



FINDINGS OF CONCERN

Marine Safety Unit Baton Rouge

July 10, 2023
Baton Rouge, LA

Findings of Concern 016-23

**FIRE FIGHTING PREVENTION AND EQUIPMENT
ACCESSIBILITY**

Purpose. The U. S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. An inspected towing vessel was underway pushing a load of mostly empty barges upbound on the Lower Mississippi River when it experienced an engine room fire. The fire quickly spread and engulfed multiple decks resulting in the total constructive loss of the vessel.

Contributing Factors and Analysis. Although the exact cause of the initial fire is unknown due to the extensive destruction of the vessel, the facts revealed the following existing unsafe conditions:

1. Infrequent engine room rounds conducted by watchmen
2. Operating underway with the engine room doors and windows open
3. Inaccessibility of the engine room's semi-portable 160-B fire extinguisher

At the time of the incident, both the port and starboard side engine room doors and 10 engine room windows were in the open position. The last visual check of the engine room by the watchman occurred nearly two hours earlier, during a watch change. When the fire occurred, there was likely a significant delay in the detection system sensing the fire due to the open engine room doors and windows allowing fresh air to enter the space, thus pulling the smoke away from the detector sensor located in the center of the space. The fresh air coming through the open doors and windows also likely fed the fire to grow at an otherwise accelerated rate. Furthermore, a semi-portable 160-B fire extinguisher was located in the center of the engine room, away from all entries to the engine room. When the crew became aware of the fire and attempted to access the semi-portable 160-B fire extinguisher, they were unable due to the concentration of fire on and around the main engines. All of these conditions combined resulted in the crew being unable to control the engine room fire, necessitating the evacuation of the vessel to the barges in the tow.



UNITED STATES COAST GUARD
U.S. Department of Homeland Security

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Findings of Concern. Coast Guard investigators have identified the following measures, that when implemented on vessels in similar service, may mitigate the risks associated with the contributing factors identified above:

- Engine room rounds should be conducted frequently to identify potential sources of ignition or to identify fires in the initial stages when extinguishing them with shipboard equipment is possible.
- Engine room doors and windows should be secured closed when crew are not actively transiting through them or occupying a space. Securing openings would likely prevent or reduce the introduction of fresh air feeding fires and would ensure the timely activation of fire detection systems, if installed.
- Consider the likely sources of fires and strategically install fire extinguishing equipment in a location with a low fire-risk so that they are readily accessible in the event of the fire.

Closing. These findings of concern are provided for informational purpose only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments please contact Marine Safety Unit Baton Rouge Investigations Division by phone at (225) 298-5400 or by email at MSUBRIO@uscg.mil.