
Office of Inspector General

Audit Report

Federal Contract Tower Program

Federal Aviation Administration

Report Number: AV-1998-147

Date Issued: May 18, 1998





Memorandum

**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Office of Inspector General

Subject: **INFORMATION:** Report on Audit of
Federal Contract Tower Program
Report No. AV-1998-147

Date: May 18, 1998

From: 
Lawrence H. Weintrob
Assistant Inspector General for Auditing

Reply To JA-1
Attn. Of:

To: Federal Aviation Administrator

We are providing this report for your information and use. Your May 8, 1998, comments to our April 14, 1998, draft report were considered in preparing this report. An executive summary of the report follows this memorandum.

In your comments to our draft report, you concurred with all four recommendations. We consider your comments and planned actions to be responsive to all recommendations. Therefore, the recommendations are considered resolved subject to the followup provisions of Department of Transportation Order 8000.1C.

We appreciate the cooperation and assistance provided by your staff during the audit. If I can answer any questions or be of further assistance, please contact me on x61992, or Alexis M. Stefani, Deputy Assistant Inspector General for Aviation, on x60500.

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Attachment

EXECUTIVE SUMMARY

Federal Contract Tower Program

Federal Aviation Administration

May 18, 1998

AV-1998-147

Objectives

The objectives of the audit were to determine whether the Federal Aviation Administration (FAA) realized the savings it expected from contracting the operation of Level I towers, whether FAA provided adequate oversight to ensure contract tower controllers met initial qualifications and received required training, and whether contract towers were staffed at appropriate levels.

Background

FAA provides air traffic control services through a system of facilities, including air traffic control towers (towers). Towers are categorized as Level I through Level V, with Level I towers having the lowest number of operations (take-offs or landings). In 1982, FAA began a pilot program to contract for air traffic control services for five Level I towers that were closed as a result of the Professional Air Traffic Controllers Organization strike in 1981. The program grew to 27 towers by 1993. In 1994, Congress provided funding for a multi-year program to convert FAA-operated Level I towers to contract operation. Later that year, FAA's Contract Tower Program Office awarded four contracts to three contractors. The program was further expanded by including towers at communities that never had an FAA-operated tower. As of November 1997, there were 160 contract towers (including 110 towers which were previously operated by FAA) and 22 FAA-operated Level I towers.

In March 1998, a United States District Court voided FAA's decision to privatize FAA-operated Level I towers. In the lawsuit, the National Air Traffic Controllers Association challenged FAA's privatization program as unlawful in that FAA failed to comply with Office of Management and Budget Circular A-76. The circular requires agencies to evaluate their functions to determine whether the functions are inherently governmental or commercial. Since FAA failed to perform the required analysis, the Court remanded the case to FAA for that purpose. Based upon that decision, additional Level I towers

EXECUTIVE SUMMARY

scheduled for conversion have been put on hold pending the Court's further review of FAA's required decision making process.

Results

The Contract Tower Program provided air traffic control services at a lower cost for 110 towers that were previously operated by FAA. The program also provided air traffic control services at 50 towers that FAA would not have staffed because they were too expensive to operate. In addition, we found contract tower controllers met initial qualification requirements and received required training. However, not all contract towers were staffed according to contract staffing plans and FAA paid for air traffic control services not delivered by the contractors. Although we found the quality of service between FAA-operated towers and contract towers was comparable, FAA should establish procedures to periodically review staffing levels at contract towers. Closer monitoring of staffing levels is necessary because staffing levels are based on contractor-prepared staffing plans and contract towers are staffed with fewer controllers than FAA-operated towers.

Contract Towers Reduce Operating Costs

In Fiscal Year (FY) 1993, FAA estimated that contracting Level I towers would result in annual savings of about \$200,000 per tower, or about \$20 million annually when all Level I towers were converted to contract towers. The Contract Tower Program has reduced costs to operate towers because contract towers are staffed with fewer controllers than when FAA operated the towers. For example, the Level I tower at the Texarkana Regional Airport in Texarkana, Arkansas, was staffed with 10 controllers when it was operated by FAA, but it is staffed with 6 controllers as a contract tower.

Although contracting the operation of Level I towers reduced costs, we could not determine the actual savings or determine how the savings were used. FAA's budget process did not identify or track actual savings from contract operations. For example, the FY 1998 budget submission to Congress for the Contract Tower Program only showed a net increase of \$5.7 million for the program to finance the operation of additional contract towers, including towers at locations that never had an FAA-operated tower. FAA was unlikely to staff those towers with its controllers because the cost of FAA-operated towers is more than the cost of contract towers.

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Contract Towers Controllers Met Qualification and Training Requirements

Contract tower controllers met FAA's qualification requirements. Federal regulations require that anyone working as a controller hold an FAA-issued Control Tower Operator certificate. Further, controllers must hold an FAA-issued facility rating, which is an endorsement that the individual has demonstrated the competence, qualifications, and skills required to control air traffic at the tower to which they are assigned. We selected 36 contract controllers and determined all 36 possessed the required certificates. Additionally, 35 of the 36 controllers reviewed possessed a facility rating for their respective contract tower. The remaining controller was recently hired and was in the process of obtaining a facility rating.

Contract tower controllers also received required training. Training requirements for contract controllers and FAA controllers were the same. We reviewed Air Traffic Service comprehensive facility evaluation reports for 19 contract towers and 10 FAA-operated Level I towers and found evaluators identified only minor problems that were similar at both contract towers and FAA-operated towers. All training problems identified during facility evaluations were corrected according to the follow-up evaluation reports, indicating all required training had been received. Consequently, we concluded FAA provided adequate oversight to ensure contract tower controllers received required training.

FAA Needs to Ensure Contract Towers Are Staffed at Appropriate Levels

The appropriate level of staffing for air traffic control facilities has long been controversial. Although FAA has staffing standards for estimating the current and future need for controllers, FAA has acknowledged these standards are limited in making precise estimates of staffing requirements for individual facilities. In response to a Congressional directed study, the Transportation Research Board published a report in 1997 entitled "Air Traffic Control Facilities, Improving Methods to Determine Staffing Requirements." The report concluded that FAA staffing standards do not provide accurate predictions of staffing requirements at individual facilities, and that the current standards cannot be modified to provide stand-alone estimates of individual facility staffing requirements. Since staffing standards could not be relied upon, FAA requested that contractors prepare detailed staffing plans showing the number of controllers and the work schedule for each contract tower in

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their contract proposal. FAA reviewed and approved the staffing plans and incorporated them into the contracts.

A 1997 FAA review of a contractor's payroll records for 3 fiscal years found contract towers were not staffed in accordance with contractual staffing plans for 35 of 36 contract towers. Overall, FAA concluded the contractor was overpaid about \$2.4 million for air traffic control services not provided, and FAA has requested the contractor to comply with contract staffing plans. However, as of March 1998, FAA had not taken action to recover the overpayment.

We performed a similar review for 13 contract towers operated by the other 2 contractors and found neither contractor provided the number of hours specified in the contracts. Of 35 payroll periods reviewed, the contractors provided fewer controller hours than specified in the contracts for 22 payroll periods. For example, according to the staffing plan for a Michigan contract tower, the contractor was required to provide 680 controller hours each pay period, but only provided 624 controller hours in one pay period sampled. For the 35 payroll periods reviewed, we found the contractors provided 413 fewer controller hours than the 14,933 hours required by the contract staffing plans. We did not compute overpayments because the purpose of this review was to determine whether the contractors staffed towers in accordance with contract staffing plans.

We discussed contract tower staffing levels with the Contract Tower Program Manager. He stated he did not believe the reduction in hours compromised safety, but was concerned that these contractors were billing FAA for services not delivered. FAA maintains contractors are required to staff towers in accordance with contractual staffing plans, while the contractors maintain that they are required to provide air traffic control services and are not bound to contract staffing plans.

Quality of Service Between FAA-Operated Towers and Contract Towers Was Comparable.

We found little difference in the quality of service at Level I towers, whether they were operated by FAA or by contractors. Interviews with airport operators and other users of contract towers indicated overall satisfaction with the service provided by contract tower controllers. We also reviewed data maintained by FAA's National Aviation Safety Data Analysis Center for 84 towers converted to contractor operations in FYs 1994 through 1996. For

EXECUTIVE SUMMARY

contract towers converted in FYs 1994 and 1995, we compared data for 2 years before and 2 years after conversion. For contract towers converted in FY 1996, we compared data for 1 year before and 1 year after conversion. Accordingly, we reviewed incidents that occurred between FY 1992 and FY 1997 for these 84 towers. We identified only 14 incident reports when the towers were operated by FAA and only 16 incident reports when the towers were operated by contractors.

Staffing Levels Should Be Closely Monitored

Although we found little difference in the quality of service between FAA-operated and contract towers, FAA will need to closely monitor staffing levels. This is necessary because (1) contract towers are staffed with fewer controllers than FAA-operated towers, and (2) staffing levels are based on contractor-prepared staffing plans since FAA does not have precise standards for estimating staffing requirements for individual facilities. It is also important that FAA monitor staffing levels at contract towers because FAA is anticipating significant increases in future air traffic. Closer monitoring of staffing levels should aid FAA in meeting its aviation safety goal of reducing US aviation fatal accident rates levels by 80 percent by 2007.

Government Performance and Results Act

The Contract Tower Program's performance plan is not adequate. The Government Performance and Results Act requires performance plans to contain outcome-oriented annual goals, measures to be used to gauge progress toward meeting the goals, and estimated resources required to meet the goals. Although the Contract Tower Program established three goals and three performance measures, only one of the three goals was satisfactory. Specifically, the goals of converting the remaining FAA Level I towers to contract towers and awarding follow-on contracts are output-oriented goals instead of outcome-oriented goals. The goal of overseeing improvements in efficiency, safety, and cost is outcome-oriented; however, none of the proposed performance measures will gauge the accomplishment of this goal. The Program Office should develop quantifiable performance measures that gauge progress toward meeting the goal of overseeing improvements in efficiency, safety, and cost.

EXECUTIVE SUMMARY

Recommendations

Several improvements are needed to ensure the Contract Tower Program is operated in a cost-efficient manner and contract towers maintain a comparable level of service to FAA-operated towers. We recommend FAA:

- ◆ Initiate action to recover the \$2.4 million in overpayments to one contractor during FYs 1994 through 1996.
- ◆ Direct contractors to staff contract towers in accordance with contract requirements and establish procedures to periodically review staffing levels at contract towers.
- ◆ Initiate detailed reviews of staffing levels for the remaining two contractors and recover any overpayments identified by the reviews.
- ◆ Develop quantifiable performance measures that gauge progress toward meeting the Government Performance and Results Act goal of overseeing improvements in efficiency, safety, and cost.

Management Position

FAA concurred with all recommendations and stated that it intends to initiate action to recover the overpayments by June 30, 1998. FAA is also currently reviewing staffing levels through audits of payroll data at the remaining two contractors. The reviews are scheduled to be completed by May 30, 1998, and if the reviews determine the contractors were overpaid, FAA will initiate action to recover the overpayments. Additionally, FAA indicated that the Contract Tower Program Office and the Contracts Division, Office of Acquisitions, will continue to ensure contract tower staffing levels are at appropriate levels. FAA also stated a revised Government Performance and Results Act goal will be developed. The changes will be completed by April 30, 1999, and made in conjunction with preparing a new statement of work for the follow-on contract for contract tower locations.

Office of Inspector General Comments

FAA's actions taken and planned are responsive to our recommendations.

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I. INTRODUCTION

Background

The Federal Aviation Administration (FAA) provides air traffic control services to the nation through a system of facilities, including air traffic control towers (towers). FAA categorizes towers as Level I through Level V, with Level I towers having the lowest number of operations (take-offs or landings). Level I towers are often referred to as low activity towers and have less than 35 operations per hour, while Level V activity is defined as 100 or more operations per hour. For example, in Fiscal Year (FY) 1996, Level I towers handled an average of about 73,000 operations, while Level V towers handled an average of nearly 500,000 operations. In addition to having fewer operations, air traffic controllers (controllers) at Level I towers rely on visual methods to control aircraft, whereas controllers at higher level towers generally use radar equipment to control air traffic. Consequently, air traffic at Level I towers is less complex to control than air traffic at higher level towers.

In 1982, FAA began the Contract Tower Program to reopen five towers that were closed as a result of the Professional Air Traffic Controllers Organization strike in 1981. The program was expanded to 15 towers in 1984, and had grown to 27 towers by 1993. In 1993, Vice President Gore's National Performance Review (NPR) endorsed the program, since experience had shown FAA could save money by contracting the operation of Level I towers. In its report, the NPR agreed with FAA that the program would save about \$20 million annually.¹ The NPR also recognized there would be up-front costs for this program. Those costs included expenses to relocate FAA controllers from Level I towers to other FAA-operated facilities.

In 1994, Congress provided funding for FAA to begin a multi-year program for converting air traffic control services at FAA-operated Level I towers to contract operations. Later that year, FAA's Federal Contract Tower Program Office (Program Office) awarded four national contracts to three contractors based on geographical areas corresponding to FAA regions. The Program Office planned to convert about 25 towers per year to contract operations and contract all Level I towers by FY 1997. However, the

¹ FAA's estimated savings were based on converting 99 FAA-operated Level I towers.

program was further expanded by including towers at communities that never had an FAA-operated tower. As of November 1997, there were 160 contract towers (including 110 towers which were previously operated by FAA) and 22 FAA-operated Level I towers. Exhibit A shows the number of contract towers by contractor and the cumulative dollar value of the contracts. FAA expected to convert the remaining FAA-operated Level I towers to contract operations during FY 1998.

In March 1998, a United States District Court voided FAA's decision to privatize FAA-operated Level I towers. In the lawsuit, the National Air Traffic Controllers Association challenged FAA's privatization program as unlawful in that FAA failed to comply with Office of Management and Budget Circular A-76. The circular requires agencies to evaluate their functions to determine whether the functions are inherently governmental or commercial. Since FAA failed to perform the required analysis, the Court remanded the case to FAA for that purpose. Based upon that decision, additional Level I towers scheduled for conversion have been put on hold pending the Court's further review of FAA's required decision making process.

Objectives, Scope, and Methodology

The objectives of the audit were to determine whether FAA realized the savings it expected from contracting the operation of Level I towers, whether FAA provided adequate oversight to ensure contract tower controllers met initial qualifications and received required training, and whether contract towers were staffed at appropriate levels.

The audit was conducted between May 1997 and January 1998 at FAA Headquarters Offices and other activities. Exhibit B lists the activities we visited or contacted during the audit. We reviewed applicable public laws, Federal regulations, and FAA orders on policies and procedures for administering the program. We also identified and evaluated management controls established by FAA to administer the program. We visited FAA's Great Lakes, Northwest Mountain, and Southwest Regional Offices, and eight FAA field facilities. We also visited 12 contract towers and met with the contractors' personnel as well as the airport operators and users. In addition, we met with officials from aviation associations affected by the program.

We reviewed the four national contracts and corresponding contract modifications issued between September 1994 and November 1997. We

also analyzed contractual data for the 19 contract towers operated under sole-source contracts. Additionally, we reviewed budget submissions and cost data for contract towers and FAA-operated Level I towers for FYs 1994 through 1998.

To determine whether controllers met initial qualifications, we judgmentally selected and reviewed applications, resumes, and Control Tower Operator certificates for 36 contract tower controllers. To determine the adequacy of controller training, we judgmentally selected 19 contract towers and 10 FAA-operated Level I towers and reviewed the most recent facility evaluation report prepared by FAA's Air Traffic Service Evaluation Division for each of the 29 towers. We relied on the results of the facility evaluation reports because the Evaluation Division is an independent organization within Air Traffic Service that performs comprehensive biennial facility evaluations of all FAA and contractor-operated air traffic facilities.

To determine if contract towers were staffed at appropriate levels, we compared actual controller staffing levels to the controller staffing levels prescribed in the national contracts. We judgmentally selected 13 contract towers operated by 2 of the 3 contractors² and analyzed the contractors' payroll records for 3 pay periods between April 1995 and September 1996. Records were not available for 4 of the 39 payroll periods selected because some towers were not in the program the full sample period and one contract tower changed contractors during the period. We used payroll records to compute the total number of hours worked by the controllers at each of these 13 towers. We then compared those hours to the number of controller hours the contractor was required to provide as stated in the national contracts.

In addition, we reviewed accident and incident³ data maintained by FAA's National Aviation Safety Data Analysis Center (NASDAC) for 84 FAA-operated Level I towers that were converted from FAA to contractor operation in FYs 1994 through 1996. NASDAC is an extensive data warehouse containing aviation safety information including accident and incident data. For contract towers converted in FYs 1994 and 1995, we compared data for 2 years before and 2 years after conversion. For contract towers converted in FY 1996, we compared data for 1 year before and

² Only two of the three contractors were reviewed because FAA had recently completed a similar review at the third contractor.

³ An incident is an occurrence other than an accident associated with the operation of aircraft, which affects or could affect the safety of operations.

1 year after conversion. Exhibit C describes the NASDAC databases used in our review. We used NASDAC reports to compare the number of incidents related to tower operations while they were operated by FAA to the number of incidents that occurred after the contractor took over operations. We did not validate the accuracy of the databases.

We also reviewed the Government Performance and Results Act (GPRA) goals and performance measures established by the Program Office for FYs 1998 through 2002.

We conducted the audit in accordance with Government Auditing Standards prescribed by the Comptroller General of the United States and included such tests as were considered necessary under the circumstances. We designed the audit steps to provide reasonable assurance of detecting abuse or illegal acts.

Prior Audit Coverage

There have been no prior Office of Inspector General audits of FAA's oversight of contract towers within the last 5 years.

II. FINDING AND RECOMMENDATIONS

Finding. FAA's Oversight of Contract Towers Is Effective, but Improvements Are Needed

Contract towers provided air traffic control services at a lower cost than when the towers were operated by FAA. Also, contract tower controllers met initial qualifications and received required training. However, not all contract towers were staffed according to contract staffing plans and FAA paid for air traffic control services not delivered by the contractors. Although we found the quality of service between FAA-operated towers and contract towers was comparable, FAA should establish procedures to periodically review staffing levels at contract towers. Closer monitoring of staffing levels is necessary because staffing levels are based on contractor-prepared staffing plans and contract towers are staffed with fewer controllers than FAA-operated towers. Closer monitoring of staffing levels should also aid FAA in achieving its safety mission goal of reducing aviation fatal accident rates from 1996 levels by 80 percent by 2007.

Contract Towers Reduce Operating Costs

FAA's costs to operate low activity towers by contract are less than the costs incurred when FAA operated the towers. This occurred because contract towers are staffed with fewer controllers. For example, the Level I tower at the Texarkana Regional Airport in Texarkana, Arkansas, was staffed with 10 controllers when it was operated by FAA, but it is staffed with 6 controllers as a contract tower.

Contractor, FAA, and airport officials identified several reasons why contract towers could operate with fewer controllers. First, contract tower controllers generally possess years of controller experience prior to employment, while FAA frequently assigns developmental controllers (trainees) to Level I towers who must undergo initial training. According to managers of FAA-operated towers, initial training can take up to 6 months. Second, contract tower managers are routinely scheduled to control air traffic, while FAA managers are usually not scheduled to control air traffic. Finally, many contract tower controllers are part-time employees while most FAA controllers are full-time employees. This provides the contractors more flexibility in preparing work schedules.

In FY 1993, FAA estimated that contracting Level I towers would result in annual savings of about \$200,000 per tower, or about \$20 million annually when all Level I towers were converted to contract towers. To illustrate, the FY 1997 actual contract cost to operate the Page Field, Florida, tower was \$260,410. We estimated that, if FAA had continued to operate this tower, it would have cost about \$525,400 annually, or about \$265,000 more than the contract cost. We performed similar comparisons for other contract towers and determined FAA's per tower estimate of savings was reasonable.

Although we found FAA reduced its costs by contacting the operation of Level I towers, we could not determine the actual savings or how the savings were used because in FAA's overall budget process only net program cost increases and decreases are identified. Consequently, FAA's budget did not identify or track actual savings from contract operations. We did identify that a significant number of FAA Level I tower controllers were reassigned to other facilities when their towers were converted to contract operations. Further, the number of contract towers has grown each year, resulting in net increases in FAA's budget submissions for the Contract Tower Program. For example, the FY 1998 budget submission to Congress for the Contract Tower Program only showed a net increase of \$5.7 million for the program to finance the operation of additional contract towers, including towers at locations that never had an FAA-operated tower. FAA was unlikely to staff those towers with its controllers because the cost of FAA-operated towers is more than the cost of contract towers.

Additionally, savings are further reduced by the nonrecurring costs required to relocate displaced FAA Level I controllers to other FAA-operated facilities. FAA budgeted almost \$29 million for relocation expenses for approximately 750 controllers for FYs 1994 through 1998.

Contract Tower Controllers Met Initial Qualifications and Received Required Training

We found that contract tower controllers met FAA qualification requirements. Controller qualification requirements for contract and FAA controllers are contained in Title 14 Code of Federal Regulations, Part 65, Certification: Airmen Other than Flight Crewmembers. This regulation requires that anyone working as a controller hold an FAA-issued Control Tower Operator (CTO) certificate. In addition, the controller must hold an FAA-issued facility rating, which is an endorsement that the individual has

demonstrated the competence, qualifications, and skills required to control air traffic at the tower to which they are assigned.

According to contractor officials, they only hire controllers who already hold CTO certificates. To verify this procedure, we judgmentally selected 36 controller applications to determine if controllers held CTO certificates prior to employment by the contractor. By reviewing records maintained by FAA's Airmen Certification Branch, we verified that all 36 controllers possessed the required CTO certificates prior to employment by the contractors.

Since contract tower controllers held CTO certificates when hired, they only needed a facility rating to work as a controller at a contract tower. Facility ratings were issued by CTO Examiners, who are FAA controllers designated to administer facility rating tests. The facility rating test was usually conducted within 30 days of a controller's assignment to a contract tower, and included the CTO Examiner observing the controller's ability to provide air traffic control services. We reviewed records maintained by FAA's Airmen Certification Branch and verified that 35 of 36 sampled controllers possessed FAA-issued CTO certificates with a facility rating for the contract tower to which they were assigned. The remaining controller was recently hired and was in the process of obtaining a facility rating.

Controller Training. In addition to meeting FAA qualification requirements, contract tower controllers received required training. Training requirements, which are the same for FAA and contract tower controllers, are outlined in FAA Order 3120.4H, Air Traffic Technical Training. All three contractors submitted training plans to satisfy these requirements with their contract proposals. FAA approved the training plans before the contracts were awarded and incorporated the plans into the contracts.

To determine how FAA ensured contract tower controllers received required training, we discussed the procedures for evaluating controller training with officials from FAA's Air Traffic Service Evaluations Division. Air Traffic Service evaluators perform independent and comprehensive biennial facility evaluations of all FAA and contractor-operated air traffic facilities. Included in these evaluations are detailed reviews of controller training. The evaluators review training documents, including facility training directives and individual controller records, to determine if required training was provided and properly recorded in the training records. Evaluators at FAA Headquarters and field locations indicated they

had not identified any significant training problems at contract towers, but stated the minor training weaknesses noted at contract towers are similar to those noted at FAA-operated Level I towers.

To substantiate the evaluators' statements, we judgmentally selected 19 contract towers and 10 FAA-operated Level I towers and obtained the most recent facility evaluation reports for those towers. These reports identified few training problems at either contract towers or FAA-operated Level I towers. The types of problems were similar at all facilities, and included minor items such as incomplete training record entries and controllers not receiving required verbal briefings on new procedures. All training problems identified during facility evaluations were corrected according to the follow-up evaluation reports, indicating all required training had been received. Consequently, we concluded FAA provided adequate oversight to ensure contract tower controllers received required training.

FAA Needs to Ensure Contract Towers Are Staffed at Appropriate Levels

The appropriate level of staffing for air traffic control facilities has long been controversial. Although FAA has staffing standards for estimating the current and future need for controllers, FAA has acknowledged these standards are limited in making precise estimates of staffing requirements for individual facilities. In response to a Congressional directed study, the Transportation Research Board published a report in 1997 entitled "Air Traffic Control Facilities, Improving Methods to Determine Staffing Requirements." The report concluded that FAA staffing standards do not provide accurate predictions of staffing requirements at individual facilities, and that the current standards cannot be modified to provide stand-alone estimates of individual facility staffing requirements. Since staffing standards could not be relied upon, FAA requested that contractors prepare detailed staffing plans showing the number of controllers and the work schedule for each contract tower in their contract proposal. FAA reviewed and approved the staffing plans and incorporated them into the contracts.

FAA Found Contractor in Noncompliance with Staffing Plan. The Program Office requested the Air Traffic Service Evaluations Division to determine the number of controllers assigned to contract towers as part of the FY 1996 biennial facility evaluations. Based on evaluation results, the Program Office had indications that one contractor may not have complied with the contract staffing plan. Consequently, the Program Office

requested FAA's Contracts Division to perform a detailed review of controller staffing at the 36 contract towers the contractor operated in FY 1996.

FAA's Contracts Division completed the review in September 1997 and found the contractor did not comply with the approved contract staffing plans for 35 of the 36 contract towers during FYs 1994 through 1996. For example, at one contract tower in Virginia, FAA determined the contractor provided 2,200 controller hours less than required by the staffing plan during FY 1996. This resulted in an overpayment of about \$52,000. The Contracts Division concluded the contractor was overpaid a total of about \$2.4 million for services not delivered during FYs 1994 through 1996. In November 1997, FAA notified the contractor that contract towers must be staffed in accordance with staffing plans. At the time of our review, FAA was evaluating the contractor's reply, but had not taken action to recover the \$2.4 million in overpayments. In our opinion, FAA should initiate action to recover payment for services not provided by the contractor.

Similar Staffing Problems Found at Other Contractor Sites. We performed a similar review for 13 contract towers operated by the other 2 contractors and found neither contractor provided the number of hours specified in the contracts. We judgmentally selected 13 contract towers and reviewed 3 pay periods between April 1995 and September 1996 at each contract tower. Records were not available for 4 of the 39 payroll periods selected because some towers were not in the program the full sample period and one contract tower had changed contractors during the period.

We found the contractors provided fewer controller hours than specified in the contracts for 22 of the 35 payroll periods reviewed. For example, according to the staffing plan for a Michigan contract tower, the contractor was required to provide 680 controller hours each pay period. However, the contractor only provided 624 controller hours of air traffic control services during a pay period when controllers took 88 hours of leave. For the 35 payroll periods reviewed, we found the contractors provided 413 fewer controller hours than the 14,933 hours required by the contract staffing plans. We did not compute overpayments because the purpose of this review was to determine whether the contractors staffed towers in accordance with contract staffing plans.

We discussed contract tower staffing levels with the Contract Tower Program Manager. He stated he did not believe the reduction in hours compromised safety, but was concerned that these contractors were billing

FAA for services not delivered. FAA maintains contractors are required to staff towers in accordance with contractual staffing plans, while the contractors maintain that they are required to provide air traffic control services and are not bound to contract staffing plans. The Program Manager also stated FAA plans to conduct detailed contract tower staffing level reviews of the other two contractors in FY 1998. FAA should initiate the planned reviews of staffing levels at contract towers and, when appropriate, recover any overpayments.

Quality of Service Was Comparable

Based on the quality of service contract towers provided users and our analysis of contract tower safety data, we concluded there was little difference in quality of service at low activity towers, whether they were operated by FAA or by contractors.

To evaluate quality of service at contract towers, we interviewed airport operators, fixed base operators,⁴ and other users of contract towers. These officials stated they were satisfied with the quality of air traffic control services provided. To further compare the quality of service between FAA-operated towers and contract towers, we reviewed data maintained by FAA's National Aviation Safety Data Analysis Center for 84 towers converted to contractor operations in FYs 1994 through 1996. For contract towers converted in FYs 1994 and 1995, we compared data for 2 years before and 2 years after conversion. For contract towers converted in FY 1996, we compared data for 1 year before and 1 year after conversion. The reports we reviewed identified potential contributing causes to the incident, such as malfunctioning communications equipment, and failure of controllers to provide clear instructions to pilots.

We identified 14 incident reports for these 84 towers when they were operated by FAA and 16 incident reports when the towers were operated by contractors. Analysis of the incident reports for the years reviewed showed tower staffing was a potential contributing factor in two incidents during FAA operation and four incidents during contractor operation of the towers. Based on the satisfaction expressed by users of contract towers and the relatively small number of incidents that occurred at FAA-operated and contract towers, we concluded contract towers provided a comparable level of service as FAA-operated towers.

⁴ Fixed base operators are airport tenant activities that provide fueling, maintenance, or other aviation-related services.

Staffing Levels Should Be Closely Monitored

Although we found little difference in the quality of service between FAA-operated and contract towers, FAA will need to closely monitor staffing levels. This is necessary because (1) contract towers are staffed with fewer controllers than FAA-operated towers, and (2) staffing levels are based on contractor-prepared staffing plans since FAA does not have precise standards for estimating staffing requirements for individual facilities. It is also important that FAA monitor staffing levels at contract towers because FAA is anticipating significant increases in future air traffic. Closer monitoring of staffing levels should aid FAA in achieving its aviation safety goal of reducing US aviation fatal accident rates from 1996 levels by 80 percent by 2007.

The following example demonstrates the potential risk when staffing levels are not closely monitored. An April 1996 investigative report for a near midair collision at an Illinois contract tower concluded staffing was a contributing factor. The report stated that at the time of the incident there was only one controller on duty. The controller was performing the multiple tasks of tower supervisor, local controller, ground controller, clearance delivery, and data clerk. The report stated “the controller failed to manage priorities and diverted his attention from keeping air traffic separated” While only one controller was on duty, the contract staffing plan showed that two controllers should have been on duty at the time of the incident. Although incidents like this were rare, they indicate staffing levels and controller workload are important factors in tower operations and safety. Therefore, FAA should establish procedures to periodically review staffing levels at contract towers.

Government Performance and Results Act (GPRA)

GPRA was enacted in 1993 as a means to reform managerial accountability and to improve the effectiveness and efficiency of programs and spending within the Federal Government. GPRA requires agencies to prepare annual performance plans for FY 1999, which cover each program activity set forth in their budgets. The performance plans are to contain outcome-oriented annual goals, the measures to be used to gauge progress toward meeting the goals, and the estimated resources required to meet the goals.

The Program Office established goals to convert the remaining FAA Level I towers to contract towers; award follow-on contracts; and oversee

improvements in efficiency, safety, and cost. The Program Office performance measures include ensuring: (1) at a minimum, evaluation ratings for contract towers that are evaluated in the same manner as FAA-operated towers remain comparable to ratings for FAA-operated towers; (2) evaluation reports identify commendable accomplishments at contract towers; and (3) local newspaper articles and correspondence from users indicate the initiative's success.

In our opinion, the Program Office's GPRA performance plan is not adequate. The goals of converting the remaining FAA Level I towers to contract towers and awarding follow-on contracts are output-oriented goals instead of outcome-oriented goals. The goal of overseeing improvements in efficiency, safety, and cost is outcome-oriented; however, none of the proposed performance measures will gauge the accomplishment of this goal. The Program Office should develop quantifiable performance measures that gauge progress toward meeting the goal of overseeing improvements in efficiency, safety, and cost. Quantifiable measures will assist the Program Office in ensuring contract towers are operated in a cost-efficient manner and the contract towers maintain a comparable level service to FAA-operated towers.

Recommendations

Several improvements are needed to ensure the Contract Tower Program is operated in a cost-efficient manner and contract towers maintain a comparable level of service to FAA-operated towers. We recommend FAA:

1. Initiate action to recover the \$2.4 million in overpayments to one contractor during FYs 1994 through 1996.
2. Direct contractors to staff contract towers in accordance with contract requirements and establish procedures to periodically review staffing levels at contract towers.
3. Initiate detailed reviews of staffing levels for the remaining two contractors and recover any overpayments identified by the reviews.
4. Develop quantifiable performance measures that gauge progress toward meeting the GPRA goal of overseeing improvements in efficiency, safety, and cost.

Management Position

FAA concurred with all four recommendations. Regarding Recommendation 1, FAA stated that an internal audit of the contractor has been performed and FAA intends to initiate action by June 30, 1998, to recover the overpayments.

In response to Recommendations 2 and 3, FAA indicated that Contract Tower Program personnel have worked with the Contracts Division, Office of Acquisitions, to enforce the contractual staffing level requirements through audits of payroll data. These audits at the remaining two contractors are scheduled to be completed by May 30, 1998. FAA stated if it is determined that the contractors were overpaid, FAA will initiate action to recover the overpayments. FAA also stated it will continue its efforts to ensure that contract tower staffing levels are at appropriate levels.

Regarding Recommendation 4, FAA stated it plans to develop a revised GPRA goal. The changes will be completed by April 30, 1999, and made in conjunction with preparing a new statement of work for the follow-on contract for tower locations.

Audit Comments

The planned corrective actions are responsive to the report's recommendations and should improve FAA's oversight of the Contract Tower Program.

CONTRACT TOWERS BY CONTRACTOR
AS OF NOVEMBER 1997

CONTRACTOR	NUMBER OF TOWERS	FAA REGIONS	CUMULATIVE DOLLAR VALUE OF CONTRACTS
Robinson-Van Vuren Associates - (2 contracts)	65	Eastern, New England, Southern, and Southwest	\$47,183,881
Midwest Air Traffic Control (ATC) Services	31	Central, Great Lakes	19,214,517
Serco Management Services	41	Alaskan, Northwest Mountain, and Western Pacific	30,471,488
Sole-Source Contracts *	19	Eastern, Great Lakes, New England, Northwest Mountain, Southern, and Southwest	18,352,738
Air National Guard **	4	Central, Northwest Mountain, and Southern	1,706,443
Totals	160		\$116,929,067

* Regional FAA offices awarded sole-source contracts to cities, counties, or airport authorities to provide air traffic services at specific contract towers prior to the award of national contracts in 1994. Cities, counties, or airport authorities operate 8 of these contract towers; Midwest ATC Services operates 10 of these contract towers under subcontract; and another subcontractor operates 1 contract tower.

** The Air National Guard requested that FAA allow it to operate four Level I towers so its members can maintain air traffic control certifications.

ACTIVITIES VISITED OR CONTACTED**FAA Air Traffic Control Towers Visited****Hub Facilities***

Midway, Chicago, Illinois
 Seattle/Tacoma, Seattle, Washington
 San Antonio, San Antonio, Texas

Level I Towers

Bloomington/Normal, Bloomington, Illinois
 Capital City, New Cumberland, Pennsylvania
 Lancaster, Lititz, Pennsylvania
 Renton, Renton, Washington
 Trenton, Trenton, New Jersey

Federal Contract Towers Visited

Bellingham, Bellingham, Washington
 Easterwood, College Station, Texas
 Forbes Field, Topeka, Kansas
 Johnson County Executive, Olathe, Kansas
 Kenosha, Kenosha, Wisconsin
 Merrill C. Meigs Field, Chicago, Illinois
 Olympia, Tumwater, Washington
 Redbird, Dallas, Texas
 Stinson, San Antonio, Texas
 Tacoma Narrows, Gig Harbor, Washington
 Waukegan, Waukegan, Illinois
 Wiley Post, Bethany, Oklahoma

Aviation Associations

American Association of Airport Executives, Alexandria, Virginia
 National Air Traffic Controllers Association, Washington DC
 Regional Airline Association, Washington, DC

* A hub facility is an FAA air traffic facility that provides support, such as controller certification and training, to smaller FAA air traffic facilities and contract towers within its geographic area. In addition, hub responsibilities include performing quality assurance reviews and providing air traffic control notices to the smaller facilities.

NATIONAL AVIATION SAFETY DATA ANALYSIS
CENTER (NASDAC) DATABASES

To assess the impact contract towers had on the quality of service, we reviewed accident and incident information in four databases maintained by NASDAC. Descriptions of the four databases follow.

Aviation Safety Reporting System (ASRS)

ASRS is administered by the National Aeronautics and Space Administration. ASRS is used to process and analyze reports of unsafe occurrences and hazardous situations that are voluntarily submitted by pilots, air traffic controllers, and other interested parties. The information is used to remedy reported hazards, conduct research on operational safety problems, and facilitate understanding of aviation safety issues.

Operational Error and Deviation System (OEDS)

OEDS is used for reporting and monitoring incidents that meet specific criteria as posing a potential danger or violating operational guidelines. In general, an operational error occurs when a controller fails to provide the required separation between two aircraft, or between an aircraft and an obstacle. An operational deviation occurs when the required separation is maintained, but the controller failed to properly coordinate an aircraft's movement with another controller. Operational errors and deviations are usually reported by controllers, but they may also be reported by pilots.

Near Midair Collision (NMAC)

The NMAC database is used to record reports of inflight incidents where two aircraft closed to an unsafe distance but avoided an actual collision. The judgment that the unsafe distance or operating conditions existed is solely at the discretion of one or more aircrew members, who report that a midair collision could have occurred or that a separation of less than 500 feet was observed while in flight. NMAC reports are investigated by FAA inspectors in coordination with controllers.

National Transportation Safety Board (NTSB) Accident and Incident Data System

The NTSB Accident and Incident Data System contains information collected during an NTSB investigation of an accident or incident involving civil aircraft within the United States, its territories and possessions, and over international waters. The NTSB database is the official repository of information on accidents and their causal factors.

MAJOR CONTRIBUTORS TO THIS REPORT

The following staff members contributed to this report.

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Memorandum

Subject: **INFORMATION:** Draft Report on Audit of
Federal Contract Tower Program

Date: MAY 8 1998

From: Acting Associate Administrator for
Administration

Reply to
Attn. of:

To: Deputy Assistant Inspector General for
Aviation, JA-10

Attached is the Federal Aviation Administration's (FAA) response to the subject report dated April 14. We concur with the four recommendations contained in the report. Our response to each recommendation is as follows:

Recommendation 1: Recommend FAA initiate action to recover the \$2.4 million in overpayments to one contractor during fiscal years 1994 through 1996.

FAA Response: Concur. An internal audit of the contractor has been performed and we intend to initiate action by June 30 to recover the overpayments.

Recommendation 2: Recommend FAA direct contractors to staff contract towers in accordance with contract requirements and establish procedures to periodically review staffing levels at contract towers.

FAA Response: Concur. We have worked with the Contracts Division, Office of Acquisitions, to enforce the contractual requirements of reporting staffing levels and for review of staffing levels through audits of payroll data. We will continue our efforts to ensure that staffing levels are at the appropriate levels.

Recommendation 3: Recommend FAA initiate detailed reviews of staffing levels for the remaining two contractors and recover any overpayments identified by the reviews.

FAA Response: Concur. A review of the staffing levels of the remaining two contractors is underway and scheduled to be completed by May 30. At the end of this review, if it is determined that there has been overpayments, we will initiate action to recover those payments.

Recommendation 4: Recommend FAA develop quantifiable performance measures that gauge progress toward meeting the GPRA goal of overseeing improvements in efficiency, safety, and cost.

FAA Response: Concur. We plan to develop a revised Government Performance and Results Act goal. These changes will be made in concert with the drafting of a new statement of work for the follow-on contract for contract tower locations. This will be completed by April 30.

We request that these comments be included in the final report.

Should you have any questions, please contact Mr. Anthony R. Williams, External Relations Branch, ABA-130. Mr. Williams can be reached on 267-9000.


Woodie Woodward