

M-142

NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: April 9, 1981

Forwarded to:

Admiral John B. Hayes
Commandant
U.S. Coast Guard
Washington, D.C. 20593

} SAFETY RECOMMENDATION(S)

M-81-5 through -7

Shortly after 0811 c.d.t., on August 7, 1980, the Bermudan bulk carrier FORT CALGARY and the U. S. towboat BRAZOS and its tow collided near beacons 75 and 76 in the Houston Ship Channel. As a result of the collision, butadiene gas escaped from one of the barges in the BRAZOS' tow. This gas ignited and set fire to the BRAZOS which resulted in its being declared a constructive total loss. All five crewmen of the BRAZOS received burn injuries. All residents within a 1-mile radius of the burning barge were evacuated from their homes. The FORT CALGARY sustained relatively minor damage to its hull. The total damage, including cargo loss, resulting from this accident has been estimated at \$860,000.^{1/}

The bulk shipment of dangerous cargoes through large population centers, such as the Houston-Galveston area, has been a major concern of shippers, carriers, and Governmental agencies for years. The safe carriage of such products to a large degree depends upon the knowledge of the inherent dangers involved and the precautions taken to minimize these dangers. One of the foremost precautions to be taken in the carriage of butadiene is proper inhibition. The Safety Board has no evidence that the butadiene carried on the barge USL 125 was not properly inhibited; however, the Safety Board believes that it is just as important for the shipper to certify the inhibition of butadiene when it is carried on a barge, as it is when carried in a self-propelled tankship. The operator and crew of the towing vessel moving a barge loaded with this product would, by their proximity to the cargo, have just as much interest as the officers and crew of a tankship in knowing that the product has been properly inhibited. Therefore, the Safety Board believes that 46 CFR 151 should be amended to require the certification of inhibition by the shipper of butadiene when shipped by barge just as 46 CFR 154 requires this to be done now when it is shipped on a self-propelled vessel.

The safe operation of vessels is dependent upon many factors. Prime among these is the conformance by vessels with the Inland Rules and Pilot Rules for Inland Waters, which, in effect, are "traffic laws" for vessels operating upon the inland waters of the

^{1/} For more detailed information, read "Marine Accident Report—Collision of U.S. Towboat BRAZOS with Bermudan Bulk Carrier FORT CALGARY, Houston Ship Channel, August 7, 1980" (NTSB-MAR-81-1).

United States. Both sets of rules prescribe that steam vessels are to keep to their own right-hand side when operating within the confines of a narrow channel--fundamental to the safe operation of vessels in channels. It provides for the orderly flow of traffic inbound and outbound, and without this basic convention, navigation within narrow channels would be chaotic. Yet both sets of rules add the provision that this convention shall be followed only "when it is safe and practicable" to do so. The pilot of the FORT CALGARY was not piloting his vessel down his right-hand side of the channel. He said that he was not doing so because the FORT CALGARY was deeply loaded and had to stay near midchannel in order to have sufficiently deep water in which to operate. Upon departure from its berth on the morning of the accident, the FORT CALGARY's draft was 35 feet 6 inches forward and 36 feet 6 inches aft. The project depth of the Houston Ship Channel in the area of the accident is 40 feet. This 40-foot depth does not extend across the full width of the channel. In fact, it is only available near midchannel. Therefore, the Safety Board believes that it might not have been "safe and practicable" for the FORT CALGARY to have kept to its right-hand side of the channel. The Safety Board further believes that had the project depth extended across the full project width of the channel, the FORT CALGARY could have kept to its right-hand side and would have had more room in which to maneuver in the channel and commensurately more clearance, which would have facilitated a safe passing, between itself and the BRAZOS.

The Houston-Galveston area is densely populated and highly developed industrially. The Houston Ship Channel which transects this area accommodates the bulk shipment of great quantities of highly dangerous commodities each year. The Safety Board believes that the potential for a major disaster resulting from the release of dangerous cargoes because of vessel collisions is present in this area. This is especially true when vessels are so deeply loaded that they cannot use the entire width of the channel to maneuver. For this reason, the Safety Board believes that the U. S. Coast Guard should take action, under its specially mandated authority and responsibility for ports and waterway safety, to manage the movements of such vessels in the Houston Ship Channel.

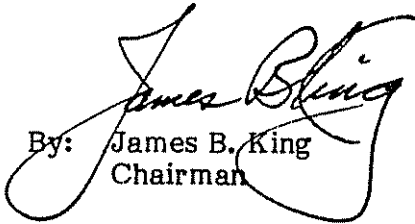
Therefore, the National Transportation Safety Board recommends that the U.S. Coast Guard:

Amend 46 CFR 151 to require the certification of inhibition by the shipper of butadiene when it is transported by an unmanned barge just as 46 CFR 154 requires this to be done now when it is shipped on a self-propelled vessel. (Class II, Priority Action) (M-81-5)

Whenever U. S. Army Corps of Engineers hydrographic data indicate that the full width of the Houston Ship Channel is not available for the safe passage of deep-draft vessels, take traffic management action to promote the safe movement of such vessels on this waterway. (Class II, Priority Action) (M-81-6)

Take action to manage the movements of vessels carrying dangerous cargoes in the Houston Ship Channel through the use of the Houston-Galveston Vessel Traffic Service (VTS) system. (Class II, Priority Action) (M-81-7) (The Safety Board has previously recommended that participation in this VTS system be mandatory.)

KING, Chairman, DRIVER, Vice Chairman, and McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations.


By: James B. King
Chairman