

### What Dali's black box recorder tells us about Baltimore bridge allision



**The US National Transportation Safety Board (NTSB) shared data from Dali's Voyage Data Recorder (VDR) on the minutes prior to contact with the Francis Scott Key Bridge.**

Gary Howard | Mar 28, 2024

NTSB Chair Jennifer Homendy told reporters at the meeting that even though Dali had a relatively new VDR model, and the VDR is popularly compared with an aircraft's black box recorder, the contents of a ship's VDR is much less complete than that of an aircraft black box. The NTSB has long wanted more data and information to be recorded in the system, she said.

NTSB is looking for other sources of information in the engine room to supplement the VDR data and get a fuller picture of engineering systems, power distribution, and engine data.

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The timeline of events from the VDR were read as follows:

By 01.07 the ship had entered the channel.

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By 01.24 the ship was underway on a true heading of 141 at a speed of approximately 8 knots.

01.24:59 - Numerous audible alarms recorded on bridge audio. VDR sensor data ceased recording, VDR audio recording continued on backup power source.

01.26:02 - VDR resumed recording sensor data. Steering commands and rudder inputs made.

01.26:39 - Ship's pilot made a general VHF radio call for tugs in the vicinity to assist. Around the same time, pilot association dispatcher phoned the Maryland Transport Authority (MDTA) duty officer regarding the Dali's blackout.

01.27:04 - Pilot ordered vessel to drop port anchor along with additional steering commands.

01.26:25 - Pilot issued VHF radio call warning that the Dali had lost all power and was approaching the bridge.

Around this time, MDTA data shows the following also occurred - an MDTA duty officer radioed two units already on scene - one on each side of the bridge - due

to construction on the bridge, and ordered them to close the bridge to traffic. All lanes were closed by MDTA.

01.29 - Ship speed recorded at just under 7 knots.

01.29:33 - VDR recorder holds sounds consistent with bridge collision.

01.29:39 - Pilot reported the bridge down over VHF to USCG.

The NTSB briefing also shared that there are 56 containers of hazardous materials on board the vessel totalling 764 tonnes of cargo including flammables, corrosives, and lithium ion batteries.

Some containers, not necessarily those with hazardous contents, are in the water and some are breached.

Homendy noted that while the data from the VDR is consistent with a power outage, it does not confirm a power outage.