

**2002 STATUS ASSESSMENT OF  
COST ACCOUNTING SYSTEM AND PRACTICES**

*Federal Aviation Administration*

*Report Number: FI-2003-043*

*Date Issued: June 3, 2003*



# Memorandum

U.S. Department of  
Transportation

Office of the Secretary  
of Transportation

Office of Inspector General

Subject: **ACTION:** 2002 Status Assessment of Cost  
Accounting System and Practices, FAA  
FI-2003-043

Date: June 3, 2003

From: Alexis M. Stefani   
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for Auditing and Evaluation

Reply To

Attn Of: Cosper: x61496

To: Federal Aviation Administrator

Congress recognized that the Federal Aviation Administration (FAA) needed accurate cost information when it passed the Federal Aviation Reauthorization Act of 1996 that required FAA to develop a cost accounting system. In 1997, the National Civil Aviation Review Commission, with Mr. Norman Mineta as chairman, recommended FAA establish a cost accounting system to better understand the costs associated with air traffic control services and programs, and to help FAA become increasingly performance based. In 2000, Congress also passed the Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century (AIR-21), which required FAA to report to Congress on the status of its cost accounting system.

AIR-21 also directed that the Office of Inspector General (OIG) annually perform eight specific assessments of FAA methods for calculating and assigning costs to specific users and to determine whether those methods are appropriate, reasonable, and understandable. As required by AIR-21, this is our third annual assessment of the FAA cost accounting system. Our audit objectives, scope, and methodology are discussed in Exhibit A.

## RESULTS

FAA's annual operations and maintenance budget has increased from about \$4.6 billion in Fiscal Year (FY) 1996 to about \$7.1 billion in FY 2003. The combination of increasing operations costs, negotiating collective bargaining agreements, and reauthorization of FAA present the FAA Administrator with significant challenges. To accomplish these objectives, FAA needs an effective cost accounting system, to include a fully implemented labor distribution system. Although FAA's cost accounting system captures overall costs, it cannot accurately assign costs to specific services, facilities, and activities. Consequently, the cost accounting system is not effective and FAA cannot credibly claim to be a performance-based organization, nor function as one, without a cost accounting system that is compliant with Federal cost accounting standards.

The FAA Administrator has an important opportunity to establish a cost accounting system, start controlling costs, operate as a performance-based organization, and hold managers at all levels accountable. Based on FAA's response to this report, the agency is well aware of this opportunity and the actions proposed to be taken will, when implemented, place FAA on the road to a strong and credible cost accounting system. However, as has been the case in the past, the key to success will depend on FAA's full implementation and follow through to the actions in process and proposed.

FAA has concurred with the audit recommendations in this report and plans to fully implement its labor distribution system and cost accounting system by September 30, 2004. FAA also will link performance bonuses for senior executives to the successful implementation of the cost accounting system. Additionally, FAA has agreed to incorporate satisfactory internal controls into the Cru-X labor distribution system to ensure that employees accurately record work start and stop times and report air traffic controller duties by position and function.

FAA began developing its cost accounting system in 1996, estimated at that time to cost about \$12 million, and planned to complete the system by October 1998. After nearly 7 years of development and spending over \$38 million, FAA expects to spend at least another \$7 million to develop and maintain the cost accounting system throughout FAA by September 2003. However, given the amount of work yet to be accomplished, the date for full implementation will probably slip again.

We have been monitoring FAA's cost accounting system since 1998 and made 27 recommendations (see Exhibit B) for improvement. However, FAA has not fully implemented our recommendations. In our opinion, the principal reason that FAA does not have an effective cost accounting system is because it has not experienced any consequences for not having one. FAA also has not been held accountable to operate like a business, which must be able to identify its cost by specific services, activities, and locations to comply with accounting standards and support management decisionmaking.

FAA needs a credible and robust cost accounting system not only to operate like a business and to control operating costs given the steep declines in projected Aviation Trust Fund revenues, but also because FAA recently lost a court case for the third time to implement user fees for overflights. While the court case did not specifically address FAA's cost accounting system, an adequate system would help identify the costs related to the overflight services.

In FY 2002, FAA produced cost information for two of its five lines of business, Air Traffic Services and Commercial Space Transportation. While these two lines of business account for about 60 percent of FAA's total costs, the cost accounting system does not produce accurate cost information and properly assign these costs to specific services, facilities, and activities within these two lines of business. For example, about \$1.3 billion of the \$2.4 billion of the Terminal Service's FY 2001 costs were reported in

lump-sum totals and not by individual facility locations, of which the cost accounting system also could not assign any of the \$115 million of equipment implementation costs to individual Terminal Service facilities. Other examples of deficiencies in the cost accounting system are summarized below.

- In 2001, FAA began developing the Cru-X labor distribution system. Labor distribution is the process of associating labor cost directly with activities, services, and projects. Developing the Cru-X system was a good start toward having a labor distribution system that would help FAA account for the \$2.6 billion of Air Traffic Services labor cost. However, we found significant flaws in the Cru-X design including the ability of controllers to record any start and stop work times rather than actual times. Under FAA's current agreement with its labor union, Cru-X would automatically sign air traffic controllers in and out of their work shifts even if they are not there. Cru-X also does not identify hours worked by controllers on collateral duties, thus preventing FAA from using the system to conduct productivity analyses. We brought the Cru-X deficiencies to the attention of the FAA Administrator and she directed that appropriate internal controls be incorporated into the Cru-X labor distribution system.
- In 1999, we reported that about \$270 million of FAA's equipment maintenance labor costs were not accurate because FAA used outdated information to assign labor costs to projects. Much of the information used to assign the labor cost was outdated and was based on systems and equipment used at that time, not the systems and equipment used in today's National Airspace System. We recommended that FAA establish a labor distribution system to properly assign labor cost to its projects. FAA has yet to install a labor distribution system for maintenance workers. It is particularly important that FAA stop using outdated standards and start to accurately measure productivity now that maintenance workers have gone to a performance-based pay system.
- In 1993, Congress passed the Government Performance and Results Act that requires Federal agencies to establish performance goals. Nearly 10 years later, FAA has not established any financial performance goal to help measure and control costs. During FY 2001, FAA planned to define performance measures for its programs and activities, but did not achieve this goal and has now abandoned its goal of fully implementing cost and performance management in FY 2004.

To enhance performance management, FAA needs to assign and report costs by activity and facility to set internal and external benchmarks and establish financial performance measures. However, about \$1.3 billion of \$2.4 billion of the Terminal Service's FY 2001 costs were reported in lump-sum totals and not by individual facility locations.

- In 1999, we reported that FAA could not accurately assign any of its \$70 million of En Route Service telecommunication and utility costs to the proper facilities because it used flawed information from an incomplete study to compute the costs. In effect, some locations were being charged for costs that legitimately belonged to other locations. Four years later, while progress has been made, the cost accounting system still cannot assign telecommunication costs to the facilities that incur the costs.
- In January 2002, we reported that FAA's headquarters administrative overhead cost pool was assigned to services, facilities, and activities using an inappropriate basis, resulting in the Air Traffic Services being charged about \$55 million too much.

To reverse the trend of continuing slippage of milestones for an effective cost accounting system and implement a system that will help FAA better manage operations, we are recommending that the FAA Administrator (1) designate an accountable person and establish an agency performance goal to implement cost accounting and labor distribution systems that meet Federal standards by October 1, 2004, and withhold performance bonuses for senior executives and program managers within the affected lines of business until successful implementation of this goal, (2) specify and implement the internal controls to be added to the Cru-X system to accurately record employees' start and stop work times and report air traffic controller duties by position and collateral duties by function, and (3) make FAA-wide cost and performance management an agency priority to be in place by October 1, 2004.

FAA agreed with our recommendations. It plans corrective actions for the full implementation of the cost accounting and labor distribution systems by September 30, 2004; successful implementation of the cost accounting system is a precondition for awarding executive bonuses. FAA plans to implement the Cru-X labor distribution system by September 30, 2004, and submit a plan to institute cost and performance management practices by August 31, 2003.

## **RESULTS OF ASSESSMENTS**

Notwithstanding multiple statutes, congressional oversight hearings, and recommendations from the National Civil Aviation Review Commission, the General Accounting Office (GAO), and the OIG, FAA still does not have an effective cost accounting system to determine the true cost of its activities and services and for enhancing the productivity of its workforce.

AIR-21 requires the OIG to perform eight specific assessments annually to determine whether FAA's methods for calculating amounts in the cost accounting system and

assigning costs to specific users are appropriate, reasonable, and understandable. The following paragraphs present the results of our assessments as of December 31, 2002.

**Assessment Area 1. Assessment to ensure that the method for calculating the overall costs of FAA and attributing these costs to specific users is appropriate, reasonable, and understandable.**

FAA calculates its overall costs from the financial accounting system and its methods are reasonable, but the cost accounting system does not properly assign the overall costs to specific services, facilities, and activities. The cost accounting system uses a combination of data from the financial accounting system and operational data systems to process overall costs. The audit of the FY 2002 FAA Financial Statements verified that the total cost presented was reasonable. An effective cost accounting system must accurately charge costs to the proper service, facility, or activity. To be effective, managers need to know the actual costs of their operations to reduce costs and become more efficient.

In addition to not assigning its overall cost to specific activities, services, and locations, FAA also used inappropriate and unreasonable cost assignment methods for attributing its overall cost to specific users, activities, and services and these methods resulted in inaccurate calculations. For example, FAA assigned \$203 million of FY 2001 costs to its Terminal Service using inappropriate cost assignment methods that are not in accordance with Federal accounting standards. The inappropriate cost assignment methods included the use of outdated FY 1999 and FY 2000 appropriation and budgetary data, which are not adequate because they are estimates and forecasts, not actual costs. As a result, FAA could not accurately report the Terminal Service's appropriate share of costs.

In 1999, we also reported that FAA used inappropriate methods or inaccurate data to assign costs. For example, FAA used outdated information to assign about \$270 million of equipment maintenance labor costs to projects. Much of the information used was outdated and was based on systems and equipment used at that time, not the systems and equipment used in today's National Airspace System. We recommended that FAA establish a labor distribution system to properly assign labor cost to its projects. As of December 31, 2002, the cost accounting system still does not capture actual labor cost by activities and services.

**Assessment Area 2. FAA cost input data, including the reliability of the Administration's source documents and the integrity and reliability of the Administration's data collection process.**

FAA has adequate source documents and cost input data, such as vendor invoices, for determining the total cost of operations, but FAA cannot get the necessary information into its cost accounting system from the source documents. For example, in 1999, we

reported that FAA could not accurately assign any of its \$70 million of telecommunication and utility costs to the proper facility because it used flawed information from an incomplete study to compute the costs. In 2001, we reported that FAA still could not accurately assign telecommunication costs to the proper facility because the cost accounting system could not collect the necessary data from the source documents.

We continue to find significant problems with FAA's data collection processes for the cost accounting system. For example, FAA inappropriately assigned about \$66 million of FY 2001 equipment acquisition costs to the Terminal Service. FAA did not trace these costs to the Terminal Service or assign the costs using an adequate basis that reflects the reason for the cost because FAA's collection process could not retrieve the source data for use by the cost accounting system.

In the past two annual assessments of FAA's cost accounting system, we recommended that FAA improve its data collection procedures to ensure that users can rely on the information produced by the cost accounting system. FAA's actions have not significantly improved its data collection methods.

FAA has stated that it plans to rely on the new Delphi financial accounting system to improve its source data collection methods. We agree that Delphi should provide improved source data, but FAA must ensure that Delphi is programmed to identify the proper information, and develop processes for assigning each activity's cost to individual facility locations to determine the actual cost of each facility.

### **Assessment Area 3. FAA's system for tracking assets.**

FAA's systems for tracking assets have been strengthened, but continue to need improvement. The Chief Financial Officers Act of 1990 required the preparation and audit of commercial-like financial statements for major Federal agencies. The Government Management Reform Act of 1994 expanded the requirement for audited financial statements and established the requirement for the acquisition cost of property, plant, and equipment (property) to be reported in agencies' financial statements and certified by their auditors. Prior to this legislation, agencies were primarily concerned with knowing what property they owned, where it was located, and its condition. Records supporting the acquisition cost of property were frequently not available.

In FY 2001, FAA implemented a commercially acquired property tracking system called the Interim Fixed Assets System (IFAS) for financial reporting. FAA engaged KPMG LLP (KPMG) to audit its property accounts. KPMG expressed an unqualified opinion on FAA's schedules of property as of September 30, 2001, but reported a material internal control weakness.

Under contract with the OIG, KPMG audited the FY 2002 FAA financial statements, which are included in FAA's FY 2002 Performance and Accountability Report. KPMG found FAA implemented five of its six recommendations and established a National Capitalization Team to provide oversight and control over property activities. However, KPMG determined that significant internal controls still were not operating effectively, and identified deficiencies related to asset tracking. As a result, KPMG concluded that FAA property continues to be a reportable condition and made additional recommendations in its audit report on the FY 2002 financial statements to strengthen controls for tracking assets. FAA agreed to implement these recommendations.

#### **Assessment Area 4. FAA's methods for establishing asset values and depreciation.**

Federal agencies were not required to compute depreciation expense until FY 1998. When FAA implemented the depreciation requirements, asset values were established using estimating procedures and depreciation expense was computed manually. OIG Report Number FE-2000-058, FAA Property, Plant, and Equipment, dated February 28, 2000, provides extensive details on FAA's basis for establishing its asset values for those assets acquired prior to October 1994.

Our report on the FY 2000 FAA financial statements expressed a qualified opinion because FAA was unsuccessful in implementing IFAS and could not substantiate the net book value and depreciation expense for its property. In FY 2001, FAA engaged KPMG to audit its property accounts and corrected reporting errors by reducing the net book value of its recorded property by \$322 million.

Under contract with the OIG, KPMG audited the FY 2002 FAA financial statements. KPMG determined that significant internal controls still were not operating effectively, and identified deficiencies related to asset valuation and depreciation. Property transactions were recorded in the general ledger, but IFAS, the official property record, was not reconciled throughout the year to the general ledger. The lack of electronic interface between IFAS and the general ledger increases the likelihood that the two systems will not agree due to backlogs of input to either system or errors that occur when entering data. Also, certain labor and travel costs related to property were being capitalized incorrectly. KPMG made recommendations to correct these deficiencies in its audit report on the FY 2002 financial statements which FAA agreed to implement.

#### **Assessment Area 5. FAA's system of internal controls for ensuring the consistency and reliability of reported data.**

FAA has significant internal control weaknesses in the design of the Cru-X labor distribution system, which will be an essential part of the cost accounting system. Labor distribution is the process of associating labor cost directly with activities, services, and

projects by requiring employees to record their time worked on specific activities. FAA is developing a labor distribution system, called Cru-X, which would account for and distribute its labor costs, including the costs of FAA's 15,000 air traffic controllers, to specific facilities and functions for FAA to better assess its workload, performance, and workforce productivity. FAA's Air Traffic Services labor cost for FY 2001 was \$2.6 billion.

In October 2001, we reported that Cru-X had two design flaws. Cru-X allowed air traffic controllers to override the computer's internal clock and record any start and stop work time, regardless of actual arrival at or departure from work. While Cru-X had the capability to capture labor hours by collateral or off-scope duty categories as described in the National Air Traffic Controllers Association (NATCA) contract, these categories were not programmed into Cru-X.

When we became aware that FAA had failed to implement the necessary controls into Cru-X, we brought the Cru-X deficiency to the attention of the new FAA Administrator. She directed that appropriate internal controls for recording of air traffic controllers' time be incorporated into Cru-X.

The lack of these fundamental procedures in Cru-X is a serious internal control weakness that brings into question the validity of labor hour data. Without a fully functioning labor distribution system, FAA will not have a credible cost accounting system, nor will it be able to credibly claim it is a performance-based organization.

Last year, we recommended that FAA prepare a comprehensive handbook of well-documented policies, procedures, and practices established for its cost accounting system. FAA prepared a handbook of cost accounting procedures and some internal control documents; however, the internal control documents do not adequately record essential internal control procedures. FAA's handbook lacks basic internal control documents such as an internal control plan for the cost accounting system or internal and external evaluations of the cost accounting system's internal control environment.

Without well-documented internal control procedures, errors may not be detected, prevented, or corrected. For example, as a result of poor internal controls, FAA did not produce complete FY 2001 cost accounting information until almost 10 months after the end of the fiscal year. Managers need timely cost information to analyze variances between budgeted amounts and actual costs to measure performance and eliminate inefficiencies and waste in FAA activities. Federal accounting standards require reliable and timely cost information to help ensure that resources are spent to achieve expected results, and to alert managers to inefficiencies.

**Assessment Area 6. FAA's definition of the services to which it ultimately attributes its costs.**

FAA's definition of services, to which it ultimately attributes its cost, is reasonable. FAA defined four services within its Air Traffic Services line of business: En Route, Oceanic, Terminal, and Flight Service Stations. FAA's services are similar to the services described in the International Civil Aviation Organization standards and recommended practices. FAA's defined services also are comparable to those of NavCanada (Canada's private provider of air traffic control services).

In FY 2002, FAA began producing cost accounting information for its Commercial Space Transportation line of business and has identified the services for cost accounting purposes. These services include issuing licenses for commercial space launches and re-entries, and promoting commercial space transportation with private industry and other Government agencies. These services are available to the public but no user fees are charged. We compared the Commercial Space Transportation's defined services, for cost accounting purposes, with the services it provides to users. FAA's defined services, for purposes of cost accounting, are reasonable.

**Assessment Area 7. Cost pools FAA used and the rationale for and reliability of the bases it proposes to use in allocating costs of services to users.**

FAA properly collected its general and administrative costs into cost pools; however, FAA did not properly allocate these costs to users. Although FAA has developed many overhead cost pools and bases for allocating the costs to its lines of business, we have not audited the reliability of all these cost pools and allocation bases.

Last year, we reported that FAA's headquarters administrative overhead cost pool was allocated to its lines of business using an inappropriate allocation base of direct labor and benefits cost; this resulted in the Air Traffic Services being charged about \$55 million too much. We found that the appropriate allocation base should be total costs. This year we evaluated three Air Traffic Services overhead cost pools and the bases used to allocate the costs to Air Traffic Services activities. We found that Air Traffic Services had properly collected the general and administrative costs into cost pools in compliance with Federal accounting standards; however, FAA did not properly allocate these costs. Federal accounting standards require that overhead costs be allocated using an appropriate allocation base to ensure that costs are distributed properly.

For the three overhead cost pools for Air Traffic Services, FAA assigned the cost to its services using an inappropriate allocation base of direct labor and benefits cost. To distribute Air Traffic Services overhead costs fairly and properly, we found the appropriate allocation base should be total costs. For example, using a total cost basis,

FAA would have allocated about \$232 million of FY 2001 overhead cost to the Terminal Service or \$38 million more than by using the direct labor and benefits cost basis. Use of the direct labor and benefits cost basis understates the cost the Terminal Service should have been assigned. FAA agreed to implement the recommendation to use a total cost basis for allocation of overhead costs.

**Assessment Area 8. Assess the progress of FAA in cost and performance management, including use of internal and external benchmarking in improving the performance and productivity of the administration.**

FAA has made little progress implementing cost and performance management practices. Cost and performance management measures the productivity of activities enabling managers to set goals and benchmarks, allocate the proper resources, and determine the number of employees needed for each activity. For example, with the proper performance measure and cost data, FAA could calculate the cost of air traffic control services per flight at each location and compare the cost at different locations. FAA could then determine the most efficient practices and establish these best practices at its locations.

As part of its implementation of the cost accounting system during FY 2001, FAA planned to define performance measures for its programs and activities within its lines of business and develop ways to monitor those measures using cost data. FAA assigned two employees to this task but it did not achieve its goal to define performance measures. During FY 2002, FAA further reduced the funding for cost and performance management by more than 50 percent, and has now abandoned its goal of fully implementing cost and performance management in FY 2004. As of December 31, 2002, FAA did not have an established target date for implementing performance management techniques. FAA expects to complete a strategic analysis by August 31, 2003. After that time a specific target date for implementing cost and performance management will be established.

During FY 2002, FAA made little progress in implementing cost and performance management practices. FAA's original plan for FY 2002 was to provide its organizations with cost accounting data and have the organizations examine their performance and develop benchmarks and goals for performance improvement. FAA did not achieve its goal. FAA's FY 2002 cost and performance implementation effort resulted only in refining high level headquarters performance goals and conducting information and training seminars for some FAA organizations.

FAA still does not report the costs for each facility location. In January 2003, we reported that FAA did not properly assign \$115 million of equipment implementation costs to its Terminal Service facilities. By not assigning these costs to its facilities, FAA does not know the actual cost to operate a facility; and therefore, it cannot set accurate internal and external benchmarks or establish financial performance measures.

FAA continues to report costs as lump-sum amounts rather than by individual facility locations and activities. For example, for the Terminal Service in FY 2001, about \$1.3 billion of \$2.4 billion was reported in lump-sum totals and not by individual facility locations as required by Federal accounting standards. FAA cannot set cost and performance goals and benchmarks, nor effectively manage its costs and productivity unless it knows the cost to operate individual facilities and provides the information to its managers so they can make better business decisions.

In 1993, Congress passed the Government Performance and Results Act that requires Federal agencies to establish performance goals. Nearly 10 years later, FAA has yet to establish any financial performance goal to help measure and control costs. It is hard to believe that in today's business environment a performance-based organization would not have a financial measure or metric.

FAA cannot achieve the full benefit from its \$45 million investment in a cost accounting system without implementing cost and performance management to link the cost of activities with performance goals and measures. In our opinion, FAA should establish development of a cost accounting system fully compliant with Federal accounting standards as an agency performance goal with the stipulation that annual performance bonuses to senior executives and program managers within the affected lines of business will be withheld until the goal is successfully accomplished.

## **RECOMMENDATIONS**

We recommend that the FAA Administrator:

1. Establish an agency performance goal to implement cost accounting and labor distribution systems that are compliant with Federal standards by October 1, 2004. FAA should:
  - a. Provide the resources necessary and designate a person to be accountable for accomplishing the goal.
  - b. Make successful implementation of the cost accounting system a precondition to the awarding of annual performance bonuses for senior executives and program managers within the affected lines of business.
2. Specify and implement the internal controls to be added in the Cru-X labor distribution system to ensure that employees accurately record their start and stop work times for hours worked and report air traffic controller duties by position and collateral duties by function.
3. Make FAA-wide cost and performance management practices an agency priority and commit appropriate funding to fully establish these practices by October 1, 2004.

## MANAGEMENT COMMENTS AND OIG RESPONSE

A draft of this report was provided to the FAA Administrator on March 28, 2003. FAA provided a written response to our recommendations on April 17, 2003, and commented on each assessment area. A summary of FAA's comments on the eight assessment areas and our recommendations and our response are provided below.

**Assessment Area 1:** FAA replaced budgetary data with actual cost data as the basis for allocating FY 2003 equipment acquisition costs, environmental liability costs, and gains and losses. FAA is reviewing the accounting processes for lease costs to identify a better way to allocate these costs.

**Assessment Area 2:** In FY 2000, FAA began using statistical data from the Telecommunication Information Management System as the basis to assign costs. FAA recognizes that the telecommunication data are not fully complete and FAA is working to resolve the issue.

**Assessment Area 3:** FAA is implementing all of the FY 2002 financial statements audit recommendations including strengthening controls for tracking assets.

**Assessment Area 4:** FAA will make changes to correct this issue as part of its effort to resolve all issues disclosed as part of the audit of the FY 2002 financial statements.

**Assessment Area 5:** FAA initially processed year-end financial statement adjustments using September 2001 cost data. FAA's subsequent analysis identified a problem with the results. FAA then processed the adjustments using the total FY 2001 costs. This produced more valid results.

**Assessment Area 6:** The OIG and FAA agree on the definition of services.

**Assessment Area 7:** FAA will process February 2003 data using total costs as the basis for Air Traffic Services overhead allocations and for most of FAA headquarter administrative overhead costs. FAA will continue to use direct labor and benefits costs to allocate the Human Resource Management costs because its analysis indicates it to be a more logical basis than total costs for this one cost element.

**OIG Response for Assessment Areas 1 through 7:** We consider FAA's corrective actions and proposed actions reasonable in Assessment Areas 1 through 7. These actions should help improve the quality of the cost accounting data.

**Assessment Area 8:** FAA's cost accounting system distributes costs to all FAA-staffed terminal facilities. However, the Air Traffic Services management only requires monthly reports for the top 50 airports and selected lower level terminals. According to FAA this

decision provides Air Traffic Services management with critical cost data while limiting to a manageable number the monthly management reports produced. FAA will address individual reporting of the cost of contract towers as part of its continuous improvement efforts.

FAA will study all costs remaining at the service level to determine the most suitable basis for assigning these costs to service delivery points. FAA plans to complete the study by September 30, 2003 and implement the changes promptly thereafter. FAA will submit its implementation plans to the OIG by December 31, 2003.

**OIG Response for Assessment Area 8:** We agree with FAA's plan to study all costs remaining in the service level to determine the most suitable basis for assigning these costs to facility locations. However, we noted FAA's plans to continue reporting the costs for a limited number of facilities. Cost information is available for all FAA-staffed facilities but not reported for all FAA-staffed facilities. By not reporting the costs on a regular and consistent basis, FAA is not in compliance with Federal accounting standards. FAA needs to report cost for each FAA-staffed location, contract tower, and other facility to the greatest extent possible. This specific cost information for each facility location is needed so that managers can compare performance among locations and can identify best practices, set benchmarks at facilities, and make informed business decisions. We strongly encourage FAA to report cost information for all FAA-staffed facilities, contract towers, and other locations so that managers can make more informed and better business decisions.

**Recommendation 1:** FAA concurred. FAA plans to fully implement its labor distribution reporting systems by September 30, 2003, and the cost accounting system by September 30, 2004. Tim Lawler, Director of Cost and Performance Management, is the executive accountable for the implementation of the labor distribution systems and the cost accounting system. Senior executives within the Office of Financial Services and the implementing organizations will receive a short-term incentive (STI) bonus only if the cost accounting system is implemented by September 30, 2004.

**OIG Response:** We concur with FAA's planned actions. Effective implementation of these actions should help FAA reach its goal of a fully implemented cost accounting system that is compliant with Federal accounting standards.

**Recommendation 2:** FAA concurred. FAA plans to provide satisfactory internal controls to ensure accurate collection of start and stop times for employees. FAA intends to collect labor distribution data by position and collateral duties by function. These changes are due to be completed by September 30, 2004.

**OIG Response:** FAA's planned actions are responsive to the intent of our recommendation. In our opinion, the collection of labor distribution cost data by position

and for collateral duties for air traffic controllers will help provide necessary information for FAA to manage its operations more efficiently.

**Recommendation 3:** FAA concurred. FAA reported its Administrator has made Organizational Excellence, including cost and performance management, one of the top priorities for her term in office. In conjunction with its strategic plan, FAA plans to implement the use of cost and performance management practices throughout FAA. FAA stated it will make every effort to fund these initiatives at a level that will incorporate cost and performance management into FAA business practices.

**OIG Response:** FAA's commitment to implement cost and performance management practices is important if FAA is to become a performance-based organization. FAA must dedicate adequate resources to accomplish this goal. FAA reported it would submit its specific plans to implement cost and performance management practices by August 31, 2003. We will evaluate the plans as part of our next assessment.

The complete text of management comments is in the Appendix. We considered management's general comments and made changes to the final report, as appropriate, to address those comments. Actions taken and planned by FAA are generally reasonable and no further reply is necessary, subject to the follow-up requirements in DOT Order 8000.1C.

We appreciate the courtesies and cooperation of FAA representatives. If you have questions concerning this report, please call me at (202) 366-1992, or Keith Cosper at (202) 366-1496.

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

The OIG assessment of FAA progress in this report responds to the mandate as defined in Section 309 of AIR-21. This report summarizes key findings concerning FAA's cost accounting and labor distribution systems as of December 31, 2002. AIR-21 requires that OIG perform eight specific assessments to determine whether FAA's methods for calculating amounts in the cost accounting system and assigning costs to specific users are appropriate, reasonable, and understandable.

Our objectives were to provide the status of FAA's cost accounting system and our results on specific assessments of each area required by AIR-21. These areas were: (1) the method for calculating and assigning costs to users; (2) integrity and reliability of cost input data, including source documents and data collection process; (3) asset system for tracking; (4) methods for establishing asset values and depreciation; (5) internal controls over cost data; (6) definition of services selected for cost collection; (7) overhead pools and the reliability of the bases used for assigning common costs; and (8) FAA's use of cost and performance management for improving performance and productivity.

The scope of our examination reflects our assessment of control risk and includes tests of compliance with applicable laws and regulations. Our assessment of control risk reflects that we have not specifically examined all internal controls that may be applicable to FAA's cost accounting system because the system still is under development. The analyses we performed of internal controls provided an understanding of the design of the internal controls, whether the internal controls had been placed in operation, and whether the internal controls were sufficient to assess the control risk associated with the cost accounting system.

This report also relies on work we performed on FAA's cost accounting system and annual financial statements. FAA is developing its cost accounting and labor distribution systems in phases. As additional portions of the systems are developed, we will report on their adequacy and compliance with Federal accounting standards.

Our audit work was not an audit of FAA's compliance with the overflight fee statute. Therefore, our audit results should not be used as a basis to evaluate FAA's overflight fees. We performed our audit from September 2002 through January 2003 at FAA Headquarters in Washington, D.C. The audit was conducted in accordance with Government Auditing Standards prescribed by the Comptroller General of the United States.

## ***EXHIBIT B. PRIOR RECOMMENDATIONS ON FAA COST ACCOUNTING SYSTEM***

We issued eight reports related to the development of FAA's cost accounting system. A listing of those reports and the 27 recommendations follow.

**Audit Report: FI-2003-013, *Terminal Service Cost Accounting Practices*, January 21, 2003.**

- Distribute costs to each Terminal Service facility location and report the results to FAA management.
- Change the cost accounting system to assign costs using an acceptable method as required by Federal accounting standards.
- Allocate the Air Traffic Services headquarters, Air Traffic Operations, and Airway Facilities Operations administrative overhead cost pools using a total cost basis.

**Audit Report: FI-2002-072, *2001 Status Assessment of Cost Accounting System and Practices*, January 10, 2002.**

- Revise the target date for having a fully functional cost accounting system considering the interface requirements of the labor distribution and Delphi accounting systems.
- Increase monetary and personnel resources to achieve implementation of cost and performance management in FY 2003.
- Modify the cost accounting system to allocate the administrative overhead costs for FAA Headquarters to lines of business using a total cost base.
- Prepare a handbook of comprehensive and well-documented policies and procedures for an adequate system of internal controls for the cost accounting system.

**Audit Report: FI-2002-065, *Flight Service Stations Cost Accounting Practices*, December 11, 2001.**

- Improve the accuracy of the data produced by the telecommunication systems by correcting inaccurate and missing telecommunication cost data.
- Use detailed vendor billing information to assign actual contract maintenance costs to each of the flight service stations.

- Compute and assign data processing labor costs automatically to each of the 61 flight service stations.

**Audit Report: FI-2002-016, *Air Traffic Services Planned Labor Distribution Reporting*, October 30, 2001.**

- Improve the internal controls within the Cru-X labor distribution system by directing that software programs be modified to use the system's internal clock to automatically record the employee's actual start and stop times and provide flexibility for the supervisor to approve variations in the scheduled work times as appropriate.

**Audit Report: FI-2001-023, *Status Assessment of FAA's Cost Accounting System and Practices*, February 28, 2001.**

- Establish the cost accounting and labor distribution systems as a top priority and establish the estimated completion date when both systems are fully implemented. FAA's goal should be to have both systems fully implemented by September 30, 2002.
- Increase allocation of monetary and personnel resources to meet the established completion date for both systems.
- Review the cost accounting system processes to determine whether more efficient methods can be used without a loss of system effectiveness.

**Audit Report: FI-2001-013, *Design of the Cost Accounting System for Research and Acquisitions*, December 18, 2000.**

- Modify the labor distribution reporting system and procedures to prevent hours from being charged to "No Project."
- Implement written timekeeping procedures to ensure that hours worked are charged to the proper projects.
- Design the cost accounting system for Research and Acquisitions to create separate cost groupings for different types of common cost, such as overhead and general and administrative expenses.
- Change the basis for allocating overhead cost to projects to a total expenditure base that includes all project costs.

- Until the cost accounting system is implemented, estimate the portion of overhead cost associated with producing facilities and equipment assets, and include the cost in work-in-process or other asset accounts until the assets are placed in use.
- Establish procedures to identify commercial and externally developed software costs incurred for all administrative systems under development, and record the cost in work-in-process or other asset accounts in the financial and cost accounting system.

**Audit Report: FE-2000-024, *Cost and Flight Data for Aircraft Overflights*, December 17, 1999.**

- Use FY 1999 cost, including property depreciation cost, and FY 1999 flight data to determine overflight costs and compute user fees.
- Update labor standards as a short-term improvement to estimate airway facilities labor costs.
- Establish a labor distribution system to capture costs for the air traffic controller and airway facilities workforces. As part of this process, establish a method to assign non-labor airway facilities costs directly to projects.

**Audit Report: FE-1998-186, *Implementation of Cost Accounting System*, August 10, 1998.**

- Collect appropriate accounting adjustments and project cost.
- Develop procedures to ensure that labor costs are accurately assigned to projects.
- Determine cost incurred by other agencies and factor into FAA's full cost of operations.
- Revise the implementation plan for the cost accounting system by specifying time and resources necessary to obtain performance data, resolve schedule conflicts, and perform critical tasks.

FAA agreed with all of our recommendations and has taken some corrective actions, but not all FAA actions resulted in correcting the problems. For example, in FY 2001, we reported a serious internal control weakness in the design of the Cru-X labor distribution system. FAA agreed to fix the problem but then negotiated a union agreement that eliminated the requirements needed to correct the weaknesses.

## ***EXHIBIT C. REPORTS AND TESTIMONIES RELATED TO AIR-21 ASSESSMENT AREAS***

Statement of Gerald L. Dillingham, Director, Civil Aviation Issues, Before the Committee on Commerce, Science, and Transportation, U. S. Senate, FAA Reauthorization Provides Opportunities to Address Key Agency Challenges, GAO Report Number GAO-03-653T, April 10, 2003.

Statement of Kenneth M. Mead before the Committee on Appropriations Subcommittee on Transportation, Treasury, and Independent Agencies, U. S. House of Representatives, Appropriation Issues for DOT's FY 2004 Budget, March 13, 2003.

Statement of Kenneth M. Mead before the Committee on Transportation and Infrastructure, Subcommittee on Aviation, U. S. House of Representatives, Re-authorization of the FAA, February 12, 2003.

Statement of Kenneth M. Mead before the Committee on Commerce, Science and Transportation, U. S. Senate, The State of the FAA, February 11, 2003.

DOT Consolidated Financial Statements for Fiscal Years 2002 and 2001, OIG Report FI-2003-018, January 27, 2003.

Quality Control Review of Audited Financial Statements for Fiscal Year 2002, FAA, OIG Report QC-2003-017, January 27, 2003.

FAA Terminal Service Cost Accounting Practices, OIG Report FI-2003-013, January 21, 2003.

DOT's Top Management Challenges, OIG Report PT-2003-012, January 21, 2003.

Major Management Challenges and Program Risks, GAO Report Number 03-108, January 2003.

Statement of Kenneth M. Mead before the Committee on Appropriations Subcommittee on Transportation, U. S. House of Representatives, March 13, 2002.

Statement of Kenneth M. Mead before the Subcommittee on Transportation and Related Agencies, House Appropriations Committee, U. S. House of Representatives, February 13, 2002.

2001 Status Assessment of FAA Cost Accounting System and Practices, OIG Report FI-2002-072, January 10, 2002.

Flight Service Stations Cost Accounting Practices, OIG Report FI-2002-065, December 11, 2001.

Air Traffic Services Planned Labor Distribution Reporting, OIG Report FI-2002-016, October 30, 2001.

Implementing a New Financial Management System, OIG Report FI-2001-074, August 7, 2001.

Statement of Kenneth M. Mead before the Appropriations Committee's Subcommittee on Transportation, U. S. House of Representatives, Management Oversight Issues, March 8, 2001.

Status Assessment of FAA's Cost Accounting System and Practices, OIG Report FI-2001-023, February 28, 2001.

Statement of Kenneth M. Mead before the Appropriations Committee's Subcommittee on Transportation, U. S. Senate, Management Oversight Issues, February 14, 2001.

Major Management Challenges and Program Risks, GAO Report Number 01-253, January 2001.

Design of the FAA Cost Accounting System for Research and Acquisitions, OIG Report FI-2001-013, December 18, 2000.

Statement of Kenneth M. Mead before the Appropriations Committee's Subcommittee on Transportation, U. S. Senate, Management Oversight Issues, March 9, 2000.

Statement of Raymond J. DeCarli before the Subcommittee on Transportation, U. S. House of Representatives, Transportation Investment Projects Management and Oversight, March 8, 2000.

Statement of Alexis M. Stefani before the Subcommittee on Science, U. S. House of Representatives, Improving Aviation Safety, Efficiency, and Security: FAA's Fiscal Year 2001 Request for Research, Engineering, and Development, March 1, 2000.

FAA Property, Plant, and Equipment, OIG Report FE-2000-058, February 28, 2000.

Statement of Kenneth M. Mead before the Committee on the Budget and Subcommittee on Transportation and Related Agencies, Committee on Appropriations, U. S. Senate, Modernizing the Federal Aviation Administration: Challenges and Solutions, February 3, 2000.

FAA Cost and Flight Data for Aircraft Overflights, OIG Report FE-2000-024, December 17, 1999.

Statement of John L. Meche before the Subcommittee on Oversight, Investigations, and Emergency Management, Committee on Transportation and Infrastructure, U. S. House of Representatives, Financial Data Quality in the U. S. Department of Transportation, September 30, 1999.

Statement of John L. Meche before the Government Reform Committee's Subcommittee on Government Management, Information, and Technology, U. S. House of Representatives, Financial Management at the Federal Aviation Administration, March 18, 1999.

Implementation of FAA Cost Accounting System, OIG Report FE-1998-186, August 10, 1998.

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

THE FOLLOWING INDIVIDUALS CONTRIBUTED TO THIS REPORT.

<u>Name</u>	<u>Title</u>
Keith L. Coper	Program Director
Paul Barry	Project Manager
Michael Veverka	Senior Auditor
Adam B. Schentzel	Auditor

## APPENDIX. MANAGEMENT COMMENTS



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

# Memorandum

Subject: **ACTION:** Draft Report on 2002 Status  
Assessment of Cost Accounting System and  
Practices, FAA

Date: April 17, 2003

From: Acting Assistant Administrator for Financial  
Services/CFO

Reply to  
Attn. of:

To: Deputy Assistant Inspector General for Financial  
and Information Technology Audits

Attached is the FAA's response to the subject Draft Assessment Report. We concur with all findings and recommendations, and indicate the specific actions that we plan to take for each recommendation and target dates for completion.

We appreciate the courtesy and professionalism of your audit staff. If you have any questions, please contact Ray Morris at (202) 267-7580.

A handwritten signature in black ink that reads "John F. Hennigan".

John Hennigan

Attachment

FAA RESPONSE TO OFFICE OF INSPECTOR GENERAL (OIG) DRAFT REPORT  
ON  
2002 STATUS ASSESSMENT OF COST ACCOUNTING SYSTEM AND  
PRACTICES  
PROJECT No. 02F3025F000

April 11, 2002

**General Comment:** We appreciate the OIG's comments and take them seriously. We have completed 15 out of 27 OIG recommendations. We are working on the others and have provided the OIG our plans for completing them.

**Specific Comments to Results of Assessments Section of the OIG Draft Report.**

**Assessment Area 1: Assessment to ensure that the method for calculating the overall costs of FAA and attributing these costs to specific users is appropriate, reasonable, and understandable.**

**OIG Draft Report:** "... FAA also used inappropriate and unreasonable cost assignment methods for attributing its overall cost to specific users, activities, and services and these methods resulted in inaccurate calculations. For example, FAA assigned \$203 million of FY 2001 costs to its Terminal Service using inappropriate cost assignment methods that are not in accordance with Federal accounting standards. The inappropriate cost assignment methods included the use of outdated FY 1999 and FY 2000 appropriation and budgetary data, which are not adequate because they are estimates and forecasts, not actual costs."

**FAA Comment:** We have updated the basis for allocation of FY 2003 FAA costs by replacing budgetary data with actual cost data for Equipment Acquisition costs (excluding lease costs), environmental liability costs, and gains and losses. Together, these costs represent \$186M (92 percent) of the \$203M that the OIG reported. We are reviewing the accounting processes for lease costs of \$17M to identify a better way to allocate these costs.

**Assessment Area 2. FAA cost input data, including the reliability of the Administration's source documents and the integrity and reliability of the Administration's data collection process.**

**OIG Draft Report:** "... FAA cannot get the necessary information into its cost accounting system from the source documents. For example, in 1999, we reported that FAA could not accurately assign any of its \$70 million of telecommunication and utility costs to the proper facility because it used flawed information from an incomplete study to compute the costs."

**FAA Comment:** In FY 2000 we resolved this issue by beginning to use statistical data from the Telecommunication Information Management System (TIMS) as the basis to assign telecommunications costs. We recognize that TIMS data is not fully complete, and we are working to resolve that issue.

**OIG Draft Report:** “In 2001, we reported that FAA still could not accurately assign telecommunication costs to the proper facility because the cost accounting system could not collect the necessary data from the source documents.”

**FAA Comment:** We are working on this issue and have made considerable improvements, including adding equipment location data for the highest cost accounts in the TIMS. By the end of the 3<sup>rd</sup> Quarter of FY 2003 we will be using additional data sources to further reduce the number of unidentified locations. We will continue to monitor this work. Our goal is to get the data substantially correct by the middle of FY 2004.

### **Assessment Area 3. FAA's system for tracking assets.**

**OIG Draft Report:** “... KPMG concluded that FAA property continues to be a reportable condition and made additional recommendations in its audit report on the FY 2002 financial statements to strengthen controls for tracking assets”.

**FAA Comment:** The FAA is implementing all of the FY 2002 financial statements audit recommendations including strengthening controls for tracking assets.

### **Assessment Area 4. FAA's methods for establishing asset values and depreciation.**

**OIG Draft Report:** “The lack of electronic interface between IFAS and the general ledger increases the likelihood that the two systems will not agree due to backlogs of input to either system or errors that occur when entering data. Also, certain labor and travel costs related to property were being capitalized incorrectly.”

**FAA Comment:** We will make changes to correct this issue as part of our resolve to address all issues disclosed as part of the audit of our FY 2002 financial statements.

### **Assessment Area 5. FAA's system of internal controls for ensuring the consistency and reliability of reported data.**

**OIG Draft Report:** “Without well-documented internal control procedures, errors may not be detected, prevented, or corrected. For example, as a result of poor internal controls, FAA did not produce complete FY 2001 cost accounting information until almost 10 months after the end of the fiscal year.”

**FAA Comment:** The FAA initially processed year-end financial statement adjustments against September 2001 cost data. Our subsequent analysis identified a problem with the results. We ran the adjustments against total FY 2001 costs. This produced more valid results.

**Assessment Area 6. FAA's definition of the services to which it ultimately attributes its costs.**

The OIG and the FAA agree on the definition of services.

**Assessment Area 7. Cost pools FAA used and the rationale for and reliability of the bases it proposes to use in allocating costs of services to users.**

**OIG Draft Report:** “For the three overhead cost pools for Air Traffic Services, FAA assigned the cost to its services using an inappropriate allocation base of direct labor and benefits cost.”

**FAA Response:** We will process February 2003 data using total costs as the basis for ATS overhead allocations instead of direct labor and benefits costs.

**OIG Draft Report:** “... FAA's headquarters administrative overhead cost pool was allocated to its lines of business using an inappropriate allocation base of direct labor and benefits cost;”

**FAA Response:** For February 2003 data, FAA will use total costs to assign virtually all FAA’s headquarters administrative overhead costs. We will continue to use direct labor and benefits costs to allocate Human Resource Management costs because our analysis indicates it to be a more logical basis than total costs.

**Assessment Area 8. Assess the progress of FAA in cost and performance management, including use of internal and external benchmarking in improving the performance and productivity of the administration.**

**OIG Draft Report:** “FAA did not properly assign \$115 million of equipment implementation costs to its Terminal Service facilities”. “...For the Terminal Service in FY 2001, about \$1.3 billion of \$2.4 billion was reported in lump-sum totals and not by individual facility locations as required by Federal accounting standards.”

**FAA Comment:** We classify the \$1.3 billion in costs not assigned to Terminal Service facility location as follows:

- \$824M (63 percent) represents the cost of FAA-staffed terminal facilities other than the top 50 airports. The CAS distributes costs to all FAA-staffed terminal facilities. However, ATS management only requires monthly reports for the top 50 airports and selected lower level terminals. They will use ad hoc queries to provide cost data for any of the other facilities. This decision provides ATS management with critical cost

data while limiting to a manageable number the monthly management reports produced.

- \$127M (9 percent) represents cost of Contract Towers. Outside contractors manage contract towers. These towers are operated under a fixed price contract where competition between bidders gives the FAA the best price for each tower. The contractor bills the FAA the monthly portion of the contract price for each tower. This becomes FAA's cost. FAA is not involved in the towers' management except to ensure that they meet established safety standards. The CAS does not report costs for individual contract towers because such information would have no value to FAA in understanding or managing its costs or making operational decisions.
- \$94M (7 percent) represents Non-controlled locations cost. FAA maintains equipment at locations that are remote from air traffic control facilities. They may support services provided by several Service Delivery Points (SDPs). Site Reports satisfy ATS management's need to understand the cost of operating and maintaining selected equipment.
- \$293M (approximately 22 percent) represents Other costs. FAA distributes costs to the service level only when costs do not have enough detail (i.e., \$115M of equipment implementation costs) to allow their accurate assignment to SDPs. Other costs also include those that are not appropriately assigned to lower levels (i.e., \$107M of Post Retirement Employee Benefits).

The FAA is in the process of placing the Reports, Analysis and Distribution System (RADS) reporting tool fully into service. This tool will give ATS access to monthly and ad hoc information for all FAA-staffed terminal facilities. In addition, the FAA is implementing a new financial management system, DELPHI. This system will replace the Departmental Accounting and Financial Information System (DAFIS). DELPHI will increase the level of detail for financial transactions. Users will be able to directly assign most costs to SDPs.

FAA will study all costs remaining at the service level to determine the most suitable basis for assigning these costs to SDPs. We plan to complete the study by the end of FY 2003 and implement the changes promptly thereafter. We will give our implementation plans to the OIG by the end of Calendar Year 2003.

### **OIG Recommendations.**

***OIG Recommendation:*** *Establish an agency performance goal to implement cost accounting and labor distribution systems that are compliant with Federal standards by October 1, 2004. FAA should:*

- a. Provide the resources necessary and designate a person to be accountable for accomplishing the goal.*

- b. *Make successful implementation of the cost accounting system a precondition to the awarding of annual performance bonuses for senior executives and program managers within the affected lines of business.*

**FAA Response:** Concur. We will fully implement LDR by the end of FY 2003 and the CAS by the end of FY 2004. Tim Lawler, Director of Cost and Performance Management, is the executive accountable for implementation. CAS implementation will be a Short-Term Incentive (STI) for senior executives in the Office of Financial Services, ABA, and organizations in which the CAS will be implemented.

**OIG Recommendation:** *Specify and implement the internal controls to be added in the Cru-X labor distribution system to ensure that employees accurately record their start and stop work times for hours worked and report air traffic controller duties by position and collateral duties by function.*

**FAA Response:** Concur. The FAA Administrator and the Inspector General have agreed that the FAA will provide satisfactory internal controls to assure accurate collection of start and stop times for employees. We will collect this data by position and collateral duties by function. We will accomplish this work during FY 2003 and FY 2004.

**OIG Recommendation:** *Make FAA-wide cost and performance management practices an agency priority and commit appropriate funding to fully establish these practices by October 1, 2004.*

**FAA Response:** Concur. The FAA Administrator has made Organizational Excellence, including cost and performance management, one of the Agency's top priorities for her term of office. In conjunction with the Administration's Strategic Plan now under development, we expect to cascade the use of cost and labor management practices throughout the Agency. The entire FAA will work on Organizational Excellence initiatives. We will make every effort to fund these initiatives at a level that will engrain them into our business practices.