Office of Inspector General
Audit Report

ENHANCED OVERSIGHT OF STAFFING AND TRAINING AT FAA'S CRITICAL FACILITIES IS NEEDED TO MAINTAIN CONTINUITY OF OPERATIONS

Federal Aviation Administration

Report Number: AV-2012-039
Date Issued: January 12, 2012

Memorandum

U.S. Department of Transportation
Office of the Secretary of Transportation
Office of Inspector General

Subject: ACTION: Enhanced Oversight of Staffing and Training at FAA's Critical Facilities Is Needed To Maintain Continuity of Operations Federal Aviation Administration Report Number AV-2012-039

Date: January 12, 2012

From: Jeffrey B. Guzzetti
Assistant Inspector General
for Aviation and Special Program Audits

Reply to Attn. of: JA-10

To: Acting Federal Aviation Administrator

Ensuring that the Federal Aviation Administration's (FAA) most critical facilities are fully staffed with qualified air traffic controllers is vital to maintain the safety of the National Airspace System (NAS). Since fiscal year (FY) 2005, FAA has begun hiring and training over 12,000 new controllers to offset the impending retirements of those hired after the 1981 controller strike. With so many veteran controllers leaving, FAA faces the risk of not having enough certified professional controllers (CPC)[1] to operate its busiest and most complex air traffic control facilities. These include locations such as Southern California, Atlanta, Chicago, and New York, many of which now have newly hired controllers.

At the request of the Chairman and Ranking Member of the Subcommittee on Transportation, Housing and Urban Development, and Related Agencies, Committee on Appropriations, we reviewed controller training and staffing at FAA's most critical air traffic control facilities to determine if FAA is positioned to ensure the continuity of facility operations.

This audit was conducted between October 2010 and October 2011 in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology.

[1] Certified Professional Controllers (CPCs) are controllers who have achieved full certification on all positions within their assigned area.

RESULTS IN BRIEF

Enhanced oversight of staffing and training at FAA's critical facilities is needed to maintain continuity of air traffic operations. Critical facilities face a potential shortage of CPCs as they have higher rates of retirement eligibility, controllers-in-training, and training attrition than the national average. For example, 15 of the 21 critical facilities we reviewed had a higher percentage of their controllers in training than the national average of 25 percent. Between FY 2008 and FY 2010, critical facilities also lost 40 percent of their trainees to attrition, compared to the national average of 24 percent. A contributing factor is that the complexity of the locations makes it more difficult for inexperienced new hires to certify. Yet, FAA's national training program[2] has not provided critical facilities with the training resources they need to help slow staffing shortfalls. As a result, some facility managers have developed their own training programs to supplement lab and classroom training. However, as FAA begins deploying Next Generation Air Transportation System (NextGen)[3] technologies, critical facilities will require even more training resources for both veteran and new controllers. Without a consistent, national approach to address critical facilities' staffing and training needs now, it will be difficult in the short term for FAA to ensure continuity of their operations and, in the long term, effectively transition them to NextGen.

We made five recommendations to assist FAA in ensuring the continuity of operations at its most critical facilities.

BACKGROUND

Although all air traffic facilities are important to the operation of the NAS, we focused our review on the staffing and training resources for 21 critical facilities. These facilities were selected based on airspace complexity, number of operations, and the number of air carriers serving that location. FAA concurred with our determination that these facilities are critical. We acknowledge that this list is not all inclusive, and other facilities may also be critical to NAS operations.

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 facility training at their assigned location. Those controllers who are unable to pass the training process are either (1) transferred within their assigned facilities to a new area of operation, (2) transferred to a less complex facility to begin the training process again, or (3) terminated from employment

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[2] Air Traffic Control Optimum Training Solution (ATCOTS) is a critical component of FAA's plans to hire and train 15,000 new controllers by 2018. In 2008, FAA awarded a contract to Raytheon to provide training support for new and existing controllers and to help modernize the training program.

[3] NextGen refers to the ongoing transformation of the NAS from a ground-based system of air traffic control to a satellite based system of air traffic management.

with FAA. While certification times for individual controllers may vary, FAA's goal is to have candidates complete the training process in 2–3 years.

FAA HAS NOT ESTABLISHED THE STAFFING AND TRAINING RESOURCES NEEDED AT ITS MOST CRITICAL FACILITIES

Despite critical facilities' higher rates of retirement eligibility, controllers in training, and attrition, FAA has not provided the staffing and training resources they need to retain new hires. NextGen deployment over the next several years will further strain training resources as both new hires and veteran controllers must learn new air traffic procedures.

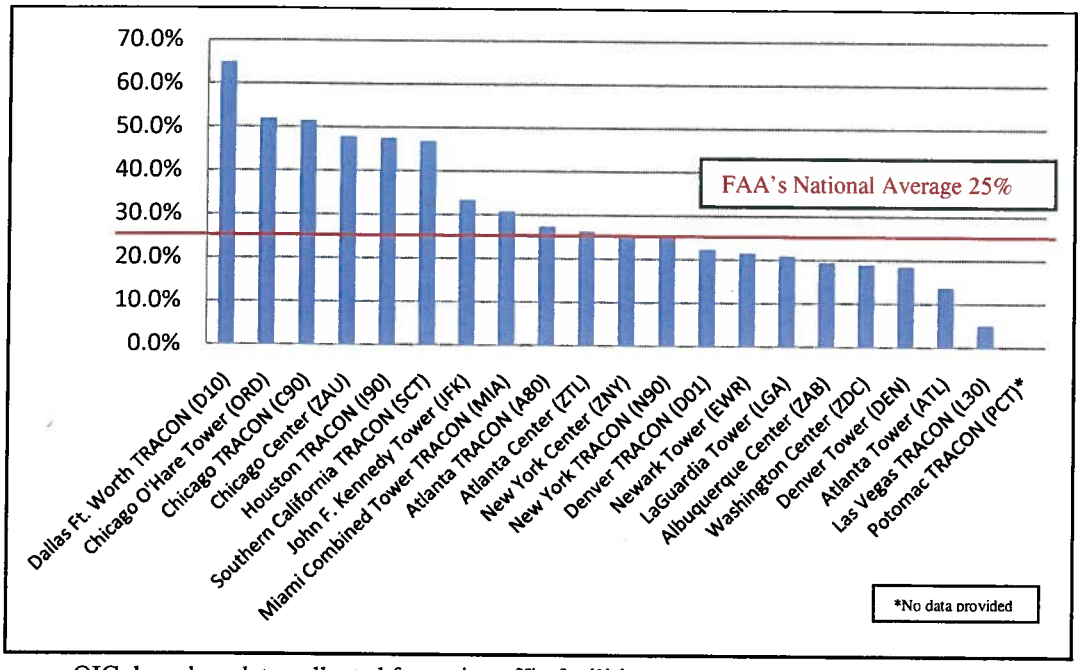
Controllers Eligible To Retire at Critical Facilities Exceed the National Average

Critical facilities have higher levels of CPCs eligible to retire than the national average. At the 21 facilities we reviewed, 32 percent[4] of CPCs on average, were retirement eligible, compared to the national facility average[5] of 25 percent. This is of particular concern at Terminal Radar Approach Control (TRACON) locations. For example, we found that 65 percent of CPCs at the Dallas-Ft. Worth TRACON and 51 percent of CPCs at the Chicago TRACON were eligible to retire (see figure 1). Overall, 10 of the 21 critical facilities we reviewed had more than 25 percent of CPCs eligible to retire.

[4] According to retirement data collected from facility management during the site visits.

[5] The national average includes all FAA air traffic facilities regardless of the complexity, traffic volume, and number of air carriers serving that location.

Figure 1. Percentage of CPCs Eligible To Retire at Critical Facilities



Source: OIG, based on data collected from air traffic facilities.

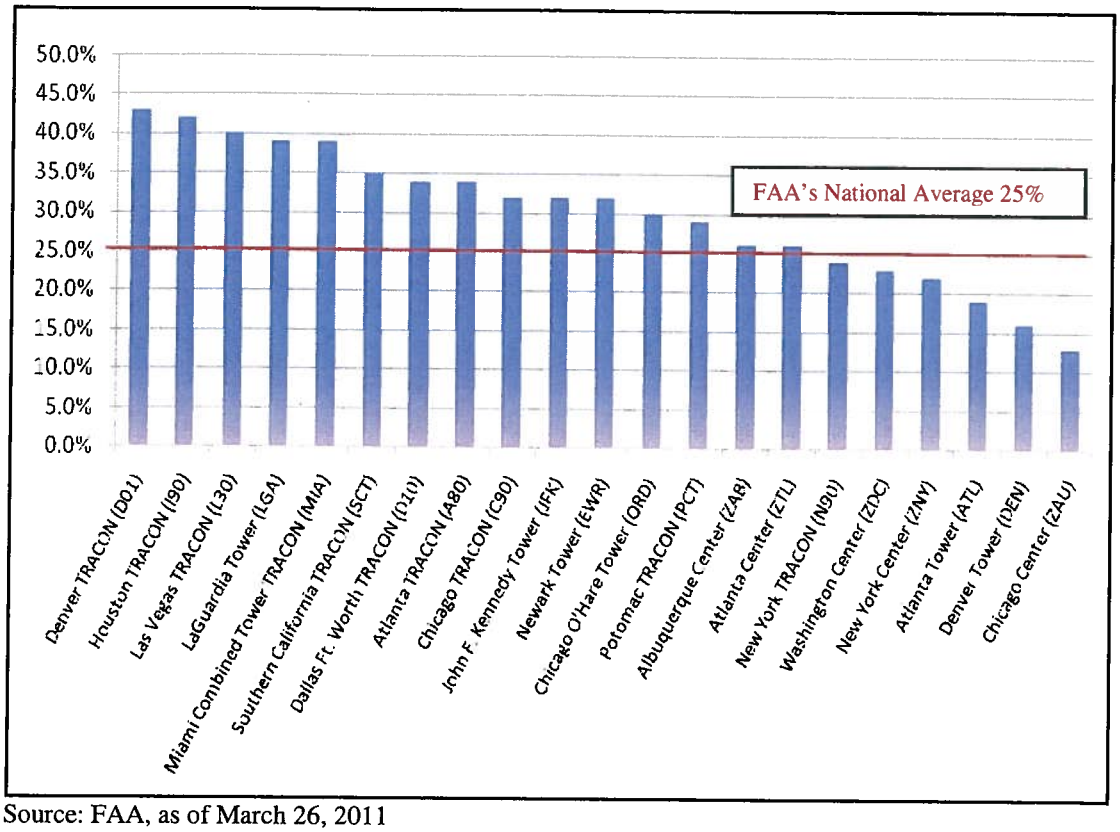
Moreover, more controllers may retire at these critical facilities than FAA expects. While FAA has data on nationwide retirement eligibility rates, we found that 2 of the 21 facilities could not provide the data. For example, the Potomac TRACON staffing manager did not know how many controllers were eligible to retire and has not provided this information to date. The Atlanta TRACON's retirement eligibility data was also unavailable at the time of our visit. FAA's plans for projecting controller retirements are based on historical data, which suggest that many controllers do not retire as soon as they become eligible. In 2010 only 16 percent of controllers retired the first year they were eligible, but those remaining controllers are eligible to retire at any time.

Percentage of Controllers-in-Training at the Majority of Critical Facilities Exceeded the National Average

Fifteen of the 21 critical facilities we reviewed had a higher percentage of controllers in training than the national average, which was 25 percent in FY 2010. For example, Denver TRACON and LaGuardia Air Traffic Control Tower (ATCT) had 43 percent and 39 percent, respectively, of their workforce in training (see figure 2 below). In June 2008,[6] we reported that facility managers and union officials stated that to achieve effective controller training while maintaining daily operations, the maximum percentage of developmental controllers should be limited to between 20 and 25 percent of a facility's total controller workforce.

[6] OIG Report Number AV-2008-055, "Review of the Air Traffic Controller Facility Training Program," June 5, 2008. OIG reports are available on our Web site at http://www.oig.dot.gov/.

Figure 2. Percentage of Workforce in Training at Critical Facilities



Source: FAA, as of March 26, 2011

The percentage of controllers in training at critical facilities has increased due to FAA's hiring wave that started in FY 2005.[7] Some critical facilities have taken measures to address the high volume of trainees. For example, the Chicago O'Hare Tower is using CPCs to supplement classroom and simulation[8] training for new hires. However, this makes it more difficult for CPCs to maintain normal operation schedules while more of their time is used to train new controllers.

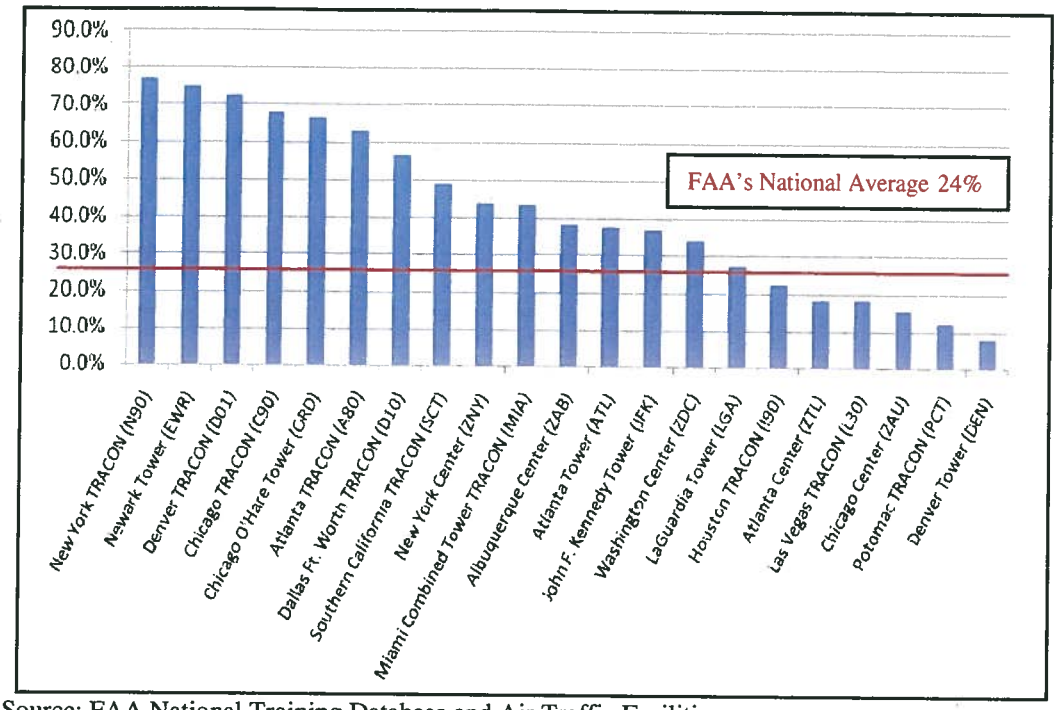
Training Attrition Rates at Critical Facilities Exceed the National Average

Training attrition rates at critical facilities exceed the national average rates. Between FY 2008 and FY 2010, the average training attrition rate for critical facilities was 40 percent, far above the national average of 24 percent (see figure 3 below).

[7] Since FY 2005 the FAA has taken action to hire and train over 12,000 new controllers to replace those hired after the 1981controller strike.

[8] Simulation training reduces controllers' overall training time and better prepares them for on-the-job training through exposure to different air traffic scenarios.

Figure 3. Controller Training Attrition Rates at Critical Facilities, FYs 2008–2010



Source: FAA National Training Database and Air Traffic Facilities

One reason for the growing training attrition rate at these sites is that FAA has placed a large number of inexperienced new hires at its most critical and complex air traffic control facilities. For example, at the New York TRACON, 77 percent of new controllers who completed facility training between FY 2008 and FY 2010 did not become CPCs. Likewise, the Southern California TRACON had 200 controllers enter on-the-job training since September 2007, but as of January 2011—more than 3 years later—only 58 had certified. Conversely, in FY 2010, the average certification time for controllers-in-training nationwide was approximately 2 years for Terminal facilities.

Critical facility managers stated that these new hires require more training resources and are less prepared to begin training. As a result, managers at several of the higher-level terminal facilities we visited recently requested that FAA only assign them controllers with prior air traffic experience (known as certified professional controllers in training, or CPC-ITs).

Facility managers at some of the busiest critical facilities—such as the Chicago, Atlanta, and Southern California TRACONs—also developed assessment tests to evaluate potential transfers from lower level facilities. These managers plan to test candidates with air traffic simulator problems based on operations at the facility. Facility managers believe that selecting candidates based on their performance on

a skills assessment is the key to improving the success rates of trainees. FAA approved the assessment program for these three sites in May 2011.

FAA Has Not Provided Critical Facilities Adequate Training Resources and Support

Despite critical facilities' complexity and higher training and attrition numbers, FAA has not provided adequate training support to all critical facilities. For example, facility management at Albuquerque Center stated that FAA's Air Traffic Control Optimum Training Solution (ATCOTS)[9] program reduced their training resources from 20 to 4 instructors, leaving the facility without enough support to cover all training needs. Consequently, the facility is supplementing training resources with CPCs, which reduces resources needed for effective air traffic operations. This raises concerns over the effectiveness of the training support that FAA's ATCOTS provides. As we previously reported, FAA faces significant challenges in achieving its goals for ATCOTS due to contract costs and fees far exceeding baseline estimates. Moreover, those funds have only been sufficient to support existing training methods and procedures; innovations to reduce training time and cost have not been implemented.

This problem is largely due to FAA initially underestimating how many controllers would need training when it launched ATCOTS. Our 2010 report recommended that FAA evaluate Raytheon's staffing methodology to determine whether facilities are receiving sufficient training and administrative support. In February 2011, the ATCOTS Program Office deployed a resource allocation tool and training priority index for each air traffic facility. This tool incorporates numerous factors such as air traffic complexity, staffing, training load, and impact to the NAS. The ATCOTS Program Office uses this data-based analytical tool to validate a facility's staffing request. However, even with FAA's new tool, managers stated that they still do not have enough resources for an effective training program. For example:

- The Dallas TRACON used to provide training during two shifts a day; however, in FY 2010 the ATCOTS program office reduced the number of hours provided by contract instructors by 20 percent. As a result, the facility can only provide training during one shift a day.

- FAA managers at the Washington Center stated that ATCOTS program office reduced the facility's training resources by approximately 35 percent. As a result, they have to continuously modify their training program to keep up with the demand of training new hires arriving at the facility. Training requirements

[9] OIG Report No. AV-2010-126, "FAA's Air Traffic Controller Optimum Training Solution Program: Sound Contract Management Practices Are Needed to Achieve Program Outcomes," September 2010.

at the Washington Center will be increasing as the facility received 28 new hires between April and August 2011.

We also found critical facilities that have a high volume of trainees but not enough contract instructors to take full advantage of training simulators. For example, it is difficult to schedule simulator sessions at Las Vegas TRACON because there are not enough instructors. Likewise, the Washington Center is experiencing training bottlenecks at the simulation laboratory because the facility does not have enough training support to operate multiple labs.

The lack of available training resources from the ATCOTS program has led to several managers developing their own training programs. For example, in 2009 the Southern California TRACON and NATCA collaborated to form a training workgroup to supplement classroom and lab simulation training. The Southern California TRACON relies on these training support resources to supplement contract instructors and meet current training demands. At the Albuquerque Center, managers assign a training team to each of the facility's air traffic control areas, which consist of a front line manager, a training specialist, and a contract instructor. The goal is for controllers to receive more tailored training to help them successfully certify.

FAA's training mission will become more challenging as it begins to implement NextGen capabilities, which will require retraining the entire controller workforce in the NAS. It will be particularly difficult for critical facilities as they train large numbers of new hires and simultaneously retrain veteran controllers on new NextGen procedures. For example, over the next 2 years, the Las Vegas TRACON is undergoing a major airspace redesign to optimize arrivals and departures. The new airspace will require the facility to retrain all controllers. According to management at the Las Vegas TRACON, the facility requires additional training resources to staff its new tower simulator that will train new controllers within the district. The facility requested eight instructors to train the new hires on the simulator; however, they only received three additional instructors. As FAA implements NextGen, managing the controller training program is critical to ensure that instructor shortages do not impact new hire training.

CONCLUSION

The United States has one of the safest air traffic systems in the world, but the continued safety of the NAS relies on having a fully staffed, well-trained air traffic controller workforce. However, the Nation's most critical air traffic control facilities are facing significant staffing shortages of fully certified controllers which could lead to potential risks to their daily operations. While FAA has begun working to better allocate staffing, it still has not provided the training support these complex facilities need to slow attrition and ensure the success of new hires.

Without a consistent staffing approach tailored to critical facilities' needs, the Agency will remain poorly positioned to prevent disruptions to air traffic operations throughout the NAS and effectively transition its controllers to the next generation of air traffic management.

RECOMMENDATIONS

To better ensure the continuity of operations at FAA's most critical facilities, we recommend that the Agency:

1) Report annually on controller retirement eligibility, controllers in training, controller attrition, and hiring projections for all critical facilities in FAA's controller workforce plan.

2) Where appropriate, assign CPC-ITs to higher level critical terminal facilities as opposed to inexperienced new hires.

3) Determine whether the skills assessment test implemented at several facilities would be beneficial at all critical terminal facilities.

4) Implement best practices such as the training workgroups developed at the Southern California TRACON and the Albuquerque Center at other critical facilities where feasible.

5) Review data collected since the deployment of the resource allocation tool to determine whether adjustments are needed at critical facilities to ensure adequate training resources are provided to meet the challenge of deploying NextGen.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided a draft of this report to FAA on November 3, 2011. We received a response from FAA on December 14, 2011, which is included in its entirety as an appendix to this report. FAA partially concurred with recommendation 1 and concurred with recommendations 2, 3, 4, and 5.

For recommendation 1, FAA stated that it agrees the recommended data components are essential for assessing overall staffing status but does not agree that the data should be part of the annual controller workforce plan. FAA believes that including these data could reduce the clarity of the annual plan and result in a misleading snapshot of facility staffing and hiring needs. Because FAA has agreed to make these data available to FAA's congressional committees of jurisdiction and to our office, we consider this recommendation closed.

In its response, FAA expressed concern about the accuracy and consistency of the retirement eligibility rates that we cite in this report for some critical facilities. FAA stated that the retirement eligibility data provided to us by individual facility managers did not match the data in FAA's centralized personnel records database. We utilized the data that we received from FAA facility managers in our analysis because they were reported directly to us by each FAA facility responsible for day-to-day air traffic operations. FAA has not reconciled these two sets of data and should perform a review of controller retirement eligibility if the Agency is concerned that headquarters and facility staff do not agree on the number of controllers currently eligible to retire.

ACTIONS REQUIRED

We are closing recommendations 1, 2, and 5 since FAA has taken the actions necessary to address them. FAA has also provided acceptable actions and timeframes for recommendations 3 and 4, and we consider these recommendations resolved but open until the planned actions are complete.

We appreciate the courtesies and cooperation of FAA representatives during this audit. If you have any questions concerning this report, please call me at 202-366-0500 or Bob Romich, Program Director, at (202) 366-6478.

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EXHIBIT A. SCOPE AND METHODOLOGY

We conducted this performance audit in accordance with generally accepted Government auditing standards prescribed by the Comptroller General of the United States. As required by those standards, we obtained evidence that we believe provides a reasonable basis for our findings and conclusions based on our audit objective. The audit was conducted between October 2010 and October 2011, and included site visits to Federal Aviation Administration (FAA) Headquarters and 21 FAA critical facilities (see Exhibit B). We determined the critical facilities based on many factors, including complexity of airspace, number of operations, air traffic controller staffing levels, and the number of air carriers serving that location. FAA concurred with our selection consisting of 16 Terminal facilities (7 Air Traffic Control Towers and 9 Terminal Radar Approach Control facilities or TRACONs) and 5 En Route Centers.

During the audit, we interviewed FAA Headquarters officials and collected training and staffing data from the Financial Analysis and Process Reengineering Office and the Office of Technical Training (AJL). We also collected safety related data regarding operational errors during on-the-job training from the Director of Safety, Quality Assurance Office (AJS). In addition, we conducted site visits to all 21 critical facilities: 6 during the survey phase of the audit and 15 during the verification phase. During the site visits, we collected staffing and training data and interviewed FAA management, including Staff and Training Support Managers, to obtain their opinions about the staffing levels and the training program at each of the facilities. We compared the data collected during the site visits to the data provided by FAA Headquarters. Finally, we analyzed the data collected to evaluate FAA's plan to staff and train controllers at the Agency's most critical air traffic control facilities and determine significant trends in staffing composition, training, retirements, attrition, and hiring.

To determine whether FAA has adequate resources to staff its critical facilities, we collected and analyzed staffing data from FAA Headquarters and during the site visits to determine the staffing range and composition for each of the 21 facilities. We also determined the number of controllers eligible to retire at each facility, as well as the number approaching mandatory retirement in the next two years. In addition, we collected controller productivity reports (e.g., overtime, operations per year). We compared the data collected during site visits to the data provided by FAA Headquarters to identify discrepancies, if any.

To evaluate FAA's plan to train controllers at these 21 facilities and determine whether adequate training resources exist, we discussed training support and the impact of training on safety with facility management during our site visits. In

addition, we collected and analyzed training data, including attrition rates between FY 2008 and FY 2010, from FAA Headquarters, the Office of Technical Training.

EXHIBIT B. FACILITIES VISITED OR CONTACTED

Atlanta Air Route Traffic Control Center (ZTL)

New York Air Route Traffic Control Center (ZNY)

Washington Air Route Traffic Control Center (ZDC)

Chicago Air Route Traffic Control Center (ZAU)

Albuquerque Air Route Traffic Control Center (ZAB)

Southern California Terminal Radar Approach Control (SCT)

New York Terminal Radar Approach Control (N90)

Potomac Consolidated Terminal Radar Approach Control (PCT)

Chicago Terminal Radar Approach Control (C90)

Dallas Terminal Radar Approach Control (D10)

Houston Terminal Radar Approach Control (I90)

Denver Terminal Radar Approach Control (D01)

Las Vegas Terminal Radar Approach Control (L30)

Atlanta Terminal Radar Approach Control (A80)

Atlanta International Air Traffic Control Tower (ATL)

Chicago O'Hare Air Traffic Control Tower (ORD)

Denver Air Traffic Control Tower (DEN)

John F Kennedy Air Traffic Control Tower (JFK)

Newark Air Traffic Control Tower (EWR)

La Guardia Air Traffic Control Tower (LGA)

Miami Combined Air Traffic Control Tower and Terminal Radar Approach Control (MIA)

EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT

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APPENDIX. AGENCY COMMENTS

Federal Aviation Administration

Memorandum

Date: DEC 14 2011

To: Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation (AAE-1)

Subject: Office of Inspector General (OIG) Draft Report on Staffing and Training at Critical Facilities

Since the Federal Aviation Administration (FAA) increased air traffic controller hiring in the mid-2000's to replace the anticipated retirement of those hired after the 1981 controller strike, the agency has progressively improved how controllers are hired, assigned, trained, certified and transferred so that facilities across the country have adequate staffing to provide safe and efficient operations in the National Airspace System (NAS). The FAA has produced more than 5,000 Certified Professional Controllers (CPCs) over the past five years and has in place a hiring and training plan that is responsive to changes in traffic and in the controller workforce. In 2011, the agency certified 1,000 controllers by the end of July, meeting the fiscal-year goal two months ahead of schedule. The FAA also continues to meet the overall goals for hiring, time-to-certification and number of controllers certified.

Additional steps being taken to improve controller staffing and training include:

- **Innovative Screening** - The FAA is piloting the Operational Assessment Program (OAP), which screens applicants who want to transfer to Level 10 and above Terminal Radar Approach Control (TRACON) facilities. Additional description is included in the response to recommendation three below.

- **Enhanced Training** - The FAA deployed additional simulators and training equipment to the field to expand the use of "e-learning" content delivery, enhance realism for training scenarios, and increase automation. Additional description is included in the response to recommendation five below.

- **Improved Oversight** - The agency improved its oversight of the Air Traffic Control Optimum Training Solution (ATCOTS) contract, which is a supplemental

training resource for air traffic facilities. Additional description is included in the response to recommendation five below.

- **Best Practices** - In April 2011, FAA initiated an in-depth review of air traffic controller training utilizing five individuals with significant experience in aviation-related training and safety programs together to delve into air traffic training as part of a nationwide Call to Action on air traffic control safety and professionalism. Additional description is included in the response to recommendation four below.

The FAA has some concerns about the accuracy and consistency of the retirement eligibility statistics in the OIG draft report. Specifically, because OIG relied upon individual facility reports rather than a centralized personnel database, there appear to be inaccuracies and inconsistencies in OIG's reported figures. For example, the OIG's reported retirement eligibility rate for ZAU assumes that 176 certified controllers were retirement eligible as of March 2011, while data from FAA personnel records indicated that only 113 met the age and service criteria necessary for retirement eligibility. Overall, based upon data from centralized FAA personnel records, retirement eligibility rates at the identified critical facilities are similar to those at all other facilities.

FAA has devoted considerable effort and resources to ensuring that it hires, trains, and places the controller workforce as effectively as possible, nonetheless significant challenges remain. For example, we recognize the "failure rate" is unacceptably high at a number of key facilities and efforts to specifically address this and other issues are underway.

RECOMMENDATIONS AND RESPONSES

OIG Recommendation 1: Report annually on controller retirement eligibility, controllers in training, controller attrition, and hiring projections for all critical facilities in FAA's controller workforce plan.

FAA Response: Partially concur. The FAA currently generates the recommended data during its annual update to the Air Traffic Controller Workforce Plan. FAA agrees that these data components are essential in helping to assess the overall staffing status at FAA air traffic facilities; however, we do not concur that including this detailed data in the published "Workforce Plan" for the facilities identified in this report will enhance the utility of the report for Congress, the general public, or other key stakeholders, and we are concerned that in this context it could actually reduce clarity.

Data such as retirement eligibility, trainee percentage, and controller attrition play a significant role in performing the analysis necessary to generate information on air traffic controller staffing and hiring needs. FAA completes a rigorous analytical process each year to examine the retirement eligibility profile of the current workforce, to develop detailed retirement and attrition forecasts, and to estimate the impact of future new hire demand on each facility's training capacity. All of these components work together to

present a more complete picture of facility staffing and hiring needs, but a one-year facility staffing snapshot may be misleading. For example, even at an aggregate level, there may be significant divergence between retirement eligibility and actual retirements, which can produce a misleading snapshot. Specifically, while more than 3,600 air traffic controllers were eligible to retire in fiscal year (FY) 2011, only 15% (554) actually retired. Accordingly, providing retirement eligibility information requires considerable context. Such analysis becomes subject to an even more complex set of variables and uncertainty at the individual facility level. For example, FAA tracks net attrition at each facility, so that a certified controller who transfers between facilities (i.e., a CPC-IT) will be a loss for one facility, but a gain for another facility. Accordingly, some facilities actually have more gains than losses, which results in a negative loss rate.

Overall, while we agree that this data provides useful input to FAA's staffing analysis, we do not agree that it would be a useful or constructive addition to the annual controller workforce plan output. The FAA is however, happy to share this data with OIG and others, as appropriate, and requests that this recommendation be closed.

OIG Recommendation 2: Where appropriate, assign CPC-ITs to higher level critical terminal facilities as opposed to inexperienced new hires.

FAA Response: Concur. In order to staff NAS-critical facilities with experienced controllers, beginning in FY 2011, the Terminal Services organization restricted placement of inexperienced new hires (such as from the general public and Collegiate Training Initiative hiring sources) into Level 11 and 12 facilities. To attract internal CPC movement to the critical facilities, the FAA offered Permanent Change of Station funds and relocation bonuses. During the year, the FAA opened vacancy announcements seeking CPC volunteers to transfer to NAS-critical facilities. There is an open-continuous vacancy announcement for New York TRACON and the FAA distributed a recruitment video to promote Chicago TRACON. The agency held three centralized selection panels to select new-hire controllers, and selecting officials carefully reviewed hundreds of applications to determine the best candidates for air traffic control positions at the various ATC Level facilities. The FAA met all FY 2011 hiring goals. For FY 2012, some NAS-critical facilities have requested a combination of experienced ATC new hires, including former military/FAA controllers, and CPC-IT transfers. The actions taken to address this recommendation were completed in October 2011, and we request that this recommendation be closed.

OIG Recommendation 3: Determine whether the skills assessment test implemented at several facilities would be beneficial at all critical terminal facilities.

FAA Response: Concur. The FAA is pilot testing the Operational Assessment Program (OAP), which screens applicants who want to transfer to Level 10 and above TRACON facilities. The program includes a knowledge exam and skills assessment as part of the pre-selection criteria, providing the hiring manager with additional data to consider in making the hiring decisions. OAP is intended to screen out applicants who lack skills to succeed at more complex and NAS-critical facilities. Chicago TRACON is the first

facility to use the program, completing assessments on 39 CPCs bidding to that facility in fiscal year 2011. Southern California and Atlanta TRACONs are also OAP pilot sites.

The OAP has been developed for use at only these key sites and could not be used at other TRACONs without additional revision and development. Nevertheless, the FAA intends to review initial results of the pilot program by June 2012. The agency also intends to collect longitudinal data, including certification rates of CPCs selected during the pilot program. We anticipate that it will take up to two years to gather and evaluate sufficient data to indicate if OAP has actually improved certification rates at the key sites. Estimated completion date is July 1, 2014.

OIG Recommendation 4: Implement best practices such as the training workgroups developed at the Southern California TRACON and the Albuquerque Center at other critical facilities where feasible.

FAA Response: Concur. The FAA already implements training teams and coordination groups at various levels to discuss training and share best practices. In April 2011, the FAA brought five individuals with significant experience in aviation-related training and safety programs together to delve into air traffic training as part of a nationwide, "Call to Action," on air traffic control safety and professionalism. The Independent Review Panel (IRP) spent three months conducting fact-finding work and in-depth discussions with FAA leadership, union representatives, on-the-job training instructors, certified controllers, and certified professional controllers in training and training staff. The panel produced 49 recommendations and offered actionable suggestions for selecting new hires, training at the FAA Academy, assigning employees to operational facilities, keeping employee records, field training, simulation strategy, on-the-job training instructors, professional standards and organizational structure, among others. The report serves as a roadmap to increase workforce effectiveness for the FAA. As a result of the recommendations, we expect to significantly change how controllers are screened, hired, placed and trained. Through changes in how we evaluate employee skills and abilities earlier in the training program, we anticipate becoming more effective in staffing decisions. The ATO has established a team to oversee review and implementation of the Panel recommendations. Many of the recommendations are aligned with what the OIG found during this audit.

A collaborative team with headquarters, field management, training specialists and National Air Traffic Controllers Association (NATCA) representatives is developing a refresher/recurrent training program with input from many different facilities. A similar effort to improve skills of on-the-job training instructors is also underway, with another collaborative workgroup evaluating feedback from more than 500 controllers at different air traffic facilities. Developing a best practices database that instructors could utilize to adapt skills and training tactics was one of the IRP recommendations, and we will continue to look for opportunities to share best practices. However, the best practices of Southern California TRACON or Albuquerque Center may not be appropriate at all facilities. Staffing, availability of equipment or operations at facilities may preclude training teams being configured the same way at every facility. A central clearinghouse

for best practices and more collaborative work groups will facilitate the sharing of information. Estimated completion date is mid-year 2012.

OIG Recommendation 5: Review data collected since the deployment of the resource allocation tool to determine whether adjustments are needed at critical facilities to ensure adequate training resources are provided to meet the challenge of deploying NextGen.

FAA Response: Concur. A resource prioritization tool (Resource Allocation Tool) is now being used to determine priorities based on "training need." The need is primarily based upon facility staffing levels (assigned versus authorized), trainer-to-trainee ratio and the employees' phase in training (contract instructors are able to make more impact in a student's early phases of training). The goal was to develop an objective tool that can measure the training need of facilities without subjective input. Thus, the ATO is now able to compare the needs between an En Route and a Terminal facility, a Level 12, and a Level 6 facility. The tool assigns a priority index for each facility, but a team representing the program office, contractor, service unit, and operational facility determines actual deployment of resources. This review occurs frequently, but at least once a quarter to determine whether adjustments are needed.

FAA also took action to increase the availability of training and tools. For example, FAA deployed additional simulators and training equipment to the field to expand use of "e-learning" content delivery, enhance realism for training scenarios, and increase automation. The agency installed the SimFast terminal radar simulator capability at more than 50 locations previously without access to a terminal radar simulator. We deployed six additional Tower Simulator Systems to the field and the FAA Academy during 2011. By increasing use of simulators for refresher training, controllers have the opportunity to hone air traffic skills and increase technical proficiency.

The FAA also improved oversight of the Air Traffic Control Optimum Training Solution (ATCOTS) contract, which is a supplemental training resource for air traffic facilities. ATCOTS resources are available at approximately 160 facilities and the FAA Academy based on available funding and training needs at the facilities. The agency conducted a top-to-bottom review of the contract staffing strategy to ensure facility contract support budgets are based on an objective evaluation of training need. The ATO also requires monthly updates to the ATCOTS Annual Work Plan (AWP). Technical On-Site Representatives (TORs) communicate new or modified requirements that are critical to their facility's training needs and the program office and training management reviews all resources available to fulfill this request. If we determine that the ATCOTS contract will be used to fulfill this request, then these updates will be communicated through the En Route and Terminal service unit liaisons or Service Areas training staff, who will review and validate the requirements. Subsequently, these requirements will be sent to the contractor via the monthly AWP updates or Baseline Change Request process. Sometimes, this may involve redirecting the contract budget from a low priority high-level facility to a higher-priority lower level facility because our analysis indicates contractors would greater impact training at the lower level facility. A portion of the contractor's award fee is tied to how successful it is in meeting our staffing requirements.

Actions taken with regard to this recommendation are complete, and we request that it be closed.