN'S PORT - a-6, 7d)

4. The Board expressed the following Opinions:

- "1. That the explosion and fire was caused by ignition of gasoline fumes in the vicinity of No. 4 center cargo tank which were ignited by a spark of undetermined origin.
- "2. That the kerosene carried in No. 4 tank could not have caused the fumes necessary for the explosion.
- "3. That the presence of gasoline fumes within said No. 4 center cargo tank and all other cargo tanks forward of the midship house could be possible by reason of the steam smothering line being open to all cargo tanks.
- "4. That the explosion originated within No. 4 center cargo tank.
- "5. That the explosion was initiated in some manner by the third mate Cubitt-Smith.
- "6. That a defective flashlight or steel being struck against steel was the most probable source of a spark required to ignite the explosive fumes present.
- "7. That the explosion ignited the kerosene within No. 4 tanks which was thrown upward through the ullage openings.
- "8. That the flaming kerosene landed on Cubitt-Smith, [REDACTED] and [REDACTED].
- "9. That there was no careless handling of cargo.
- "10. That removal of ullage screens on occasion is necessary for viewing the content of the tanks.
- "11. That [REDACTED] pumpman aboard the SS LOGAN'S PORT, and [REDACTED] tankerman aboard the barge GATCO 106, met death as a result of the explosion and fire.
- "12. That their bodies sank beneath the waters of Hampton Roads in the vicinity of the anchored vessel."

5. The Board made the following Recommendation:

"That the case be closed."

REMARKS

6. It is recommended that the Findings of Fact, Opinions and Recommendation of the Marine Board of Investigation be approved.

[REDACTED]
Acting

Chief, MVI Division to
Commandant

17 September, 1951
(LOGAN'S FORT - a-5 Bd)

Ind-1

M
24 September, 1951

From: Chief, Office of Merchant Marine Safety
To: Commandant

Subj: Marine Board of Investigation; SS LOGAN'S FORT explosion
Hampton Roads, Va. 20 January, 1951, with loss of life

Forwarded, recommending approval.

[REDACTED]

27 September, 1951

APPROVED:

[REDACTED]

MERLIN O'NEILL
Vice Admiral, U. S. Coast Guard
Commandant