

M-111 AI-4

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: December 7, 1979

Forwarded to:

Lieutenant General J.W. Morris, USA
Chief of Engineers
Department of the Army
Washington, D.C. 20314

SAFETY RECOMMENDATION(S)

M-79-116

On June 2, 1978, the uninspected dredge LOUISIANA was operating under contract with the U.S. Army Corps of Engineers (COE) in Tiger Pass, Louisiana in the Mississippi River Delta. About 1915 c.s.t., as the dredge was taking on fuel oil and water from a barge moored alongside, the crew of the LOUISIANA heard a noise described as a small explosion and saw flames on the main deck near the engineroom.

The dredge's assistant engineer had inserted the end of a 2-inch fuel oil hose from a refueling barge into a 4-inch fill pipe which extended 6 inches above the dredge's deck. It was customary to secure the hose with 1/4-inch line to prevent the hose from coming out of the fill pipe; however, the assistant engineer died in the fire and none of the other crew could remember if the hose had been secured. The tank was vented through the fill pipe and had no separate vents. One crewman saw the fuel oil hose flopping on the deck shortly after the fire was discovered. As a result of the fire, the dredge has been declared a total loss of over \$1,500,000.

Although the LOUISIANA was an uninspected vessel, U.S. Coast Guard regulations (33 CFR 156.120) require that couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil be one of the following:

1. A bolted or full-threaded connection; or
2. a quick-connect coupling approved by the Commandant; or
3. an automatic back-pressure shutoff nozzle used to fuel the vessel.

The insertion of a fuel oil hose into a fill pipe does not meet these requirements and the dredge did not have the fuel oil discharge containment required by 33 CFR 155.320.

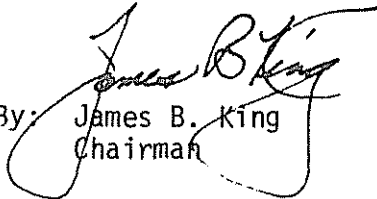
The LOUISIANA was under contract to the COE, and the general terms of the contract provided that the contractor was responsible ". . .for complying with any applicable Federal, State, and municipal laws, codes, and regulations." The terms of the contract also included "Special Provisions" for several matters pertinent to the dredge such as the requirements to display lights in accordance with U.S. Army and U.S. Coast Guard regulations, and to comply with all pollution laws, but made no specific reference to Coast Guard regulations relating to fuel oil transfer.

The fuel oil tanks were not equipped with vents. While vents are not expressly required by the regulations, it would be necessary for the tanks to be vented in order to use the couplings prescribed by 33 CFR 156.120 (1) or (2). The use of an automatic back-pressure shutoff nozzle probably would not be practical for the quantities involved in fueling the dredge. If the tank had been vented and the coupling made as prescribed by the regulations, or the hose properly secured by the assistant engineer, this accident may have been prevented.

Therefore, the National Transportation Safety Board recommends that the U.S. Army Corps of Engineers:

Establish written procedures to require all dredges contracted by the U.S. Army Corps of Engineers to meet U.S. Coast Guard design regulations for fuel oil transfer operations.
(Class II, Priority Action)(M-79-116)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.


By: James B. King
Chairman