

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR23FA287

MEDICAL

Specialist's Factual Report

July 15, 2025

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A ACCIDENT

Location: Upland, California
Date: July 30, 2023

B MEDICAL SPECIALIST

Specialist JE Tuttle MD MHA FACS
National Transportation Safety Board
Washington, DC

C DETAILS OF THE INVESTIGATION

1.0 Purpose

This investigation was performed to evaluate the pilot for potentially impairing medical conditions and substances.

2.0 Methods

The Federal Aviation Administration (FAA) medical case review and the pilot's autopsy, death investigation report, and toxicology reports were reviewed. Selected relevant regulation, medical literature, and investigator reports were also reviewed.

D FACTUAL INFORMATION

1.1 FAA Medical Case Review

According to the FAA Medical Case Review, the 64-year-old male pilot's last aviation medical examination was September 27, 2007. At that time, he reported 175 total civilian flight hours. He reported no medication use and no active medical conditions. He was issued a third-class medical certificate without limitation. That medical certificate subsequently expired. He did not hold a current medical certificate at the time of the accident.

1.2 Autopsy

The San Bernadino County Sheriff's Department, Coroner Division performed the pilot's autopsy. According to the pilot's autopsy report, his cause of death was multiple blunt force injuries, and his manner of death was accident. The autopsy report described his major coronary arteries as calcified without atherosclerosis. The left ventricle and interventricular septum of his heart were thickened. The remainder

of the autopsy, including visual examination of the heart, did not identify other significant natural disease.

1.3 Toxicology

1.3.1 NMS Labs Toxicology

At the request of the Sheriff's Department, NMS Labs performed toxicological testing of postmortem specimens from the pilot. No tested-for substances were detected.¹

1.3.2 FAA Forensic Sciences Laboratory Toxicology

The FAA Forensic Sciences Laboratory also performed toxicological testing of postmortem specimens from the pilot.² Ethanol was detected in brain tissue at 0.012 g/hg and was not detected in liver tissue.³ Losartan was detected in liver and muscle tissue.

1.4 Descriptions of Detected Substances

Ethanol is a type of alcohol. It is the intoxicating alcohol in beer, wine, and liquor, and, if consumed, can impair judgment, psychomotor performance, cognition, and vigilance.⁴ FAA regulation imposes strict limits on flying after consuming ethanol, including prohibiting pilots from flying with a blood ethanol level of 0.04 g/dL or greater.⁵ Alcohol consumption is not the only possible source of ethanol in postmortem specimens. Ethanol can sometimes be produced by microbes in a person's body after death.

Losartan is a prescription medication commonly used to treat high blood pressure. It is generally not considered impairing.

¹ The NMS Labs toxicology report listed tested-for substances in liver tissue as: amphetamines, barbiturates, benzodiazepines, buprenorphine/metabolite, cannabinoids, cocaine/metabolites, fentanyl/acetyl fentanyl, methadone/metabolite, methamphetamine/MDMA, opiates, oxycodone/oxymorphone, phencyclidine, acetone, ethanol, isopropanol, and methanol. Additionally, chest cavity blood was screened for carbon monoxide exposure.

² The FAA Forensic Sciences laboratory has the capability to test for around a thousand substances including toxins, prescription and over-the-counter medications, and illicit drugs.

³ In tissue, concentrations in g/hg are approximately equivalent to concentrations in g/dL.

⁴ Cook CCH. Alcohol and aviation. *Addiction*. 1997;92(5):539-555.

⁵ 14 Code of Federal Regulations §91.17.

E SUMMARY OF MEDICAL FACTS

The 64-year-old male pilot's last aviation medical examination was September 27, 2007. At that time, he reported medication use and no active medical conditions. He was issued a third-class medical certificate without limitation, that certificate subsequently expired. He did not hold a current medical certificate at the time of the accident.

According to the pilot's autopsy report, his cause of death was multiple blunt force injuries, and his manner of death was accident. The autopsy report described his major coronary arteries as calcified without atherosclerosis. The left ventricle and interventricular septum of his heart were thickened.

The pilot's postmortem toxicological testing by NMS Labs did not detect any tested-for substances. The pilot's postmortem toxicological testing by the FAA Forensic Sciences Laboratory detected ethanol in brain tissue at 0.012 g/hg and did not detect ethanol in liver tissue. FAA testing also detected losartan in liver and muscle tissue.

Submitted by:

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Medical Officer