



# Memorandum

**U.S. Department of  
Transportation**

Office of the Secretary  
of Transportation

Office of Inspector General

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Subject: ACTION: OIG Investigation – Alleged Cover-up  
of Operational Errors at DFW TRACON

Date: February 14, 2005

From: Kenneth M. Mead  
Inspector General

Reply to  
Attn of:

To: The Secretary

Presented herein are the results of our investigation concerning alleged management cover-up of air traffic control operational errors and deviations at the Dallas/Fort Worth (DFW) Terminal Radar Approach Control (TRACON) facility. Operational errors, which occur when an air traffic controller allows aircraft to come too close together, can pose very serious safety risks and are critical indicators of the safety of the Nation's air traffic control system.

You requested that we investigate this matter pursuant to allegations raised by Anne Whiteman, presently a DFW Control Tower Supervisor, which were referred to you for investigation by the U.S. Office of Special Counsel (OSC) in the attached correspondence. Specifically, OSC referred Ms. Whiteman's allegations that FAA managers at the DFW TRACON routinely covered-up operational errors and deviations<sup>1</sup> by not properly investigating and reporting them in accordance with FAA policy. Ms. Whiteman cited two specific incidents in her complaint that she maintained were previously unreported operational errors.

In her filing with OSC, Ms. Whiteman asserted that because of her efforts to expose this improper practice, she has been subjected to reprisal by her superiors and harassment by her co-workers. Since filing her complaint with OSC, FAA has promoted Ms. Whiteman to the supervisory position of DFW Control Tower Supervisor. Notwithstanding, OSC, which has principal statutory responsibility for

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<sup>1</sup> An *operational deviation* occurs when an aircraft in airspace controlled by one air traffic controller encroaches upon, or flies into, airspace assigned to another controller without proper coordination. For purposes of simplicity in reporting, hereinafter, the term "operational errors" includes operational deviations.

investigating whistleblower reprisal claims, has opened an investigation into Ms. Whiteman's complaint of unlawful reprisal.

Due to the apparent safety implications, OSC referred Ms. Whiteman's allegations of cover-up to you for investigation and response to OSC. Under its statutory procedure, OSC, while directly investigating alleged whistleblower reprisal, refers complainant allegations of a public health or safety nature to Federal agencies for investigation and appropriate corrective action.

By memorandum, you delegated to our office responsibility for investigating the allegations contained in the referral. Procedurally, if you accept the results of our investigation, we recommend that you transmit this report to the Special Counsel.

### **Executive Summary**

In brief, it took whistleblowing by Ms. Whiteman and our probe to expose a 7-year management practice at this TRACON of improperly investigating—and, therefore, *underreporting*—operational errors. More specifically, beginning in about 1996, and contrary to FAA-wide policy, the then-TRACON manager (now retired) implemented his own policy that stifled appropriate use of simple and reliable “playback tools”<sup>2</sup> to investigate suspected operational errors, instead relying on the word of controllers as to whether they committed errors. The fact that this improper practice went undetected for many years raises questions as to the efficacy of management oversight performed by FAA's Southwest Region, as well as headquarters elements.

The underreporting of operational errors caused by this local policy is significantly evident in the following: Prior to our investigation, in the first 6 months of Calendar Year 2004, the TRACON reported just 2 operational errors. After instituting appropriate use of playback tools in June 2004 (as a result of our investigation), the TRACON reported 36 confirmed operational errors during the next 6 months ending December 2004. *While none of these 36 operational errors were classified as high severity, 28 were rated moderate severity*<sup>3</sup>. (For example, FAA classified as moderate severity an operational error occurring at a TRACON when a controller directed a passenger jet and a business jet into converging courses—about 7 seconds from a midair collision when the pilots' evasive actions averted an accident). Our investigation also confirmed as operational errors both of

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<sup>2</sup> “Playback tools” are software programs and other electronic instruments for recreating air traffic incidents by replaying recorded radar and voice data.

<sup>3</sup> Under FAA policy, operational errors are classified as low, moderate, or high severity per an index that assigns each error a point total based on the proximity of the aircraft and their respective direction of flight, e.g., converging.

the incidents  
Ms. Whiteman identified in her OSC filing—one classified as moderate severity,  
the other as low severity.

Our findings at the DFW TRACON validate Ms. Whiteman's concerns about cover-up. Whether operational errors are systematically ignored as a result of management policy—as occurred in this case, or covered-up on an incidental basis, such conditions represent a safety deficiency. Such cover-ups also undermine public confidence in the integrity of the nation's air traffic control system.

Due to the serious safety implications, operational errors have been the subject of increasing emphasis by our office. In a December 2000 audit, we found that operational errors may be underreported because of FAA's reliance on controllers to self-report errors, and for the past five years, we have identified reporting and reducing operational errors as a top annual management challenge for the Department<sup>4</sup>.

During our investigation of Ms. Whiteman's allegations concerning the DFW TRACON, we completed a nationwide audit of controls over the reporting of operational errors. Significantly, our recent audit<sup>5</sup> found that FAA still relies on controllers to self-report suspected and actual operational errors. Further, we found that under current FAA policy, playback tools may only be used to investigate suspected operational errors and cannot be used to randomly audit radar and voice data. As addressed in greater detail below, our audit report included recommendations for FAA to enhance—system-wide—its ability to identify and report operational errors, to include random audits of playback data. FAA concurred with our recommendations, but needs to articulate how it plans to implement them and identify timeframes for completion. You have instructed FAA to provide, by March 15, 2005, a detailed implementation plan for carrying out our audit recommendations.

We have addressed our DFW TRACON investigative results with senior levels of FAA and believe corrective actions undertaken by the agency (detailed below) substantially address Ms. Whiteman's concerns and represent considerable progress toward preventing future unreported operational errors at that facility. Also, from our investigation, we recommend that FAA, in its national policy directive, clarify that review of playback data is a required step in investigating suspected operational errors. As with FAA's follow-through on our recent audit findings and

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<sup>4</sup> Our *Top Management Challenges* Report, dated November 15, 2004, is provided in its entirety at: [http://www.oig.dot.gov/item\\_details.php?item=1434](http://www.oig.dot.gov/item_details.php?item=1434)

<sup>5</sup> Our Report, *Audit of Controls Over the Reporting of Operational Errors*, dated September 20, 2004, is provided in its entirety at: [http://www.oig.dot.gov/item\\_details.php?item=1395](http://www.oig.dot.gov/item_details.php?item=1395)

recommendations, we will also review the extent to which FAA carries out its corrective actions at DFW.

### ***Recent OIG Audit***

Our audit of controls over the reporting of operational errors found that FAA still relies on controllers to self-report suspected and actual operational errors. In fact, only 20 of FAA's 524 air traffic control facilities have an automated system to identify when operational errors occur. These 20 facilities with automatic detection systems are en route centers—which control only about one-fourth of air traffic operations<sup>6</sup>—yet in FY 2003, 684 operational errors were reported at these 20 centers compared to 501 errors reported at all 504 TRACON and tower facilities. Given that en route centers control far less traffic than TRACONs and towers, it does not seem logical that en route facilities would have nearly 40 percent more operational errors.

Further, our review of FAA data showed that 22 percent of the operational errors reported by TRACONs and towers in FY 2003 were initially identified as a result of reports from pilots, neighboring air traffic control facilities, and other outside sources (e.g., airport and airline personnel, hotline complaints). In contrast, only 4 percent of operational errors reported by en route centers were identified by outside sources. These statistics, along with the results of our investigation at the DFW TRACON, show that FAA cannot rely on a system that is based on facility personnel self-reporting operational errors. FAA needs a procedure that will provide greater assurance that substantially all operational errors are being reported.

Our audit found that while facilities such as TRACONs have playback tools readily available, current FAA policy authorizes use of playback tools only to investigate *suspected* operational errors, prohibiting their use without a triggering event or indication that an error has already occurred (i.e., a suspected occurrence). Our audit report included several recommendations for FAA to strengthen—system-wide—the identification and reporting of operational errors, as well as agency oversight of those processes:

1. To promote the identification and reporting of all operational errors, FAA needs to rescind its policy provision limiting use of playback tools to investigation of suspected operational errors, and instead allow playback tools in conducting random audits of radar and voice data.

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<sup>6</sup> En route centers control aircraft flying at higher altitudes and outside the immediate area of airports, where air traffic is concentrated. TRACONs and towers control approximately three-fourths of all air traffic operations.

2. Establish internal audit procedures that require facility quality assurance staff to periodically review voice and radar data to assess whether operational errors are being fully reported.
3. Require FAA's Air Traffic Office of Safety Evaluations (with staff assigned regionally and at headquarters) to review and test audit records at TRACONs and towers to ensure facility quality assurance personnel are in fact conducting periodic audits of playback data.

FAA concurred with our audit recommendations and commissioned a workgroup within its Air Traffic Organization to develop specific means to implement the recommendations and ensure accurate and full reporting of operational errors system-wide. You have instructed FAA to provide, by March 15, 2005, a detailed implementation plan for carrying out our audit recommendations, including timeframes for completion. Upon issuance, we will review FAA's plan for sufficiency and provide a follow-up assessment of the implementation of FAA's stated actions.

#### ***Corrective Actions Based on DFW TRACON Investigation***

Officials in FAA's Air Traffic Office of Safety Evaluations (which participated in our investigation) considered the improper investigation and underreporting of operational errors at the DFW TRACON to be very serious, warranting prompt corrective action. Accordingly, following consultations with our staff, they initiated a number of remedial actions with Air Traffic management as findings developed during the course of the investigation.

Foremost, the current DFW manager, who had been at the facility less than a year, was unfamiliar with how operational errors were being investigated. Following our interview of her, during which she learned of the TRACON's improper method of investigating operational errors, she issued a policy memorandum to her staff, dated June 25, 2004, directing immediate use of playback tools to investigate all suspected operational errors. The result of this change is reflected in the following substantial increase in reported operational errors: *Prior to our investigation, only 2 operational errors were declared at the TRACON between January 1 and June 24, 2004. After instituting appropriate use of playback tools on June 25, 2004, through December 2004, the TRACON reported 36 confirmed operational errors.*

Further, the Air Traffic Office of Safety Evaluations placed the DFW facility in a "no-notice review" status for a 2-year period, which means evaluations staff can show up at the facility unannounced to assess whether operational errors are being accurately reported. Other corrective actions taken include (a) reassignment of the

facility quality assurance manager (and selection of a new quality assurance manager); (b) the facility manager, along with operations managers and supervisors, were placed on performance improvement plans for not abiding by FAA national policy for investigating/reporting operational errors; (c) individual controllers were given remedial training for operational errors committed, and placed on performance improvement plans for failing to self-report errors; and (d) revision of the TRACON's quality assurance order to remove the proscription against use of playback tools. In addition, one controller was decertified for having committed a previously unreported operational error.

Additionally, FAA's Air Traffic Office of Safety Evaluations reviewed the practices of other TRACONs and concluded that the DFW TRACON was unique in terms of how it investigated operational errors. However, to ensure that the conditions at DFW do not exist elsewhere, FAA has undertaken a complete review of all quality assurance elements nationwide.

An additional finding of our investigation, meriting remedial action by FAA, concerns FAA's national policy directive on operational errors, which prescribes investigation and reporting procedures. While FAA officials consistently told us that the policy requires review of playback data to investigate suspected operational errors, the language of this directive does not explicitly say so. In our view, the policy directive is ambiguous as to whether investigation of suspected errors actually requires use of playback tools. To avoid localized misinterpretations, we recommend that the directive (an FAA Order) be revised to clarify, explicitly, that review of playback data is a required step in investigating all suspected operational errors and in conducting audits.

### **OSC Referral**

In her March 4, 2004, filing with OSC<sup>7</sup>, Ms. Whiteman asserted that for at least two years, the management of the DFW TRACON routinely covered-up operational errors and deviations by failing to investigate and report suspected occurrences, as required by FAA policy. Ms. Whiteman asserted that operational errors involving aircraft flying dangerously close to one-another occurred, on average, at least once per month at the TRACON, and many of these incidents were never declared operational errors. Ms. Whiteman included in her filing evidence of two specific incidents she maintained were non-investigated, and thus unreported, operational errors—one in March 2002, the other in February 2004. In both incidents, required minimum separation between aircraft was allegedly lost because controllers failed to properly coordinate their control actions.

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<sup>7</sup> By statute, OSC has authority to refer to Federal agencies, for investigation, disclosures it receives from Federal employees that implicate danger to public health or safety.

She largely attributed the alleged cover-up of operational errors to an incentive program, instituted in 2002 by facility management, designed to reward controllers with time-off if their facility remained error-free for an entire quarter.

Ms. Whiteman related that FAA headquarters had investigated prior complaints she made in 2002, via the FAA Administrator and OIG hotlines, that the TRACON failed to report several operational errors. She noted that she was told FAA headquarters did not substantiate her allegations and, as such, no action was taken.

In her filing with OSC, Ms. Whiteman asserted that because of her efforts to expose this improper practice, she has been subjected to reprisal by her superiors and harassment by her co-workers. Since filing her complaint with OSC, in April 2004, FAA promoted Ms. Whiteman to the supervisory position of DFW Control Tower Supervisor. Notwithstanding, OSC, which has principal statutory responsibility for investigating whistleblower reprisal claims, has opened an investigation into Ms. Whiteman's complaint of unlawful reprisal.

### **FAA Policy on Operational Errors**

At TRACONs and towers, FAA relies on supervisors/managers and controllers to self-identify suspected operational errors because, unlike enroute control centers, there is no automated system to identify when operational errors occur. FAA policy concerning the investigation and reporting of operational errors/deviations is contained in FAA's Order on Air Traffic Quality Assurance (FAA Order 7210.56C).

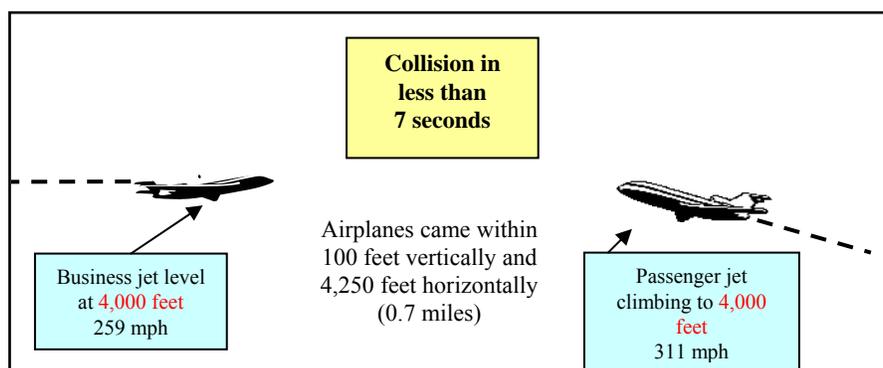
This Order prescribes that FAA employees aware of a potential operational error are to report the suspected operational error to a supervisor or controller-in-charge (CIC) for investigation. The Order authorizes use of "playback tools," designed for the playback of recorded radar and voice data, that are "available to assist in investigations" of suspected operational errors by recreating events. (A technical description of playback tools is provided in **Appendix A**.) While FAA officials consistently told us that this Order requires review of playback data to investigate suspected operational errors, as addressed below, the language of the Order does not explicitly say so. In our view, the Order is ambiguous as to whether investigation of suspected errors actually requires use of playback tools.

The Order specifies that an operational error be formally declared once investigation confirms that it in fact occurred. The Order prescribes a series of corrective actions to be taken by management, to include removing the responsible

controller from radar duty, directing remedial training be accomplished, and prompt notification to Air Traffic headquarters.

Further, under FAA policy, operational errors are classified as low, moderate, or high severity per an index that assigns each error a point total based on the proximity of the aircraft and their respective direction of flight, e.g., converging. An example from our recent audit is depicted in Figure 1 below. In this instance, an operational error occurred at a TRACON when a controller directed a passenger jet and a business jet into converging courses. The aircraft were about 7 seconds from a midair collision when the pilots' evasive actions averted an accident. In assessing the severity of the controller's operational error, FAA rated this incident at the high end of moderate severity.

**Figure 1. Operational Error at a TRACON**



### **Investigation Methodology**

We conducted our investigation with technical assistance from FAA's headquarters-based Air Traffic Office of Safety Evaluations. In addition, a member of the OIG staff conducting this investigation was formerly an air traffic controller. Our methodology included the following steps:

- Interviews with Ms. Whiteman.
- Use of playback tools to randomly review radar data and voice recordings for air traffic operations between May and June 2004<sup>8</sup>.
- Examination of prior incidents the facility found did not constitute operational errors, to include the February 2004 and March 2002 incidents Ms. Whiteman asserted in her complaint were, in fact, operational errors.

<sup>8</sup> FAA policy requires that electronic data recordings be retained for 45 days.

- Interviews of current and former TRACON managers and quality assurance personnel.
- Interviews of controllers and supervisors involved in unreported operational errors we identified during our review.

## **Details**

### **1. Operational errors at the DFW TRACON were improperly investigated, resulting in underreporting**

- We found merit to Ms. Whiteman’s allegations concerning unreported operational errors, discovering a practice at the DFW TRACON wherein the former facility manager put in place his own policy, contrary to FAA-wide policy, that inhibited appropriate use of playback tools to investigate whether operational errors had occurred. In effect, the DFW TRACON employed an “honor system” approach to resolving suspected operational errors—one that, by design, excluded use of highly reliable playback tools to confirm whether suspected operational errors in fact occurred.
- Instead, investigation of suspected operational errors at the TRACON entailed supervisors simply asking subject controllers whether aircraft separation had been lost. When a controller responded that he/she had maintained required separation, the incident was considered resolved with no further action taken. If a controller acknowledged that separation was, or might have been, compromised, playback tools would then—and only then—be used to determine if an operational error in fact occurred.
- The underreporting of operational errors at the DFW TRACON is significantly demonstrated by the following difference in errors reported before and after our investigation commenced in June 2004.
  - Prior to our investigation, only 2 operational errors were declared at the TRACON during the 6 month period between January 1 and June 24, 2004.
  - After instituting appropriate use of playback tools on June 25, 2004, through December 2004, the TRACON reported 36 confirmed operational errors.

While none of these 36 operational errors were classified as high severity, 28 were rated moderate severity.

- Through our own use of playback tools, we found 7 operational errors at the TRACON that were previously found by facility supervisors to be non-substantiated.

These 7 operational errors consisted of the 2 incidents Ms. Whiteman alleged in her complaint, along with 5 others that occurred during the two-month period we reviewed. (Based on FAA’s data retention limitations, we were able to review 15 suspected operational errors occurring in May-June 2004, which the TRACON previously found unsubstantiated. Through our own use of playback tools, we determined that 5 of those 15 incidents were, in fact, operational errors.)

6 of these 7 operational errors were classified as “moderate severity”, with the other classified as “low severity.”

*All 7 of these operational errors had been identified by TRACON personnel as suspected errors, but supervisors declared them unsubstantiated after the controllers involved asserted that separation had been maintained. A simple review of playback data (as we performed during our review) at the time of the incident would have conclusively established each of these as an operational error. **Appendix B** contains a detailed account of each of these 7 operational errors.*

## **2. Several factors contributed to the TRACON’s lax investigation of suspected operational errors, but a short-lived incentive program was not material**

As addressed below, we found several factors contributing to the TRACON’s practice of improper investigation—and, thus, underreporting—of suspected operational errors.

### ***Former Manager’s Policy and Issuance of Written Directive***

- TRACON personnel we interviewed advised that in about 1997, then-facility manager Ross Schulke (who retired in January 2003) issued a verbal edict that suspected operational errors were to be investigated in the manner described above—with playback tools used only after a controller acknowledged that separation was, or may have been, lost. In October 2000, Mr. Schulke issued a written directive (DFW Order 7010.1) formalizing and reinforcing this restriction on the use of playback tools. It included the following proscription: “**IN NO CASE** shall [playback] data be used until an error is declared.”

- Mr. Schulke made conflicting statements during our interview. He initially denied having instituted this practice, contending that he heard rumors of it when he became facility manager in 1996. He told us that when he became aware of the practice, he sought to eliminate it, but was unsuccessful in so doing. However, in a contradictory assertion, Mr. Schulke told us that FAA had an agreement with the National Air Traffic Controllers Association (NATCA) that playback tools would not be used unless, and until, an operational error had already been declared, following acknowledgement by a controller that an error had occurred. We found no such agreement with NATCA.
- Several TRACON employees we interviewed advised that the TRACON's policy on handling operational errors discouraged the reporting of operational errors. One operations supervisor told us, "It was common knowledge at the DFW to do everything not to report OEs. Do whatever we could to get out of an OE." This supervisor related that Mr. Schulke told him, "Region does not want to hear this information; they don't want OEs", and that Mr. Schulke said his performance ratings as a manager were based upon the number of operational errors and employee grievances occurring at the facility.

According to this operations supervisor, during one specific incident on September 19, 2000, a controller almost allowed one aircraft to fly into the side of another. He said that despite the controller's claim that separation had been maintained, he decided to review the radar data and audio recordings, discovering multiple operational errors. This supervisor said that in listening to radio recordings, the pilot of one of the involved aircraft stated to the controller, "That was mighty close, what are you doing?"

This operations supervisor told us that when he presented Mr. Schulke with the results of his review, Mr. Schulke "dressed me down in the hallway screaming and yelling." He said Mr. Schulke told him they (DFW TRACON managers and supervisors) were not going to use playback tools to verify operational errors because it would "infuriate the union." This supervisor advised that Mr. Schulke then demanded all the documents, tapes and personal notes regarding this incident, which Mr. Schulke proceeded to destroy.

Mr. Schulke acknowledged during our interview that he once destroyed a report on a confirmed operational error submitted by one of his subordinate TRACON supervisors. According to Mr. Schulke, the operational error had been verified using a radar data playback device he believed was not approved under FAA's agreement with NATCA. He further advised that since the data tape-recording had already been recycled in accordance with FAA's data retention policy and

thus could not be further reviewed, he decided that an operational error would not be declared.

- We looked at the history of the TRACON Order restricting use of playback data for investigation of operational errors and found it was revised once, in September 2001, but without any change to the subject restriction on use of playback tools.

#### ***Lack of Oversight by the TRACON's Quality Assurance Unit***

- David Slaton, who until recently was Quality Assurance Manager for the TRACON, told us that the TRACON's quality assurance staff was not involved in reviewing investigations of suspected operational errors conducted by facility supervisors. He advised that by virtue of facility quality assurance personnel (nationwide) becoming NATCA members, FAA would have to pay them overtime to conduct quality assurance reviews of suspected operational errors occurring outside their normal work hours. Mr. Slaton advised that Mr. Schulke did not want to pay overtime and directed that only supervisors investigate suspected operational errors, in accordance with Mr. Schulke's investigative procedures.

#### ***Missed Opportunities to Detect and Remedy the TRACON's Improper Investigative Practice***

- As Ms. Whiteman noted in her correspondence to OSC, she previously contacted the FAA Administrator and OIG hotlines, in July and October 2002, to identify unreported operational errors at the TRACON; specifically, three separate incidents. We referred Ms. Whiteman's complaints to FAA's headquarters Air Traffic Office of Safety Evaluations for investigation. While substantiating two of these incidents as previously unreported operational errors, the FAA headquarters investigator examined them as discrete incidents and did not discover the TRACON's systematic practice of improperly investigating operational errors.

#### ***Insufficient Oversight by Current Manager***

- JoEllen Casilio, who became manager of the DFW TRACON in October 2003, told us she was unaware of the TRACON's restriction on the use of playback tools and had not focused on the facility's low incidence of reported errors. When we informed her of our findings, Ms. Casilio said she felt responsible for having not provided adequate oversight. Following our interview with her, she

issued a policy memorandum to her staff, dated June 25, 2004, directing immediate use of playback tools to investigate all suspected operational errors.

### ***Incentive Program Was Not a Material Factor in Underreporting***

- Based in part on the foregoing findings, we concluded that an incentive program at the DFW TRACON, intended to reduce the number of operational errors, was not a significant factor in the non-reporting of operational errors. This program, designed to reward all facility controllers with 4 hours time-off if the facility went 90 days without experiencing an operational error, was initiated on a trial basis in January 2002 by FAA's Southwest Region Air Traffic Division. The program resulted in one award to DFW TRACON controllers, in June 2002, but was abandoned after a one-year test period because the program's goal of 90 days error-free was deemed unrealistic.

### ***Ambiguity in FAA's Air Traffic Quality Assurance Order***

- FAA's Air Traffic Quality Assurance Order (7210.56C), which prescribes policy for the investigation and reporting of operational errors/deviations, is ambiguous as to whether investigation of suspected operational errors *requires* review of playback data. Specifically, section 5-1-3 of the Order, "Initial Investigations" states, in part:

"The initial investigation is intended to be fact finding in nature. It has been designed to determine what occurred in the system, to ensure corrective action is initiated to maintain system integrity, and to report significant events to higher levels of management. . .

. . . The operations supervisor or the controller-in-charge . . . shall determine the validity of suspected OE/OD's and, if valid, shall ensure the following is accomplished:

- d. Review voice recordings . . .
- e. Review available radar data . . ."

The wording "*shall determine the validity . . . and if valid shall ensure the following*" is, in our view, poorly constructed and subject to interpretation regarding whether these provisions ("d" and "e") are required to be performed in the investigation of suspected operational errors.

Further, while section 5-1-5 of the Order, "Investigative Process," states that the "investigation of an OE/OD must entail an in-depth inquiry into all causal

factors”, this section and Appendix 1 of the Order, regarding radar data, do not require use of playback tools. Specifically, Appendix 1 states that “playback tool[s] may be used in the investigation of a . . . suspected OE/OD . . . to determine the relative flight tracks, speeds, headings, location and separation of the involved aircraft. These tools may be used to determine employee and/or pilot performance and/or involvement in the incident, as well as the closest proximity.”

### **3. FAA has undertaken corrective actions based on our investigative findings**

- Based on our findings, FAA’s Air Traffic Office of Safety Evaluations has undertaken a number of actions to remedy the deficiencies at the DFW TRACON. These include directing the facility manager to institute appropriate use of playback tools for investigating suspected operational errors and placing it in a “no-notice review” status for a two-year period, which means evaluations staff can show up at the facility unannounced to assess whether operational errors are being accurately reported.

Other corrective actions taken include (a) reassignment of the facility quality assurance manager (and selection of a new quality assurance manager); (b) the facility manager, along with operations managers and supervisors, were placed on performance improvement plans for not abiding by FAA national policy for investigating/reporting operational errors; (c) individual controllers were given remedial training for operational errors committed, and placed on performance improvement plans for failing to self-report errors; and (d) revision of the TRACON’s quality assurance order to remove the proscription against use of playback tools. In addition, one controller was decertified for having committed a previously unreported operational error.

Further, FAA’s Air Traffic Office of Safety Evaluations reviewed the practices of other TRACONs and concluded that the DFW TRACON was unique in terms of how it investigated operational errors. However, to ensure that the conditions at DFW do not exist elsewhere, FAA has undertaken a complete review of all quality assurance elements nationwide.

- Ms. Whiteman expressed concern to us that some remedial actions were not being instituted by Ms. Casilio. Accordingly, we contacted FAA’s Air Traffic Office of Safety Evaluations and jointly conducted an on-site review at the TRACON, verifying that the stated corrective actions have been, or are being, implemented.

### **Recommendation**

An additional finding of our investigation, meriting remedial action by FAA, concerns FAA's national policy directive on operational errors, FAA Order 7210.56C, which prescribes investigation and reporting procedures. While FAA officials consistently told us that this Order requires review of playback data to investigate suspected operational errors, the language of the Order does not explicitly say so. In our view, the Order is ambiguous as to whether investigation of suspected errors actually requires use of playback tools. To avoid localized misinterpretations, we recommend that FAA Order 7210.56C be revised to clarify, explicitly, that review of playback data is a required step in investigating all suspected operational errors.

We have addressed our investigative results with senior levels of FAA and believe the agency's corrective actions substantially address Ms. Whiteman's concerns and represent considerable progress toward preventing future unreported operational errors at the DFW TRACON and elsewhere. As with FAA's follow-through on our recent audit findings and recommendations, we will also review the extent to which FAA carries out the foregoing corrective actions at DFW.

Attachment

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## **Appendix A – Playback Tools**

“Playback tools” are software programs and other electronic instruments for recreating air traffic incidents by replaying recorded radar and voice data. Playback tools are used to investigate incidents or accidents, and can be used to determine the relative flight tracks, speeds, headings, location and separation of the involved aircraft. These tools may be used to determine controller and/or pilot performance and/or involvement in the incident, as well as the aircraft’s closest proximity. Playback tools available to assist in investigations of operational errors (OE) or operational deviations (OD) include:

**Continuous Data Recording (CDR)** – This fundamental program providing continuous recording of radar data from the Automated Radar Terminal System (ARTS).

**Radar-Audio Playback of Terminal Operations Recording (RAPTOR)** – This advanced program integrates CDR radar data and digital voice recordings for a computerized playback of combined radar/voice data within requested time and airspace parameters.

**National Track Analysis Program (NTAP)** – This program, which provides a computer-generated track of aircraft, was originally designed to assist in search and rescue missions to locate missing or suspected downed aircraft.

**Systematic Air Traffic Operations Research Initiative (SATORI)** – This program uses NTAP reports to graphically recreate ATC incidents on a computer screen.

## Appendix B - Verified Operational Errors

A joint review by OIG and FAA's Air Traffic Office of Safety Evaluations produced evidence to confirm the following operational errors:

**Note:** *The first two operational errors, both verified during our review, were included in Ms. Whiteman's complaint.*

### 1) March 24, 2002

Ms. Whiteman provided the OSC two plots with corresponding radar data and audio tapes for March 24, 2002, which she acquired through a FOIA request. A review of those plots and audio tapes disclosed that N160W<sup>9</sup> and EGF654 were both approaching Meacham Field from the Northeast. The pilot of N160W did not appear to turn westbound at a pre-designated point required in the procedures for the landing pattern in use at the time.

These aircraft, essentially flying the same route one mile in trail of each other, were being controlled by separate controllers. Both controllers were found to have been working separate aircraft in the same airspace without proper coordination when the loss of separation occurred. These aircraft closed to within 500 feet elevation and .43 miles laterally of one another. This was classified, per FAA guidelines, as moderate severity<sup>10</sup>.

### 2) February 29, 2004

A review of this incident, provided by Ms. Whiteman, showed that on February 29, 2004, in accordance with the instructions of the ATC, EGF712 began descending toward 5000 feet. At the same time N2099D, which had just departed DFW, was climbing northbound to 4000 feet. The controller responsible for N2099D advised him of the presence of EGF712 and the pilot reported that he had EGF712 in sight. EGF712 descended past 5000 feet toward 4000 feet. The controller for N2099D directed the pilot to maintain visual separation. EGF712 and N2099D approached to within 100 feet elevation and 1.61 miles horizontally. Moreover, our review of the audio tapes revealed that

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<sup>9</sup> Aircraft are identified throughout this report by their call signs as reflected on the FAA documents.

<sup>10</sup> FAA Air Traffic Order 7210.56C establishes a severity index to determine the severity of an operational error based on the proximity of the aircraft and their respective direction of flight, i.e., in trail, converging, and the facility involved, i.e., tower facility, enroute center, or TRACON. Based upon the total points the operational error will then be given a severity rating of; high—90 points and above, moderate—40-89 points, and low—39 points and below.

the controller responsible for EGF712 had given the pilot instructions to descend to 4000 feet, vice the 5000 feet reported. (The authorized altitude was 5000 feet.) This incident was classified as low severity.

Operations Manager Ronald Hathcock investigated the suspected loss of separation which occurred on February 29, 2004. Despite having the audio data, Mr. Hathcock terminated the investigation when he was unable to retrieve the CDR data. Mr. Hathcock further admitted that while he had the X and Y coordinates of the involved aircraft, and that those coordinates could have been plotted to obtain the separation intervals, he did not possess the knowledge required to manually plot separation of the aircrafts. This incident was classified by Mr. Hathcock as a non-occurrence.

### **3) May 17, 2004**

On May 17, 2004, the ATC controlling CHQ6355 received a Traffic Alert & Collision Avoidance System/ Resolution Advisory<sup>11</sup> [TCAS RA] on AAL2076, which was controlled by another ATC. The controller for AAL2076 claimed he gave instruction to the pilot to diverge from CHQ6355. The pilot of flight CHQ6355 reported AAL2076 was in sight after the TCAS RA and was instructed to maintain visual separation. Both controllers reported to the supervisor conducting the inquiry that there was no loss of separation.

When we confronted Robert Beck, the on-duty Operations Supervisor concerning his investigation of this incident, he reported that subsequent to learning of the TCAS RA, he briefed John P. Jones, the on-duty Operations Manager, and requested the voice recordings and CDR data/plots for his review. Mr. Jones told us he directed Mr. Beck to interview the controller(s) first and ascertain what had occurred and reminded him (Mr. Beck) that unless a loss of separation was reported, CDR data was not authorized to be used to search for an error<sup>12</sup>. Accordingly, after both controllers asserted that there had not been a loss of separation, the inquiry was terminated.

Our review of the CDR data and audio transmission for this incident revealed that AAL2076 was vectored northbound at 6,000 feet on a downwind approach for the ILS Runway 17C, and was handed off to another controller for arrival.

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<sup>11</sup> TCAS alert is an airborne collision avoidance system based on radar beacon signals which operates independent of ground based equipment.

<sup>12</sup> FAA Order 7210.56C Appendix 1 (1)(c) states, “. . . CDR data and other reduction or playback tools shall not be arbitrarily used as the primary initiating source (triggering event) for reporting an OE/OD or commencing an investigation. However, these reduction/playback tools may be used in the investigation of suspected incidents to determine the amount of separation that existed or the position of the aircraft.”

At the same time, CHQ6355 was on the base leg to approach the same runway and was descending to 6,000 feet. CHQ6355 reported a TCAS Resolution Advisory, and was issued instructions to turn to avoid AAL2076. CHQ6355 reported AAL2076 in sight, and was instructed to maintain visual separation. These aircraft approached to within 800 feet elevation and 1.36 miles laterally. This incident was classified as moderate severity.

#### **4-5) May 17, 2004**

During a review of the CDR data tapes, in relation to the above incident, two additional operational errors were identified:

(1) AMT217 was flying southwest approaching DFW at 6,000 feet. CHQ6355 was also at 6,000 feet and flying southwest on a converging heading with AMT217. Turns and altitude restrictions were issued to both aircraft, but not before they closed to within 200 feet vertically and 2.06 miles laterally of one another.

(2) AMT217 was flying southwest inbound to DFW and was descending to avoid CHQ6355, causing AMT217 to close to within 600 feet elevation and 2.57 miles laterally of AAL2076, who was northbound and descending on the downwind for the ILS Runway 17C. Both incidents were classified as moderate severity.

#### **6) June 8, 2004**

On June 8, 2004, AAL453 was west bound, being vectored for an ILS approach to Runway 17L, and was descending, per controller instructions, to 4000 feet. AAL453 was subsequently turned to a heading of 190 degrees and was instructed to join the Runway 17L localizer. However, this turn instruction to AAL453 was issued too late, and AAL453 overshot the final approach course. AAL453 was subsequently issued an additional instruction turn to 150 degrees to rejoin the localizer; however, not until separation had been lost with AAL1303, who was also inbound to DFW and flying at 4000 feet. The aircraft closed to within 0 feet elevation and 1.84 miles laterally. This incident was classified as moderate severity.

An inquiry into this incident by the on-duty Operations Supervisor, Bill Seiling, was closed as a non-incident after both controllers reported maintaining proper separation. CDR data and audio transmissions were not reviewed.

**7) June 26, 2004**

On June 26, 2004, during the time our inquiry was being conducted at DFW, flight N888XL departed from Dallas Love Field and initially headed northeast. The pilot was subsequently issued instructions to turn on course towards the southwest climbing to 16,000 feet. Around the same time flight SKW3762 departed from Dallas/Fort Worth airport heading northeast subsequently turning northwest per instructions from the air traffic controller and climbing to 17,000 feet, which activated a conflict alert alarm. SKW3762 was then issued instruction to turn to the east, but not before the two aircraft approached to within 700 feet elevation and 1.74 miles laterally of one another. Despite the presence of OIG and FAA Air Traffic investigators, DFW TRACON personnel failed to document and report this operational error. This incident was classified as moderate severity.

An additional incident, on December 2, 2002, reported by Ms. Whiteman and allegedly involving an encroachment of her airspace by an aircraft controlled by another controller, was reviewed. This incident could not be positively identified as an operational deviation due to the lack of supporting data.

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