

**TRAINING FAILURES AMONG NEWLY HIRED  
AIR TRAFFIC CONTROLLERS**

*Federal Aviation Administration*

*Report Number: AV-2009-059*

*Date Issued: June 8, 2009*




# Memorandum

U.S. Department of  
Transportation

Office of the Secretary  
of Transportation  
Office of Inspector General

Subject: **ACTION:** Report on Training Failures Among  
Newly Hired Air Traffic Controllers  
Federal Aviation Administration  
Report Number AV-2009-059

Date: June 8, 2009

From: David A. Dobbs   
Deputy Inspector General

Reply to  
Attn. of: J-2

To: Federal Aviation Administrator

This report provides the results of our review of training failures among newly hired air traffic controllers. We conducted this review at the request of Representative Jerry F. Costello, Chairman of the House Subcommittee on Aviation. Specifically, the Chairman expressed concern that the Federal Aviation Administration (FAA) was facing a high number of training failures among newly hired air traffic controllers, especially at some of the busiest and most complex facilities in the National Airspace System.

Consistent with the Chairman's request, our audit objectives were to determine (1) the training failure rate among newly hired air traffic controllers and (2) the common causes and factors that are contributing to this rate.

We conducted this audit between December 2007 and January 2009 in accordance with generally accepted government auditing standards prescribed by the Comptroller General of the United States. Our audit included site visits to 30 Air Traffic Control en route and terminal facilities, the FAA Academy in Oklahoma City, Oklahoma, and FAA Headquarters in Washington, DC. Exhibit A details our scope and methodology. Exhibit B lists all locations visited.

## BACKGROUND

FAA plans to hire and train nearly 17,000 new controllers through 2017 to replace the large pool of controllers who were hired after the 1981 strike and are now retiring. Training success among these newly hired controllers is critical as more veteran controllers leave the system. New air traffic controllers must complete an arduous training program that includes learning the basic concepts of air traffic

control at the FAA Academy, followed by extensive on-the-job training at their assigned facilities.

Those controllers who are unable to pass the training process are either transferred within their assigned facilities to a new area of operations, transferred to a lower level facility to begin the training process again, or terminated from employment with FAA. While certification times for individual controllers may vary, FAA's goal is to have terminal candidates complete the training process in 2 years and en route candidates in 3 years.

FAA uses a system, known as the National Training Database (NTD), to track the progress of newly hired controllers in training. FAA also uses the NTD to determine the number and rate of controllers who do not complete training because they either lack the skills needed to certify at their assigned facility (training failures) or leave the Agency for other reasons.

## **RESULTS IN BRIEF**

According to FAA, the training attrition rate for all controllers in fiscal year (FY) 2007 was approximately 7 percent. However, we found that FAA's reported rate is not accurate for several reasons.

- First, FAA's reported rate includes training failures of newly hired air traffic controllers *and* transferring veteran controllers who are training on the airspace of their new facility. FAA does not track training failures among newly hired controllers as a separate metric. In our opinion, combining these two categories of trainees to determine one overall rate of failures systemwide misconstrues the data FAA needs to effectively carry out its plans to train 17,000 newly hired controllers through 2017.
- Second, FAA's rate was based on FY 2007 training failure data; however, in FY 2007 most new controllers were still in the early stages of training. FAA only began implementing its plans to address the surge in attrition starting in 2005. From FY 2005 to FY 2006, FAA hired 1,635 new controllers. In contrast, from FY 2007 to FY 2008, FAA hired 4,011 new controllers. Since it takes new controllers 2 to 3 years to certify, most controllers had not been in training long enough in FY 2007 to accurately assess a realistic rate of training failures. As FAA hires more new controllers, the number and rate of training failures will likely increase.
- Third, FAA does not have a uniform definition of training failures and other types of attrition. Consequently, it is largely left to managers to determine how to classify controller attrition, which is not done consistently. For example, Headquarters managers told us that transfers to lower-level facilities are not

counted as training failures. However, several facility managers told us they classify *all* candidates who fail to make satisfactory training progress as training failures, regardless of whether they transfer or are terminated from FAA. Developing a clear and consistent definition is important since we also found that many new controllers left training for reasons other than failing (e.g., medical disqualification, compensation issues, and misconduct).

- Fourth, we found that FAA's data in the NTD, its primary source for tracking training progress and failures, were incomplete, inaccurate, or understated. For example, we compared data from the NTD with source data from 30 facilities.<sup>1</sup> Seven of the 30 provided data that differed, often significantly, from what we found in the NTD for the same time periods. One reason for these discrepancies is that FAA does not uniformly enforce requirements for facilities to enter data into the NTD. As a result, we found several facilities were not entering data on a timely basis and some not at all. For example, one large terminal location failed to enter any data into the NTD for 3 non-consecutive months.

With the influx of new controllers planned through 2017, FAA must ensure that facilities and Headquarters properly collect and categorize training failure data so that the Agency has accurate information to effectively, efficiently, and expediently manage its efforts to train the next generation of air traffic controllers. This will be particularly important as FAA begins implementing its new controller training contract, the Air Traffic Control Optimal Training Solution (ATCOTS), a new \$900 million contract with Raytheon Corporation that will manage controller training throughout the Agency including new controller training at the Academy and at air traffic facilities. FAA will need accurate data on training failures in order to assess the performance of the contractor.

We also found that it was premature to make conclusions regarding trends and potential root causes of training failures. This was because, at the time of our review, FAA was still in the early stages of its hiring and training efforts. We briefed Chairman Costello's staff on this issue at the conclusion of our review. Based on those discussions, the Chairman requested that we review FAA's process for selecting and placing newly hired controllers. We began that review in November 2008.

We did, however, identify a series of factors that could indicate trends and potential root causes of training failures. Those include: (1) facility type (en route versus terminal and facility complexity and level), (2) time or stage in training

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<sup>1</sup> We visited 7 facilities during the early phase of our audit and subsequently chose a statistical sample of 20 facilities (Level 10-12) to project a rate of training failures among newly hired controllers. FAA Air Traffic facilities are organized by complexity into levels (Level 4 through 12—least complex to most complex) based on traffic levels, airspace configurations, and other related factors.

prior to failure, (3) hiring source and previous experience, (4) Air Traffic Selection and Training (AT-SAT) test scores, and (5) Academy Performance Verification (PV) scores. Although at the time of our review there were not sufficient data on these factors to identify trends or determine conclusive causes, aggregated data on these types of factors will become increasingly important as FAA increases its hiring efforts in coming years. As more newly hired controllers enter the system over the next several years, FAA should monitor these types of factors to identify trends and potential root causes of training failures. This will also be an important management tool for FAA to assess the performance of the ATCOTS contractor.

Our recommendations to FAA focus on developing procedures to obtain accurate data on training failures in order to effectively monitor and improve its controller training program. FAA concurred with our recommendations, which are listed on page 12.

## **FINDINGS**

### **FAA's Reported Training Failure Rate for Newly Hired Controllers Is Not Accurate**

According to FAA, the training attrition rate for all controllers in FY 2007 was approximately 7 percent. However, we found that this rate does not reflect actual training failures among newly hired controllers for four reasons: (1) FAA does not track training failures among the new controllers as a separate metric; (2) FAA's current rate is based on FY 2007 training failures and will likely increase as FAA hires more new controllers between FY 2009 and FY 2017; (3) FAA does not have a uniform definition of training failures and other types of attrition; and (4) FAA's training failure data in the NTD were incomplete, inaccurate, or understated.

#### *FAA Does Not Track Training Failures Among Newly Hired Controllers as a Separate Metric*

Although FAA tracks training failures for *all* controllers, this rate includes both newly hired air traffic controllers and transferring veteran controllers who are training on the airspace of their new facility. Because FAA does not track training failures among newly hired controllers as a separate metric, we collected data (for the period FY 2005 through mid-2008) on training failures for newly hired controllers who had failed training at the FAA Academy and 20 randomly selected en route and terminal facilities.

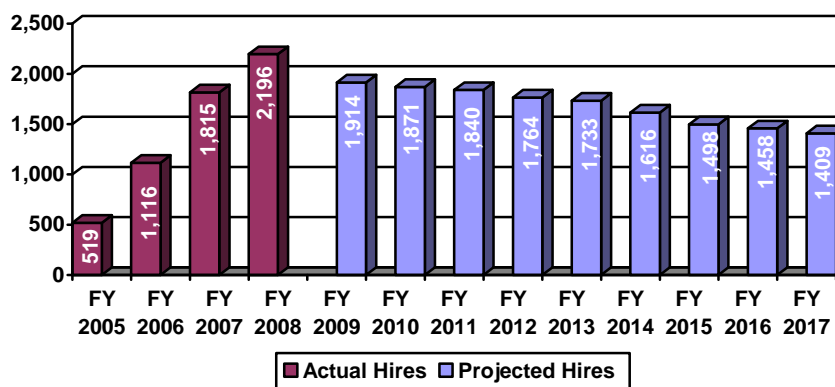
Specifically, the results of our sample found the following:

- At the FAA Academy, between the beginning of FY 2005 and June 2008, 3,177 newly hired controller candidates received training at the FAA Academy. Of these, only 98 candidates (3.1 percent) failed Academy training.
- At 20 randomly selected (Level 10 and above) air traffic control facilities, between the beginning of FY 2005 and April 2008, 944 newly hired controllers were in facility training. Of these, only 48 (about 5.1 percent) failed training. Based on this sample, we project (with a 95-percent confidence level) that the failure rate at Level 10 and above facilities is between 2.4 percent and 7.7 percent, with a best estimate of 5 percent.

### *Training Failures Will Likely Increase as FAA Increases Its Hiring Efforts*

While we found that both the Academy and facility failure rates currently appear relatively low, they will likely increase since FAA only began its hiring efforts in 2005. From FY 2005 to FY 2006, FAA hired 1,635 new controllers. In contrast, from FY 2007 to FY 2008, FAA hired 4,011 new controllers. Since it takes new controllers 2 to 3 years to certify, most had not been in training long enough at the time of our review (December 2007 through December 2008) to gauge a future rate of training failures. As most of FAA's hiring efforts will occur between FY 2009 and FY 2017 (see figure 1), the number and rate of training failures will likely increase over the next several years.

**Figure 1. FAA Actual and Projected Air Traffic Controller Hiring  
FY 2005 – FY 2017**



Source: FAA

### *FAA Does Not Clearly Define Controller Training Failures or Other Types of Attrition*

We found that FAA does not uniformly apply definitions for training failures and other forms of non-failure training attrition. Two Agency documents, FAA Order 3120.4L and Employment Policy 1.14, prescribe procedures for new controller training and for the disposition of training failures. In addition, the NTD provides

users with several categories by which controllers who do not complete facility training can be classified.

However, during interviews with FAA personnel, we found they had differing definitions of what constitutes a training failure. For example, FAA's Director of Technical Training & Development stated that, "transfers from higher- to lower-level facilities are not counted as training failures." Conversely, managers at the Potomac Terminal Radar Approach Control facility (TRACON) told us that they classify *all* candidates who fail to make satisfactory training progress as training failures, regardless of whether they are transferred to lower-level facilities or terminated from FAA.

This has led to inconsistencies in how FAA facilities classify training failures and other forms of attrition in the NTD. For instance, during the initial phase of our review, the NTD showed that since FY 2005 only one controller at the Atlanta Center had been classified as a training failure. However, we determined that three additional controllers had failed training at the facility and were allowed to transfer to other facilities. The facility had incorrectly classified these three controllers as "Transferred Prior to Completion of Training" in the NTD.

Developing a clearer definition of training failures and other types of attrition is important since we also found that some new controllers did not complete training for reasons other than failure. While this type of attrition was low at the FAA Academy, it was nearly double the failure rate (of 5.1 percent) at our sampled air traffic facilities. The subjectivity of classification and number of other reasons make those numbers suspect and underscore the need for a consistent definition.

At the FAA Academy, of the 3,177 newly hired controllers in our scope, only 37 controllers, or 1.2 percent, did not complete training for other reasons. However, of the 944 newly hired controllers who were in training at our 20 randomly selected air traffic control facilities, 89 controllers, or about 9.4 percent, did not complete training for other reasons. Of these 89 controllers:

- 21 (about 24 percent) resigned for unspecified personal reasons.
- 19 (about 21 percent) resigned due to candidate hardships.
- 12 (about 13 percent) resigned due to compensation issues.
- 6 (about 7 percent) resigned due to retirement and medical issues.
- 31 (about 35 percent) left for other various reasons including career change, misconduct, and security issues.

*FAA's Primary Source of Training Failure Data, the NTD, Contains Outdated or Inaccurate Data*

We found that while FAA does have a database, the NTD, in place to track the training progress of newly hired controllers, the database contained inaccurate information. The NTD is the main system used by FAA to track the progress of developmental controllers at air traffic facilities. Originally designed to track the training time for developmental controllers, the database was expanded to capture data relating to the various categories of training attrition, including training failures.

Specifically, we found the NTD contained inaccurate information regarding the number of training failures and other training attrition. To determine this, we provided air traffic facilities we visited with a list of new controller training failures and attrition that we obtained from the NTD prior to our visit to the facility. We asked these facilities to cross-check this list against their records to see if the NTD included all training failures and other attrition, going back to FY 2005. As shown in table 1, 7 of the 30 facilities visited during the audit provided attrition numbers that differed from records received from FAA Headquarters.

**Table 1. New Hire Training Attrition Data Since FY 2005\*  
National Training Database Figures vs. Facility Figures**

Facility	National Training Database Figures	Facility Figures
Miami Center	13	21
Washington Center	13	16
Southern California TRACON	6	11
Northern California TRACON	1	4
Potomac TRACON	4	6
Atlanta TRACON	5	6
Chicago TRACON	0	1

\*As of April 10, 2008

In the case of Miami Center, we found three different sets of figures for training failures and other attrition:

- According to NTD figures pulled at FAA Headquarters on February 3, 2008, there were 13 newly hired training failures and other attrition.
- According to the list compiled by the facility on February 14, 2008, there were 21 newly hired training failures and attrition.
- According to information pulled from the NTD on February 14, 2008, there were 19 newly hired training failures and other attrition.



We also found that some facilities were not entering any information into the NTD. The NTD produces a report showing which facilities have not entered its data. A February 2008 report showed several facilities were not up to date in entering information into the NTD. One facility, the Southern California TRACON, had yet to enter data for September, October, or December of 2007. When we asked officials at the TRACON about the discrepancy, they noted that they were more concerned with training their controllers than entering information into the NTD.

As a result of these data discrepancies, FAA cannot ensure the accuracy of the information it provides to Congress and other stakeholders regarding controller training. As such, current issues with the NTD, combined with the collection and categorization issues we identified, raise questions regarding the accuracy of FAA's training attrition statistics.

### **At the Time of Our Review, There Were Insufficient Data To Identify Root Causes of Training Failures Among Newly Hired Controllers**

To address the Chairman's request regarding possible root causes, we examined a series of factors that could indicate potential trends or root causes of training failures. The factors we identified were: (1) facility type (en route versus terminal and facility level), (2) time or stage in training prior to failure, (3) hiring source and previous experience, (4) Air Traffic Selection and Training (AT-SAT) test scores, and (5) Academy Performance Verification (PV) Scores.

We found, however, that it was premature to make conclusions regarding trends and potential root causes of training failures. This was because, at the time of our review, FAA was still in the early stages of its hiring and training efforts. For example, about 62 percent of the 944 new hires from our 20-facility sample were still in training at the time of our analysis, and only 48 new controllers had failed training at our sampled facilities. Additionally, there were not enough data on those factors to identify trends or determine conclusive causes of training failures.

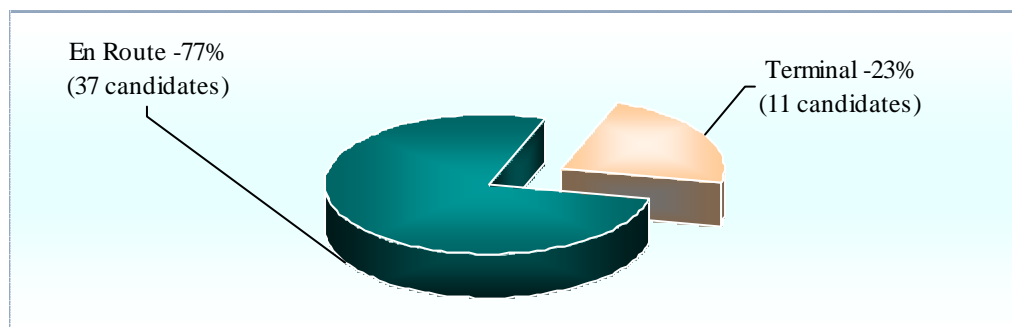
We briefed Chairman Costello's staff on this issue at the conclusion of our review. Based on those discussions, the Chairman requested that we review FAA's process for selecting and placing newly hired controllers. We began that review in November 2008. As part of this review, we are further assessing the quantity and quality of more recent data on several of the five factors to determine if there are any commonalities. The five factors we identified are discussed in detail below.

#### *Facility Type*

We reviewed data on the type of facility (en route versus terminal) as a possible common factor of training failures. We found that most of the facility training failures in our sample occurred at en route centers. As shown in figure 2 below,

37 of the 48 failures, or about 77 percent, occurred at en route centers while only 11, or about 23 percent, occurred at terminal facilities.

**Figure 2. Training Failures by Facility Type**



Source: FAA Air Traffic Control Facilities listed in exhibit B

This result was not unexpected as FAA initially targeted its hiring efforts toward en route facilities when it began hiring in 2005. As shown in table 2 below, in FY 2005 and FY 2006 the number of developmental controllers assigned to facility training at en route centers was significantly higher than the number of new controllers assigned to terminal facilities. Only in the past 2 years have the number of controllers in training leveled out among terminal and en route facilities.

**Table 2. Newly Hired Controllers in Training FY 2005 – FY 2008**

Facility Type	FY 2005	FY 2006	FY 2007	FY 2008*
Terminal	48	169	1,027	1,284
En-Route	650	1,027	1,375	1,426

Source: FAA Air Traffic Organization (ATO)

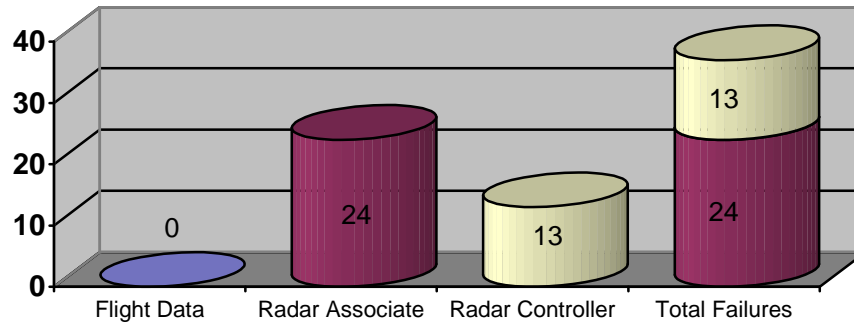
\* As of May 28, 2008

### *Time or Stage of Training*

We also reviewed data on training stages to determine if there was a common stage during training in which most training failures occurred. Overall, at our sample of air traffic facilities, we found that the average time newly hired controllers spent in training prior to failure was 1.86 years. In addition, we found that all 37 en route candidates in our sample failed during the radar portion of on-the-job training (OJT). During OJT, each en route candidate must certify on three operational positions that they will control when fully certified: (1) flight data (primarily responsible for entering flight data into the Agency's computer systems); (2) radar associate (assists the radar controller in planning, organizing, and expediting the flow of traffic); and (3) radar position (initiates control instructions, monitors and operates radios, and has responsibility for separation between aircraft).

As shown in figure 3 below, we found all of the 37 en route failures were able to complete the flight data portion of training; however, 24 of the 37 failures could not pass the radar associate portion while the remaining 13 failures could not pass the radar position portion.

**Figure 3. En Route Training Failures by Training Segment**



### *Hiring Source*

We reviewed data on the hiring pool of new controllers to determine if candidates from a particular hiring source were failing training more than others. FAA utilizes three hiring sources from which selections are made to replace retiring veteran controllers.

- **Previous Controllers:** Individuals who have previous air traffic control experience with the Department of Defense (DOD) (civilian or military) or FAA.
- **Collegiate Training Initiative (CTI) Program:** Individuals who have successfully completed an aviation-related program of study from a school in FAA's CTI program.
- **General Public:** Individuals who have limited or no aviation knowledge or experience and apply for positions via vacancy announcements.

Of the 944 developmental controllers reviewed in our sample, 890 controllers, or about 94 percent, came from the CTI or ex-military hiring pools. Consequently, of the 48 total training failures in our sample, 25 candidates (52 percent) came from CTI schools, and 23 candidates (48 percent) were ex-military or civilian DOD controllers. As part of our ongoing audit of FAA's process for selecting and placing newly hired controllers, we are reviewing current data on FAA hiring sources and the type and level of facility where newly hired controllers from those sources are placed. Data on hiring sources will become increasingly important as FAA has recently begun hiring new controllers from the general public.

### *Air Traffic Selection and Training Test Scores*

We reviewed data on AT-SAT test results to determine if a candidate's score was indicative of their ability to complete training. While FAA has cited the AT-SAT test as its main tool for screening potential controllers, we found only a small number of training failures had actually taken the test. Of the 48 controller candidates that failed during facility training in our sample, we were able to obtain only 5 corresponding AT-SAT scores from the FAA Academy. Of the 5 candidate scores received, 4 candidates qualified with scores between 70 and 84, while the remaining candidate was classified as "well qualified" with a score of 85 or above.

As for the remaining 43 training failures, we determined that:

- 22 candidates (51 percent) had previous military controller experience and, per FAA's guidelines, were exempt from taking the AT-SAT test.
- 14 CTI candidates (33 percent) lacked AT-SAT scores; rather, they had Office of Personnel Management test scores that were used as their qualifying scores. Most of these candidates were hired in FY 2005 or earlier.
- The FAA Aeronautical Center Human Resource Management Office and the Civil Aerospace Medical Institute were unable to locate AT-SAT scores for the remaining seven training failures in our sample (16 percent).

As part of our ongoing audit of FAA's process for selecting and placing newly hired controllers, we are reviewing current data on AT-SAT scores and the type and level of facility that newly hired controllers are placed to determine if there is any correlation.

### *Academy Performance Verification Scores*

We also reviewed Academy PV scores to determine if a candidate's score was indicative of their ability to complete training. Student performance is verified at the end of the Academy training program with a PV test to ensure that developmental controllers are ready to proceed to facility training. FAA's Air Traffic Controller Training and Development Group (AJL-11) was only able to provide PV scores for 21 of the 48 facility training failures in our sample. Only six candidates failed the first PV, with one student failing two PVs. This student was given a third chance, which he successfully completed, and was then allowed to proceed to facility training.

As with AT-SAT scores, we found that some candidates were not required to take the PV test—20 of the 48 facility training failures in our sample population (42 percent) were ex-military controllers and were not required to attend the FAA Academy. Consequently, they had no PV results. Additionally, the PV results for

seven CTI candidates (15 percent) could not be located by FAA Academy officials.

As part of our ongoing audit of FAA's process for selecting and placing newly hired controllers, we are reviewing current data on PV scores and the type and level of facility that newly hired controllers are placed to determine if there is any correlation.

## **CONCLUSION**

While FAA is still in the early stages of replacing its controller workforce, it is important that the Agency begin improving how it collects and categorizes data on newly hired controllers. As large numbers of new controllers enter training in the next several years, this information will be critical for FAA, Congress, and other stakeholders to (1) determine FAA's progress toward addressing attrition, (2) assess training problems at individual facilities, (3) identify needed changes to the overall training program, and (4) monitor the performance of the ATCOTS contractor.

## **RECOMMENDATIONS**

We recommend that FAA:

1. Develop and implement procedures for tracking training failure rates of newly hired and transferring veteran air traffic controllers separately.
2. Develop a comprehensive and uniform definition of controller training failures and other types of attrition and ensure that the definition is consistently applied at FAA Headquarters, the FAA Academy, and air traffic facilities.
3. Enforce procedures requiring facilities to enter training data into the National Training Database accurately and in a timely fashion.
4. Develop a process for conducting periodic reviews to determine if facilities are complying with National Training Database data entry requirements.
5. Identify factors that could indicate trends or potential root causes of training failures and require FAA and contractor officials to retain sufficient data on those factors to assess the performance of the ATCOTS contractor. Factors should include data on: (a) facility type (en route versus terminal and facility level), (b) time or stage in training prior to failure, (c) hiring source and previous experience, (d) Air Traffic Selection and Training (AT-SAT) test scores, and (e) Academy Performance Verification (PV) Scores.

## **AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

We provided FAA with our draft report on May 8, 2009, and received its response on May 29, 2009. FAA concurred with all five recommendations and has either taken appropriate corrective actions or provided acceptable target dates. We therefore consider our recommendations addressed but open pending completion of the proposed actions. FAA provided additional technical comments to our draft report, which we incorporated into this final report where appropriate. FAA's formal response is included in its entirety at the appendix to this report.

We appreciate the courtesies and cooperation of FAA representatives during this audit. If you have any questions concerning this report, please contact me at (202) 366-6767 or Dan Ravielle, Program Director, at (202) 366-1405.

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cc: Martin Gertel, M-100  
Anthony Williams, ABU-100

## **EXHIBIT A. SCOPE AND METHODOLOGY**

We conducted this performance audit December 2007 to January 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The following scope and methodology were used in conducting this review. During this audit we visited FAA Headquarters, the FAA Academy, and 30 Air Traffic facilities.

To determine the training failure rate of newly hired air traffic controllers, we examined two sources of information. First, to determine the failure rate at the FAA Academy we examined summary statistics provided by the FAA Academy from the beginning of FY 2005 through June 10, 2008. Second, to determine the training failure at air traffic facilities we selected a statistical single-stage cluster sample of 20 out of 66 Level 10 and above air traffic control facilities and reviewed the training status of all 944 newly hired air traffic control trainees at those 20 facilities. We then compared data obtained from FAA's National Training Database from the beginning of FY 2005 through April 10, 2008, with training records at the facilities and interviewed facility personnel to identify candidates who failed training and those who left for other reasons.

To determine the common causes and factors contributing to the training failure rate, we interviewed managers at all levels of the Agency and examined information obtained from the FAA Academy and the National Training Database for randomly selected air traffic facilities. We reviewed the data collected and analyzed the following five attributes for each of the newly hired controllers who failed training at our 20 randomly selected air traffic control facilities: (1) facility type, (2) time or stage in training prior to failure, (3) hiring source and previous experience, (4) AT-SAT test scores, and (5) Academy Performance Verification test scores.

On October 8, 2008, we briefed the Aviation Subcommittee staff on our findings. Based on that briefing, on October 30, 2008, Chairman Costello requested that we review FAA's process for the initial screening, placement, and training of newly hired air traffic controllers. We have recently begun this audit, which will assess how FAA determines whether candidates have the requisite abilities to become successful controllers, what procedures FAA uses to place controllers at air traffic facilities, and whether the initial training the FAA Academy provides to candidates is sufficient.

## EXHIBIT B. FAA SITES VISITED

Washington En-Route Center	Potomac TRACON*
Atlanta En-Route Center*	Miami En-Route Center
Atlanta TRACON	Cleveland Tower*
Cleveland En-Route Center	Minneapolis Tower*
Dallas/Fort Worth Tower/TRACON	Detroit Tower*
Fort Worth En-Route Center	Houston En-Route Center*
Houston TRACON*	Memphis Tower*
Tampa Tower*	Albuquerque En-Route Center
Los Angeles Tower	Los Angeles En-Route Center*
Southern California TRACON*	Salt Lake City En-Route Center*
Northern California TRACON*	Oakland En-Route Center
Phoenix TRACON*	Phoenix Tower*
Chicago O'Hare Tower	Chicago En-Route Center*
Chicago TRACON*	Charlotte Tower*
Philadelphia Tower*	Boston Logan Tower*

\* Statistical Sample Facilities



**EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT**

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Ben Huddle	Analyst
My Le	Analyst
Andrea Nossaman	Writer/Editor

## APPENDIX. AGENCY COMMENTS



# Federal Aviation Administration

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## Memorandum

Date: May 29, 2009

To: Lou Dixon, Assistant Inspector General for Aviation and Special Program Audits

From: Ramesh K. Punwani, Assistant Administrator for Financial Services/CFO

Prepared by: Anthony Williams, x79000 

Subject: OIG Draft Report: Training Failures Among Newly Hired Air Traffic Controllers

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Thank you for the opportunity to review and comment on the findings and recommendations of the subject report dated May 8. The report recommendations to the Federal Aviation Administration (FAA) focus on developing procedures to obtain accurate data on training failures in order to effectively monitor and improve its controller training program. FAA concurs with the report's five recommendations. In addition to this memorandum, we are separately providing a number of specific and technical comments on areas of the report that could benefit from clarification. We request that you consider these specific and technical comments when preparing your final report.

The following is FAA's response to each of the recommendations.

**OIG Recommendation 1:** Develop and implement procedures for tracking training failures of newly hired and transferring veteran air traffic controllers separately.

**FAA Response:** Concur. The FAA tracks training attrition for all controllers. This is because each failure, resignation, or removal for other reasons while in training results in a decrease in the air traffic controller Actual On Board (AOB) figure. Each decrease in the controller AOB must result in an additional controller new hire during that fiscal year to ensure the controller AOB target is reached for the year. As the year progresses, this may result in either an increased or, as we've seen this year, a decreased number of new hires needed to reach the controller AOB target in the Flight Plan. Whether measured by the rate that FAA currently reports for all controllers or by the sampling of new hires the OIG cites in its report, the training failure rates for controllers are consistent with or lower than historical levels.

So that FAA can determine failure trends and percentages in these separate groups, we will initiate a separate tracking mechanism and implement the new tracking system no later than December 31.

**OIG Recommendation 2:** Develop a comprehensive and uniform definition of controller training failures and other types of attrition and ensure that the definition is consistently applied at FAA Headquarters, the FAA Academy, and air traffic facilities.

**FAA Response:** Concur. The FAA has already made significant progress in establishing categories of training failures and attrition and incorporated these into the National Training Database (NTD). Now, a key part of the process is to communicate these changes to all stakeholders who enter, track, or report on training failures. FAA will form a workgroup to address this issue to establish a common definition with consistent application and communication throughout FAA. FAA plans to complete this action by December 31.

**OIG Recommendation 3:** Enforce procedures requiring facilities to enter training data into the National Training Database accurately and in a timely fashion.

**FAA Response:** Concur. While a significant attempt to go back into the NTD and enter appropriate training progress, completion, and failure data prior to fiscal year 2008 has occurred, some facilities still need to update past training histories and enter current training information in a timely manner. We are working to ensure that training histories are updated throughout FAA. Further, in an effort to ensure that future training is entered into the NTD system timely, FAA will issue a memorandum directing facilities to input (or arrange for input) all controller data into the NTD within 14 days of occurrence to ensure the accuracy of the NTD. FAA plans to complete this action by December 31.

**OIG Recommendation 4:** Develop a process for conducting periodic reviews to determine if facilities are complying with National Training Database data entry requirements.

**FAA Response:** Concur. The FAA is establishing a separate division within the Technical Training Office to directly oversee air traffic controller facility training efforts. This office will also establish a periodic NTD review process. FAA plans to complete this action by December 31.

**OIG Recommendation 5:** Identify factors that could indicate trends or potential root causes of training failures and require FAA and contractor officials to retain sufficient data on those factors to assess the performance of the ATCOTS contractor. Factors should include data on: (a) facility type (en route versus terminal and facility level), (b) time/stage in training prior to failure, (c) hiring source and previous experience, (d) Air Traffic Selection and Training (AT-SAT) test scores, and (e) Academy Performance Verification (PV) scores.

**FAA Response:** Concur. The FAA is establishing a Quality Assurance division within the Technical Training Office to establish and maintain complete records on all aspects of controller training, to include training failures. This division will consider the factors

recommended by OIG and others to ensure that the ATCOTS contractor is effectively and efficiently delivering on its contractual obligations to the FAA. FAA plans to complete this action by December 31.

The following pages contain textual versions of the graphs and charts found in this document. These pages were not in the original document but have been added here to accommodate assistive technology.

# Report on Training Failures Among Newly Hired Air Traffic Controllers

## Section 508 Compliant Presentation

### **Figure 1. FAA Actual and Projected Air Traffic Controller Hiring Fiscal Year 2005 through Fiscal Year 2017**

In fiscal year 2005, 519 air traffic controllers were hired.

In fiscal year 2006, 1,116 air traffic controllers were hired.

In fiscal year 2007, 1,815 air traffic controllers were hired.

In fiscal year 2008, 2,196 air traffic controllers were hired.

Projected air traffic controller hiring for fiscal year 2009 is 1,914.

Projected air traffic controller hiring for fiscal year 2010 is 1,871.

Projected air traffic controller hiring for fiscal year 2011 is 1,840.

Projected air traffic controller hiring for fiscal year 2012 is 1,764.

Projected air traffic controller hiring for fiscal year 2013 is 1,733.

Projected air traffic controller hiring for fiscal year 2014 is 1,616.

Projected air traffic controller hiring for fiscal year 2015 is 1,498.

Projected air traffic controller hiring for fiscal year 2016 is 1,458.

Projected air traffic controller hiring for fiscal year 2017 is 1,409.

Source: Federal Aviation Administration

### **Table 1. New Hire Training Attrition Data Since Fiscal Year 2005 National Training Database Figures versus Facility Figures (data are as of April 10, 2008)**

Miami Center: National Training Database Attrition Figure: 13. Facility Attrition Figure: 21.

Washington Center: National Training Database Attrition Figure: 13. Facility Attrition Figure: 16.

Southern California TRACON: National Training Database Attrition Figure: 6. Facility Attrition Figure: 11.

Northern California TRACON: National Training Database Attrition Figure: 1. Facility Attrition Figure: 4.

Potomac TRACON: National Training Database Attrition Figure: 4. Facility Attrition Figure: 6.

Atlanta TRACON: National Training Database Attrition Figure: 5. Facility Attrition Figure: 6.

Chicago TRACON: National Training Database Attrition Figure: 0. Facility Attrition Figure: 1.

### **Figure 2. Training Failures by Facility Type**

37 of the 48 training failures in our sample, or about 77 percent, occurred at en route centers while only 11, or about 23 percent, occurred at terminal facilities.

Source: Federal Aviation Administration Air Traffic Control Facilities listed in exhibit B

### **Table 2. Newly Hired Controllers in Training Fiscal Year 2005 through Fiscal Year 2008 (data are as of May 28, 2008)**

The numbers of newly hired controllers at terminal facilities for fiscal year 2005 through 2008 were as follows: 48 in fiscal year 2005, 169 in fiscal year 2006, 1,027 in fiscal year 2007, and 1,284 in fiscal year 2008.

The numbers of newly hired controllers at en-route facilities for fiscal year 2005 through 2008 were as follows: 650 in fiscal year 2005, 1,027 in fiscal year 2006, 1,375 in fiscal year 2007, and 1,426 in fiscal year 2008.

Source: FAA Air Traffic Organization

### **Figure 3. En Route Training Failures by Training Segment**

All of the 37 en route failures were able to complete the flight data portion of training; however, 24 of the 37 failures could not pass the radar associate portion while the remaining 13 failures could not pass the radar position portion.