Federal Aviation Administration
Report of Investigation
To the Secretary of Transportation

In response to:

U.S. Office of Special Counsel (OSC)

File DI-18-0381

Director, Office of Audit and Evaluation (AAE-1)
Federal Aviation Administration
Washington, D.C.

February 28, 2018

Executive Summary

Secretary of Transportation, Elaine Chao, directed the Federal Aviation Administration (FAA), Office of Audit and Evaluation (AAE) to investigate a U.S. Office of Special Counsel (OSC) whistleblower disclosure (OSC File No. DI-18-0381) referred on December 13, 2017. AAE is an independent FAA organization with statutory authority to conduct impartial investigations of aviation safety-related whistleblower disclosures.

This whistleblower disclosure alleged "gross mismanagement and danger to public safety" at Salt Lake City Terminal Radar Approach Control (TRACON) due to understaffing and management refusal to use overtime to cover for controller staffing shortages. Ben McCall, Certified Professional Controller (CPC), at Salt Lake City TRACON (S56), Salt Lake City, UT, submitted this disclosure. Mr. McCall consented to the release of his identity in this report.

The whistleblower specifically alleged that: "(1) S56 TRACON is routinely short-staffed, sometimes across multiple shifts; (2) the S56 Operations Manager has repeatedly refused to utilize approved overtime to maintain staff at requisite levels; and (3) understaffing has contributed to serious safety issues, including a loss of separation that occurred on April 28, 2017." [Actual date of incident was April 27, 2017]

The investigation did not substantiate gross mismanagement or danger to public safety. There was no evidence that staff shortages contributed to any safety event, including the safety event identified by Mr. McCall. We partially substantiated the allegation that S56 is under-staffed, as defined by current controller staffing models, but it is not significantly under-staffed in comparison to the nationwide facility average. We did not substantiate the allegation that the S56 Operations Manager refuses to use approved overtime when required.

We found at the time of Mr. McCall's disclosure, that facility staffing was at 82.2%[1], while the national average was 81.8 %. As of January 2018, facility staffing is 75.6%. The facility consistently staffs positions using trainees to augment staffing by CPC, which is an acceptable practice in many facilities, when trainees are certified for the sectors to which they are assigned.

Controller trainees, by definition, are not certified for all facility assignments, but they may be certified on one or more air traffic positions. Prior to the utilization of overtime pay, S56 management assigns trainees to positions on which they certified, when available. The on-duty CPCs are assigned to positions that trainees are not certified for, and this type of staffing methodology is an approved practice. The facility operations manager explained that this methodology is safe, allows the facility to more effectively manage overtime pay, provides controller trainees the opportunity to maintain currency, and to gain needed experience. Overtime assignments are made when there is a shortage of qualified personnel, when severe weather is predicted, or if frontline managers justify the need for overtime. As of December 1, 2017, S56 had spent $47,262 on overtime for the year.

Currently, there are 12 controllers in training at S56, and full-certification requires an average of 1.6 years. By the end of FY 2018, staffing is projected to be above the national average, if all S56 trainees achieve full certification.

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[1] Source: Business Analytics and Support Group, AJT-23.

We did not substantiate the allegation that a refusal to utilize overtime duty pay contributed to any operational incidents, such as a loss of separation event that occurred on April 27, 2017. That investigation determined that a pilot reduced speed unexpectedly after explicit instructions from a trainee controller to maintain 210 knots. That speed reduction created a sudden loss of separation from an aircraft sequenced behind, but that incident was not caused by controller error.

S56 had 54 loss of separation events in 2017. By comparison, Seattle TRACON, also a level 10 in difficulty/complexity facility with nearly equivalent staffing as S56 (83.7% at the time of the disclosure), had nearly double the loss of separation events, and with an overtime pay expenditure double that of S56. In fact, a review of all level 10-12 (highest difficulty/complexity) TRACONs, S56 had the lowest number of loss of separation events in 2017.

Detailed Findings

Allegation 1: S56 TRACON is routinely short staffed, sometimes across multiple shifts.

Finding: Partially Substantiated

The FAA "staffs to traffic," matching the number of air traffic controllers at its facilities with traffic volume and workload, which is quantified in agency controller staffing models. We found that in 2017, at the time of Mr. McCall's disclosure, staffing at S56 was 82.2%, while the national average of certified professional controllers at all air traffic facilities was 81.8 %. As of January 2018, the facility's staffing is 75.6%. The facility consistently staffs positions using trainees to augment staffing by certified professional controllers (CPCs). These trainees, while not full CPCs, are certified on one or more air traffic positions. Rather than always calling in overtime, if an unexpected absence occurs, S56 management frequently uses trainees to cover busy "banks" or peak volume times, meal and other breaks for CPCs, and other training for CPCs by having these trainees work the position(s) which they are certified in, having the CPCs work the positions which the trainees are not certified in. According to the operations manager (OM), this allows the facility to save money on overtime use, and allows the trainee to maintain currency and familiarity and gain extra experience in the positions they are certified on. Overtime is only used if the periods cannot be covered through alternative means, if severe weather is forecast, if certified personnel cannot cover all sectors, or if a frontline manager (FLM) provides appropriate justification for overtime.

Currently, there are 12 personnel in training at S56, where it takes an average of 1.6 years to achieve full certification. By the end of FY 2018, staffing is forecast to be above the national average, if all S56 trainees complete the training as predicted.

Thus, this allegation was partially substantiated because S56 is staffed below the level defined by the current controller staffing model. However, it is staffed at a level consistent with the current national average, and there is no evidence that S56 staffing levels are related to any safety issues at that facility. The safety metrics indicate that S56 is performing at a high level.

Allegation 2: The S56 Operations Manager has repeatedly refused to utilize approved overtime to maintain S56 TRACON staff at requisite levels.

Findings: Not Substantiated

As of December 1, 2017, the facility spent $47,262 on overtime pay. The OM has approved the use of overtime when complete coverage cannot be maintained by personnel qualified for each position.

There is no requirement to use overtime to cover controller absences. The decision to use overtime is not always made on a "one-to-one basis," meaning that if a CPC is out sick for 8 hours, another employee is called for an overtime assignment for 8 hours, which is a common practice at some air traffic facilities. The S56 OM uses trainees, who are certified for one or more positions, to fill in during peak times, to cover breaks for CPCs, and to provide them necessary experience in positions they are already certified to work.

Allegation 3: Understaffing has contributed to serious safety issues, including a loss of separation that occurred on April 28, 2017 [Event occurred on April 27, 2017].

Findings: Not substantiated.

S56 had 54 loss of separation events in 2017. By comparison, Seattle TRACON, also a level 10 facility in terms of "difficulty/complexity" and with nearly equivalent staffing (83.7% at the time of the disclosure), had nearly double the loss of separation events, while utilizing double the overtime payroll. A review of all level 10-12 (highest difficulty/complexity) TRACON found that S56 had the lowest number of loss of separation events in 2017.

The safety event identified in the OSC disclosure occurred on April 27, 2017. A formal investigation determined that the pilot of a King Air turboprop was cleared by a controller in training (under Mr. McCall's supervision) to join the Runway 35 localizer and to maintain a speed of 210 knots. The pilot confirmed the clearance, but the aircraft deviated from the clearance, flew through the localizer by .8 miles, and unexpectedly slowed to less than 210 knots. This caused a loss of separation on final approach as Delta Airlines (DAL) Flight 233 was behind the King Air at a distance of 3 miles at 210 knots.

The trainer/trainee attempted to turn DAL 233, but initially used the wrong call sign, resulting in no readback from the Delta pilot. Mr. McCall then instructed DAL 233 to turn right heading 090 with a correct read back, but a brief loss of separation occurred. The closest proximity was 600 feet vertical and 2.76 miles lateral. Standard separation between aircraft at the TRACON is 1,000 feet vertical, or 3 miles lateral. The matter was classified as a pilot deviation due to the King Air pilot's failure to comply with air traffic instructions.

The Frontline Manager on duty (FLM A) saw the incident unfolding from the supervisor's desk and proceeded to intervene. By the time he arrived, Mr. McCall had already remedied the situation.

Mr. McCall asserted that if a "Final Monitor" position had been staffed that day, the loss of separation would not have occurred. FLM A stated that the event would have occurred regardless of the number of staff on duty that day because the pilot failed to comply with very clear and basic ATC instructions. The facility was running wide simultaneous arrivals at the time, and FLM A stated he thought it was prudent to have individuals working "hand-off" positions rather than "Final Monitor." S56 had three individuals working "hand-off" positions, one of which was in direct support of the sector Mr. McCall and the trainee were working, when the event occurred.

FLM A stated he believed that overtime should have been called in that afternoon due to low visibility and a lower than normal complement of CPCs on that shift. However, he also stated that he did not believe that the staffing situation that day caused the event identified by Mr. McCall. When FLM A arrived for his shift, he stated that he asked FLM B, who was working an earlier shift, whether overtime was authorized, and FLM B[2] told him it was not. FLM A confirmed that he never made a request for overtime to either the OM or the Air Traffic Manager. FLM A further stated that he has never requested overtime from the OM and had it denied. The OM stated he does not recall anyone asking him for overtime on that date. He provided a list of individuals on position at the time of the event. There were 11 individuals on shift, nine CPCs or trainees working, and two on break. He stated that 11 controllers on duty is a full staff complement for S56, and that while some of the on-duty controllers were trainees, they were certified for assignment to the positions they were working at the time.

Mr. McCall stated that he filed a safety disclosure because of the event. He maintained that had the "Final Monitor" position been staffed, the event might not have occurred. He testified that the Event Review Committee reviewed the event and recommended that the facility conduct a System Service Review (SSR). SSR is a formal review process in which controllers, management representatives, and quality assurance specialists review the radar records to determine whether factors not apparent in the initial review might have caused the event. The SSR was held in May 2017. The participants in this review were the OM, FLM A, the controller working hand off with Mr. McCall, the Quality Assurance Manager, and the facility union representative.

Our review of the SSR determined that it was a thorough review and that the panel determined all positions were properly staffed, the operational sector involved was also properly staffed, and that facility positions and sectors were combined in an appropriate manner. Additionally, the panel identified no potential systemic resource management issues.

In conclusion, our investigation found that there is no evidence to support the allegation that additional staffing would have prevented the loss of separation incident that occurred on April 27, 2017. The facility was properly staffed, the incident was quickly resolved by Mr. McCall, and FLM A was also in the process of responding, illustrating multiple levels of redundancy in place as required. Moreover, there is no evidence that the use of overtime was either requested of, or denied by, the OM on the date in question.

[2] FLM B retired from FAA in September 2017 and was not interviewed.

Investigation Methodology

The investigation was conducted under the authority of the FAA Office of Audit and Evaluation (AAE), pursuant to Title 49 U.S.C. §106(t) and FAA Order 1100.167B.

Investigative Team:

- Erika Vincent, Senior Technical Advisor, Office of Audit and Evaluation

The investigative team analyzed records and documents obtained from the whistleblower, as well as data from FAA's data analytics group concerning staffing and overtime usage for S56, radar replays and Mandatory Occurrence Reports (MORs) and SSRs. Interviews were conducted with the following individuals:

- [redacted], Air Traffic Manager
- [redacted], Quality Assurance Manager
- [redacted], Front Line Manager
- Ben McCall, Certified Professional Controller
- [redacted], Operations Manager
- [redacted], Management Representative, Event Review Committee