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M.E.B.A. President: DALI Incident Caused by Systemic Failure Not Simple Wiring Fault

The National Transportation Safety Board (NTSB) recently issued its final report on the allision of the containership DALI with Baltimore's Francis Scott Key Bridge which subsequently collapsed. The accident occurred on March 26, 2024, when the DALI leaving Baltimore Harbor, experienced losses of electrical power, propulsion, and steering and struck the bridge. A substantial portion of the bridge subsequently collapsed into the river, killing six highway workers on the bridge. The investigation determined that one of the causes of the accident was loss of electrical power (blackout), due to a loose signal wire connection to a terminal block stemming from the improper installation of wire-label banding, resulting in the vessel's loss of propulsion and steering close to the bridge.

But subsequent press headlines and the NTSB's own tidy news release summary following the report sensationalized the role of the loose wire, without properly highlighting the substantive negligence that spawned the disaster. A deeper reading of the report makes it clear that the accident cannot be blamed solely on a single "loose wire," but instead was a cascading failure rooted in cost-cutting, poor maintenance, and disregard for U.S. maritime safety standards by the foreign owners and operators of the DALI. M.E.B.A. President Adam Vokac argued in a recent editorial that adherence to U.S. maritime laws and American crewing practices would have prevented the blackout, the collision, and the loss of six lives. That editorial follows:

More Than a Loose Wire: The Key Bridge Truth
by M.E.B.A. President Adam Vokac

Don't be distracted by headlines declaring that the National Transportation Safety Board (NTSB) found the crash that destroyed the Francis Scott Key Bridge and killed six bridge workers was caused by a single loose wire. The NTSB's 19-page synopsis and the Department of Justice's (DOJ) 53-page court claim against the ship's owners and operators reveal that the crash would not have happened if the ship had flown an American flag (requiring it to adhere to American maritime laws) or hired American mariners. Foolhardy engineering policies by the Dali's Singaporean owners and

operators, aimed at cutting costs (according to the DOJ), recklessly compromised operational safety. These failures ignored U.S. laws and sound maritime practices universally followed by American vessel operators and mariners.

This conclusion isn't born from misguided patriotism, but from the flag-of-convenience system under which much of global shipping operates. It is that system that has led to over $5 billion in bridge damage, six deaths, and years of traffic delays for Baltimore residents. The Singaporean companies responsible, Synergy Maritime (the operator) and Grace Marine Private Limited (the owner), will likely face minimal repercussions, while the Indian crew may face jail time and Maryland and U.S. taxpayers are stuck holding the bill.

The U.S. Coast Guard, ship owners, operators, and mariners already have solutions for every error made by our Singaporean and Indian counterparts. These solutions, as simple as adhering to basic laws and time-tested operating practices, would have saved the bridge and six lives.

Several critical facts are undisputed. The Dali has a single propeller driven by the diesel-powered main engine, but none of its systems—engine, steering, communication, lighting—can function without electricity. Thus, the main engine shuts down without electric power because its fuel and lubricating oil must be continuously supplied by electric motors. In turn, without propulsion from the main engine, the ship cannot slow down, stop, reverse or maneuver. Critically, the Dali experienced two electrical blackouts while docked in Baltimore. Despite these unmistakable warnings, neither the NTSB nor the DOJ found evidence that the owner or operator performed diagnostics or repairs to prevent further blackouts. Subsequently, as alleged by the DOJ, the captain misled the Maryland-based pilot (a local captain with specialized knowledge of complex waterways), assuring him the Dali was seaworthy without disclosing the dockside blackouts. Shortly after departing, a third blackout occurred, leading to a complete loss of propulsion, steering, and lighting. After power was restored briefly, a fourth blackout struck, leaving the Dali adrift. Attempts to drop anchor and slow the vessel failed due to the anchor mechanism's unpreparedness for emergencies. By the time the crew was able to drop the anchor, it was too late; the ship was within one boat length of the bridge pier, without any ability to stop. The Dali rammed the pier, collapsing the bridge and killing six men performing bridge maintenance.

Vessel blackouts are rare and serious. In my experience, a well-maintained vessel may have one unplanned blackout every three to five years. American operators and mariners would never sail a vessel that had experienced a blackout until the root cause had been identified and fixed. Likewise, American mariners are legally required to notify the Coast Guard of a blackout, as well as all diagnostic and corrective action taken, before being permitted to leave the dock.

Press coverage implies a loose wire caused the ship's collision with the bridge, but that oversimplifies the situation. A loose wire may occur, just as a flat tire might occur. But a properly-maintained car will manage a flat tire just fine, whereas the driver who does not maintain their car and allows multiple defects to develop is going to have a much different outcome. Similarly, if the Dali had operated under American maritime standards, it could have weathered a loose wire without incident.

The NTSB and DOJ found that the Dali's owners and operators knowingly altered or disabled systems that, left alone to function as designed, would have prevented a blackout or saved crucial time, even after the infamous wire disconnected. Specifically:

- The operator disabled two electric "fuel service" pumps that ensure continuous fuel flow to generators, opting instead for a pump not designed for that purpose. This decision, made to save costs (according to the DOJ), led to the engine being starved of fuel, directly causing the fourth, catastrophic blackout.
- The operator also turned off an automatic system that would have rerouted power through a redundant system after a transformer lost power due to the disconnected wire. Operating in "manual" mode heightened the danger by unnecessarily delaying power restoration.
- The operator failed to prepare the anchor for emergency deployment, violating legal requirements.
- The operator failed to notify the Coast Guard of the dockside blackouts, another legal violation.
- The captain failed to inform the pilot of dockside power outages and mechanical defects, which also violates U.S. law.

Unfortunately, there is no incentive for non-American operators to properly train their crew or encourage mariners to report unsafe conditions. It is my opinion that unscrupulous operators prefer plausible deniability, discouraging safety reports and punishing whistleblowers. American mariners, by contrast, enjoy legal protections that allow them to report safety issues without fear of retaliation.

Lastly, a perverse incentive in U.S. law may have influenced the Dali's decision to launch into Baltimore harbor under unsafe conditions. A maritime statute from 1851 limits a vessel owner's liability for damages to the value of the vessel and its cargo, motivating owners to take undue risks. The Dali's owners almost certainly were aware of this stop-loss when they took the risks they did.

American vessels and mariners may have higher costs, but they are infinitely preferable to outsourcing our maritime economy and safety to the lowest bidder, then standing by helplessly as our reckless foreign counterparts bring it all crashing down around us.