

MVI

19 March, 1952

(UNNAMED GRAVEL DREDGE  
a-2 B4)

**From:** Chief, Merchant Vessel Inspection Division  
**To:** Commandant  
**Via:** Chief, Office of Merchant Marine Safety

**Subj:** Marine Board of Investigation; unnamed, unnumbered dredge -  
explosion, mile 637.0 AHP Mississippi River, 30 October, 1950, with  
loss of life

1. Pursuant to the provisions of Title 46 C.F.R., Part 156, the record of the Marine Board convened to investigate subject casualty, together with its Findings of Fact, Conclusions and Recommendations, has been reviewed and is forwarded herewith.

2. The unnamed and unnumbered dredge, 110 x 30 x 5.5 ft., sand and gravel barge C.E. No. 4429, 195 x 35 x 10.5 ft., unnamed and unnumbered steel barge 100 x 26 x 6.6 ft., and the tow boat M/V SKIPPER, were anchored and moored at mile 637.0 AHP Mississippi River for the purpose of obtaining sand and gravel. The weather conditions were clear, wind, south - 6 to 8 miles per hour and the temperature 77° F. The Diesel and gasoline operating machinery, together with fuel tank installations on board the dredge were sub-standard so that spillage and vapors escaped into and permeated the entire hull of such dredge. On or about 1730, 30 October, 1950, a fire was observed on the dredge, and she thereafter exploded, which resulted in her complete demolition and sinking. As a result of this casualty, all known persons on board the dredge lost their lives, whose names and addresses are as follows:

1. Paul Godsey, Sr., Caruthersville, Missouri
2. William A. Smith, Caruthersville, Missouri
3. Earl C. Wallace, Caruthersville, Missouri
4. Richard Durtz, Caruthersville, Missouri
5. Edward Resch, Caruthersville, Missouri
6. Paul Godsey, Jr., Caruthersville, Missouri
7. Harry D. Fields, Caruthersville, Missouri
8. John Purser, Helena, Arkansas

3. The Board made the following Findings of Fact:

"1. That the unnamed, uninspected and undocumented non-propelled sand and gravel dredge, constructed of wood, built in 1928, size 110' x 30' x 5'5", owned and operated by the Mississippi River Sand and Gravel Company, Caruthersville, Missouri, was anchored

at Mile 637.0 AHP, near the left bank of the Lower Mississippi River engaged in dredging sand and gravel for the U. S. Engineer Corps Project No. B.P.P. #11, exploded, burned and sank in approximately 20' of water on 30 October, 1950, at approximately 1740 CST.

"2. That the unnamed, uninspected and undocumented steel flat barge, built in 1947, size 100' x 26' x 6' 6", owned and operated by the Mississippi River Sand and Gravel Company, Caruthersville, Missouri, used to transport fuel oil and gasoline to the Dredge, was moored alongside the port side of the Dredge and caught fire as a result of the explosion, broke away from the Dredge and drifted downstream in the Mississippi River for a distance of approximately 18 miles and, until beached by the Diesel towboat SAM HOUSTON at Hughey Light, Mile 629.7 AHP.

"3. That the uninspected, documented, Diesel towing vessel SKIPPER of St. Louis, Missouri, Official No. 240021, gross tonnage 62.98, size 48' x 12.5' x 4.2', owned and operated by the Mississippi River Sand and Gravel Company, Caruthersville, Missouri, was moored astern of the flat barge noted in paragraph 2 above, and remained so moored after the barge broke away from the Dredge which sank immediately after the explosion. The tug was unmanned and drifted with the barge.

"4. That the U. S. Engineer Corps' flat barge No. C. E. 4429, size 195' x 35' x 10.5', used to transport sand and gravel from the Dredge to the shore was moored alongside the Dredge on the starboard side and was also secured with a cable to the Dredge's anchor. This barge remained on location after the Dredge exploded and sank.

"5. That of the eight persons known to be on board the Dredge at the time of this casualty, one died shortly after the explosion without regaining consciousness, six bodies have been recovered and one is missing. Seven persons comprised the operating crew of the Dredge and tug together, and one person, hired for welding repairs, was temporarily employed on board the Dredge.

"6. That the Dredge was a conventional type flat barge with a deckhouse extending practically the full length of the hull. Crew quarters and galley compartment were located on top of the deckhouse at the forward bow end. All were of wood construction. The suction pipe was located at the aft stern end. All machinery, Diesel and gasoline tanks were located on the main deck inside the deckhouse. There were

no drip pans under the gasoline or Diesel fuel tanks to drain off any spillage or overflow. The tanks were filled by a hose through an opening in the top. The vents from the gasoline tanks extended above the roof of the vessel and terminated with no flame screen or other safety device. The main deck of the Dredge had a number of openings which were covered with wood gratings. The hull of the Dredge was not fitted with bulkheads.

"7. That the Dredge sustained damage of major proportion was evident by the debris found on board the barges that had been moored on either side of the Dredge. The fuel carrying barge was damaged by fire to the extent that the deck over the aft rake was bulged and blown out. The Diesel tug SKIPPER was slightly damaged by fire in the vicinity of the pilot house, all glass windows being broken and doors jarred off the hinges. The U. S. Engineer Corps' flat barge No. C. E. 4429 was not damaged.

"8. That, as a result of the inspection by this Board of the debris on board the U. S. Engineer Corps' flat barge No. C. E. 4429, it was found that parts of the main deck planking, concrete bath room floor and iron mooring cleats were blown up and on board the barge which was found to have approximately 7' of freeboard, whereas the Dredge had approximately 30". In addition, a considerable amount of heavy machinery parts were found on the barge.

"9. That downstream from the scene of the casualty, some 200 yards or 300 yards, the dredge ROBERT H. was working and shortly before the casualty occurred, crew members observed welding or metal cutting being carried out on the upper deck of the Mississippi River Sand and Gravel Company's Dredge and they also noticed a small fire on the main deck below where this cutting or welding torch was working. About this time the dredging machinery of the ROBERT H. was stopped to clean out the suction and members of her crew decided to go to the Mississippi River Sand and Gravel Company's Dredge and help put the fire out. They procured some fire extinguishers and were in the act of releasing the lines on their towing vessel when the Dredge above them exploded and sank.

"10. That there were no Coast Guard vessels or commercial vessels involved in this casualty.

"11. That the weather report from the local office of the Weather Bureau, Memphis, Tennessee, indicated weather conditions obtaining at the time of the explosion, to be as follows:

Temperature	- - - - -	77°
Wind direction	- - - - -	South at 1800
Wind velocity	- - - - -	6 to 8 M.P.H.
Weather	- - - - -	Clear

4. The Board made the following Conclusions:

"1. In view of the fact that there are no survivors of this casualty, it is the opinion of this Board that the exact cause of this casualty cannot be determined. However, from the testimony adduced at this investigation, the following contributing factors were found to have existed: That the Dredge was equipped with gasoline and Diesel combustion engines; that the fuel tanks containing gasoline and Diesel oil storage were installed within the deck house; that a welder had been observed effecting welding repair work near the stern of the Dredge; and that a small fire had been observed on the main deck of the Dredge by crew members of another dredge immediately preceding the explosion.

"2. Due to the fact that the hull of this Dredge was not subdivided, any spillage of gasoline or Diesel fuel could eventually find its way into the hull and create an explosive mixture which would permeate the entire hull. An open flame or spark of any type occurring anywhere in or near the pump housing or near any of the grated openings in the deck, would be a potential explosion. This, in the opinion of the Board is the most logical explanation for an explosion of such tremendous force, as actually indicated by such heavy objects found on board of the gravel barge which was moored alongside of the Dredge and the disintegration of the Dredge itself.

"3. The Board is of the opinion that the flat barge used to transport gasoline and Diesel oil to the Dredge was not a contributing factor in the explosion. However, this barge was found to be carrying inflammable liquids in bulk in violation of 46 U.S.C. 391a. The Officer in Charge, Marine Inspection, Memphis, Tennessee is mindful of this condition and will cite the owner for this violation.

"4. The fuel barge was found not to comply in any respect to existing Tank Vessel Regulations, CG-123, thus, it is reasonable to assume that the Dredge, being an uninspected vessel and belonging to the same company, did not conform to the best methods of construction from a standpoint of safety. This condition could not have existed had this type of vessel been required to be inspected."

5. The Board made the following Recommendations:

"1. Inasmuch as there was no indication of a violation of any existent laws insofar as the Dredge is concerned, the Board recommends that no further action be taken and that the case be closed."

Chief, MVI Division to  
Commandant

19 March, 1952  
(DAMAGED GRAVEL DREDGE - a-2 86)

6. It is recommended that the Findings of Fact, Conclusions and Recommendations of the Board be approved.

/s/ P. A. OVENDEN  
P. A. OVENDEN

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21 March, 1952

From: Chief, Office of Merchant Marine Safety  
To: Commandant

Forwarded, recommending approval.

/s/ H. C. SHEPHEARD  
H. C. SHEPHEARD

APPROVED: MAR 24, 1952

/s/ A. C. RICHMOND  
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A. C. RICHMOND  
Rear Admiral, U. S. Coast Guard  
Acting Commandant