DOD METHODOLOGY FOR ESTIMATING THE HISTORIC COST OF INVENTORIES

Report Number 99-178
June 7, 1999

Office of the Inspector General
Department of Defense

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Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFAS</td>
<td>Defense Finance and Accounting Service</td>
</tr>
<tr>
<td>IG</td>
<td>Inspector General</td>
</tr>
<tr>
<td>LAC</td>
<td>Latest Acquisition Cost</td>
</tr>
<tr>
<td>MILSTRAP</td>
<td>Military Standard Transaction Reporting and Accounting Procedures</td>
</tr>
<tr>
<td>SFFAS</td>
<td>Statement of Federal Financial Accounting Standards</td>
</tr>
<tr>
<td>USD(C)</td>
<td>Under Secretary of Defense (Comptroller)</td>
</tr>
<tr>
<td>USGSGGL</td>
<td>U.S. Government Standard General Ledger</td>
</tr>
<tr>
<td>WCF</td>
<td>Working Capital Fund</td>
</tr>
</tbody>
</table>
June 7, 1999

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
AND TECHNOLOGY
UNDER SECRETARY OF DEFENSE (COMPTROLLER)

SUBJECT: Audit Report on the DoD Methodology for Estimating the Historic Cost of
Inventories (Report No. 99-178)

We are providing this audit report for review and comments. The audit was
performed in support of the requirements of the Chief Financial Officers Act of 1990,
as amended by the Federal Financial Management Act of 1994 and the Federal
Financial Management Improvement Act of 1996.

Comments from the Under Secretary of Defense for Acquisition and
Technology conformed to the requirements of DoD Directive 7650.3 and left no
unresolved issues. Therefore, no additional comments are required. The Under
Secretary of Defense (Comptroller) did not respond to a draft of this report.
Accordingly, we request that the Under Secretary of Defense (Comptroller) provide
comments on the final report by July 7, 1999.

We appreciate the courtesies extended to the audit staff. Questions on the audit
should be directed to Mr. James L. Kornides at (614) 751-1400, extension 11
(jkornides@dodig.osd.mil), or Mr. Timothy F. Soltis at (614) 751-1400, extension 13
(tsoltis@dodig.osd.mil). Appendix D lists the report distribution. The audit team
members are listed on the inside back cover.

[Signature]
David K. Steensma
Deputy Assistant Inspector General
for Auditing
Office of the Inspector General, DoD

DoD Methodology for Estimating the Historic Cost of Inventories

Executive Summary


Inventories represent a significant DoD asset that is material to the DoD Agency-wide financial statements and the Government-wide financial statements. Proper valuation of DoD inventories is essential to preparing reliable financial statements. At the end of FY 1998, the Defense Working Capital Funds reported inventories of $56.6 billion. The inventories were valued using the latest acquisition cost method of accounting, which requires that the last invoice price be applied to all like items, including those items acquired through donation or nonmonetary exchange.

In its “Plan to Improve the Management and Performance of the DoD Working Capital Funds,” September 1997, the Under Secretary of Defense (Comptroller) made the decision to change the basis for valuing inventory from the latest acquisition cost method of accounting to the historic cost method and established a study group to implement that decision. Historic cost includes all appropriate purchase, transportation, and production costs incurred to bring an item to its current condition and location. Historic cost is the preferred method of accounting for inventories because it is verifiable and understandable. However, none of the DoD Components have been able to convert from the latest acquisition cost method because the logistics feeder systems are unable to capture historic cost data. In response to this problem, the Under Secretary of Defense (Comptroller) developed a methodology that attempted to estimate the historic cost of ending inventories that were valued at latest acquisition cost. As part of the DoD implementation strategy for achieving favorable audit opinions on its financial statements, the Under Secretary of Defense (Comptroller) agreed to work with the Defense Finance and Accounting Service and the audit community to implement an acceptable methodology that will approximate historical cost for DoD inventories.

Objectives. The overall audit objective was to evaluate management assertions about the valuation, completeness, and existence of assets in the DoD inventory accounts and to determine whether these accounts were presented fairly and in accordance with Office of Management and Budget Bulletin No. 97-01, “Form and Content of Agency Financial Statements,” October 16, 1996, as amended on November 20, 1998. For this part of the audit, we evaluated the methodology used by the Under Secretary of Defense (Comptroller) to estimate the historic cost of inventories in the Defense Working Capital Fund. We also
evaluated relevant internal controls. See Appendix A for a discussion of the scope and methodology, an assessment of the management control program, and a summary of prior audit coverage.

**Results.** The methodology used by the Under Secretary of Defense (Comptroller) to estimate the historic cost of FY 1998 inventories of $56.6 billion was not adequate. The methodology did not fully comply with Federal accounting standards for the treatment of inventory gains and losses totaling over $39 billion, did not contain adequate guidance to properly account for established inventory transaction codes, and was not adequately documented. In addition, the methodology was dependent on unreliable information produced by the DoD Components' logistics feeder systems and the ability of the Defense Finance and Accounting Service to translate over 400 inventory accounts used by the DoD Components into the 6 inventory accounts in the U.S. Government Standard General Ledger. Until the deficiencies with the methodology and the logistics feeder systems are corrected, accurate and reliable inventory values will not be reported in the financial statements.

**Summary of Recommendations.** We recommend that the Under Secretary of Defense for Acquisition and Technology establish a process action team, to include representatives of the Deputy Under Secretary of Defense (Logistics), the Under Secretary of Defense (Comptroller), and the Defense Finance and Accounting Service, that will ensure consistent accounting for inventory transactions by DoD Components and improve the adequacy of the guidance in DoD Regulation 7000.14-R. We also recommend that the Under Secretary of Defense for Acquisition and Technology perform comprehensive reviews of all logistics feeder systems. The reviews should result in complete documentation showing how each inventory transaction is currently being processed, determine the extent of noncompliance with Federal and DoD requirements, and provide milestones for correcting the deficiencies. We recommend that the Under Secretary of Defense (Comptroller) work with the process action team and provide guidance on the appropriate accounting treatment for each DoD inventory transaction, revise DoD Regulation 7000.14-R to provide guidance to DoD Components on the historic cost method of inventory valuation, and adequately document the methodology for estimating historic cost.

**Management Comments.** The Director, Acquisition Resources and Analysis, Office of the Under Secretary of Defense for Acquisition and Technology responded to the recommendations. The Director concurred with the recommendations and stated that a memorandum issued to the Military Departments and the Defense Logistics Agency on March 15, 1999, addressed some of our recommendations. The Director stated that the remaining recommendations are being addressed as part of the DoD implementation strategy for achieving favorable audit opinions on its financial statements. See the Finding section of this report for a discussion of management comments and the Management Comments section for the complete text of management comments. The Under Secretary of Defense (Comptroller) did not respond to a draft of this report issued on March 15, 1999. Accordingly, we request that the Under Secretary of Defense (Comptroller) provide comments on the final report by July 7, 1999.
# Table of Contents

**Executive Summary**  

**Introduction**
- Background  
- Objectives  

**Finding**
- Inventory Valuation  

**Appendixes**
- A. Audit Process  
  - Scope  
  - Methodology  
  - Management Control Program  
  - Summary of Prior Coverage  
- B. DFAS Inventory of Critical Feeder Systems  
- C. Significant Inventory Adjustments  
- D. Report Distribution  

**Management Comments**
- Under Secretary of Defense for Acquisition and Technology Comments  


Background


The Chief Financial Officers Act requires the Inspector General (IG), DoD, to audit the financial statements of DoD organizations. Underlying the financial statements are management assertions on the valuation, ownership, existence, completeness, and presentation of DoD inventories. Auditors are responsible for verifying these assertions. Assertions regarding inventory valuation deal with whether DoD inventories have been included in the financial statements at the appropriate dollar amounts and whether the basis of valuation is appropriate, properly applied, and consistent with previous periods.

Proper valuation of DoD inventories is essential to preparing reliable financial statements. Statement of Federal Financial Accounting Standards (SFFAS) No. 3, “Accounting for Inventory and Related Property,” October 27, 1993, provides the accounting requirements for inventory valuation. SFFAS No. 3 allows inventories to be valued at either historic cost or at latest acquisition cost (LAC), adjusted to the approximate historic cost.

Inventory Management. Inventory management is a major logistics program performed by DoD organizations. DoD inventories include about 4.9 million items used by the Military Departments, Defense agencies, and other Government agencies to sustain operations. As of September 30, 1998, the WCFs of the three Military Departments and the Defense Logistics Agency reported total inventories of about $82.5 billion (at LAC). The Defense Finance and Accounting Service (DFAS) reduced that amount by $25.9 billion for various adjustments to arrive at the $56.6 billion reported on the FY 1998 DoD Agency-wide Statement of Financial Position. The $56.6 billion was intended to represent the approximate historic cost of inventory, adjusted for potential excess materiel that was valued at estimated salvage value.

DoD Inventory Control Points, which are financed by the three Military Departments and the Defense Logistics Agency WCFs, manage most DoD inventories. The Inventory Control Points buy materiel, position it at DoD storage locations, account for in-transit materiel, and direct the transfer of materiel to depot maintenance and disposal organizations. Storage organizations
such as the Defense Logistics Agency distribution depots receive materiel, issue materiel to customers, conduct physical inventories, and maintain materiel in storage.

**Accounting for Inventory Transactions.** Many of the millions of inventory-related transactions processed by the Inventory Control Points and storage organizations for program management and control purposes also represent financial events that must be captured in the accounting records. Because of the large volume of transactions processed, the Inventory Control Points and storage organizations rely extensively on automated systems to process most inventory transactions. These automated systems are called logistics feeder systems because they provide data to the financial management systems used by DFAS to prepare the financial statements. For inventories to be accurately valued on the financial statements in accordance with Federal accounting requirements, logistics organizations need to properly identify, record, and classify the millions of inventory transactions processed annually.


The National Defense Authorization Act of 1998 directed DoD to create a Biennial Financial Management Improvement Plan (Biennial Plan) that outlines the DoD plan for improving financial management. The FY 1998 Biennial Plan describes the status of financial management systems in DoD, including feeder systems, and was designed to meet the requirements of the Federal Financial Management Improvement Act of 1996.

**Objectives**

The overall audit objective was to evaluate management assertions about the valuation, completeness, and existence of assets in the DoD inventory accounts and to determine whether these accounts were presented fairly on the financial statements and in accordance with Office of Management and Budget Bulletin No. 97-01, “Form and Content of Agency Financial Statements,” October 16, 1996, as amended on November 20, 1998. For this part of the audit, we evaluated the methodology used by the Under Secretary of Defense (Comptroller) (USD[CI) to estimate the historic cost of inventories. We also evaluated relevant internal controls. See Appendix A for a discussion of the scope and methodology, an assessment of the management control program, and a summary of prior audit coverage.
Inventory Valuation

The methodology used by the USD(C) to estimate the historic cost of FY 1998 inventories of $56.6 billion was not adequate. The methodology did not fully comply with Federal accounting standards regarding the treatment of inventory gains and losses totaling over $39 billion, did not contain adequate guidance to properly account for established inventory transaction codes, and was not adequately documented. In addition, the methodology was dependent on unreliable information produced by the DoD Components' logistics feeder systems and the ability of DFAS to crosswalk over 400 inventory accounts used by the DoD Components into the 6 inventory accounts in the U.S. Government Standard General Ledger (USGSL). Key information generated by the logistics feeder systems was unreliable because:

- management self-disclosures and prior audit reports showed that the feeder systems were not in substantial compliance with Federal accounting requirements. Significant deficiencies included the lack of the USGSL at the transaction level and significant unsupported adjustments between logistical and financial inventory records.

- logistics and financial management personnel in the Military Departments and the Defense agencies did not review the systems in sufficient detail to determine the full extent of noncompliance and determine what actions are needed to correct the system deficiencies.

Until the deficiencies with the methodology and the logistics feeder systems are corrected, accurate and reliable inventory values will not be reported in the financial statements.

Inventory Valuation Policy

Federal Accounting Policy. SFFAS No. 3 requires that inventories be valued on the financial statements at historic cost. Historic cost includes all appropriate purchase, transportation, and production costs incurred to bring an item to its current condition and location. Historic cost is the preferred method of accounting for inventories because it is verifiable and understandable.

SFFAS No. 3 allows Federal entities to initially value inventories in the accounting records at LAC where the last invoice price is applied to all like items, including those items acquired through donation or nonmonetary exchange. If LAC accounting is used, Federal accounting policy requires that ending inventories be adjusted to approximate historic cost. This is accomplished by establishing allowance accounts to capture unrealized gains and losses from price changes occurring throughout the year and using the allowance accounts to revalue ending inventories and the related cost of goods sold at least annually.
DoD Accounting Policy. Prior to FY 1991, DoD inventory values were reported at standard price. The standard price of an item generally consists of the latest invoice price plus the DoD Component’s surcharge rate. In October 1991, the USD(C) changed its accounting policy to require that all DoD inventories be valued at LAC (effective with the FY 1991 financial statements). The policy change required each DoD Component to remove the surcharge added to each item to arrive at the estimated LAC.

To comply with SFFAS No. 3, the USD(C) developed a methodology to convert inventories valued at LAC to the estimated historic cost. The methodology was established in DoD Regulation 7000.14-R, the “DoD Financial Management Regulation,” volume 11B, “Reimbursable Operations, Policy and Procedures for the Defense Business Operations Fund,” December 1994. The USD(C) subsequently developed spreadsheet models that expanded on the methodology in DoD Regulation 7000.14-R.

In its “Plan to Improve the Management and Performance of the DoD WCFs,” September 1997, the USD(C) made the decision to change the basis for valuing inventory in the DoD WCFs from the LAC method to the historic cost method and established a study group to implement the decision. The Office of the Deputy Under Secretary of Defense (Logistics) had concerns about the decision and questioned the need to value inventory at historic cost. At the end of FY 1998, none of the DoD logistics systems had the capability to value inventories at historic cost. Accordingly, the USD(C) continued to use its methodology, or models, to estimate historic costs. As part of the DoD implementation strategy for achieving a favorable audit opinion on its financial statements, the USD(C) agreed to work with DFAS and the audit community to implement an acceptable methodology that will approximate historical cost for DoD inventories.

DoD Logistics Feeder Systems

The DoD Components operate numerous logistics feeder systems (11 logistics feeder systems are identified in Appendix B) that perform supply management, distribution, storage, and other logistics functions. DFAS operates the core DoD accounting systems (a core accounting system performs the primary financial management functions), but does not have responsibility over most feeder systems that capture essential financial management data. A core financial system receives accounting data from feeder systems and from direct user input, and it arranges the data to allow for preparation of the financial statements.

According to DFAS estimates, approximately 80 percent of the accounting data used to prepare financial statements for DoD organizations originate in feeder systems, such as those used by the DoD Components to manage their logistics programs. OMB policy requires that DoD annually report on its core financial systems and other systems that are critical to DoD-wide financial management, control, and reporting. During FY 1998, DFAS tasked the Military Departments and Defense agencies to identify their critical feeder systems. The
Military Departments and Defense agencies identified and provided DFAS with lists containing 83 critical feeder systems (see Appendix B for details) that were used during FY 1998 to provide essential accounting data to the core accounting systems.

At least 11 of the systems listed were major logistics feeder systems that DFAS relied on to value DoD inventories. However, the list was not complete. Other major logistics feeder systems, such as the Defense Logistics Agency’s Distribution Standard System, were not on the DFAS list. In Inspector General, DoD, Report No. 99-123, “Assessment of the DoD Biennial Financial Management Improvement Plan,” April 4, 1999, we recommended that the USD(C) review the DoD financial management systems inventory and include all critical systems. This recommendation, if implemented, will ensure that all critical feeder systems are provided to DFAS. Therefore, we have no additional recommendations on this matter.

Adequacy of the USD(C) Methodology

The USD(C) developed a methodology to estimate the historic cost of inventories in the DoD Components’ WCFs. However, the methodology did not fully comply with Federal accounting standards regarding the treatment of inventory gains and losses, did not contain adequate guidance to properly account for established logistics transaction codes, and was not adequately documented.

Compliance With Federal Accounting Standards. The USD(C) methodology did not fully comply with SFFAS No. 3 criteria for revaluing inventory from the LAC basis of accounting to the historic cost basis of accounting. According to SFFAS No. 3, allowance accounts should be established to capture unrealized holding gains and losses resulting from periodic price changes that occur while inventory remains in storage. As new items are bought, the value representing the difference between the old and the new price of each item held in inventory should be posted to the allowance accounts as a gain or loss. A portion of this unrealized holding gain or loss must be recognized as a cost when inventory is sold or otherwise disposed.

The DoD logistics feeder systems did not have the necessary processes in place to capture price changes as they occurred. To overcome this deficiency, the USD(C) methodology categorized as unrealized holding gains and losses the DoD Component general ledger accounts used to summarize various inventory adjustments. The USD(C) methodology captured unrealized gains and losses resulting from price changes and recognized those gains and losses when inventory was sold or disposed. However, in addition to price changes, the USD(C) methodology also captured the value of quantity changes as an unrealized gain or loss. USD(C) Accounting Policy officials believed that SFFAS No. 3 allowed both price and quantity changes to be recognized as an unrealized gain or loss.
In audits conducted during the last 2 years, the Inspector General, DoD, the General Accounting Office, and the Military Department audit agencies questioned the USD(C) treatment of several inventory adjustment accounts as holding gains and losses. The auditors raised questions about the treatment of general ledger accounts that included transactions representing quantity changes, error corrections, and other types of adjustments as unrealized holding gains and losses. For example:

- The DoD Components' WCFs made inventory accounting adjustments totaling $31.7 billion during FY 1998. These adjustments were treated as unrealized holding gains and losses, although DoD defined the Accounting Adjustment account as containing adjustments necessary to show differences between accounting records and corresponding logistics records due to quantity differences and other factors (see Appendix C for details).

- The DoD Components' WCFs made physical inventory adjustments totaling $7.4 billion during FY 1998. The adjustments were treated as unrealized holding gains and losses, although DoD defined the Physical Inventory Adjustment account as containing adjustments necessary to bring the value of the inventory on the logistics records into agreement with the value of inventory on hand, as determined by a physical count (see Appendix C for details).

DoD officials stated that they did not believe that the amounts in the DoD Components' general ledger accounts actually represented what the account definitions indicated the accounts should represent. They also stated that the DoD Components' logistics feeder systems may have improperly processed transactions that did not represent financial events (such as movements of materiel between warehouse storage bins) as inventory adjustments, or may have otherwise incorrectly processed information. Therefore, they were reluctant to treat the accounts as gains and losses in the current period, as required by Federal accounting standards. Instead, DoD treated the accounts as unrealized holding gains and losses in an attempt to minimize the fluctuation in operating results that would have occurred if Federal accounting standards were followed.

The issue of holding gains and losses and the use of models to approximate historic cost has been included in the DoD implementation strategy for achieving an unqualified audit opinion on its financial statements. Specifically, the USD(C) agreed to work with the audit community and DFAS to refine inventory valuation formulas and reach a consensus on the accounting treatment of inventory gain and loss accounts by September 1999. Therefore, we are not making any recommendations on this matter.

**Guidance on Transaction Processing.** The USD(C) methodology did not contain adequate guidance on the proper accounting treatment of existing inventory transaction codes or provide procedures to account for inventories using the historic cost method.
Accounting for Inventory Transactions. DoD Components must be consistent in accounting for similar inventory transactions. DoD Manual 4000.25-2-M, "Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP)," May 1989, provides policies and prescribes uniform procedures and coding structures for recording inventory transactions for program execution. The MILSTRAP procedures were developed before the implementation of the current Federal accounting standards and have not been translated into financial events that can be readily linked to the USGSGL.

In July 1997, the Principal Deputy USD(C) mandated the use of the USSGL throughout DoD to ensure consistency in recording financial events. However, at the end of FY 1998, none of the DoD Components had fully implemented the USGSGL at the transaction level. To support full implementation of the USGSGL in the logistics feeder systems, all DoD Components must use the same chart of accounts (list of general ledger accounts), including standard numbering structures and account titles. In addition, regardless of the system used, the same financial events (or MILSTRAP transactions) must be captured, summarized, and posted to the general ledger accounts, according to the posting logic prescribed by the Department of the Treasury. During FY 1998, the DoD Components used over 400 different accounts to capture inventory-related transactions that ultimately had to be translated to 6 inventory accounts in the USGSGL.

The more than 400 inventory accounts used by the DoD Components initially had to be translated by DFAS personnel to the 39 inventory accounts in the DoD standard general ledger to account for all inventory transactions processed by DoD logistics organizations, including allowance accounts for unrealized holding gains and losses. The 39 accounts in the DoD standard general ledger were subsequently translated to the 6 accounts in the USGSGL. This caused problems because each DoD Component developed its own accounts and accounting processes, and many of the accounts had numbering structures and titles that differed from those established by the USD(C) for the DoD standard general ledger.

The number of accounts used by a reporting entity depends on its size, the nature of operations, and the extent to which detailed management information is needed to plan and control operations and for external reporting purposes. The USD(C) determined that because of the size and complexity of DoD operations, 39 inventory-related accounts were warranted. However, the need for more than 400 inventory accounts was questionable and was likely to contribute to processing errors and the large number and frequency of inventory adjustments. In addition, the account titles and descriptions often did not reflect the underlying nature of the transactions posted, and in some cases, may not have reflected actual financial events.

Historic Cost Basis of Accounting. The procedures established in DoD Regulation 7000.14-R pertain only to LAC accounting. However, accounting for inventories at historic cost requires different procedures from LAC accounting. For example, under historic cost accounting, there is no need to establish allowance accounts for estimation purposes because the actual historic cost is computed based on the purchase history. In addition, Federal accounting
standards allow the use of various cost flow methods such as the first-in, first-out method or the weighted average method to be applied in arriving at the historic cost of inventory. Because the USD(C) changed the basis for valuing DoD inventory from the LAC method to the historic cost method, DoD Regulation 7000.14-R must be revised to provide guidance on historic cost accounting to assist the DoD Components that plan to convert.

In December 1998, a study group established by the Defense WCF Policy Board issued a report on the conversion of inventory valuation methodologies from the LAC method to the historic cost method. The report stated that immediate implementation by all DoD Components was not feasible and that the costs involved in changing valuation methodologies had not been estimated. The report recommended that a major accounting firm be engaged to evaluate the merits of the proposed conversion to the historic cost method of inventory valuation, including a determination of the estimated costs of modifying existing logistics and financial systems. The report also recommended that the contractor determine the costs of modifying logistics and financial systems to comply with the USD(C) decision.

Documentation. During the last 3 years, auditors’ recommendations and other factors have caused the USD(C) to continuously update its methodology for estimating the historic cost of inventory. However, the updates were not adequately documented in DoD Regulation 7000.14-R. Instead, the methodology was maintained on desktop computer spreadsheets. The spreadsheets did not provide adequate assurance that unauthorized or undocumented changes would be prevented. In addition, personnel responsible for implementing the inventory valuation methodology at the DFAS Centers stated that they did not fully understand the methodology.

Adequacy of Logistics Feeder Systems

The accuracy of USD(C) methodology for estimating the historic cost of inventories was influenced by the problems caused by using logistics feeder systems that were not designed to process financial information for use in preparing financial statements. The methodology constituted an attempt to translate the more than 400 general ledger accounts established by the DoD organizations into the USGSL. By doing so, however, DoD assumed that the logistics feeder systems captured the millions of inventory transactions processed annually, and that the systems properly identified, recorded, and classified the transactions in accordance with Federal accounting requirements. However, management self-disclosures and prior audits during the last several years showed that such an assumption was not valid.

Management Self-Disclosures. DoD managers have acknowledged that their logistics feeder systems do not comply with Federal accounting and system requirements. They have also acknowledged that until these system deficiencies are corrected, DoD will be unable to produce auditable financial statements. Specific management disclosures regarding the inadequacy of their logistics feeder systems included the following.
The logistics feeder systems, some of which were designed and implemented decades ago, did not capture and record inventory transactions according to current Federal accounting requirements.

The current environment of nonintegrated databases precluded the reliable interfacing of information from logistics functional areas with the core finance and accounting systems in DoD. Inadequate internal controls and undocumented audit trails further exacerbated these deficiencies.

Logistics feeder systems maintained inventory values at standard (selling) price instead of historic cost, causing the dollar value of inventory reported on the financial statements to be a calculated amount instead of a system-generated amount.

DoD disclosed in its FY 1998 Biennial Plan that inadequate feeder systems were an impediment to producing auditable financial statements. DoD plans to focus on system consolidation and standard data elements.

Audit Reports. Financial statement audits by the Inspector General, DoD, and the Military Department audit agencies have cited inadequate logistics feeder systems as a major impediment to giving favorable audit opinions on the WCF financial statements. Our ability to audit information systems depended largely on the features and characteristics of the systems under review. Adequate systems will allow verification of the accuracy and completeness of data processing results and the effectiveness and reliability of internal controls. Audits of DoD inventory accounts during the last 2 years (see Appendix A for a list of prior audits) have identified problems such as the following.

- Financial inventory records were routinely adjusted to logistical feeder system records, rather than reconciled, and supporting details for the adjustments were not readily available. These processes resulted in the need to make large and frequent inventory adjustments, such as those listed in Appendix C.

- Systems supporting the DoD financial statements did not capture all inventory transactions, perform double-entry accounting, have transaction-driven general ledgers, and maintain adequate audit trails.

- Written definitions, transaction posting guidance, and posting rules were not available to show the accounting effects of inventory-related accounts containing balances of over $159 billion.

Evaluations of Key Logistics Feeder Systems

Adequate accounting for inventory transactions cannot be accomplished until the problems with the logistics feeder systems are fully understood, documented, monitored, and corrected. Although DoD managers have disclosed that the existing logistics feeder systems do not substantially comply with Federal
requirements, they have not taken the steps needed to determine the full extent of noncompliance or specific actions to correct the problems. Representatives from the DFAS Defense Accounting Systems Program Management Office stated that as of the end of FY 1998, none of the DoD Components had completed a comprehensive review of its key logistics feeder systems. At a minimum, an effective logistics feeder system must be able to:

- identify, assemble, and record all actions taken by the Inventory Control Points, storage organizations, and other logistics organizations when those actions represent financial events consistent with USGSGL posting requirements and the posting logic prescribed by the Department of the Treasury;

- capture all essential accounting information for each financial event at the time the transaction is initially entered into the feeder system;

- identify and record only authorized inventory transactions;

- describe transactions in sufficient detail to classify them properly in the financial statements and in the proper accounting period;

- maintain the integrity of the data in each system by establishing adequate general and application controls and providing adequate audit trails to support summary balances and facilitate audits; and

- measure the value of each transaction so that its monetary value can be recorded in the financial statements at historic cost.

To fully comply with the Federal Financial Management Improvement Act, the Under Secretary of Defense for Acquisition and Technology must direct each DoD Component to identify all major logistics systems that furnish essential financial data to the DFAS core financial systems. An accurate list of all feeder systems is essential to ensure that deficiencies are identified and corrected. Each system must then be prioritized for review based on factors such as dollar value and number of transactions processed, and comprehensive reviews must be performed on each logistics feeder system.

When the full extent of noncompliance and internal control deficiencies is understood and documented (including the impact of the deficiencies on preparing reliable financial reports), the DoD Components must establish an action plan that includes specific milestones for when the system will be fixed. Included in the action plan must be the estimated time frame when each system will be converted from the LAC basis of accounting to historic cost accounting. As an interim measure, the DoD implementation strategy for achieving a favorable audit opinion on its financial statements allows the use of formulas or models to approximate historical cost for DoD inventory that is controlled through systems that maintain inventories at standard price or LAC.
Corrective Actions Taken

On February 10, 1999, we briefed personnel from the Offices of the Deputy Under Secretary of Defense for Logistics (a subordinate office of the Under Secretary of Defense for Acquisition and Technology) and the USD(C) on a draft of this report. On March 15, 1999, the Principal Deputy Under Secretary of Defense for Acquisition and Technology issued a memorandum on the existence, completeness, and valuation of DoD inventory assets that addressed some of the problems discussed in this report. The memorandum required each Military Department and DLA to take the following actions.

- Confirm whether current MILSTRAP codes encompass all transactions that affect inventory.
- In coordination with the USD(C) and DFAS, determine which MILSTRAP transactions represent financial events that should be reported in the DoD financial management systems.
- In coordination with the USD(C) and DFAS, ensure that MILSTRAP transaction codes for reportable financial events translate into appropriate accounting terms and entries.
- Evaluate manual and automated transaction processes for inventory systems and financial systems and identify adjustments or errors that consistently occur, as well as the causes and sources of those adjustments.
- Develop a detailed remedial plan to take actions to implement changes, eliminate the need for repetitive adjustments, and correct errors as they are identified.

Recommendations

A.1. We recommend that the Under Secretary of Defense for Acquisition and Technology:

a. Establish a process action team, to include representatives of the Under Secretary of Defense (Comptroller), the Deputy Under Secretary of Defense (Logistics), and the Defense Finance and Accounting Service, that will ensure consistent accounting for inventory transactions by DoD Components and improve the adequacy of the guidance provided in DoD Regulation 7000.14-R by:

1. Evaluating the current Military Standard Transaction Reporting and Accounting Procedures codes to ensure that all financial events pertaining to DoD inventories are covered.
(2) Identifying all inventory transactions that are not covered by the existing Military Standard Transaction Reporting and Accounting Procedures coding structure and referring them to the Deputy Under Secretary of Defense (Logistics) for new codes.

(3) Evaluating the existing DoD inventory accounts to determine whether all are needed, or whether additional accounts are needed to capture unique DoD Component transactions.

(4) Providing detailed guidance on the specific posting logic needed to properly account for each Military Standard Transaction Reporting and Accounting Procedures transaction in accordance with Federal requirements.

(5) Identifying all Military Standard Transaction Reporting and Accounting Procedures and DoD Component-unique logistics transactions that should not be posted to the accounting records.

Management Comments. The Director, Acquisition Resources and Analysis, responded to the recommendation for the Under Secretary of Defense for Acquisition and Technology. The Director concurred with the recommendation and stated that the memorandum issued on March 15, 1999, by the Principal Deputy Under Secretary of Defense required the Military Departments and DLA to take the recommended actions. The actions should be completed by September 30, 1999.

b. Direct each of the DoD Components to perform comprehensive reviews of each major logistics feeder system that include:

(1) Complete documentation of the method used to process each inventory transaction.

(2) A comparison of the current processes against Federal and DoD accounting and system requirements.

(3) A rapid reduction in the use of the over 400 inventory accounts, to be replaced by the approved DoD chart of accounts.

(4) An assessment of the full extent of noncompliance with Federal and DoD requirements and the impact of noncompliance on the preparation of reliable financial reports.

(5) The establishment of specific milestones for correcting system deficiencies.

Management Comments. The Director, Acquisition Resources and Analysis, concurred with the recommendation and stated that recommended actions are being addressed jointly with the USD(C) through implementation strategies developed for obtaining a favorable audit opinion on the DoD Agency-wide financial statements. Inventory issues are addressed in DoD Implementation Strategy B.1, “Inventory Issues - Existence, Completeness, and Valuation of Inventory.” Actions should be completed by September 30, 1999.
A.2. We recommend that the Under Secretary of Defense (Comptroller):

a. Work with the process action team and provide guidance on the appropriate accounting treatment for each DoD inventory transaction.

b. Revise DoD Regulation 7000.14-R to:

(1) Provide guidance to DoD Components on historic cost inventory valuation; the guidance should be fully compliant with Federal accounting standards.

(2) Adequately document the DoD methodology for estimating the historic cost of inventories at latest acquisition cost, including a complete explanation of all account translations and computational formulas provided in spreadsheet models.

Management Comments Required

The Under Secretary of Defense (Comptroller) did not comment on a draft of this report. We request that the Under Secretary of Defense (Comptroller) provide comments on the final report.
Appendix A. Audit Process

Scope

Work Performed. During this part of our audit of the DoD inventory accounts, we evaluated the reasonableness of the methodology established by the USD(C) to estimate the historic cost of the $56.6 billion of inventories reported by the DoD WCFs in their FY 1998 financial statements. We reviewed applicable Federal accounting requirements for the proper valuation of inventory on the financial statements. In addition, we reviewed the Federal requirements pertaining to financial management systems, including the requirements for logistics feeder systems. We also reviewed prior audit coverage of these areas.

We conducted a separate audit on the valuation of inventory because valuation is one of the primary management assertions underlying the financial statements.

Limitations to Audit Scope. The scope of our audit was limited in that we did not perform substantive tests of the inventory adjustment accounts used by the DoD Components. In addition, DoD managers have reported significant problems with the data produced by their logistics feeder systems, but have not performed the comprehensive reviews needed to fully understand the magnitude of the problems or the effect on the financial statements. We did not perform the extensive system testing that would be required to determine the full extent of noncompliance with Federal requirements.

DoD-wide Corporate Level Government Performance and Results Act Goals. In response to the Government Performance Results Act, the Department of Defense has established 6 DoD-wide corporate level performance objectives and 14 goals for meeting these objectives. This report pertains to achievement of the following objective and goal.

Objective: Fundamentally reengineer DoD and achieve a 21st century infrastructure. Goal: Reduce costs while maintaining required military capabilities across all DoD mission areas. (DoD-6)

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to achievement of the following functional area objective and goal.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Defense Financial Management and the Defense Inventory Management high-risk areas.

Methodology

We reviewed the methodology used by DoD to estimate the historic cost of its inventories to determine whether the methodology complied with Federal accounting standards. We also reviewed management disclosures and prior audit reports that documented known deficiencies in the logistics feeder systems to determine the extent to which data from the systems could be relied on.

Use of Computer-Processed Data. We used computer-processed data from the DoD Components' Financial Management Systems for background purposes and to show the magnitude of inventory adjustments reported by the DoD Components. We did not evaluate the general or application controls over the automated systems generating this data.

Audit Type, Dates, and Standards. This financial-related audit was conducted from June 1998 through February 1999 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD. Further details are available on request.

Management Control Program

DoD Directive 5010.38, "Management Control Program," August 26, 1996, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of the Management Control Program. We reviewed the FY 1998 DoD Annual Statement of Assurance and the FY 1998 DoD Biennial Financial Management Improvement Plan (the Biennial Plan) to determine whether the issues addressed in this report had been reported as material management control weaknesses. The Biennial Plan incorporates other regulatory reporting requirements, including the DoD Annual Statement of Assurance required by section IV of the Federal Managers' Financial Integrity Act of 1982.

Adequacy of Management Controls. Management controls did not ensure that the DoD inventory valuation methodology was adequate to estimate the historic cost of inventories in accordance with Federal accounting standards.
Adequacy of Management’s Self-Evaluation. In its FY 1998 Annual Statement of Assurance, DoD reported that its accounting, finance, and feeder systems did not fully comply with Federal financial management systems requirements, including accounting standards, or with internal management control objectives. In the FY 1998 Biennial Plan, DoD reported that it faced major impediments to auditable financial statements because of inadequate program feeder systems. Specifically, program feeder systems were not transmitting necessary or standard data to the core financial management systems to allow managers to properly account for the inventory or manage costs. DoD also reported that inventories were valued at standard (selling) price, not at historic cost as required by Federal accounting standards. Additionally, DoD reported that the inventory values were not included in DoD financial systems, but in logistics systems, resulting in calculated amounts rather than system-generated amounts being reported on the financial statements.

Summary of Prior Coverage

General Accounting Office


Inspector General


Air Force


Army


Navy

Appendix B. DFAS Inventory of Critical Feeder Systems

Department of the Navy

1. Navy Enlisted Personnel Information System
2. Officer Personnel Information System
3. Force Management System
4. Inactive Manpower and Personnel Information System
5. Microcomputer Claims Processing System
6. Reserve Information Management System
7. Standard Labor Data Collection and Distribution Application
8. Automated Labor and T&A Input and Reporting System
9. Automated Time and Labor System
10. Command Management System
11. Command Resource Management Module
12. DCPS Defense Automated Timekeeping
13. Local Lejeune System
14. Local Naval Personnel Research and Development Center
15. Fleet Technical Support Center, Atlantic Payroll System
16. Automated Procurement and Accounting Data Entry System
17. Integrated Technical Item Management Program*
18. Uniform Inventory Control Point Applications*
19. Uniform Automated Data Processing System*
20. Shipboard Uniform Automated Data Processing System*
21. Asset Tracking Logistics and Supply System
22. Aircraft Inventory Reporting System
23. Supported Activities Supply System*
24. Marine Ammunition Accounting and Reporting System II
25. Conventional Ammunition Integrated Management System
26. Aircraft Engine Management System
27. Meteorology Automated System for Uniform Recall and Reporting
28. Navy Facility Assets Data Base
29. Plant Property System
30. Logistics Management Information System*
31. Garrison Mobile Equipment Management System
32. Missile History Data Base System
33. Missile Status Report System
34. Combat Boat Support System
35. Equipment Reporting Registration and Tracking System

*Indicates key logistics feeder system.
Department of the Air Force

36. Personnel Data System
37. Time and Attendance Reporting System
38. Item Manager’s Wholesale Requisition System
39. Wholesale and Retail Receiving/Shipping System
40. Commercial Operations Integrated System
41. Acquisition and Due-In System
42. Base Contracting Automated System
43. Acquisition Management Information System
44. Aerospace Maintenance and Regeneration Center - Asset Control System
45. Special Support Stock Control and Distribution System*
46. Fuels Automated Management System
47. Stock Number User Directory
48. Work Information Management System
49. Information Processing Management System
50. Reliability and Maintainability Information System
51. Comprehensive Engine Management System
52. Facility Equipment Planning, Programming and Control System
53. Combat Ammunition System - Ammunition Control Point
54. Requirements Data Bank System*
55. Test Measurement and Diagnostic Equipment System
56. Recoverable Assembly Management Process
57. On-Line Vehicle Interactive Management System
58. Aerospace Vehicle Resource

Department of the Army

59. Standard Installation/Division Personnel System
60. Headquarters Application System
61. COE Time and Attendance/Labor System
62. Electronic Timekeeping System
63. Reserve Component Input System
64. JUMPS Standard Terminal Input System
65. ROTC Mission Management System
66. Continuing Balance System Expanded/Requisition Validation
67. Standard Army Automated Contracting System
68. Procurement Automated Data and Document System
69. Commodity Command Standard System*

*Indicates key logistics feeder system.
70. Standard Army Retail Supply System
71. Standard Depot System
72. Create On-Line Procurement System
73. Standard Property Book System - Redesign
74. Worldwide Ammunition and Reporting System
75. Integrated Facilities System - Micro/Mini
76. Integrated Facilities System - Micro/Mini Stand-Alone
77. Headquarters Integrated Facilities System - Micro/Mini
78. Real Estate Management Information System
79. Army Medical Department Property Accounting System

Office of the Under Secretary of Defense

80. Defense Civilian Personnel Data System

Defense Logistics Agency

81. Defense Property Accountability System
82. Contractor Property Management System

Defense Security Assistance Agency

83. Foreign Military Sales Credit Reporting System

*Indicates key logistics feeder system.
Appendix C. Significant Inventory Adjustments

Examples of Significant FY 1998 DoD Inventory Adjustments (Billions)

<table>
<thead>
<tr>
<th>Adjustment</th>
<th>Gain</th>
<th>Loss</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>$8.9</td>
<td>$22.8</td>
<td>$31.7</td>
</tr>
<tr>
<td>Physical Inventory</td>
<td>3.2</td>
<td>4.2</td>
<td>7.4</td>
</tr>
<tr>
<td>Total</td>
<td>$12.1</td>
<td>$27.0</td>
<td>$39.1</td>
</tr>
</tbody>
</table>

*Definitions of adjustments:

Accounting: adjustments to show gains and losses resulting from differences between supply management accounting records and corresponding (subsidiary) logistics records.

Physical Inventory: adjustments to show gains and losses to bring the value of the inventory on logistics records into agreement with the value of assets on hand, as determined by a physical inventory.
Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Deputy Under Secretary of Defense (Logistics)
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
General Counsel of the Department of Defense
Assistant Secretary of Defense (Public Affairs)

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Finance and Accounting Service
  Director, Defense Information Systems Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency
Non-Defense Federal Organizations and Individuals

Office of Management and Budget
General Accounting Office
  National Security and International Affairs Division
  Technical Information Center

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform
Under Secretary of Defense (Acquisition and Technology) Comments

MEMORANDUM FOR DIRECTOR, FINANCE AND ACCOUNTING DIRECTORATE, OFFICE OF THE INSPECTOR GENERAL


Recommendation A.1.a. The Office of the Inspector General, OSD, recommends that OUSD(A&T) establish a process action team to include representatives of the Under Secretary of Defense (Comptroller), the Deputy Under Secretary of Defense (Logistics) and the Defense Finance and Accounting Service that will ensure, consistent accounting for inventory transactions by DoD Components and improve the adequacy of the guidance provided in DoD Regulation 7000.14-R by:

1. Evaluating the current MILSTRAP transaction codes to make sure that all financial events pertaining to DoD inventories are covered by existing codes.
2. Identifying all inventory transactions that are not covered by the existing MILSTRAP coding structure and referring them to the Deputy Under Secretary of Defense (Logistics) for a new code.
3. Evaluating the existing DoD inventory accounts to determine whether all are needed or if additional accounts are needed to capture unique DoD Component transactions.
4. Providing detailed guidance on the specific posting logic needed to properly account for each MILSTRAP transaction in accordance with Federal requirements.
5. Identifying all MILSTRAP and DoD Component-unique logistics transactions that should not be posted to the accounting records.

OUSD(A&T) Response: On March 15, 1999, OUSD(A&T) issued a memorandum to the Secretaries of the Military Departments, Commandant, US Marine Corps, Director Defense Logistics Agency, and Director Defense Finance and Accounting Service regarding the existence, completeness, and valuation of inventory. This memorandum addresses the specific recommendations of the draft report. The memorandum requested that each Military Department and the DLA take the following actions:

1. Confirm whether current Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP) codes encompass all transactions that impact inventory.
2. In coordination with OUSD(C) and the Defense Finance and Accounting Service (DFAS), determine which MILSTRAP transactions represent a financial event that should be reported to the Department's financial management systems.
(3) In coordination with OUSD(C) and the DFAS, ensure MILSTRAP transaction codes that pertain to reportable financial events translate into appropriate accounting terms and entries.

(4) Evaluate inventory and financial systems (both manual and automated) transaction processes and identify adjustments and/or errors that consistently occur, as well as the causes and sources of those adjustments and/or errors.

(5) Develop a detailed remedial plan to take such actions as are required to implement changes, eliminate the need for repetitive adjustments, and to correct such errors, as are identified in the efforts addressed in (1) through (4). Ensure that such changes and corrections are implemented no later than September 30, 1999.

This office believes this memorandum addresses the issues included in your recommendation. OUSD(A&T) will establish a process action team to review the remedial plans prepared by the Military Departments and DLA and monitor the status of the corrective actions.

Recommendation A.1.b. The Office of the Inspector General, OSD, recommends that OUSD(A&T) direct each of the DoD Components to perform comprehensive reviews of each major logistics feeder system that include:

(1) Complete documentation as to the way each inventory transaction is processed.

(2) A comparison of the current processes against Federal and DoD accounting and system requirements.

(3) A rapid reduction in the use of the over 400 inventory accounts and start using only the approved DoD chart of accounts.

(4) An assessment on the full extent of noncompliance with Federal and DoD requirements and the impact that noncompliance has on preparation of reliable financial reports.

(5) Establishment of specific milestones for correcting system deficiencies.

OUSD(A&T) Response: Issue (1) should be addressed by the Military Departments and DLA in response to the March 15, 1999 memorandum referred to under Recommendation A.1.a. The remaining recommendations are being jointly addressed by OUSD(C) and OUSD(A&T) through the implementation strategies developed for obtaining an unqualified audit opinion on the consolidated DoD financial statements.

The point of contact for this matter is Stan Azebu, who may be reached by e-mail: azebun@acs.osd.mil or by telephone at (703) 697-1786.

Nancy L. Spruill
Director, Acquisition
Resources and Analysis

Coordination: 05/10/99 5-4-99
Congressional Actions &
Internal Reports

25
Audit Team Members

The Finance and Accounting Directorate, Office of the Assistant Inspector General for Auditing, DoD, produced this report.

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INTERNET DOCUMENT INFORMATION FORM

A. Report Title: DOD Methodology for Estimating the Historic Cost of Inventories

B. DATE Report Downloaded From the Internet: 08/06/99

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): OAIG-AUD (ATTN: AFTS Audit Suggestions)
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