

Log M-218

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: August 16, 1983

Forwarded to:

Admiral James S. Gracey
Commandant
U.S. Coast Guard
Washington, D.C. 20593

SAFETY RECOMMENDATION(S)

M-83-56 and -57

The investigation and analysis of a marine accident on December 14, 1982, disclosed that 10 hopper barges were moored to trees growing on a small island close to the right descending bank of the Arkansas River in an unauthorized fleeting area about 1/2 mile upstream from an authorized fleeting area where 37 other barges were moored. About 2030 c.s.t. on December 4, during a period of high river flows, the downriver end of the island washed away and, as a result, the trees were uprooted and the 10 barges in the unauthorized fleeting area came adrift. They drifted into collision with the 37 barges in the authorized fleeting area, causing 25 of the barges to break away from their moorings. The barges drifted downstream and collided with a State highway bridge and a grain dock, where three more barges were set adrift. Ultimately, a total of 38 barges were adrift in the river. Some barges grounded, some sank, and some drifted into dam No. 2 at mile 17 of the Arkansas River. Barges blocked 12 of the dam's 16 spill gates causing the water level upstream of the dam to rise 7.4 feet and setting up turbulent, asymmetrical flow over the dam which scoured material from the river bed and undermined the dam's foundation. No one was injured, but resultant property damage, including salvage costs, was estimated at over \$12 million.^{1/}

The regulations contained in 33 CFR 128, which apply only to barges moored within a specified area of the lower Mississippi River near New Orleans, describe how fledged barges are to be moored to the shore and to each other. These regulations also contain surveillance and recordkeeping requirements, specify inspection routine, and require special procedures during periods of high water and during barge breakaways. There are no similar regulations applicable to barges moored on the Arkansas River or, for that matter, on any other portion of the inland waters of the United States. This accident dramatically illustrates the need for these, or similar regulations, to be made applicable on other parts of the navigable waters of the United States where large numbers of barges are moored together. This accident caused over \$3 million damage to barges, over \$2 million in cargo damage, \$4 million damage to dam No. 2, over \$3 million in salvage costs, and threatened to disable a \$1.3 billion navigation system. The Safety Board believes that if fleeting regulations similar to those contained in 33 CFR 128 had been in force, and effectively enforced, this accident would not have happened. The barges involved in this accident were either empty, or loaded with rather innocuous cargoes, and the fleeting facility was located in a rural area far from population centers and industrial areas.

^{1/} For more detailed information, read "Marine Accident Report--Breakaway of 38 Barges, Arkansas River, December 4, 1982" (NTSB MAR-83-5).

However, fleeting areas on other waterways, which are in more densely populated and industrially developed regions, moor barges which may be loaded with a wide variety of hazardous materials, including toxic chemicals, petroleum products, and explosives. Since fleeting facilities are not required to meet minimum operational safety standards, the care and attention given to the barges in fleets will vary greatly. The lack of enforceable minimum standards may lead to the adoption of a wide range of "standards" and practices, some of which may not be adequate to prevent barge breakaways, especially during severe weather and/or current conditions.

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

Promulgate regulations similar to the regulations contained in 33 CFR 128.801 to be applicable to barge fleets moored in all portions of the inland waters of the United States. (Class II, Priority Action) (M-83-56)

Once barge fleeting regulations have been promulgated, institute an enforcement program including periodic fleet inspections to insure that the regulations are followed. (Class II, Priority Action) (M-83-57)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY and McADAMS, Members, concurred in these recommendations. ENGEN, Member did not participate.


By: Jim Burnett
Chairman