

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: March 4 , 1978

Forwarded to:

Admiral Owen W. Siler
Commandant
U.S. Coast Guard
Washington, D.C. 20590

} SAFETY RECOMMENDATION(S)

M-78-3 through 8

On November 13, 1975, the tank barge B-924 caught fire in one of its cargo tanks and exploded while being repaired at the Brent Towing Company's repair facility in Greenville, Mississippi. The explosion blew the bow rake away from the vessel with such force that large sections of debris were deposited up to 500 yards away, and internal bulkheads, shell plating, and strength members in proximity were severely distorted. A secondary fire, fueled by cargo residues in the B-924, engulfed the forward portion of the B-924 and required over 1 1/2 hours of intensive firefighting to extinguish. The fire and explosion killed four persons and injured two others. An adjacent barge was damaged slightly.^{1/}

The accident occurred when a marine chemist, certified by the National Fire Protection Association, allowed electric arc welding in a cargo tank containing flammable residues. Welding sparks ignited the residues and initiated a flash fire. The flames quickly propagated across the surface of the residues until they contacted a concentration of flammable vapors and exploded.

The repair of vessels within the United States involves thousands of individuals and several billions of dollars in property annually. The actions and judgment of marine chemists impact heavily on the safety of those lives and that property. Therefore, vessel repairs should be conducted under the safest possible circumstances. This accident demonstrates the critical need for stringent Coast Guard regulations regarding the establishment and maintenance of a safe working environment for personnel who repair vessels.

^{1/} For more information, read "Marine Accident Report: Tank Barge B-924 Fire and Explosion with Loss of Life, at Greenville, Mississippi, November 13, 1975." (NTSB-MAR-78-2)

Federal regulations require vessel repairers to notify the Coast Guard and receive approval before repairs are begun. Ideally, Coast Guard personnel inspect before welding or other hot work is done to insure that such repairs can be made safely. However, the local Coast Guard Marine Safety Detachment often approved repairs similar to those done on the B-924 via telephone without inspection.

There are numerous waterfront facilities surrounding Greenville, Mississippi, that handle flammable cargoes or repair vessels which carried flammable cargoes. Therefore, the probability of a similar fire along this section of the Mississippi River is high. In spite of the likelihood of such casualties, there are no areawide contingency plans for coordinating firefighting efforts and resources. Furthermore, there has been no attempt to assess what resources are necessary to respond to such emergencies. The Safety Board recommended in its report on an accident involving a tank vessel fire that areawide contingency plans for responding to catastrophic accidents be formulated. 2/

Therefore, the National Transportation Safety Board recommends that the U.S. Coast Guard:

Establish a program for licensing or documenting marine chemists, which includes the latest methods and materials to safely insure that all marine chemists demonstrate a working knowledge of all necessary regulations pertaining to the repair of vessels. Marine chemists should be reexamined periodically to insure that they maintain familiarity with current regulations. Provisions should also be incorporated for the suspension or revocation of licenses or documents of marine chemists not complying with these regulations. (Class II, Priority Action) (M-78-3)

Promulgate regulations to establish specific procedures for the issuing, transmitting, and posting marine chemists' certificates. (Class II, Priority Action) (M-78-4)

Promulgate regulations to establish specific criteria which must be met before personnel enter and repair vessels. (Class II, Priority Action) (M-78-5)

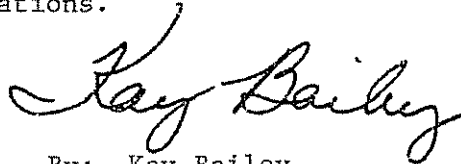
Establish criteria for the qualification of individuals designated or utilized as a fire watch on vessels being repaired. (Class II, Priority Action) (M-78-6)

2/ "Marine Casualty Report, SS C.V. SEA WITCH - SS ESSO BRUSSELS Collision and fire in New York Harbor on 2 June 1973 with Loss of Life" (Report No. USCG/NTSB-MAR-75-6).

Review Coast Guard personnel utilization practices and staffing levels at Marine Safety Detachments to insure that adequate resources are available to properly monitor vessel repairs and related activities. (Class II, Priority Action) (M-78-7)

Initiate contingency plans for responding to major marine casualties in the Greenville, Mississippi, area. Such plans should require that emergency communications are established, that appropriate training be provided, and that firefighting resources be coordinated. (Class II, Priority Action) (M-78-8)

BAILEY, Acting Chairman, McADAMS, HOGUE, and KING, Members, concurred in the above recommendations.

A handwritten signature in cursive script that reads "Kay Bailey".

By: Kay Bailey
Acting Chairman