



FINDINGS OF CONCERN

USCG Sector Virginia

February 24, 2025
Norfolk, VA

Findings of Concern 003-25

**BRIDGE ALLISIONS INVOLVING UNCERTAINTY OF VESSEL
AIR DRAFT**

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. A deck barge equipped with two spuds was pushed ahead by a towing vessel transiting westbound on the Intracoastal Waterway in the vicinity of Great Bridge, Virginia. The tug and barge came to a full stop prior to passing under the US-168 fixed causeway bridge. The crew lowered the spuds by visual approximation until it appeared they were sufficiently lowered to allow safe passage under the bridge. However, while passing underneath, one of the spuds contacted a support structure on the far side that was designed to hang lower than the rest, causing damage to the penultimate chord. The charted clearance height for the bridge was based on this lower hanging structure.

Contributing Factors and Analysis. The spuds lacked height reference marks, thereby the towing vessel crew had no way to ascertain the vessel and tow's exact maximum height above water. This made it difficult for the crew to quickly assess the maximum air draft of the barge. As a result, the vessel's master did not lower the spuds sufficiently to clear the bridge and was then unable to stop before contacting the far side of the bridge.

Findings of Concern. Coast Guard investigators have identified the following voluntary actions for owners & operators of similar vessels to consider reducing the likelihood of recurrence:

- To mitigate the risk of allisions resulting from discrepancies between actual air drafts and charted bridge clearances, vessel owners and operators should consider implementing precise methods for determining their vessels' air draft, to include visual measurement markings on barge spuds. The inability to accurately measure the highest point of a vessel or vessel(s) in tow poses a significant navigation hazard, as it relies on subjective estimates of air draft particularly with movable components. Since spuds on barges are frequently raised and lowered during transit, this introduces uncertainty about the vessel's true air draft at a given time. There has been a substantial increase in allisions between spud barges and bridges where there was a lack of knowledge concerning the vessels air draft as compared to the clearance of overhead obstructions. Title 46, Code of Federal Regulations (CFR) Section (§) 140.635 and 33 Code of Federal Regulations (CFR) CFR § 164.80 require officers in charge of navigation watches on towing vessels to consider vessel air drafts and bridge clearances as part of their ongoing voyage planning, which includes conducting the assessments for vessels in tow.

Closing. These findings of concern are provided for informational purposes only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments please contact Sector Virginia Investigations Division by phone at (757) 668-5500 or by email at IO.SectVA@uscg.mil.