

4. The absence of practical and specific recommendations or standards limiting the maximum allowable filling of tanks, both in the state of the art and in applicable Coast Guard rules, regulations, and manuals.

The Safety Board concurs in the conclusions of the Marine Board that the following were also contributory causal factors:

1. The presence of the M/V MARTIN and its potential sources of ignition immediately alongside the barges during discharge operations.
2. Failure of the master to investigate and ascertain the source of the vapors.
3. Failure of the master to take timely action to eliminate the source of the vapors.
4. Failure of the master to keep the tank hatch covers securely closed.

Loss of life was caused by the violent release of energy due to ignition of explosive vapors near the deck of the barge, dispersal of flaming gasoline from explosive rupture of the loaded drums caught in the fire, and the wind borne dispersal of burning gasoline vapors over the MARTIN and the floating dock.

RECOMMENDATIONS

The Safety Board concurs in the recommendations of the Marine Board of Investigation. We further support such recurrent training programs as the tankerman course proposed for the National River Academy. Such educational and recurrent training programs are effective methods for reducing accidents involving dangerous cargo. They should receive the full support of the maritime industry.

In addition, it is recommended that:

1. The owners and operators of all tank vessels and tank barges which are not required to have loadlines, provide each vessel or barge with a maximum loading capacity guide, such guide to cover the petroleum products normally carried and the seasonal temperature variations normally encountered in the area of operations.
2. The Coast Guard, as a part of its review of tank vessel and tank barge casualties, evaluate the effectiveness of the safe handling procedures as recommended by the Rules and Regulations

M-71-1

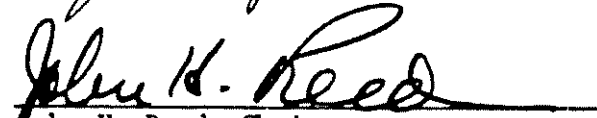
M-71-2
CASE

[Handwritten signature]

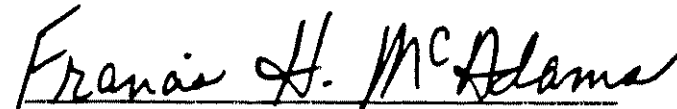
for Tank Vessels (Title 46 CFR, Parts 30 to 40) and the Manual for the Safe Handling of Inflammable and Combustible Liquids. The intent of such a review would be to determine whether some of the current recommended procedures should be made mandatory by regulation.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

Adopted this 7th day of January, 1971:


John H. Reed, Chairman


Oscar M. Laurel, Member


Francis H. McAdams, Member


Louis M. Thayer, Member


Isabel A. Burgess, Member