



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

MEDICAL FACTUAL REPORT

August 31, 2018

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Medical Officer

A. ACCIDENT: CEN17FA132 - Opal, South Dakota

On March 16, 2017, about 1640 mountain daylight time, a Cessna 210B airplane, N9581X, impacted terrain near Vig Limousin Ranch Airstrip (1SD4), Opal, South Dakota. The pilot was fatally injured, and the airplane was destroyed. The airplane was registered to and operated by Groves Vig & Vig LLP under the provisions of 14 *Code of Federal Regulations* Part 91 as a personal flight. Day visual meteorological conditions prevailed for the flight, which departed from Rapid City Regional Airport (RAP), Rapid City, South Dakota without a flight plan at 1606.

B. GROUP IDENTIFICATION:

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

C. DETAILS OF INVESTIGATION

Purpose

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

Methods

The FAA medical case review, pilot's FAA medical certification file, FAA Bioaeronautical Sciences Research Laboratory toxicology report, and autopsy report were reviewed.

FAA Medical Case Review and FAA medical certification file

According to the FAA records, at the time of his most recent FAA medical certification exam, dated May 20, 2015, the 67-year-old male pilot was 68 inches tall and weighed 174 pounds; and reported he had accrued 3,300 total flight hours. The pilot reported he had no recent health care visits, no known significant medical conditions, used no medications, and the physical examination did not identify any significant medical issues. The pilot was issued a second class medical certificate with a requirement to wear corrective lenses.

Autopsy

The Clinical Laboratory of the Black Hills autopsy documented the cause of death was blunt trauma injuries. The heart weighed 410 grams, the average for a man his weight is 349 grams

(range 265-461 grams).¹ The right coronary artery showed up to 80 percent narrowing and the left anterior descending and left circumflex coronary arteries each show 40 to 50 percent narrowing. The heart muscle had a 2 x 1 x 1 cm area of fibrosis of the posterior left ventricle, "grossly compatible with a remote myocardial infarct". Further, microscopic examination of the heart muscle confirmed fibrosis (scar tissue). The heart muscle changes were consistent with an old ischemic event causing muscle damage; however, no acute changes were identified.

Toxicology

FAA Bioaeronautical Sciences Research Laboratory toxicology testing did not detect ethanol, carbon monoxide or tested-for-drugs.²

D. SUMMARY OF MEDICAL FINDINGS

The 67-year-old male pilot was issued a second class medical certificate on May 20, 2015. On that examination he denied any medical concerns or the use of medications. Further, the pilot's family knew of no medical concerns. The Clinical Laboratory of the Black Hills autopsy documented the cause of death was blunt trauma injuries. The right coronary artery showed up to 80 percent narrowing and the left anterior descending and left circumflex coronary arteries each show 40 to 50 percent narrowing. The heart muscle had a 2 x 1 x 1 cm area of fibrosis of the posterior left ventricle consistent with damage from an old ischemic event. FAA Bioaeronautical Sciences Research Laboratory toxicology testing was negative for ethanol, carbon monoxide and tested-for-drugs.

¹ Kitzman DW, Scholz DG, Hagen PT, Ilstrup DM, Edwards WD. Age-related changes in normal human hearts during the first 10 decades of life. Part II (Maturity): A quantitative anatomic study of 765 specimens from subjects 20 to 99 years old. Mayo Clinic Proc., 1988. 63(2): p. 137-46.

² The FAA Bioaeronautical Sciences Research laboratory tests for more than 1300 substances including toxins, common prescription and over-the-counter medications as well as illicit drugs. See: <http://jag.cami.jccbi.gov/toxicology/default.asp?offset=0> for a complete listing.