



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

September 17, 2021

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Medical Officer

A. ACCIDENT INFORMATION

Identification: DCA21PM003

Location: Port Arthur, Texas

Date: October 11, 2020 (approximately 15:35 local time)

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

1. Purpose

This investigation was performed to evaluate the bridge crews of both vessels for medical conditions and substance use.

2. Methods

This medical investigation included all crew members who were on duty on the bridges of the two involved vessels at the time of the collision, as determined by the National Transportation Safety Board (NTSB) Investigator in Charge (IIC).

The included L&M BoTruc 33 bridge crew were the Captain and an Able Seafarer (Ab). For the L&M BoTruc 33 Captain, records from his United States Coast Guard (USCG) merchant mariner medical file were reviewed, as were selected personal medical records, post-accident United States Department of Transportation (USDOT) alcohol and drug test results, and a post-accident NTSB interview. For the L&M BoTruc 33 Ab, records from his USCG merchant mariner medical file were reviewed, as were post-accident USDOT alcohol and drug test results.

The included bridge crew of the USCG cutter Harry Claiborne were the Commanding Officer (CO), Conning Officer (Conn), and Officer of the Deck (OOD). For those crew, post-accident alcohol and drug test results were reviewed, as were USCG medical examination and medical history report forms from 3 days after the accident.

Investigator reports and relevant regulation and medical literature were also reviewed.

3. Findings

a. L&M BoTruc 33 Bridge Crew

I. L&M BoTruc 33 Captain

i. USCG Merchant Mariner Medical File

According to the 61-year-old male L&M BoTruc 33 Captain's USCG merchant mariner medical records, his most recent examination for medical certification before the accident was on July 29, 2019. At that time, he reported having sleep apnea, treated with a continuous positive airway pressure (CPAP) machine, and anxiety, treated with the prescription medication sertraline. The examining physician noted that the status of both of those conditions was "great." The examining physician noted that the Captain had been on the sertraline for 9 months and was stable on his current dose. The Captain also reported prior back surgery; the examining physician noted for this issue the Captain had been cleared by a neurosurgeon to return to work without restrictions in 2015. The examining physician recommended the Captain for merchant mariner medical certification.

Supporting documentation included copies of a 6-month CPAP download report and a CPAP follow-up note from the Captain's sleep medicine physician, both dated July 22, 2019. The download report indicated that the Captain had been using his CPAP machine on 84.4% of days for an average of 8 hours 36 minutes per day on days used and an average of 7 hours 16 minutes per day across all days.¹ The sleep medicine physician noted that the CPAP usage was adequate, that CPAP had eliminated apnea, and that the Captain had no complaints or concerns, felt good overall, and was happy with the machine. The USCG approved the issuance of the Captain's medical certificate on August 8, 2019, with a waiver for OSA treated with CPAP.

¹ For purposes of obtaining or maintaining a merchant mariner medical certificate, minimum CPAP compliance is defined by the USCG as proper use of the CPAP device on at least 70% of days for at least 4 hours per day. [United States Coast Guard. Merchant Mariner Medical Manual. COMDTINST M16721.48. https://media.defense.gov/2019/Sep/11/2002181050/-1/-1/0/CIM_16721_48.pdf. Published August 30, 2019. Accessed August 25, 2021.]

ii. Personal Medical Records

According to reviewed primary care records, the L&M BoTruc 33 Captain's most recent visit to his primary care provider before the accident was on August 20, 2020. At that visit his documented medications included sertraline, metformin (a prescription medication used to control blood sugar in diabetes), and atorvastatin (a prescription medication used to control high cholesterol). He also was prescribed non-steroidal anti-inflammatory drugs (NSAIDs) to be used only if needed for musculoskeletal pain. Metformin, atorvastatin, and NSAIDs are generally not considered impairing. Sertraline typically carries a warning that it can cause sleepiness or affect the ability to make decisions, think clearly, or react quickly, and that users should not drive, operate heavy machinery, or do other dangerous activities until they know how the medication affects them.²

Reviewed primary care records showed that the Captain's primary physician performed his most recent merchant mariner medical certification examination on July 29, 2019. Later, in June 2020, the Captain was evaluated for fatigue and had labs done indicating high cholesterol and diabetes. He was started on atorvastatin and metformin on June 27, 2020, and began dieting on July 1, 2020. A record of twice-daily home blood sugar checks for the first 2 weeks of July 2020 showed that he achieved good blood sugar control, with blood sugars ranging from 94 to 129 milligrams per deciliter (mg/dL) during the second week.³

Reviewed primary records first documented the Captain's anxiety in October 2018, at which time it was described as having onset months/one year prior, having moderate severity, being in the context of life stressors, and causing symptoms including worry, irritability, chest pain, and sleep disturbances. The primary physician noted a psychiatric portion of the Captain's physical exam to be normal, and prescribed him sertraline at that time. At a visit on April 18, 2019, the Captain stated the sertraline had initially worked well but was no longer working as well; he was prescribed a dose increase. No other changes to or concerns about the status of his anxiety or sertraline use were documented in reviewed records.

² National Institutes of Health National Library of Medicine. Zoloft. DailyMed. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=fe9e8b7d-61ea-409d-84aa-3ebd79a046b5>. Updated July 8, 2021. Accessed August 26, 2021.

³ For many adults with diabetes, recommended pre-meal blood sugars are between 80 and 130 mg/dL, and recommended peak after-meal blood sugars are less than 180 mg/dL. [American Diabetes Association. Standards of medical care in diabetes – 2020. *Diabetes Care*. 2020;43(Suppl. 1):S1-S212. http://care.diabetesjournals.org/content/43/Supplement_1. Accessed December 2, 2020.]

Reviewed primary care records also indicated that the Captain had elevated blood pressure being treated with diet and exercise. The Captain's sleep apnea was not documented in reviewed primary care records except on the July 2019 USCG Application for Medical Certificate form and the associated copies of CPAP/sleep medicine information, which were the same as those in the Captain's USCG medical file.

According to a separate CPAP download report, the Captain used CPAP on 100% of nights in the 6 nights preceding the accident date, with an average usage of 7 hours 37 minutes, and a usage of 8 hours 6 minutes on the night before the accident date.¹ According to a CPAP follow-up note from the Captain's sleep medicine physician, the physician evaluated the Captain on October 19, 2020 (8 days after the accident) and found his CPAP adherence to be excellent.⁴

iii. Post-Accident Alcohol and Drug Testing

Reviewed records showed that the L&M BoTruc 33 Captain underwent an alcohol breath test at 01:40 on October 12, 2020, with no alcohol detected.⁵ Reviewed records also showed that the Captain provided a urine specimen at 02:34 on October 12, 2020, for USDOT post-accident drug testing, which did not detect any tested-for-substances.⁶

iv. Post-Accident Interview

Information provided by the L&M BoTruc 33 Captain in a post-accident interview with the NTSB was generally consistent with the information documented in reviewed records regarding his medical conditions, medications, and CPAP use. The Captain stated that he was feeling alert and well-rested at the time of the accident and had not used any over-the-counter medications.

II. BoTruc Able Seafarer

i. USCG Merchant Mariner Medical File

According to the 33-year-old male L&M BoTruc 33 Ab's USCG merchant mariner medical records, his most recent examination for medical certification before the accident was on March 18, 2020. At that time, he reported having high blood pressure, treated with the prescription medication lisinopril. Lisinopril is generally not

⁴ The follow-up note included the results of a download from an unspecified date range showing CPAP use on 100% of nights, with an average use of 8+ hours per night, and disordered breathing episodes controlled to normal during use.

⁵ According to the IIC, the L&M BoTruc 33 Captain and Ab also reportedly each had a negative post-accident saliva swab test for alcohol, but details could not be verified.

⁶ USDOT post-accident urine drug testing tests for marijuana metabolites, cocaine metabolites, amphetamines, opioids, and phencyclidine (PCP), per 49 Code of Federal Regulations §§ [40.85](#) and [40.87](#).

considered impairing. The examining physician noted that the Ab's high blood pressure was well-controlled on lisinopril, without side effects, and recommended the Ab for merchant mariner medical certification. The USCG approved the issuance of the Ab's medical certificate on April 2, 2020, limited by a requirement for corrective lenses.

ii. Post-Accident Alcohol and Drug Testing

Reviewed records showed that the L&M BoTruc 33 Ab underwent an alcohol breath test at 01:50 on October 12, 2020, with no alcohol detected.⁵ Reviewed records also showed that the Ab provided a urine specimen at 02:23 on October 12, 2020, for USDOT post-accident drug testing, which did not detect any tested-for-substances.⁶

b. Harry Claiborne Bridge Crew

I. Harry Claiborne Commanding Officer

i. Post-accident Alcohol and Drug Testing

According to the record of a post-accident USCG field sobriety test, the Harry Claiborne CO tested negative for alcohol at 19:05 on the accident date.

According to the final report from post-accident testing performed by the Armed Forces Medical Examiner System (AFMES) Division of Forensic Toxicology, the Harry Claiborne CO screened negative for tested-for drugs of abuse and alcohol.

ii. Post-accident USCG Medical Examination/History

The 41-year-old male Harry Claiborne CO underwent a medical evaluation by a USCG physician on October 14, 2020. According to the reports of medical examination and medical history from that evaluation, the CO had mild hearing loss, affecting the left ear more than the right, with normal voice discrimination. He did not report any current medication use. No disabling conditions were identified, and he was found to be qualified for service with no limitations.

II. Harry Claiborne Conning Officer

i. Post-accident Alcohol and Drug Testing

According to the record of a post-accident USCG field sobriety test, the Harry Claiborne Conn tested negative for alcohol at 19:09 on the accident date.

According to the final report from post-accident testing performed by the AFMES Division of Forensic Toxicology, the Harry Claiborne Conn screened negative for tested-for drugs of abuse and alcohol.

ii. Post-accident USCG Medical Examination/History

The 29-year-old female Harry Claiborne Conn underwent a medical evaluation by a USCG physician on October 14, 2020. According to the reports of medical examination and medical history from that evaluation, the Conn did not report any current medication use, and no disabling conditions were identified. She was found to be qualified for service with no limitations.

III. Harry Claiborne Officer of the Deck

i. Post-accident Alcohol and Drug Testing

According to the record of a post-accident USCG field sobriety test, the Harry Claiborne OOD tested negative for alcohol at 19:07 on the accident date.

According to the final report from post-accident testing performed by the AFMES Division of Forensic Toxicology, the Harry Claiborne OOD screened negative for tested-for drugs of abuse and alcohol.

ii. Post-accident USCG Medical Examination/History

The 40-year-old male Harry Claiborne OOD underwent a medical evaluation by a USCG physician on October 14, 2020. According to the reports of medical examination and medical history from that evaluation, the OOD did not report any current medication use, and no disabling conditions were identified. He was found to be qualified for service with no limitations.

D. SUMMARY OF MEDICAL FINDINGS

1. L&M BoTruc 33 Bridge Crew

According to reviewed medical information, the 61-year-old male L&M BoTruc 33 Captain had obstructive sleep apnea (OSA), anxiety, diabetes, high cholesterol, and elevated blood pressure. His sleep apnea was treated with a continuous positive airway pressure (CPAP) machine, which he was using effectively as evidenced by CPAP download and sleep medicine records. His anxiety was treated with the prescription medication sertraline; this treated anxiety was documented as stable at his most recent merchant mariner medical examination in July 2019, and there were no documented changes or concerns related to the anxiety or sertraline in subsequent primary care visit records. His diabetes was treated with the prescription medication metformin, which is generally not considered impairing. Reviewed records showed that, as of July 2020, he had achieved good blood sugar control with metformin and diet. His

high cholesterol was treated with the prescription medication atorvastatin, which is generally not considered impairing.

According to the 33-year-old male L&M BoTruc 33 Able Seafarer's USCG merchant mariner medical records, he had high blood pressure treated with the prescription medication lisinopril, which is generally not considered impairing.

Post-accident United States Department of Transportation (USDOT) alcohol and drug testing of the L&M BoTruc 33 Captain and Able Seafarer did not detect any tested-for substances.

2. Harry Claiborne Bridge Crew

Available information from post-accident alcohol/drug tests and medical evaluations of the Harry Claiborne Commanding Officer, Conning Officer, and Officer of the Deck provided no evidence of potentially impairing medical conditions or substance use.