

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



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MEDICAL

Specialist's Factual Report

September 7, 2023

TABLE OF CONTENTS

A. INCIDENT	3
B. MEDICAL SPECIALIST	3
C. DETAILS OF THE INVESTIGATION	3
1.0 PURPOSE	3
2.0 METHODS.....	3
D. FACTUAL INFORMATION.....	3
1.0 CONTROLLER.....	3
1.1 FAA Medical File	3
1.2 Additional CPAP Record.....	5
1.3 DOT Urine Drug Test.....	5
2.0 PILOTS.....	5
E. SUMMARY OF MEDICAL FACTS.....	6

A. INCIDENT

Location: Austin, Texas
Date: February 4, 2023
Time: About 6:40 AM local time

B. MEDICAL SPECIALIST

Specialist Turan Kayagil, MD, FACEP
National Transportation Safety Board
Washington, DC

C. DETAILS OF THE INVESTIGATION

1.0 Purpose

This investigation was performed to evaluate the involved air traffic control specialist (controller) and the four pilots of the two involved airplanes for potentially impairing medical conditions and the presence of potentially impairing substances.

2.0 Methods

The controller's Federal Aviation Administration (FAA) medical file was reviewed, as were records related to his use of a continuous positive airway pressure (CPAP) device for treatment of obstructive sleep apnea (OSA). The controller underwent United States Department of Transportation (DOT) urine drug testing one day after the event; records of this testing were reviewed. The FAA medical certification files of the four involved pilots (Southwest captain, Southwest first officer, FedEx captain, and FedEx first officer) were reviewed. None of these pilots underwent post-incident drug or alcohol testing. Selected National Transportation Safety Board (NTSB) investigator reports and relevant regulation and medical literature were also reviewed.

D. FACTUAL INFORMATION

1.0 Controller

1.1 FAA Medical File

According to the 43-year-old male controller's FAA medical file, at a September 2021 aviation medical examination he reported that he suspected that he had OSA and had been scheduled for a sleep study. The aviation medical examiner

(AME) noted that the controller was moderately obese and had borderline elevated blood pressure but appeared to be overall in good health.

The controller underwent a home sleep study in November 2021, the report of which was contained in his FAA medical file. The sleep medicine physician who interpreted the study documented that findings were consistent with mild obstructive sleep apnea. Based on this sleep study, the FAA temporarily withdrew the controller's medical clearance in December 2021. The controller began treatment with CPAP. After reviewing records related to his treatment, the FAA reinstated his medical clearance in March 2022.

The controller's subsequent aviation medical examination was September 7, 2022. This was his most recent aviation medical examination as of the incident date. At the time of this examination, his blood pressure was normal and his weight was less than had been documented at the time of his home sleep study. He reported a history of mild seasonal allergies; the AME commented that these were managed with over-the-counter non-sedating medications as needed. The controller did not report any other medication use or active medical conditions, and the AME did not identify any significant issues. The AME issued the controller interim Air Traffic Control Specialist medical clearance without limitation, pending a final determination of clearance by the FAA.¹

The controller subsequently provided the FAA with a CPAP usage report covering 90 days between September and December 2022, along with a December 2022 letter from a sleep medicine provider. The provider noted that the usage report showed excellent CPAP adherence, with use on 100% of days for an average of 6 hours 9 minutes per day.² The provider also noted excellent control of OSA as evidenced by an average apnea-hypopnea index (AHI) of 1.4.³ The provider documented that the controller did not report feeling excessively sleepy, had a normal Epworth Sleepiness Scale score of 0, and had an excellent prognosis with continued therapy.⁴

¹ Such interim clearance is standard procedure when an AME issues a clearance under the FAA Air Traffic Control Specialist Health Program, which applies to applicants seeking medical clearance to perform air traffic control duties as an FAA employee. For additional information, see [FAA Order 3930.3C](#) and [FAA Form 3900-7](#).

² Commonly, adherence to CPAP treatment is defined as CPAP use on at least 70% of days for at least 4 hours per day. The FAA generally considers the target goal for effective CPAP treatment to be use on at least 75% of days, for an average (on days used) of at least 6 hours per day.

³ In OSA, a person's upper airway soft tissues collapse during sleep, causing the person to have repeated episodes during which breathing temporarily stops (apnea) and/or becomes ineffective (hypopnea). Generally, the severity of OSA is classified by the AHI, which is the number of apnea and hypopnea episodes that occur per hour of sleep. An AHI of less than 5 is normal. Mild OSA corresponds to an AHI of 5 to less than 15, moderate OSA corresponds to an AHI of 15 to 30, and severe OSA corresponds to an AHI of more than 30.

⁴ The Epworth Sleepiness Scale is a questionnaire in which patients subjectively rate their likelihood to doze off or fall asleep on a scale of 0 (would never doze) to 3 (high chance of dozing) in each of eight situations (sitting and

On January 4, 2023, after reviewing the documentation that the controller submitted related to his OSA, the FAA issued the controller medical clearance with Special Consideration for OSA treated with CPAP, valid through September 2023, without limitation.⁵

1.2 Additional CPAP Record

According to a 30-day record of the controller's CPAP use between the afternoon of January 6, 2023, and the morning of February 5, 2023, he used his CPAP machine on 100% of days during this period. His average daily CPAP use during this period was 6 hours 51 minutes. His AHI for this period was 1.1.

The controller's most recent CPAP use prior to the morning work shift during which the incident occurred was earlier during that same morning, February 4, 2023, for approximately 3.5 hours. His most recent CPAP use prior to that was for approximately 8.5 hours during the preceding morning of February 3, 2023. In the week preceding/including the incident date, the controller used CPAP on all 7 days for an average of approximately 7 hours per day, spread over 8 occasions.⁶

1.3 DOT Urine Drug Test

The controller underwent DOT urine drug testing the day following the incident. According to records of this testing, the urine specimen was collected at 3:40 PM on February 5, 2023. No tested-for substances were detected.⁷ The controller did not undergo post-incident alcohol testing.

2.0 Pilots

According to the Southwest captain's FAA medical certification file, his most recent aviation medical examination before the incident was on August 9, 2022. At that time, he reported 22,910 total civilian flight hours. No significant issues were identified, and he was issued a first-class medical certificate limited by a requirement to possess glasses for near/intermediate vision. His next aviation medical examination

reading, watching television, sitting inactive in a public place, as a passenger in a car for an hour without a break, lying down to rest in the afternoon, sitting and talking to someone, sitting quietly after a lunch without alcohol, in a car stopped for a few minutes in traffic). The total score (0-24) is intended to reflect daytime sleepiness. A score of 10 or less is typically considered normal.

⁵ Special Consideration is a waiver of medical standards granted on a basis of case-by-case review to controllers who would otherwise be medically disqualified for safety-related air traffic control duties.

⁶ One occasion where the CPAP machine was used very briefly is not included.

⁷ Tested-for substances on DOT urine drug testing are marijuana metabolites, cocaine metabolites, amphetamines, opioids, and phencyclidine (PCP), in accordance with [49 Code of Federal Regulations § 40.85](#), as detailed at [49 Code of Federal Regulations § 40.87](#).

(after the incident date) was on February 14, 2023, and did not identify any significant issues; he was issued a first-class medical certificate limited by a requirement to use corrective lens(es) to meet vision standards at all required distances.

According to the Southwest first officer's FAA medical certification file, his most recent aviation medical examination before the incident was on August 1, 2022. At that time, he reported 4,358 total civilian flight hours. No significant issues were identified, and he was issued a first-class medical certificate without limitation. His next aviation medical examination (after the incident date) was on May 30, 2023, and did not identify any significant issues; he was issued a first-class medical certificate without limitation.

According to the FedEx captain's FAA medical certification file, his most recent aviation medical examination before the incident was on August 19, 2022. At that time, he reported 7,000 total civilian flight hours. No significant issues were identified, and he was issued a first-class medical certificate without limitation. His next aviation medical examination (after the incident date) was on February 10, 2023, and did not identify any significant issues; he was issued a first-class medical certificate without limitation.

According to the FedEx first officer's FAA medical certification file, his most recent aviation medical examination before the incident was on November 10, 2022. At that time, he reported 1,295 total civilian flight hours. No significant issues were identified, and he was issued a first-class medical certificate limited by a requirement to wear corrective lenses. His next aviation medical examination (after the incident date) was on May 15, 2023, and did not identify any significant issues; he was issued a first-class medical certificate limited by a requirement to use corrective lens(es) to meet vision standards at all required distances.

E. SUMMARY OF MEDICAL FACTS

The 43-year-old male controller had a history of mild obstructive sleep apnea (OSA) diagnosed on a home sleep study in November 2021. His OSA was treated with a continuous positive airway pressure (CPAP) device. His last aviation medical examination before the incident was on September 7, 2022. At that time, he reported a history of mild seasonal allergies managed with over-the-counter non-sedating medications as needed. The AME issued the controller interim Air Traffic Control Specialist medical clearance without limitation. Following this examination, the controller provided the FAA with a CPAP usage report covering 90 days between September and December 2022, along with a December 2022 letter from a sleep medicine provider. The provider noted that the usage report showed excellent CPAP adherence, with use on 100% of days for an average of 6 hours 9 minutes per day. The provider also noted excellent control of OSA as evidenced by an average apnea-hypopnea index (AHI) of 1.4. The provider documented that the controller did not

report feeling excessively sleepy, had a normal Epworth Sleepiness Scale score of 0, and had an excellent prognosis with continued therapy. On January 4, 2023, the FAA issued the controller medical clearance with Special Consideration for OSA treated with CPAP, valid through September 2023, without limitation.

A 30-day record of the controller's CPAP use between the afternoon of January 6, 2023, and the morning of February 5, 2023, showed that he used his CPAP machine on 100% of days during this period. His average daily CPAP use during this period was 6 hours 51 minutes. His AHI for this period was 1.1. His most recent CPAP use prior to the morning work shift during which the incident occurred was earlier during that same morning, February 4, 2023, for approximately 3.5 hours. In the week preceding/including the incident date, he used CPAP on all 7 days for an average of approximately 7 hours per day, spread over 8 occasions.

The controller did not undergo post-incident alcohol testing. On the afternoon of the day after the incident, a specimen was collected from the controller for DOT urine drug testing. This testing did not detect any tested-for substances.

The four involved pilots all held first-class medical certificates. None of the pilots underwent post-incident drug or alcohol testing.

Submitted by:

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