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Report to the Chairman, Committee on the Budget, House of Representatives

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FINANCIAL MANAGEMENT

Federal Aviation Administration Lacked Accountability for Major Assets

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Accounting and Information
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February 18, 1998

The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

Dear Mr. Chairman:

This letter responds to your request that we analyze the Department of Transportation (DOT) Inspector General's (IG) audit report on the Federal Aviation Administration's (FAA) fiscal year 1996 Statement of Financial Position, which reports FAA's assets and liabilities. As financial statements provide accountability for the expenditure of appropriated funds, this analysis is important to understanding the reliability of reported financial information and the possible consequences of unreliable information. Specifically, you asked us to consider the possible program and budgetary implications of the questions raised about financial statement data deficiencies identified in the audit report.

Background

FAA's primary mission is to ensure safe, orderly, and efficient air travel throughout the United States. FAA's ability to fulfill this mission depends on the adequacy and reliability of the nation's air traffic control (ATC) system, a vast network of computer hardware, software, and communications equipment. Sustained growth in air traffic and aging equipment has strained the current system, limiting the efficiency of ATC operations. To combat these trends, in 1981 FAA embarked on a multibillion dollar, mission-critical capital investment program aimed at modernizing its aging ATC infrastructure.

This modernization program includes over 200 separate projects estimated to cost over $34 billion through the year 2003. It includes the acquisition of new radars and automated data processing, navigation, and communications equipment as well as new facilities and support equipment. As these items are placed in service, FAA is required to report them as property and equipment assets in its financial statements. In addition, related spare parts necessary to support the operation and maintenance of this equipment are reported as operating materials and supplies inventory. In its fiscal year 1996 financial statements, FAA reported assets of $18.2 billion, including approximately $9.2 billion of operating materials and supplies (such as mission-critical spare parts), property and equipment (such as land, buildings, and air traffic control

equipment), and work-in-process (which consists of facilities and equipment acquired but not yet put in service). It also reported expenses of $10.1 billion.

Problems in the reporting of operating materials and supplies and property and equipment (including work-in-process) were cited by the DOT IG in its audit report on FAA's fiscal year 1996 financial statement. The IG is responsible for auditing FAA's financial statements under the Chief Financial Officers Act of 1990, as expanded by the Government Management Reform Act of 1994, to determine whether those financial statements are reliable. The IG audited FAA's fiscal year 1996 Statement of Financial Position, which reports the agency's assets and liabilities, but disclaimed (did not express) an opinion primarily because of internal control weaknesses that precluded the IG from determining if FAA's operating materials and supplies and property and equipment were fairly presented. This is significant since at September 30, 1996, operating materials and supplies and property and equipment represented approximately 51 percent of FAA's total reported assets. Similar conditions resulted in the IG issuing disclaimers of opinion on FAA's fiscal years 1993 through 1995 financial statements.

Among the more serious deficiencies cited in the IG's report on FAA's fiscal year 1996 financial statement were the following:

- The reported $432 million for operating materials and supplies could not be verified because physical inventory counts were not adequately performed, documentation to verify operating materials and supplies valuation was not available, and certain spare parts were not included in the reported total. For example, FAA did not include one category of spare parts, which includes disk drives, modems, and card assemblies, estimated at $245 million in the financial statement because the field spare parts inventory records were unreliable.
- The reported $5.5 billion for property and equipment was unreliable because FAA records for such assets contained significant errors and omissions and did not accurately reflect property and equipment owned by FAA. For example, $198 million of property that no longer existed, such as fuel storage tanks and buildings, was included in the financial statement as assets.
- The reported $3.3 billion of work-in-process could not be verified because FAA did not maintain sufficient details to support what was in the account, and the total was not completely reconciled to other FAA records.

Results in Brief

The deficiencies concerning operating materials and supplies and property and equipment cited by the IG impair FAA's ability to efficiently and effectively manage programs that use these assets and expose the agency to waste, fraud, and abuse. Four examples follow.

- Lack of physical controls over inventory and equipment could result in the costly, unnecessary acquisition of additional assets already on hand, shortages of critical parts, delays in ordering needed assets erroneously shown to be on hand, or misuse of assets. In addition, unnecessary costs could be incurred to manage and maintain excess assets.
- Spare parts, such as disk drives, modems, and circuit card assemblies, may not be adequately safeguarded. Since many of these items are portable, inaccurate inventory records may increase the risk of undetected theft or loss due to unauthorized acquisition and use or disposition.
- Mission-critical equipment, such as radars and other air traffic control equipment, may be difficult to locate when needed, which could exacerbate an emergency situation.
- Problems in accounting for significant investments in property may affect FAA's ability to properly maintain these assets, including estimating future maintenance funding needs.

In addition, while not a specific focus of the IG report, GAO and others have identified the lack of a reliable cost accounting system as a weakness that prevents FAA from reliably determining costs. The lack of cost accounting information impairs FAA's ability to make effective decisions about resource needs, to adequately control major projects such as the ATC modernization program, and to identify and avoid waste. For example, without good cost information FAA cannot reliably measure the ATC modernization program's actual cost performance against established baselines, and cannot reliably use information relating to actual cost experiences to improve future cost estimating efforts. The lack of cost accounting information also limits the ability of FAA management and other decisionmakers to develop a system of user fees based on the cost of services provided. Finally, the lack of reliable cost information also limits FAA's ability to meaningfully evaluate performance measures in terms of efficiency and cost-effectiveness.

Overall, the lack of accountability over physical assets means that FAA and the Congress may not have accurate financial management information to help make informed decisions about future funding. The lack of accountability is of particular concern in situations such as FAA's where

billions of dollars of assets are being acquired in connection with the ATC modernization program.

FAA advised us that since the IG report was issued on March 27, 1997, it has made significant progress and expended significant resources toward correcting the problems reported by the IG. According to FAA, it has taken or plans corrective actions in three principal areas: (1) operating materials and supplies, (2) property and equipment, and (3) cost systems. FAA informed us that it has counted a major portion of operating materials and supplies and property, identified excess items, adjusted its records, and created a Cost Accounting Division.

We have not assessed the current status or sufficiency of these actions. The audit of FAA's fiscal year 1997 financial statement is currently nearing completion, and we will report the results of our assessment of that audit and the effectiveness of FAA's remedial actions at a later date.

Objectives, Scope, and Methodology

Our objectives were to analyze the IG audit report on FAA's fiscal year 1996 Statement of Financial Position and to consider the possible program and budgetary effects of reported financial statement data deficiencies. To fulfill our objectives, we analyzed the IG's report on the audit of the FAA fiscal year 1996 Statement of Financial Position and reviewed selected IG workpapers related to the audit. We focused on the areas of operating materials and supplies and property and equipment because these were the areas cited in the IG's report as causing the disclaimer of opinion. We also interviewed IG personnel to obtain more details about the issues raised in the report and to gain an understanding of the work performed and its results. In addition, we accessed historical IG program reports for the last 10 years and reviewed financial statement audits of FAA for the fiscal years 1993 through 1995 statements. We also obtained and reviewed information from the FAA Chief Financial Officer and other FAA personnel about the current status of corrective actions on the reported issues.

In addition, because many of the problems identified by the IG were the result of the lack of a reliable system to accumulate costs, we reviewed several reports concerning FAA's financial and cost accounting systems. These included the Department of Transportation's Federal Managers' Financial Integrity Act reports for fiscal years 1993 through 1996, an April 1996 consultant report by Arthur Andersen on FAA's cost accounting

system problems and needs,[1] and a December 1997 report issued by the National Civil Aviation Review Commission that provides insights into and recommends improvements to FAA's cost accounting system.[2] We performed our review from October 1997 through January 1998 in accordance with generally accepted government auditing standards.

We requested oral comments on a draft of this report from the Secretary of Transportation or his designee. On February 3, 1998, the FAA Associate Administrator for Administration and his staff provided us with oral comments.

Operating Materials and Supplies Were Not Accurately Tracked

The IG was unable to determine whether operating materials and supplies with a reported value of $432 million were fairly stated because adequate inventory counts were not performed to determine actual items on hand,[3] excess inventory was not identified, documentation was not available to verify the correct cost of items, and accurate detailed records were not maintained for spare parts kept in the field (field spares).

Operating materials and supplies consist of spare parts located at the Logistics Center and in the field for ATC and other equipment, FAA facilities, and aircraft. The Logistics Center is the central warehouse for operating materials and supplies and uses an automated inventory system, which is continually updated (perpetual inventory) to account for inventory. Field spares are parts that to meet operational needs, are maintained at locations near the facility that they support. FAA facilities responsible for field spares generally maintain their own manual or automated inventory lists. The IG was unable to verify the reported balance of operating materials and supplies stocked at the Logistics Center because of numerous errors and omissions. Further, because FAA concluded that its records for field spares were not reliable and field spares were expensed when issued, no amount for field spares was included in the reported operating materials and supplies asset total. Available FAA records showed a balance of $245 million for field spares.

[1]Cost Accounting System Recommendations and Proposal Project Plan and Cost Estimate, April 1996. Arthur Andersen, Washington, D.C.

[2]Avoiding Aviation Gridlock & Reducing the Accident Rate, A Consensus for Change, December 1997. National Civil Aviation Review Commission, Washington, D.C.

[3]For fiscal years 1994 through 1996, FAA inventoried less than 8 percent of the Logistics Center inventory for each year and, in 1996, inventoried only 26 percent of field spares.

Some of the IG's specific findings were that

- 20 percent of the Logistics Center inventory counts did not agree with the amounts on perpetual inventory system listings,
- 27 percent of the field spare line items that were test counted did not match lists of stocked items,
- 48 percent of the Logistics Center parts did not have invoices or other documentation to verify the unit price of items, and
- 106 disk drives recorded at $3.6 million were kept in stock related to a system that was being decommissioned, some of which potentially could be identified as excess inventory.

The lack of accurate inventory information may result in program officials' inability to make prudent business decisions and to safeguard assets adequately, as shown in the following examples.

- Because of inaccurate inventory information, funding requests may not be based on actual needs, unnecessary purchases may be made, and inventory may be overstocked or hoarded due to availability concerns. In turn, this resulting excess, as well as spare parts for equipment no longer in service, would require storage, inventory control, and other activities that consume operating resources.
- Spare parts, such as disk drives, modems, and circuit card assemblies, may not be adequately safeguarded. Since many of these items are portable, inaccurate inventory records may increase the risk of undetected theft or loss due to unauthorized acquisition and use or disposition.

The lack of accurate inventory information may also impair operational effectiveness, as shown in the following examples.

- Inaccurate inventory information may result in a shortage of or the inability to locate essential parts necessary to repair mission-critical systems. This could result in repair delays due to unscheduled outages and failures of FAA equipment.
- Inaccurate information about the location and quantities of spare parts may cause a failure to make necessary modifications or updates to these items. Complex systems may require modifications to reflect functional design changes and to eliminate failure-prone parts. Since these parts could be used to repair operational systems, it is important that these parts, especially circuit card assemblies, subassemblies, and similar items, receive required modifications to ensure system design integrity.

Finally, the lack of accurate inventory information affects the reliability of financial management information. Operating materials and supplies inventory is recorded as an asset until it is issued or consumed in operations when the cost is charged to operating expenses. Therefore, if inventory assets are understated, operating expenses would be overstated. The misstatement of operating expenses distorts historical maintenance cost amounts that may be used to project and budget for future costs.

Agency Actions Related to Operating Materials and Supplies

FAA advised us that it has

- performed a wall-to-wall inventory of operating materials and supplies at the central warehouse, identified excess items, and adjusted records accordingly;
- revised policies and procedures to include an inventory count of operating materials and supplies every 3 years;
- counted 48 percent (dollar value) of field spares and plans to complete the field spares inventory by the end of fiscal year 1998;
- initiated a new project to provide physical and fiscal management of FAA assets both centralized at the Logistics Center and in field facilities;
- begun recording field spares as assets rather than expensing them as was the previous practice;
- revised methods to ensure timely review of excess operating materials and supplies stored at the Logistics Center; and
- made plans to implement bar coding for the asset tracking process in July 1998.

Property and Equipment on Hand Could Not Be Reliably Determined

The IG was unable to determine whether $5.5 billion of property and equipment was correct because records for these assets contained significant errors and omissions, supporting documentation was often unavailable, and inventory counts had not been performed to determine actual items on hand. The $5.5 billion includes reported amounts of almost $2 billion in property (real estate assets), and $3.5 billion in equipment (also referred to as personal property). Issues identified by the IG related to each of these categories of assets are discussed in the following sections.

Property

FAA's system for keeping track of property, such as land, facilities, and lease improvements, had significant errors and omissions and could not be

relied on to determine the actual amount of property owned. The IG found the following.

- Property estimated at $198 million, which had been disposed of, destroyed, or physically removed was still included in the property system. For example,
  - at the Air Route Traffic Control Center in Miami, a large fuel storage tank that had been removed years ago was still on the property list and
  - at another control center, several buildings on the property list had been demolished.
- Limited tests of real property identified about $12 million in assets held by FAA that could not be located in the property system. For example,
  - at the Cleveland Air Route Traffic Control Center, a medical trailer facility was not recorded and
  - at another control center, FAA failed to record a day care center completed in 1994.
- The IG could not determine if 22 of 65 leases tested should have been recorded as long-term capital leases[4] because documentation available was not sufficient to properly classify the leases. If these leases, with about $4 million in annual payments, were improperly classified as short-term instead of long-term, assets and liabilities would have been understated.

These types of errors and omissions affect FAA's ability to manage its real estate assets and make decisions about future needs. For example, long-range planning needs for future facilities are impaired by the lack of accurate information on the cost and useful lives of existing facilities. Further, lack of records on revenue-producing properties results in the inability to analyze the adequacy of fees charged to recover costs.

Equipment

As with real property, FAA's system for tracking equipment, such as ATC equipment and aircraft, could not be relied on because of a lack of supporting documentation and numerous errors. The IG found that:

- At various regions, equipment records did not separately identify individual assets. For example, at one region, three computer workstations valued at $162,000 were lumped together and could not be individually identified or located. FAA officials subsequently determined that the workstations were replaced in 1994.

[4]Statement of Federal Financial Accounting Standards No. 5, Accounting for Liabilities of the Federal Government provides criteria for a capital lease. If a lease meets the criteria, it is reported as an asset with a corresponding liability for payments to be made over the life of the lease.

- Documentation did not always exist to support reported equipment costs. For example, at one location, documentation to support the cost of mission-critical equipment, such as the Backup Emergency Communications system and the Voice Switching Control system, could not be located.
- Equipment costs totaling $325 million (out of $473 million tested by the IG) were improperly reported as operating expenses instead of assets. Based on the results of this sample test, the IG indicated that for fiscal years 1995 and 1996, an undetermined portion of the estimated $4.5 billion in major system equipment acquisitions using facilities and equipment funding was inappropriately charged as operating expenses rather than recorded as assets.

The unreliability of the equipment information system affects FAA's ability to properly manage these assets, thus giving rise to potential operational inefficiencies. For example, mission-critical equipment, such as radars and other air traffic control equipment, may be difficult to locate when needed, which could exacerbate an emergency situation. Also, as with inventory, asset theft could go undetected, and funds could be spent unnecessarily to acquire equipment that is already on hand.

Problems in accounting for both property and equipment also affect FAA's ability to properly maintain these assets, including estimating future maintenance and deferred maintenance funding needs. Effective in fiscal year 1998, FAA will be required under federal accounting standards to estimate deferred maintenance costs.[5] Such estimates will provide information to FAA and the Congress that will be useful in making decisions about maintenance priorities and future funding. However, without accurate property records, FAA and the Congress may not have sufficient information to make reliable estimates of maintenance and deferred maintenance needs.

Agency Actions Related to Property and Equipment

FAA advised us that for property it

- has counted 70 percent (dollar value) of real property and plans to count the remaining property by July 31, 1998;
- has made adjustments to detailed property and financial records based on property validations (computer match of database) taken;

[5]Statement of Federal Financial Accounting Standards No. 6, Accounting for Property, Plant, and Equipment, defines maintenance as the act of keeping fixed assets in an acceptable condition. The deferred maintenance estimate is the amount of future funding required to bring property and equipment to its acceptable operating condition.

- plans to develop procedures by June 30, 1998, to (1) ensure detailed property records are adjusted when property is acquired, disposed of, or destroyed and (2) reconciled property records to the general ledger; and
- has published guidelines for identifying capital leases and has directed a complete evaluation of leases.

FAA advised us that for equipment it

- has validated (computer match of database) 100 percent of equipment records greater than $25,000;
- has developed a system modification to record equipment acquisitions as individual items rather than as an aggregate amount and has issued written guidance about managing equipment effectively;
- is revising procedures and plans to train personnel in 1998 to properly identify equipment purchase costs that should be recorded as assets; and
- has worked with the IG to develop an approach for determining the value of fiscal years 1996 and 1997 transactions (individual items) that should be recognized as assets.

FAA Lacked a Reliable System to Account for Project Costs

Many of the problems the IG identified in operating materials and supplies and property and equipment result from the lack of a reliable system for accumulating project cost accounting information. When FAA acquires facilities and equipment, some project costs are accumulated in an account called work-in-process. The work-in-process account is a key component of FAA's system used to account for project costs. When the acquired items are placed in service, the accumulated costs are to be removed from work-in-process and recorded in appropriate asset or expense accounts. However, the IG was unable to determine whether the $3.3 billion reported as work-in-process was correct because FAA did not maintain sufficient details to support what was in the account, and the total was not completely reconciled to other FAA records. Without a reliable system to accumulate project costs, and to transfer out the appropriate amount when assets are placed in service, the asset and expense accounts relating to operating materials and supplies and property and equipment will continue to be misstated.

The inadequacy of FAA's cost accounting system has been identified by GAO and others as a weakness that prevents FAA from reliably determining project and other costs. For example, with regard to the ATC modernization program, we previously reported that FAA does not have a cost accounting

system capable of reliably accumulating full project cost information.[6] Our report concluded that without a system to capture and report the full cost of ATC projects, FAA cannot reliably measure the ATC projects' actual cost performance against established baselines, and cannot reliably use information relating to actual cost experiences to improve future cost estimating efforts. Further, we reported that the Congress does not have reliable cost information to use in making funding decisions about FAA.

In April 1996, an FAA consultant reported on FAA's cost accounting needs and options. Among other conclusions, the consultant stated that "none of the (existing FAA) systems evaluated can provide cost data to support management needs. . . ." Others have discussed some of these needs. For example, in December 1997, the National Civil Aviation Review Commission reported that "only with this effective management tool (cost accounting system) can a substantial improvement in cost accuracy and service be obtained by FAA." Among the Commission findings was that "[m]odern business tools, such as a cost accounting system, that tie specific costs to services, and measurement tools that assess how well services are provided are not yet available." Among the recommendations made by the Commission were that FAA's revenue must be based on the cost of services provided. "Using such a (cost-based) system, in and of itself, will bring about a very significant management improvement. The questions that could be answered in a cost-based environment cannot be answered today."

The lack of reliable information about the costs of program activities limits the ability of FAA management and other decisionmakers to estimate future costs in preparing and reviewing budgets, to control and reduce costs, and to identify and avoid waste. For example, without reliable cost information, FAA and other decisionmakers may not be able to effectively

- compare, during the budgeting process, expected costs with expected benefits, identify activities that add value, and make informed decisions about whether to expend resources for activities that are not cost-effective;
- compare and identify the causes of cost changes over time;
- identify and reduce excess capacity costs (the cost to maintain a level of service that may not be needed), if any;

[6]Air Traffic Control: Improved Cost Information Needed to Make Billion Dollar Modernization Investment Decisions (GAO/AIMD-97-20, January 22, 1997).

- choose among alternative actions such as whether to perform a project in-house or contract it out, to accept or reject a proposal, or to continue or eliminate a product or service; and
- compare costs of similar activities and find causes for cost differences, if any.

The lack of reliable cost information about program activities also limits the ability of FAA management and other decisionmakers to establish fees for services based on the cost of the services provided. For example, the Federal Aviation Reauthorization Act of 1996 (Public Law 104-264) directed FAA to establish user fees not to exceed $100 million for selected services, including aircraft overflights, and to directly relate these fees to the costs of providing the service rendered.

Finally, the lack of reliable cost information limits the ability of FAA management and other decisionmakers to meaningfully evaluate performance measures. Measuring costs is an integral part of measuring performance in terms of efficiency and cost-effectiveness. Efficiency is measured by relating inputs to outputs and is often expressed by the cost per unit of output. Effectiveness is measured by the outcome, or the degree to which a predetermined objective is met, and is commonly combined with cost information to show "cost-effectiveness." However, these measures are meaningless if they are not based on reliable underlying information.

Agency Actions Related to Cost Systems

With regard to accounting for costs, FAA advised us that

- it created a Cost Accounting Division and, at the end of fiscal year 1997, established a baseline cost accounting system for selected pilot organizations that it plans to implement agencywide by the end of fiscal year 1998;
- by February 28, 1998, it plans to have policies and procedures developed for classifying amounts and managing the amounts recorded as work-in-process;
- it plans to complete development of a detailed transaction database to support the amounts in the financial records and financial statements; and
- its new cost accounting system will respond to recommendations made by the National Civil Aviation Review Commission.

Conclusion

Accountability over physical assets is a key step in avoiding waste, fraud, and abuse, and is essential to efficient and effective budgeting and management of resources. It is particularly critical in situations such as FAA's, in which billions of dollars of assets are being acquired in connection with the ATC modernization program. Until FAA implements effective policies and procedures to provide accountability over operating materials and supplies and property and equipment, it remains vulnerable to significant mismanagement of appropriated funds used to acquire these assets.

Agency Comments

FAA officials generally concurred with our findings and conclusions. They emphasized, however, that they have taken significant actions to address the problems identified in the IG's audit report on the fiscal year 1996 financial statement. We have added throughout our report a discussion of actions FAA stated it has taken since the date the IG audit report was issued. Because neither we nor the IG has yet determined the effectiveness of these actions, it is not clear whether they are sufficient to address FAA's accounting and financial management deficiencies. FAA also provided some clarifying comments that we incorporated into our report where appropriate.

We are sending copies of this letter to the Ranking Minority Member of your Committee, the Secretary of Transportation, the Administrator of the Federal Aviation Administration, the Acting Chief Financial Officer of the Federal Aviation Administration, the Director of the Office of Management and Budget, the Department of Transportation Inspector General, and other interested parties. Copies will also be made available to others upon request.

If you have any questions about this letter, please call me at (202) 512-8341 or John C. Fretwell, Assistant Director, at (202) 512-9382.

Sincerely yours,

Linda M. Calbom
Director, Resources, Community,
and Economic Development Accounting
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