

3. A probable increase in the area of this side-light-obscured zone beyond that permitted by the rules, due to the resetting of these lights after they had been checked without any accurate alignment guides.
4. Lack of a visible outline of the barges to aid the operator of the cabin cruiser in identifying the tow, in determining its distance from his boat, and in selecting the shortest escape route.
5. The uncertainty of the captain of the HAMILTON as to the precedence of the various rules of the road. The requirement that boats under 65 feet in length "shall not hamper" vessels with tows apparently contributed to the captain's decision not to initiate any whistle signals when the vessels closed to within $\frac{1}{2}$ mile.
6. The absence of any authoritative interpretations of actions required under the "shall not hamper" rule, which apparently permitted a hazardous interpretation.

Log M-31 NOT 1004 M-73-1 thru 5

RECOMMENDATIONS

The National Transportation Safety Board recommends that:

1. The Coast Guard develop and require use of illumination techniques for barges that will make them readily visible and recognizable when pushed ahead of towboats. As a minimum requirement such a system should outline the boundaries of the tow. M-73-1
2. The Coast Guard include a cautionary note in the Rules of the Road; Western Rivers stating that even when bearings of an approaching vessel are changing, there can be a risk of collision with a long tow ahead of the towboat making the observations. M-73-2
3. The Coast Guard require suitable side-light alignment and securing devices on the front of barge tows to insure that such light will comply with the alignment required by the Rules of the Road. M-73-3
4. The Coast Guard upgrade the reliability of the navigation lights on barge tows by requiring that the circuits for these lights be automatically monitored to give an alarm in case of light failure, and by requiring redundant lights. M-73-4

~~M-73-1~~

M-73-5

- 5. The Coast Guard clarify the effect on responsibilities for initiation of whistle signals in Rules of the Road, of the requirement that easily maneuverable vessels less than 65 feet shall not hamper large vessels or vessels with tows, and develop and publish authoritative interpretations of actions required in other frequently encountered operating situations in which the "shall not hamper" rule interacts with other rules.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

Adopted this 20th day of December 1972:

John H. Reed
 John H. Reed, Chairman

Francis H. McAdams
 Francis H. McAdams, Member

Louis M. Thayer
 Louis M. Thayer, Member

Isabel A. Burgess
 Isabel A. Burgess, Member

William R. Haley
 William R. Haley, Member