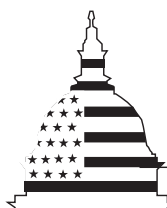

July 1999

FAA FINANCIAL MANAGEMENT

Further Actions Needed to Achieve Asset Accountability



G A O

Accountability * Integrity * Reliability



United States General Accounting Office
Washington, D.C. 20548

Accounting and Information
Management Division

B-282977

July 30, 1999

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

Dear Mr. Chairman:

In January 1999, we designated the Federal Aviation Administration's (FAA) financial management as a high-risk area because of serious and long-standing accounting and financial reporting weaknesses. These weaknesses render FAA vulnerable to waste, fraud, and abuse; undermine its ability to manage operations; and limit the reliability of financial information provided to the Congress. These weaknesses included an inability to determine the accuracy of certain amounts reported in FAA's fiscal year 1998 financial statements, including \$11.9 billion in major assets and \$9 billion of program costs.

This letter responds to your request that we provide an assessment of FAA's property, plant and equipment (PP&E) and inventory asset accountability problems, which were major factors in our designation of FAA financial management as a high-risk area. Specifically, you asked us to determine (1) the key issues FAA must resolve in order to achieve accountability over its PP&E and inventory and (2) whether FAA is taking appropriate actions to resolve these issues in a timely manner.

Results in Brief

FAA's lack of accountability for PP&E and inventory generally stems from

- an historical lack of attention to basic recordkeeping,
- the continuing use of outdated systems that were not designed for financial management, and
- poor systems of internal controls to prevent and detect errors in accounting for these assets.

In order to address these issues for PP&E, FAA needs to determine what assets it has and then reconstruct its records to establish an historical cost baseline for those assets. Next it needs to establish adequate systems and controls to account for the assets on an ongoing basis.

With regard to inventory, FAA has made improvements in its Logistics Center (warehouse) inventory accounting, but still needs to strengthen its procedures and controls. It has made less progress with its field spares (spare parts) inventory. An accurate baseline of inventory quantities and costs needs to be established for field spares, and new procedures and controls implemented in order to maintain accountability on an on-going basis.

FAA has taken several actions that are likely to lead to or already have resulted in improved accountability. However, as discussed below, major issues remain unresolved.

During fiscal year 1999, FAA undertook an extensive effort to identify and record the baseline cost of unrecorded PP&E assets and to adjust its detailed records. This effort is still in process. Also, in fiscal year 1999, FAA began to comprehensively address its systems needs; however, it does not expect full implementation of these new systems until 2001. Without systems capable of maintaining PP&E accountability on an ongoing basis, accounting for the acquisition of these assets will continue to require costly, time-consuming manual processes. Because these manual processes are inherently prone to error, strong internal controls are needed to ensure accurate accounting. While some improvements have been made, FAA has not implemented such a system of controls. The accuracy of FAA's reported PP&E assets will remain uncertain until FAA establishes baseline costs for previously acquired PP&E and establishes effective systems and controls to properly account for ongoing PP&E activity.

As of September 30, 1997, FAA had completed a comprehensive physical inventory of its Logistics Center's operating materials and supplies, and established a baseline of the inventory quantities. In addition, as of September 30, 1998, we had assessed the system used to track Logistics Center inventory quantities on an ongoing basis and determined that it was generally reliable. A 1998 test of inventory quantities confirmed the results of this assessment.

However, an accurate baseline of FAA's field spares inventory has not been established through a comprehensive physical count that has been verified by independent audit testing. Although procedures to improve accountability for field spares inventory have been established, they have not been fully implemented. Until an accurate comprehensive physical inventory of field spares is taken and verified and effective inventory

accountability procedures and controls are implemented, the reliability of FAA's field spares inventory quantities will be uncertain.

Overall, FAA's lack of management and accountability over physical assets means that these assets continue to be exposed to waste, fraud, abuse, and mismanagement. It also means that the Congress has no assurance that it has accurate financial management information to help make informed decisions about future funding and oversight of FAA activities. The lack of accountability is of particular concern in light of the billions of dollars of taxpayer funds being spent to acquire assets in connection with the \$42 billion air traffic control (ATC) modernization program.

We make several recommendations regarding FAA's need to

- establish accountability for billions of dollars expended for PP&E in the past and institute upgraded systems, procedures, and controls to ensure that accountability is maintained on an ongoing basis and
- complete improvements over its inventory accountability, particularly those related to field spares.

FAA officials generally concurred with our findings and conclusions. They did not concur with two of our seven recommendations. As discussed in the "Agency Comments and Our Evaluation" section of this report, we believe that our recommendations are valid.

Background

FAA's primary mission is to promote safe, orderly, and efficient air travel throughout the United States. Among other activities, FAA is responsible for the operation of the nation's air traffic control system. To fulfill its mission, FAA depends on the adequacy and reliability of the ATC system, a vast network of computer hardware, software, and communications equipment and related inventory.

Sustained growth in air traffic and aging equipment has strained the ATC system, limiting the efficiency of ATC operations. To combat these trends, in 1981 FAA embarked on its multibillion-dollar, mission-critical Capital Investment Plan (CIP) aimed at modernizing its aging ATC infrastructure. FAA's modernization program currently consists of over 200 separate projects estimated to cost over \$42 billion during the 23-year period through fiscal year 2004. It includes acquisition of new radar and

automated data processing, navigation, and communications equipment as well as computer software, facilities, and support equipment.¹

During fiscal years 1982 through 1998, FAA reported that it had obligated approximately \$26 billion on its ATC modernization programs. As of September 30, 1998, the agency had reported less than \$12 billion in gross PP&E in its fiscal year 1998 financial statements, including \$7.4 billion of property and equipment (such as land, buildings, and air traffic control equipment) and \$4.5 billion of work-in-process (which consists of facilities and equipment acquired but not commissioned). While some of these costs were appropriately expensed, OIG audits have shown that a significant amount of costs was improperly excluded from the PP&E asset total reported by FAA. In addition, \$820 million of spare parts inventory was reported in the financial statements.

The modernization costs that have gone towards the acquisition of significant amounts of PP&E and spare parts inventory are to be recorded as assets because of the long-term benefits they are expected to provide. FAA is accountable for these assets from the time they are acquired until their ultimate disposition. It is important to keep adequate records of assets that are acquired for two primary reasons. First, detailed asset records are necessary to help provide for their physical accountability. Second, the cost of these assets is charged to operating expenses over the time that they provide services- -PP&E through depreciation after it is placed in service and inventory when it is consumed.² The matching of costs to the time periods when services are actually provided is an important part of measuring the cost of operations on an ongoing basis. For example, costs incurred this year for a new radar system that will be in use for 10 years should not be charged to a current year expense account. That would distort current year information about the cost of FAA operations. Rather, the cost should be charged to an asset account and, when the asset is placed in service, its cost would then be spread over the future periods that it provides service benefits. Conversely, costs incurred in the current year that only have a benefit to the current year should be charged to a current year expense account. For example, administrative salary costs are charged to operating expense when incurred.

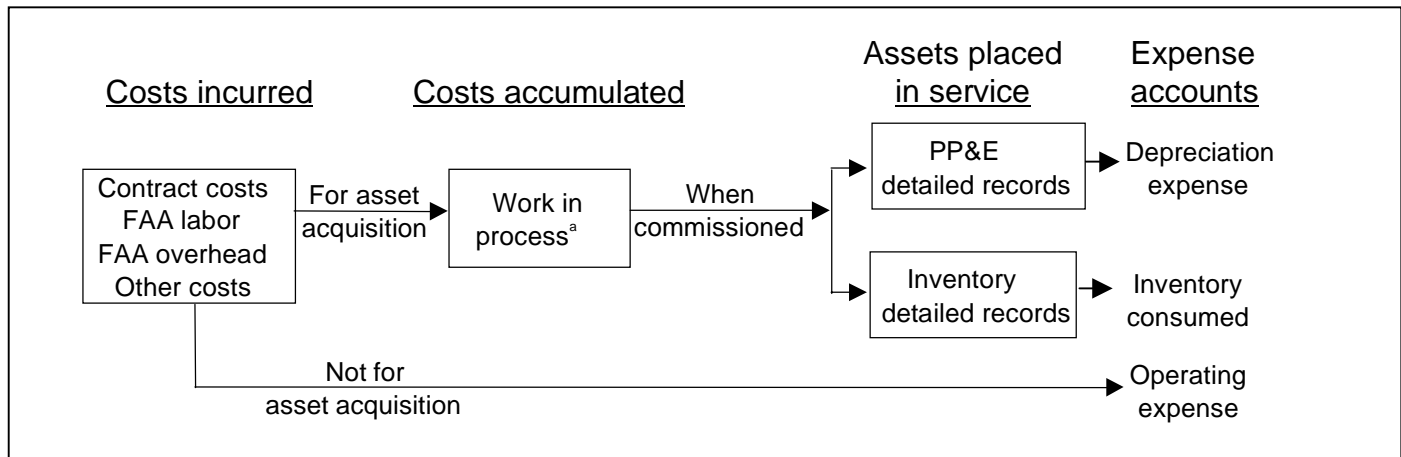
¹See [Air Traffic Control: Status of FAA's Modernization Program](#) (GAO/RCED-99-25, December 3, 1998) for details about the program and its status.

²Depreciation is the process used to spread the cost of PP&E over the time that the asset services are provided.

Proper asset accountability requires that detailed records of the full cost of assets acquired be maintained, and that these assets be properly reported in the agencies' financial management records and financial reports.³ The full cost of assets includes all direct and indirect costs required to acquire the asset and to place it in service. In the case of FAA, the full cost of many projects includes such direct costs as contractor hardware and software, installation costs, FAA direct labor costs, as well as FAA indirect labor and related overhead. Since many FAA expenditures for modernization project assets are incurred before the assets are placed in service, these costs should be "captured" in temporary accounts, called "work-in-process" (WIP) accounts. When assets are placed in service, a process that FAA calls "commissioning," the related costs should be removed from the WIP accounts and placed either in a PP&E account (such as personal property), or in an inventory account.

The flow of costs in such circumstances is depicted in figure 1.

Figure 1: Flow of Project Costs



^aSome acquired assets that are immediately placed in service do not need to flow through WIP.

³These requirements permit assets that have a cost below a defined materiality threshold to be charged to expense accounts and not be recorded as an asset. This reduces the costs of recordkeeping.

Objectives, Scope, and Methodology

Our objectives were to determine (1) the key issues FAA must resolve in order to achieve accountability over its PP&E and inventory and (2) whether FAA is taking appropriate actions to resolve these issues in a timely manner.

To fulfill our objectives, we interviewed relevant FAA staff and reviewed and analyzed FAA reports and records concerning PP&E and inventory. We attended monthly meetings to monitor the status of FAA's efforts to correct identified PP&E financial management deficiencies. We also obtained and reviewed information from the FAA Office of the Chief Financial Officer (OCFO) about the current status of corrective actions on PP&E and inventory.

We reviewed OIG program reports on PP&E and inventory, as well as financial statement audit reports for fiscal years 1992 through 1998. We also reviewed selected OIG workpapers related to the fiscal year 1998 audit, including the results of various test counts. In order to help facilitate the fiscal year 1998 FAA financial statement audit, we conducted, with OIG assistance, an audit of inventory quantities at the Logistics Center in Oklahoma City, Oklahoma. To accomplish this, we selected a statistical sample of items recorded in the inventory database and performed test counts at the Logistics Center.⁴ However, we did not address valuation of inventory. We also visited FAA field sites in connection with the OIG's audit work for PP&E and inventory to better understand the OIG's audit procedures and their results.

We conducted our work primarily in Washington, D.C., and at the OIG office in Baltimore, Maryland, and also obtained information through field visits to Chicago, Atlanta, New York, Atlantic City, and Oklahoma City. We performed our work from July 1998 through June 1999 in accordance with generally accepted government auditing standards.

We requested comments on a draft of this report from the Secretary of Transportation, or his designee. On July 6, 1999, FAA officials provided us with oral comments, which are summarized in the "Agency Comments and Our Evaluation" section of this report.

⁴Physical counts and evaluation of count results of inventory and related assets were performed from August 1998 through January 1999 at FAA's Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma.

FAA Lacks Accountability for Billions of Dollars Invested in PP&E

Starting with the first audit of FAA's financial statements for fiscal year 1992 and continuing through the fiscal year 1998 audit, the OIG has reported that FAA has not been able to provide the basic records necessary to demonstrate accountability for assets totaling billions of dollars that it has acquired.⁵ During these audits, the OIG found that FAA had improperly charged billions of dollars of capitalizable costs to expense accounts instead of to asset accounts. Under the system that FAA had in place, this meant that there were no detailed records of these assets, which resulted in incomplete asset accountability. In many cases, FAA was also unable to provide the OIG supporting documents necessary to verify the valuation of assets that were recorded.⁶ Finally, the OIG reported that FAA continued to include assets that had been placed in service as work-in-process. From a financial accounting and reporting perspective, these problems in aggregate would have understated assets on the balance sheet and overstated expenses, thus distorting FAA's reported operating results.

Early in fiscal year 1999, FAA started an extensive effort to reconstruct the detailed records necessary to support prior PP&E costs that should have been reported as assets on its financial statements. With a significant effort and commitment of resources, real progress has been made for the first time. However, FAA lacks the necessary systems, procedures, and controls to properly account for the full cost of additional assets as they are acquired on an ongoing basis. FAA began to comprehensively address its systems needs in early 1999; however, complete systems improvements are not expected until 2001. Thus, absent strong controls over manual efforts to maintain these records on a current basis, these PP&E accountability deficiencies limit FAA's ability to prepare reliable, auditable financial statements; expose it to waste, fraud, and abuse; and may prevent it from being able to accurately determine the cost of its operations.

⁵The OIG undertook audits of FAA's financial statements starting in 1992. As required by the Chief Financial Officers Act of 1990, the initial financial statements audited by the OIG were limited to certain trust and revolving funds. In subsequent years, as the financial activities subject to audit became more comprehensive, the scope of the OIG's audits increased. By 1994, the financial statements subject to audit covered all FAA's activities.

⁶According to FAA officials, in the past the Department of Transportation did not have a centralized policy for retaining asset documentation. In December 1998, FAA established a policy to retain asset documentation as long as the asset is in service.

Basic Accountability Records for PP&E Costs Have Not Been Maintained

The OIG has reported that billions of dollars of FAA's modernization program capital costs have been improperly charged to expense accounts instead of being recorded as assets and that FAA's historical records necessary to support and permit the verification of PP&E balances have been incomplete and inaccurate. Some examples of these problems follow:

- In its report on FAA's fiscal year 1998 financial statements, the OIG stated that FAA's personal property reported at \$4.1 billion was understated by at least \$1 billion due to FAA's long-standing practice of expensing rather than capitalizing material portions of major equipment systems. For example, voice switching control systems installed at 23 locations were recorded at a total cost of \$234 million, instead of the actual cost of \$1.1 billion.
- During its test of FAA's fiscal year 1998 work-in-process account reported at \$2.1 billion, the OIG stated that it was unable to trace recorded amounts to invoices or other supporting documentation on 34 percent of the 185 projects selected for testing because it was unable to obtain transaction summaries for those projects. Transaction summaries provide the link between amounts recorded in FAA's records and underlying supporting documentation. For example, FAA recorded costs of \$1.2 million for a flight service station during fiscal year 1998, but could only provide transaction summaries for costs of \$123,000, leaving \$1.1 million unsupported.
- During its test of FAA's fiscal year 1998 real property reported at \$2.5 billion, the OIG tested a sample of 117 items with a recorded value of \$790 million and determined that the cost for 34 of the sample items, recorded at \$141 million, could not be supported. For example, for a power system installed in 1992, FAA was able to provide contracts, purchase orders, payment records, and other support for only \$3.6 million of the recorded \$20 million cost.
- During its fiscal year 1998 test of real property, the OIG concluded that four items valued at \$50 million should be removed from the property records because they no longer existed. For example, the property records continued to include a building recorded at \$1 million that had been demolished over 10 years earlier.

In addition to these weaknesses, FAA does not move project costs from its work-in-process account to appropriate asset accounts in a timely manner. The OIG identified and reported that costs were not being transferred from the WIP account to other appropriate accounts in its report on FAA's fiscal year 1993 financial statements. In its report on FAA's fiscal year 1998 financial statements, the OIG reported that FAA had estimated that

approximately \$1.3 billion in completed projects were improperly retained in the WIP account rather than being transferred to the appropriate real or personal property accounts. For example, FAA completed construction of an air navigation facility in 1995 at a cost of \$746,000. As of December 31, 1998, the facility remained in the WIP account. In addition, since these assets were not moved to the appropriate accounts, depreciation expense was not calculated. The OIG estimated that unrecorded depreciation expense related to these projects amounted to at least \$62 million.

FAA's lack of basic accountability over PP&E is the result of numerous factors, including the lack of financial accounting oriented systems, inadequate or outdated policies and procedures, inconsistent implementation of existing policies and procedures, and the low priority placed on maintaining adequate records.

The lack of accurate PP&E information:

- Limits FAA's ability to accurately determine its costs, an essential requirement if FAA moves to funding its operations through the use of cost-based user fees. For example, when PP&E costs are improperly charged to expense accounts, operating costs for that year and future years are distorted.
- Impedes proper management of these assets and gives rise to possible operational inefficiencies. For example, the ability to plan for long-range facilities needs may be impaired.
- May impair the ability of managers to provide appropriate stewardship over FAA assets. For example, asset theft could go undetected and funds could be spent unnecessarily to acquire equipment that is already on hand.
- Impairs FAA's ability to properly maintain these assets, including estimating future maintenance and deferred maintenance funding needs.

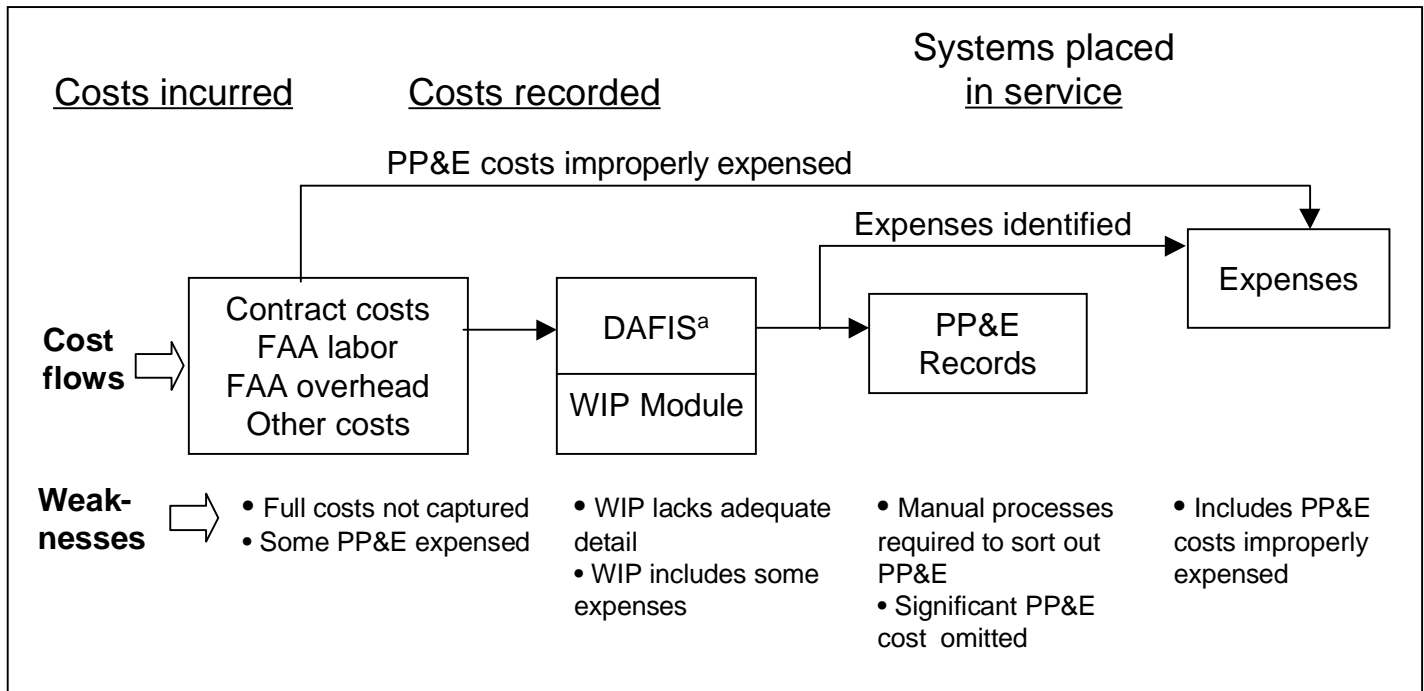
FAA Lacks Systems and Controls to Account for PP&E on an Ongoing Basis

While FAA is making a concerted effort to properly account for prior PP&E costs, existing FAA systems and controls are not adequate to account for PP&E in an efficient and effective manner on an ongoing basis. As a result, FAA faces the prospect of a continuing need to manually adjust its records for ongoing costs until its systems and controls are upgraded to account for PP&E automatically. Among other capabilities, effective and efficient PP&E systems provide an automated means to capture the full cost of PP&E when incurred, transfer data among integrated systems components

with minimal manual processes, record complete PP&E information, and calculate depreciation. FAA's current systems and controls do not meet these needs in a number of respects.

FAA's practices and identified weaknesses in those practices are depicted in figure 2.

Figure 2: Weaknesses in FAA's PP&E Systems



^aDepartment Accounting and Financial Information System.

First, FAA's systems do not capture the full cost of PP&E. Full costs means all costs, including internal labor and overhead, necessary to acquire and place property in service. Such costs are typically identified and recorded through a cost accounting system. We have reported the lack of an adequate FAA cost accounting system as a weakness that prevents FAA from reliably determining full project and other costs.⁷ This can result in a

⁷Air Traffic Control: Improved Cost Information Needed to Make Billion Dollar Modernization Investment Decisions (GAO/AIMD-97-20, January 22, 1997).

lack of reliable project cost information, which is needed to accurately estimate future project costs and to make sound investment decisions. In addition, this can result in the misstatement of PP&E assets and related depreciation expense, as well as the misstatement of overall expenses.

Another issue is that FAA's PP&E systems do not capture identifiable PP&E costs as they are incurred. For example, when contractor CIP invoices are paid, the invoice amounts are recorded in a subsidiary module of FAA's Department Accounting and Financial Information System (DAFIS) general ledger accounting system. This subsidiary module constitutes the details for the WIP account. In some cases, individual decisions are necessary to determine which costs should be recorded in the subsidiary module, and to what specific job order number. Job order numbers are used to differentiate individual systems projects in the WIP account. This manual process is imprecise, resulting in some valid CIP costs being omitted, some invalid CIP costs being included, and costs being assigned to incorrect job orders.

In addition, at the time costs are initially recorded, they are not identified or identifiable as PP&E costs. Rather, they are identified as CIP costs related to a specific CIP project. However, contractor CIP costs may include PP&E costs, spare parts inventory costs, or costs that are appropriately classified as expenses. Later, when the specific project is completed and commissioned, FAA must perform a tedious manual analysis of documentation related to each of the costs included in the details of the WIP job orders to determine how much should be recorded in the PP&E, spare parts inventory, and expense accounts.

A third systems issue is that FAA is unable to transfer cost and other information to and among systems components in an efficient manner. For example, when the manual review and classification of costs charged to WIP job orders is complete, accounting entries must be manually prepared to remove the costs from the WIP account and to record them in other appropriate accounts. In addition, manual entries must be prepared and input to the property system to add individual PP&E items to the detailed property records. Each of these manual entries and processes is time-consuming and, if adequate controls are not in place, may introduce errors into the detailed records.

Furthermore, FAA property systems are unable to calculate depreciation for property because the detailed property record systems do not have this capability. Rather, in order to calculate depreciation, information about the

cost and acquisition date of individual property records must be downloaded into a spreadsheet database to perform the depreciation calculation. The results of the calculation must then be manually input to the DAFIS general ledger system in order to record the amount of depreciation expense for the year.

The lack of adequate integrated systems to account for PP&E costs has resulted in the need for FAA to undertake a time-consuming reconstruction of its PP&E accounting records, as discussed below. The chronic lack of effective systems capabilities results in a continuing need to perform manual processes to provide sufficient accountability. Due to the number of manual processes and decisions required, such accountability can be achieved only if strong controls are in place to prevent and detect errors. Based on the poor condition of FAA's PP&E records, it is evident that such controls have not existed in the past.

The conditions described above result from the adaptation of systems, which were acquired for a specific purpose, to satisfy other purposes for which they were not designed. For example, the DAFIS general ledger system, which was created for the Department of Transportation (DOT) in 1976, was designed to account for FAA financial activities from a budgetary perspective. As a result, many of the accounting needs of a financial statement accounting system were not and continue not to be available in the system that FAA uses.

Until FAA acquires adequate and integrated accounting systems' capabilities, its ability to account for PP&E as well as other costs on an on-going basis will be severely limited. The lack of systems integration and the ability to appropriately accumulate and transfer data among systems components will continue to require time-consuming and error-prone manual processes. If these manual processes do not have the proper controls to prevent and detect errors, FAA will continue to lack assurance that it has accountability over PP&E.

FAA Has Initiated an Extensive Effort to Establish Historical PP&E Costs

On September 30, 1998, the Secretary of Transportation submitted a plan to the Office of Management and Budget for resolving major material findings and management deficiencies in the FAA financial statement audits. In December 1998, the FAA Administrator approved the formation of an Audit Correction Program to resolve audit concerns identified by the OIG and to put in place improved systems and processes to prevent these issues from recurring. The Audit Correction Program included the formation of three

teams to address WIP, real property, and personal property issues. As described by FAA, these teams are primarily focused on regaining accountability over PP&E by establishing baseline costs for existing assets. FAA expects that the work of the three teams will conclude in fiscal year 1999, and described the effort as “pivotal to accomplishing an unqualified audit opinion for FY 1999.”

FAA’s strategy for implementing the secretary’s plan is to perform a top-down analysis of the \$25.7 billion of CIP appropriations for fiscal years 1982 through 1998 to determine what costs FAA should record in its asset accounts and in what asset categories as compared to the approximately \$12 billion currently reflected on the books. As FAA completes segments of its work, an OIG audit verification of the results is performed. Initially FAA classified the \$25.7 billion of appropriated CIP costs into major categories by project type as shown in table 1.

Table 1: FAA Classification of Appropriated CIP Costs

Dollars in billions	
Capital systems projects	\$11.4
Terminated projects	2.5
Real property	5.0
Other	6.8
Total	\$25.7

Note: Other includes projects that have not been placed in service (\$2.1 billion); expensed projects (\$3.7 billion); and fully depreciated projects (\$0.9 billion).

The FAA cost classification process results are also subject to OIG verification.

FAA initially selected 44 systems from the capital systems projects category with reported costs totaling \$10.31 billion as of June 30, 1999, for which detailed supporting documentation packages will be prepared to establish baseline costs. Generally, these 44 systems were chosen because they represent the higher cost systems. This initial selection came from a population of 123 systems for which \$11.4 billion was appropriated.

As of June 30, 1999, FAA had completed detailed documentation packages for the 44 systems initially identified for review. The OIG reviewed and analyzed 32 of these packages and, in the process, identified at least

\$4.5 billion of additional costs, the majority of which should be included in the PP&E accounts.⁸ This amount may increase depending upon the outcome of a number of unresolved questions related to those 32 packages. As the verification of the initial 44 systems is completed, and as unresolved questions are answered, FAA will determine, in consultation with the OIG, the nature and extent of additional work that may be required to identify additional unrecorded assets. Once FAA has successfully completed its reviews and the OIG has validated them, FAA will have a reasonable beginning baseline for its PP&E costs.

Starting in June 1999, the OIG began visiting selected field sites to verify real property, using a variety of means, including cost per square foot models.

FAA Has Only Just Begun to Comprehensively Address its Systems Issues

As previously discussed, FAA's ability to maintain accountability over its PP&E on an ongoing basis hinges on implementing systems that can efficiently and effectively account for these assets. However, FAA has only recently developed a plan to address this issue comprehensively.

As a part of the Audit Correction Program described above, on May 20, 1999, FAA issued its Clean Audit Program Process Improvement Plan. The plan responded to a request from FAA senior management to begin working on modifying FAA's practices to ensure that progress achieved by the Audit Correction Program can be sustained over the long term. Basically, the plan is divided into three separate sets of activities termed "tiers" by FAA.

Tier 1 includes making minor systems enhancements during fiscal year 1999 to help achieve immediate improvements in FAA's recordkeeping. Tier 2 consists of revisions during fiscal year 2000 in organizational responsibilities related to work-in-process and the implementation of additional minor systems enhancements. Both tiers 1 and 2 are interim actions to strengthen FAA's systems and processes until existing systems are replaced. However, FAA has not yet comprehensively reviewed

⁸According to FAA officials, based on their analysis, eventual adjustments to the PP&E amount reported in the FAA financial statements will be significantly less than the \$4.5 billion because some of these costs have already been recorded as assets.

internal controls to ensure that all existing systems weaknesses are identified and corrected.⁹

Tier 3 includes longer-term systems changes related to the following two systems initiatives:

- DOT is replacing its DAFIS general ledger system with a commercial based system, which it has enhanced and refers to as DELPHI.
- FAA is defining its needs for a system that will account for PP&E once it has been placed in service.¹⁰ FAA describes this system as an “in service” system.

FAA describes the planned DOT-wide DELPHI system as an integrated suite of financial software. FAA has stated that the implementation of this system will, if properly configured and utilized, eliminate many of the processing issues presently constraining the identification, classification, processing, and accumulation of FAA’s PP&E costs. DELPHI has a June 2001 target date for implementation at FAA.

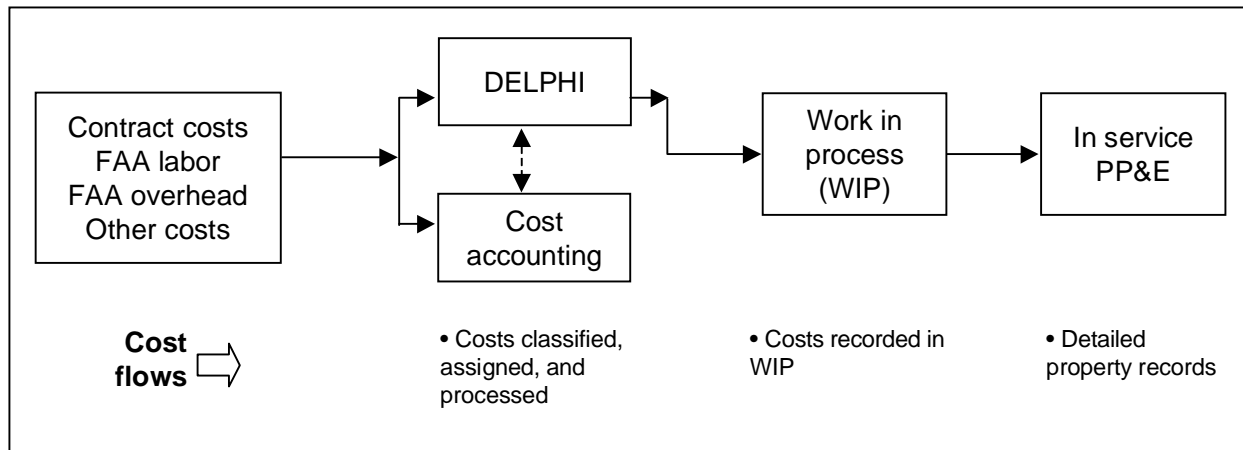
According to FAA, the planned in-service system provides for all financial accounting requirements for PP&E that has been placed in service and includes interfaces to the DELPHI system for tracking the costs of projects under development. This system has a planned implementation date of September 30, 2001.

An overview of FAA’s planned systems functions is shown in figure 3.

⁹According to FAA officials, in the last 2 years, significant improvements have been made to the internal controls over recording of PP&E . For instance, a system for monitoring the WIP backlog has been instituted to prevent backlogs from occurring. This is accomplished through matching commissioning dates from a separate system with the WIP report and identifying the backlog at 6 months past commissioning. While these improvements are positive steps, they are not comprehensive and neither we nor the OIG have verified them.

¹⁰ In this regard, the Institute of Electrical and Electronic Engineers (IEEE) has developed a nine step process for acquiring software as described in its IEEE Recommended Practices for Software Acquisition, IEEE Std 1062, 1998. The nine steps start with planning an organizational strategy to define organizational objectives and a software strategy in step 1, through conducting a follow-up analysis of the process used to acquire the software and lessons learned in step nine.

Figure 3: FAA Planned Systems Functions



In addition to these recent initiatives, FAA is developing a cost accounting system. The inadequacy of FAA's cost accounting system has been identified by GAO,¹¹ the OIG, and others as a weakness that prevents the agency from having reliable and timely information about the full cost of projects and program activities. The objective of a cost accounting system is to accurately assign basic financial cost data, such as contractor costs and agency direct labor and overhead costs, to individual project and program activities. Although FAA originally expected a cost accounting system to be fully implemented by October 1, 1998, this objective was not met. It subsequently revised this goal to implementation of a partially operational system by December 31, 1998, and a fully operational system by March 31, 1999. FAA now projects full implementation of its cost accounting system by March 31, 2001.¹²

¹¹Air Traffic Control: Improved Cost Information Needed to Make Billion Dollar Modernization Investment Decisions (GAO/AIMD-97-20, January 22, 1997).

¹²Statement of Federal Financial Accounting Standards No. 4, Managerial Cost Accounting Standards (SFFAS No. 4), effective in fiscal year 1998, requires agencies to accumulate and report the full costs of their activities. FAA officials told us that the cost accounting system they are implementing goes well beyond the requirements of SFFAS No. 4 and that they believe they will be in compliance with SFFAS No. 4 for fiscal year 1999.

Inventory Accountability Has Improved, but Field Spares Accuracy Remains Uncertain

FAA maintains its inventory at its Logistics Center, the central warehouse for operating materials and supplies, and at approximately 34,000 field spares locations.¹³ Inventory accountability has improved at the Logistics Center, and, as of September 30, 1998, inventory quantities were reasonably stated in the accounting records.¹⁴ Also, Logistics Center inventory system controls provide a reasonable basis for the ongoing tracking and controlling of inventory.¹⁵ Although we found some weaknesses in data entry, receipts and issuances, and other processing-type procedures at the Logistics Center, these weaknesses did not significantly impact overall accountability.

The accuracy of FAA's accounting for field spares quantities, however, remains uncertain because an accurate baseline has not been established. Field spares are mission-critical parts that support the National Airspace System (NAS)¹⁶ and are maintained at locations near the facilities they support. Although FAA is acting to improve field spares inventory accountability, until these action plans are fully implemented, FAA has no assurance that it is accurately accounting for field spares.

Logistics Center Accountability Has Improved

Beginning with the OIG's audit of FAA's financial statements for fiscal year 1992, the OIG could not validate the Logistics Center inventory quantity balances because of the lack of accurate records and documentation. This problem continued through fiscal year 1996 because of limited Logistics Center inventory counts by FAA. In fiscal year 1996, the OIG could not verify the FAA inventory balance because of numerous errors and omissions in the inventory records. In fiscal year 1997, FAA conducted, and the OIG tested, a comprehensive wall-to-wall count of Logistics Center inventory and made necessary adjustments to correct its inventory records.

¹³Some of the 34,000 locations may be in the same geographic location and even in the same building.

¹⁴The OIG tested inventory values as of March 31, 1998, and needed adjustments were made as identified. Neither the OIG nor we validated the reported inventory values as of September 30, 1998.

¹⁵ The Logistics Center inventory system is designed to operate as a perpetual inventory system and updates inventory quantities at various points in time. Among other capabilities, it tracks receipts, issuances, adjustments, and locations of inventory.

¹⁶ The National Airspace System is the FAA system that provides for the safe, orderly, and expeditious flow of air traffic in the United States. NAS's principal component is the nation's air traffic control system.

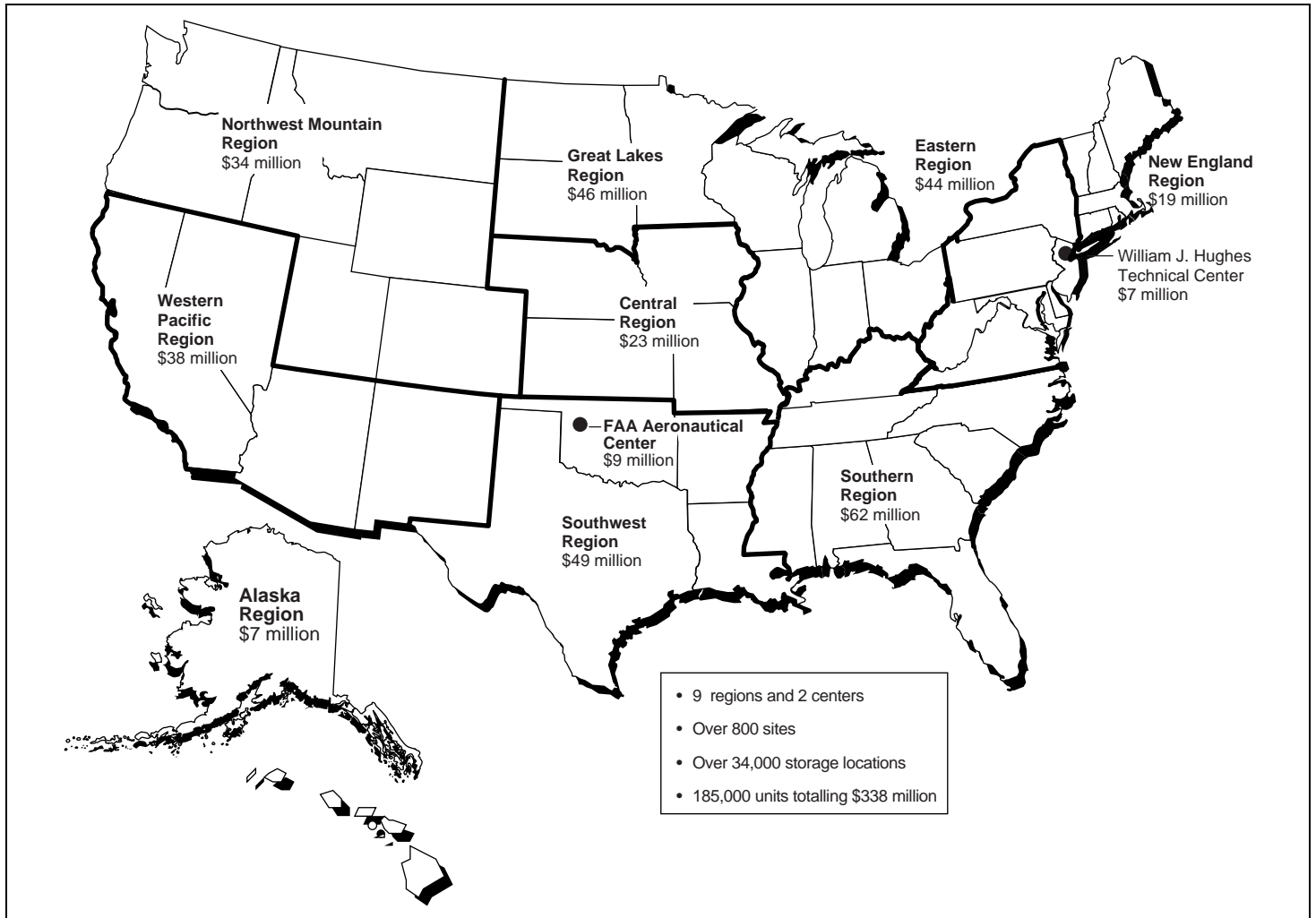
In fiscal year 1998, GAO, with OIG assistance, performed test counts of inventory quantities at the Logistics Center. Based on the results of our tests, we concluded that the Logistics Center inventory quantities were materially correct as of September 30, 1998, and the system for tracking quantities was generally reliable. However, we identified minor differences in quantities caused by factors such as data entry errors, untimely processing of recording receipts and issuances, commingling of similar items, and prior erroneous inventory adjustments. Cumulatively, these differences, when statistically projected, did not result in material variances in recorded inventory quantity balances. While these differences were not material to inventory balances at the time of our review, the weaknesses that caused these differences could lead to significant problems in inventory balances in the future if not addressed by FAA management.

Accurate Baseline for Field Spares Has Not Been Established

Until fiscal year 1997, FAA recorded the cost of field spares as expenses in its financial statements regardless of whether they had been used or remained available in inventory for use in future years. In fiscal year 1997, FAA first reported field spares inventory as an asset. However, the amount was estimated because a comprehensive physical inventory count had not been performed, even though FAA's policy, contained in order 4250.9B, "Field Material Management and Control," dated January 24, 1992, mandates a 100-percent annual count of field spares. According to FAA, it completed a full field spares physical inventory in fiscal year 1998; however, as discussed below, our review of the results of the OIG tests shows that the accuracy of field spares records remains in question.

As of September 30, 1998, the reported value of field spares inventory was \$338 million. Figure 4 shows the reported amount of field spares in each FAA region and center.

Figure 4: Reported Value of Field Spares in FAA Regions and Centers



Source: FAA

FAA tracks field spares through an automated Field Spares Inventory system (FSI). This system is maintained by about 1,000 FAA personnel who are individually responsible for managing field spares at each of 34,000 different locations, but whose primary responsibility is to keep the NAS systems operational.

Based on our analysis of the OIG's workpapers related to its testing of FAA's fiscal year 1998 field spares inventory count, we were unable to satisfy ourselves about the accuracy of the field spares inventory

quantities. In its review of the fiscal year 1998 field spares physical inventory, the OIG tested data for 14 sites with a recorded value of \$14 million. The sites were judgmentally selected based in part on locations where the OIG expected there might be problems. The OIG found numerous errors in inventory recordkeeping and a lack of physical controls over inventory on hand for 9 of the 14 sites. Some examples follow:

- At one site, FAA had not recorded \$106,000 of communication equipment spares for newly commissioned systems.
- At another site, 11 items valued at over \$39,000 that support new systems were not included in the records, while 21 items valued at about \$67,000 could not be located.
- At a third site, numerous errors resulting from inaccurate or incomplete record keeping totaled \$380,000. These included items related to newly commissioned systems, decommissioned systems, and other items that had not been recorded.

OIG workpapers stated that the field spares quantity errors identified by the OIG staff were subsequently corrected in the FSI. However, these errors were identified in a test of only 14 of 834 sites. In addition, while the OIG report referred to internal FAA analyses that suggested accountability issues for a number of other sites, quantifiable information does not exist to determine the extent or severity of the problems for the other 820 sites.

According to an FAA commissioned fiscal year 1998 study of NAS Field Spares Inventory,¹⁷ several factors could have affected the accuracy of field spares records. First, prior to 1998, the field spares program lacked procedures for

- updating the field spares inventory system for adding field spares to the inventory records when systems are commissioned,
- deleting field spares from inventory records when systems are decommissioned, and
- taking field spares physical inventories.

¹⁷“Federal Aviation Administration FY 98 Study of NAS Field Spares Inventory, Report of the Field Spares Environment” prepared by DOT Research & Special Programs Administration, Volpe National Transportation Systems Center and Coopers & Lybrand L.L.P., dated June 5, 1998.

The FAA study provided procedures to perform the above functions. However, according to OIG workpapers, when these procedures were issued in 1998, they were not provided to all FAA staff responsible for accounting for inventory transactions and physical inventories. As a result, field spares records were not maintained consistently.

Second, the FAA study stated that FAA order 4250.9B stipulates that the System Management Office (SMO) managers have property accountability for field spares in a geographical area within a specific FAA region. The order also provides that this responsibility can be delegated. However, different interpretations of this responsibility by field personnel have caused them to be uncertain as to who has ultimate responsibility for field spares, including ensuring that inventory counts are complete, accurate, and timely.

Third, the FAA study states that although limited training was provided, additional training is needed on how to take physical inventory and how to use the FSI module, which contains field spares quantity and location information. OIG workpapers stated that testing of the fiscal year 1998 physical inventory process showed that lack of training continued to be a problem contributing to field spares record errors.

The errors and lack of procedures noted above imply serious weaknesses in physical controls and accountability over inventory and field spares. These conditions increase the risk that theft¹⁸ or loss could go undetected. Also, inaccurate field spares information could result in unexpected shortages of critical parts, or unnecessary ordering of parts already on hand, thus requiring the use of additional funds to purchase unneeded spares. The latter situation may lead to excess or obsolete stock requiring storage, control, and other activities that consume operating resources.

Procedures Established to Improve Inventory Accountability, but Full Implementation Needed

FAA senior management has indicated that it recognizes the urgency of correcting inventory accountability deficiencies. To address these deficiencies, FAA has established procedures in its Inventory Integrity Guide and is in the process of implementing the procedures at the Logistics Center. These procedures include performing periodic inventory counts to

¹⁸ According to FAA, in early 1998, a theft of aircraft parts was detected at the Logistics Center and is currently under investigation. The value and extent of the missing inventory parts have not been conclusively determined.

substantiate inventory balances on an ongoing basis. The Guide should also provide useful guidance to FAA staff in correcting the control weaknesses identified at the Logistics Center and improving accountability over operating materials and supplies. In addition, FAA personnel are developing a bar coding system to improve tracking of inventory from the time it arrives at the Logistics Center warehouse until it is issued. When implemented, this system should help improve controls over the inventory in the warehouse.

For field spares, FAA has recently distributed new procedures for managing them. Among other topics, these procedures include guidance on

- adding field spares to the automated inventory system when NAS systems are commissioned,
- deleting field spares from the automated inventory system when NAS systems are decommissioned, and
- taking and recording physical inventory.

When fully implemented, these procedures should help improve the accountability and control over field spares by requiring verification of both physical counts and also data entered into the FSI. These procedures should also help to effectively utilize FAA's perpetual inventory system, thus providing up-to-date and accurate information on field spare quantities and locations. In addition, FAA advised us that it is conducting a 100-percent count of field spares inventory for fiscal year 1999.

FAA is also separately developing a bar coding system for field spares that is expected to provide more accurate and reliable identification of and physical control over these items. Under the system, the manufacturer and FAA would install bar codes on field spares. According to FAA officials, this system is expected to be implemented as funds are budgeted, possibly by installing bar coding on a NAS system-by-system basis. This would be done by providing bar coding for one specific system and its related field spares at all FAA locations. Once fully developed and implemented, the use of this bar coding system should help provide more accurate identification and control over inventory.

Conclusions

While FAA has taken steps that are likely to lead to or already have resulted in improved accountability for PP&E and inventory, much still remains to be done. Until such time as full accountability is achieved, these assets will

continue to be exposed to waste, fraud, abuse, and mismanagement. In addition, the Congress will have no assurance of receiving accurate financial management information to help make informed decisions about future funding and oversight of FAA activities. The continued lack of accountability is of particular concern in light of the billions of dollars of taxpayer funds being spent to acquire assets in connection with the \$42 billion Air Traffic Control modernization program.

Recommendations

We recommend that the Secretary of Transportation direct the FAA Administrator to take the following actions:

- Ensure timely completion of current efforts to identify, record, and provide support for all PP&E owned by FAA in order to establish a baseline of PP&E costs.
- Perform a comprehensive internal control assessment of current PP&E accounting practices and identify and implement new PP&E controls where necessary to ensure ongoing accountability.
- Prioritize the acquisition of systems that are capable of accurately accounting for PP&E efficiently and effectively on an ongoing basis.
- Ensure timely implementation of planned procedures to improve inventory accountability, including
 - performing periodic cycle counts at the Logistics Center to substantiate inventory quantities on an ongoing basis;
 - conducting a comprehensive field spares inventory by September 30, 1999, resolving count differences, and making appropriate adjustments to establish a field spares inventory baseline; and
 - implementing the planned bar coding system for the Logistics Center and for field spares to capture inventory information from the time of receipt and through subsequent movements and ultimate disposition.
- Perform an internal control assessment of field spares accountability practices and implement new field spares controls where necessary to ensure ongoing accountability.
- Implement a program of periodic field spares cycle counts to substantiate inventory quantities on an ongoing basis.
- Revise FAA order 4250.9B, "Field Material Management and Control," to clearly indicate the official who has ultimate responsibility for the accountability of field spares and the procedures required to carry out this responsibility.

Agency Comments and Our Evaluation

FAA officials consisting of the Acting Director of the Office of Financial Management, and the Program Director of the Resource Management Program and their staffs, provided oral comments on a draft of this report. The officials generally concurred with our findings and conclusions. They did not concur with two of our seven recommendations. As discussed below, we believe that our recommendations are still valid.

In regard to our recommendation that FAA perform a comprehensive internal control review of current PP&E accounting practices, FAA officials stated that a study of PP&E controls has already been performed and a report has been issued by an independent Certified Public Accounting firm and the DOT VOLPE National Transportation System Center. The scope of the study was limited, focusing on fixed asset capitalization processes, which represents only one of the activities related to PP&E accountability. A comprehensive internal control assessment would include other significant activities such as determining what controls are needed to ensure that all owned property is recorded, all recorded property actually exists, all property is properly valued, and all recorded property balances are substantiated. Therefore, we continue to recommend that FAA perform a comprehensive PP&E internal control assessment.

In regard to our recommendation that FAA revise its order 4250.9B, "Field Material Management and Control," to clearly indicate who has ultimate responsibility and is accountable for field spares, FAA officials stated that such a change had been issued. Subsequently, FAA personnel provided us a draft change order, which has not yet been issued, and which continues to give primary responsibility for the accountability for field spares to Systems Management Office managers, while also allowing the responsibility to be delegated. Therefore, we continue to affirm our recommendation that FAA order 4250.9B be revised to clearly state which official has ultimate responsibility for field spares accountability.

While FAA officials did not disagree with our recommendation that FAA implement procedures to conduct a comprehensive field spares inventory count during fiscal year 1999 and establish a field spares inventory baseline by September 30, 1999, they stated that they had previously established a field spares inventory baseline. They added that the baseline was established in fiscal year 1998 through a 100-percent wall-to-wall inventory. As discussed in our report, the OIG performed limited tests of the fiscal year 1998 field spares inventory and found numerous errors in FAA's inventory records, thus indicating that an accurate baseline for field spares

has not been established. FAA officials further stated that they plan to perform a complete field spares inventory by September 30, 1999.

In addition, FAA provided us a number of suggested technical changes to our report. We have reviewed these proposed changes and incorporated them where appropriate.

We are sending copies of this letter to Representative John M. Spratt, the Ranking Minority Member of your committee; the Honorable Rodney E. Slater, Secretary of Transportation; the Honorable Carl B. Schellenberg, Chief Financial Officer of the Federal Aviation Administration; the Honorable Jane F. Garvey, Administrator of the Federal Aviation Administration; the Honorable Jacob Lew, Director of the Office of Management and Budget; the Honorable Kenneth M. Mead, Department of Transportation Inspector General; and other interested parties. Copies will also be made available to others on request.

If you have any questions concerning this letter, please call me at (202) 512-9508 or John C. Fretwell at (202) 512-9382. Key contributors to this letter are included in appendix I.

Sincerely yours,



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

GAO Staff Acknowledgements

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