

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA22FA338

MEDICAL

Specialist's Factual Report

March 7, 2023

A. ACCIDENT

Location: Portland, Arkansas
Date: 7/26/22
Time: 17:02 Local
Airplane: Air Tractor AT-802A, N749LA; Air Tractor AT-802, N214RL

B. MEDICAL SPECIALIST

Specialist Michelle Watters, MD, PhD, MPH
National Transportation Safety Board, RE-1
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C. DETAILS OF THE INVESTIGATION

Purpose

This investigation was performed to evaluate the pilots for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

Methods

The Federal Aviation Administration (FAA) medical case review and the 802A pilot's autopsy and FAA Forensic Sciences Laboratory toxicology reports¹ were reviewed. Other relevant medical and regulatory issues were reviewed.

D. FACTUAL INFORMATION

1.0 802A Pilot

1.1 FAA Medical Case Review

According to the FAA medical case review, at the time of the accident, the 54-year-old male 802A pilot held a second class medical certificate without limitation. At the time of his most recent FAA medical certification examination on 1/10/22, he reported 15,786 flying hours and was 73 inches tall and weighed 251 pounds. He reported taking no medications or having any medical conditions.

¹ The FAA Forensic Sciences Laboratory has the capability to test for more than 1,000 substances including toxins, common prescription and over-the-counter medications, and illicit drugs. <https://jag.cami.jccbi.gov/toxicology/>

1.2 Autopsy

According to the autopsy report from the Arkansas State Crime Laboratory, Little Rock, Arkansas, the cause of death of the 802A pilot was multiple blunt force injuries and the manner of death was accident. No significant natural disease was identified by the medical examiner.

1.3 Toxicology

Toxicology testing performed by the FAA Forensic Sciences Laboratory detected ethanol in the 802A pilot's heart blood at 0.019 grams per deciliter (gm/dL), but not in his vitreous fluid and urine. Putrefaction was noted in tissue samples. No other tested for drugs were detected in his urine.

Ethanol is a social drug commonly consumed by drinking beer, wine, or liquor. It acts as a central nervous system depressant; it impairs judgment, psychomotor functioning, and vigilance. Ethanol is water soluble, and after absorption it quickly and uniformly distributes throughout the body's tissues and fluids. The distribution pattern parallels water content and blood supply of the tissue. A small amount of ethanol can be produced after death by microbial activity. Vitreous fluid, and to a lesser extent urine, does not suffer from postmortem production to any significant extent.² Extensive trauma increases the spread of bacteria and raises the risk of ethanol production after death.³

2.0 802 Pilot

2.1 FAA Medical Case Review

According to the FAA medical case review, at the time of the accident, the 45-year-old male 802 pilot held a second class medical certificate without limitation. At the time of his most recent FAA medical certification examination on 2/28/22, he reported 17,606 flying hours and was 72 inches tall and weighed 235 pounds. He reported no medical concerns, and no significant conditions were identified on physical examination.

2.2 Toxicology

No specimens were obtained from the 802 pilot for FAA Forensic Sciences Laboratory toxicology testing.

² Federal Aviation Administration. Updated 1/16/19. Forensic Toxicology Drug Information. Ethanol. <http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=60>

³ Kugelberg, FC and AW Jones. 2007. Interpreting results of ethanol analysis in postmortem specimens: a review of the literature. *Forensic Science International* 165(1):10-29.

E. SUMMARY OF MEDICAL FACTS

The 54-year-old male 802A pilot held a second class medical certificate without limitation. At his most recent FAA medical certification examination on 1/10/22, he reported taking no medications or having any medical conditions. According to the autopsy report, the cause of death of the 802A pilot was multiple blunt force injuries and the manner of death was accident; no significant natural disease was identified. Toxicology testing detected ethanol in the 802A pilot's heart blood at 0.019 grams per deciliter (gm/dL), but ethanol was not detected in his vitreous fluid and urine.

The 45-year-old male 802 pilot held a second class medical certificate without limitation. At the time of his most recent FAA medical certification examination on 2/28/22, he reported no medical concerns, and no significant conditions were identified on physical examination. No specimens were obtained from the 802 pilot for toxicology testing.

Submitted by:

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