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Infrastructure
Subcommittee on Aviation
United States House of Representatives**

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**Safety and Cost Metrics of
the Federal Aviation
Administration's Visual
Flight Rule Towers**

**Statement of
The Honorable Kenneth M. Mead
Inspector General
U.S. Department of Transportation**



Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify today regarding the Federal Aviation Administration's (FAA) visual flight rule (VFR) towers. The focus of our testimony this morning will be on safety and cost metrics of FAA's VFR air traffic control towers, both those staffed with FAA controllers and those staffed with contract controllers.

VFR towers, or non-approach control facilities, do not provide radar separation to aircraft. Instead, controllers at non-approach control towers are responsible for sequencing aircraft using other methods such as visually identifying an aircraft's location and communicating with pilots to determine their position. Controllers at these towers may use a radar display to aid them in performing their duties. For example, they may correlate the positions of an aircraft, provide suggested headings, and issue radar traffic advisories. However, they cannot advise an aircraft that they are under radar control.

FAA's Contract Tower Program began in 1982 when FAA began a pilot program to contract for air traffic control services for five low activity towers that were closed as a result of the Professional Air Traffic Controllers Organization strike in 1981. Currently there are 219 VFR towers¹ in the Contract Tower Program. FAA also operates 71 VFR towers that are staffed with controllers employed by the FAA instead of a contractor. However, these 290 towers (contract and FAA-staffed VFR towers) do not include airports such as Los Angeles International, Baltimore/Washington, Norfolk, Chicago Midway, or Kansas City (as examples).

¹ 195 towers that are fully funded by FAA and 24 towers where FAA and the local airport share the costs.

Three weeks ago, we issued a report comparing certain metrics about contract towers and the 71 FAA-staffed VFR towers. We conducted that analysis as part of our ongoing oversight responsibility of the Contract Tower Program and at the request of the President of the National Air Traffic Controllers Association (NATCA) who asked that we review cost-related issues associated with the Contract Tower Program. We expanded the scope of our analysis to include metrics on cost, safety, and operations at both contract towers and FAA-staffed VFR towers.

Mr. Chairman, we have been conducting audits and reviews of the Contract Tower Program since 1998. Our work has repeatedly found that contract towers provide cost-effective services that are comparable to the quality and safety of FAA-staffed towers. (The Attachment provides a short synopsis of our major reports.) Today, I would like to briefly discuss the results of our most recent analysis but let me first emphasize two important metrics we observed regarding safety and costs.

- **Safety.** In terms of safety of operations as measured by operational errors/deviations, both the contract towers and the FAA-staffed VFR towers fell well below FAA’s national average. However, FAA relies on controllers at both contract towers and FAA-staffed VFR towers to self-report any operational errors/deviations that they might have.

- **Costs.** In terms of cost-effectiveness of operations, the metrics indicate that contract towers cost, on average, \$917,163 less to operate annually per tower than comparable FAA-staffed VFR towers. The difference in operating costs is largely because contract towers are staffed with fewer controllers, and because FAA-employed controllers have higher salaries and benefits. In 1998, the same analysis showed that contract towers cost, on average, \$786,471 less to operate than the comparable FAA-staffed VFR towers.

Before discussing the metrics for contract towers and FAA-staffed VFR towers, let me provide some background about the operations at those towers. While most contract towers are low-activity facilities (nearly half handle, on average, less than 20 aircraft operations per hour) there are towers in both groups that have comparable operations. For example, 30 FAA-staffed VFR towers and 74 contract towers handle between 20 and 40 aircraft operations per hour.

In contrast, unlike most contract towers which are relatively similar (primarily low activity airports), the 71 FAA-staffed VFR towers are not a homogeneous group. The 71 FAA-staffed VFR towers have significant differences in the volume of air traffic they control, the number and types of users they serve, and the complexity of the airspace they manage.

For example, the average number of aircraft operations handled each hour at the 71 FAA-staffed VFR towers ranges from about 20 aircraft operations per hour to over 100 aircraft operations per hour. The Van Nuys, California, VFR tower is the eighth busiest air traffic control tower in the country. In fact, 11 of the 71 FAA-staffed VFR towers are among FAA's 50 busiest air traffic control towers in the United States in terms of airport operations.

In 1998, FAA reclassified all its air traffic control (ATC) facilities as part of a new pay system for FAA controllers negotiated between FAA and NATCA. FAA facilities are now classified based on numerous factors including the complexity of operations, the types of users, and the number of aircraft operations handled. The higher the ATC grade, the more difficult the operations and the higher the controllers' average salaries. Since controllers at contract towers are not FAA employees, contract towers were not reclassified as part of the new pay system for FAA controllers.

The FAA-staffed VFR towers are classified as ATC grade levels 5 through 9. When making comparisons between contract towers and FAA-staffed VFR towers, we used FAA-staffed VFR towers in ATC grade levels 5 and 6, which are more comparable to the towers in the Contract Tower Program, in terms of the number of operations.

ATC GRADES OF 71 FAA-STAFFED VFR TOWERS

ATC GRADE LEVEL	NUMBER OF TOWERS
5	7
6	23
7	32
8	5
9	4
TOTAL	71

There are also several facts about FAA’s Contract Tower Program that differentiate the Program from a truly “privatized” operation.

- First, the Contract Tower Program is an FAA program – FAA dictates the level of services and pays for the majority of services provided.
- Second, contract towers are subject to the same air traffic policies and procedures as FAA-staffed facilities – contract tower controllers are certified by FAA and must meet FAA qualification and training requirements.
- Third, all contract towers receive biennial safety evaluations from FAA’s Air Traffic Evaluations Branch. Contract towers also receive oversight from an FAA national program office and from FAA staff assigned to the Program at each FAA region. In addition, each contract tower is assigned to a larger FAA-staffed hub tower, which is responsible for conducting quality assurance reviews of the contract tower’s operations.

I would now like to turn to the results of our analysis.

Safety

In terms of safety of operations as measured by operational errors/deviations, both the contract VFR towers and the FAA-staffed VFR towers fell well below FAA's fiscal year (FY) 2002 overall average of 6.70 operational errors for every 1 million operations handled. An operational error occurs when an air traffic controller does not maintain minimum FAA separation requirements between aircraft. An operational deviation occurs when a controller allows an aircraft to enter airspace managed by another controller without prior coordination and approval.

- In FY 2002, the 219 contract towers had a total of 8 operational errors/deviations, which was a rate of 0.49 incidents per million operations handled.
- The 71 FAA-staffed VFR towers had 38 operational errors/deviations in FY 2002, which was a rate of 2.70 incidents per million operations handled.
- The 30 FAA-staffed VFR towers that are most comparable to contract towers (those in ATC grade levels 5 and 6) had 9 operational errors/deviations in FY 2002, which was a rate of 2.03 incidents per million operations handled.
- In FY 2001, contract towers had 11 operational errors/deviations; the FAA-staffed VFR towers had 31.

While the operational error rates at contract towers and the FAA-staffed VFR towers are significantly better than FAA's agencywide average, it is important to note that neither the FAA contract towers nor the FAA-staffed VFR towers have a system for automatically reporting operational errors.² Although FAA requires self-reporting and has taken adverse action against personnel who intentionally cover up operational errors, FAA cannot be sure that all operational errors are

² In contrast, en route facilities, which handle the en route portion of a flight, have a system for automatically reporting operational errors.

reported at either FAA-staffed VFR towers or at contract towers. Additionally, the severity of most of the errors that occurred could not be determined using FAA's rating system for operational errors because the severity system can only be used for airborne errors that were being tracked with radar. Those incidents that were rated were predominantly in the low to moderate range.

The largest percentages of operational errors/deviations did not occur at the facilities with the highest levels of hourly aircraft operations. For example, in FY 2002, nearly 80 percent of the operational errors/deviations at the FAA-staffed VFR towers occurred at facilities that average less than 60 aircraft operations per hour. At the contract towers, 75 percent of the operational errors/deviations in FY 2002 occurred at facilities that average less than 40 aircraft operations per hour.

Costs

In FY 2002, the cost to operate the 71 FAA-staffed VFR towers was \$123.7 million compared to \$73.5 million to operate the 219 contract towers. The difference in costs is primarily due to differences in controller staffing levels between the FAA-staffed towers and the contract towers,³ and the higher salaries and benefits paid to the FAA-employed controllers.

Our analysis of June 2003 staffing data found that contract towers, on average, are staffed with six controllers. In comparison, the 30 FAA-staffed VFR towers that are most comparable to contract towers (those in ATC grade levels 5 and 6) are staffed, on average, with 10 and 12 controllers, respectively.

³ As of June 2003, there were 1,082 controllers at 196 contract towers (does not include 16 sole source and 7 National Guard contracts). As of September 2003, there were 968 controllers at the 71 FAA-staffed VFR towers. Those numbers include only operational controllers and do not include non-operational managers or support staff.

One reason for the difference in staffing levels that we observed during our prior audits was that, at FAA contract towers we visited, tower managers worked some operational shifts as controllers. In contrast, at the FAA-staffed VFR towers we visited, most tower managers did not work operational shifts controlling traffic.

Another reason for the staffing differences, according to officials from NATCA, is that many of the 71 FAA-staffed VFR towers have historically been used as a training ground for new FAA controllers.⁴ According to FAA and officials from the American Association of Airport Executives, most controllers at contract towers are retired military controllers or former FAA controllers.

Our audit work has also identified several staffing issues at FAA contract towers that have now been corrected. In our FY 1998 audit, we found that not all contract towers were staffed according to contract staffing plans. We recommended that FAA direct contractors to staff contract towers in accordance with contract requirements and establish procedures to periodically review staffing levels at contract towers.

FAA agreed with our recommendations and took appropriate actions including requiring that staffing at contract towers be a “special emphasis” item during tower evaluations conducted by FAA’s Evaluations Branch.

We also recommended that FAA recover payments of \$2.4 million made to one contractor who did not comply with staffing plans at 35 locations. The amount was never recovered based on opinions by FAA procurement officials and FAA Chief Counsel that the old contracts were written as fixed price contracts and therefore not subject to recoveries based on staffing differences.

⁴ As of September 2003, there were 60 developmental controllers at the 71 FAA-staffed VFR towers.

FAA corrected the contract problem in FY 2000 when it issued new contracts. Those contracts contain specific provisions requiring contractors to report monthly the number of controllers at each location and the hours they worked. The contracts also contain provisions that allow FAA to make downward or upward price adjustments based on actual staffing levels provided by the contractors.

In FY 2002, the average cost to operate a full-funded contract VFR tower was \$365,608 while the average cost to operate an FAA-staffed VFR tower was \$1,741,935.⁵ Those figures represent average costs for *all* towers in both groups. To determine the average cost differences between comparable contract towers and FAA-staffed VFR towers, we compared the FY 2002 costs of 12 contract towers with 12 FAA-staffed VFR towers (in ATC grades 5 and 6) that had similar averages for hourly aircraft operations (air traffic density).

Our analysis showed that the average cost to operate the 12 contract towers was \$426,837 compared to an average cost of \$1,344,000 to operate the 12 FAA-staffed towers – a difference of \$917,163. To put that cost difference in perspective, the analysis indicates that if the 189 full-funded contract towers had been staffed with FAA controllers in FY 2002, the agency's annual operating costs could have been about \$173 million higher.

In 1999, FAA did the same analysis using FY 1998 cost data and the same towers we selected. At that time, the 12 contract towers, on average, cost \$786,471 less to operate than the 12 FAA-staffed VFR towers. Now, the difference has grown to \$917, 163, an increase of \$130,692 or 16.6 percent.

⁵ Contract tower costs were based on total contract costs for each tower. FAA costs were based primarily on total personnel compensation and benefits costs at each location. A small amount for miscellaneous expenses such as supplies was also included. Costs for both groups do not include capital costs, which are paid by FAA and/or the airport.

**AVERAGE COST COMPARISONS OF CONTRACT TOWERS
AND FAA-STAFFED VFR TOWERS**

	Contract Towers	FAA-staffed VFR Tower	Difference
FY 2002			
Average Cost for 12 Comparable Towers	\$426,837	\$1,344,000	\$917,163
FY 1998			
Average Cost for 12 Comparable Towers	\$334,187	\$1,120,658	\$786,471

That concludes my statement, Mr. Chairman. I would be pleased to address any questions you or other members of the Subcommittee might have.

ATTACHMENT. Prior OIG Reports

- In 1998, we conducted a comprehensive review of the Contract Tower Program and found little difference in the quality or safety of services provided at Level I towers whether they were operated by FAA or by contractors. Specifically, we found that contract controllers met qualification requirements and received required training, users were satisfied with the services they received at contract locations, and the number and types of incidents (such as operational errors and deviations) at FAA and contract towers were comparable.

We also found that contract towers reduced operating costs. However, we found that not all contract towers were staffed according to contract staffing plans. (In our FY 2000 audit, we found those staffing issues had been resolved.) We recommended that FAA direct contractors to staff contract towers in accordance with contract requirements and establish procedures to periodically review staffing levels at contract towers. Those measures were necessary because contract towers were staffed with fewer controllers than FAA-staffed VFR towers and staffing levels were based on contractor-prepared staffing plans. http://www.oig.dot.gov/item_details.php?item=305

- In FY 1999, Congress requested that we conduct a review of an FAA study of expanding the Contract Tower Program to 71 FAA-staffed VFR towers. In that review, we found that contract towers continued to provide services that are comparable to the quality and safety of FAA-operated towers, and that users remained supportive of the Program. We also found that previously reported staffing issues had been addressed. We tested payroll records for a 2-month period at 37 contract towers and found that contractors (in total) provided the required number of employees and hours within 2 percent of the contractual requirements. In addition, we found that FAA's new contract solicitation contained specific provisions requiring contractors to report and certify monthly the number of controllers at each location and the hours they worked.

However, we found that FAA's study of expanding the Program did not fully consider several key factors that needed to be further analyzed and reported to Congress. Those factors included devising a better methodology for determining which FAA-staffed VFR towers could be contracted out, revising estimated savings by location, and evaluating the benefits that FAA controllers from locations converted to contract operations could provide in meeting FAA's projected staffing needs. FAA has not completed actions to address our recommendations. http://www.oig.dot.gov/show_pdf.php?id=95