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AUDIT REPORT
11-02

Control and Accountability of Laptop Computers

December 6, 2010

MEMORANDUM

U.S. GOVERNMENT PRINTING OFFICE

OFFICE OF INSPECTOR GENERAL

Date

December 6, 2010

To

Public Printer

Chief Information Officer

From

Assistant Inspector General for Audits and Inspections

Subject

Final Report on Audit of Control and Accountability of Laptop Computers
Report Number 11-02

Enclosed please find the subject final report. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response has been incorporated into the body of the report and the response is included in its entirety at Appendix D. We consider the proposed actions responsive to each of the report's seven recommendations. All of the seven recommendations will remain open pending completion of revised Directive 810.11B and the implementation of the Accountable Item Management System project. To ensure that the agreed upon corrective actions are sufficient to close each of the seven recommendations, we ask that you include us in the review and concurrence process for both actions. The status of each recommendation upon issuance of this report is included in Appendix E. The final report distribution is in Appendix F.

We appreciate the courtesies extended to the audit staff. If you need additional information or would like to arrange a meeting to discuss this final report, please contact Mr. Karl Allen, Supervisory Auditor at (202) 512-0277, or me at (202) 512-2009.

Kevin J. Carson

Kevin J. Carson
Assistant Inspector General for Audits and Inspections

Enclosure

cc:
Acting Chief Management Officer
Director Quality Assurance

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GPO Office of Inspector General

Report Number 11-02 **December 6, 2010**

Control and Accountability of Laptop Computers

Executive Summary

Background

Government-issued notebook or laptop computers (laptops) are at risk of loss and theft because of their high value, portability, and ease of concealment. Because of their ability to store large amounts of data, lost or stolen laptops also create a risk of exposing personally identifiable information (PII)[1] and sensitive Government information. The inability to account for laptops has been prevalent throughout the Federal Government,[2] and the GPO has experienced instances of missing laptops. Due in part to findings by the Office of Investigations of security and inventory control lapses in the management of Agency laptop computers; the Office of Audits conducted a comprehensive audit of the control and accountability of laptop computers at GPO.

Objectives

The objectives of the audit were to determine whether GPO (1) could account for all Agency laptop purchases, and (2) had adequate controls in place that would prevent the loss or theft of laptops.

Results in Brief

Based on our testing of a statistical sample of laptops issued to personnel between 2005 and 2009, we estimate with 99-percent confidence that GPO could not account for between 150 and 213 laptops that GPO had originally purchased for an average price of $2,210 (per laptop). The purchase price value of the missing laptops was

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[1] GPO Directive 825.41, March 30, 2010, "Protection of Personally Identifiable Information" defines PII "as information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, etc. alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth or mother's maiden name."

[2] Other Federal agencies with reported issues of laptop accountability include the Federal Bureau of Investigation, Internal Revenue Service, Indian Health Service, Securities and Exchange Commission, Veterans Administration, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, and National Archives. *See also* General Accountability Office, Indian Health Service: Management Led to Millions of Dollars in Lost or Stolen Property and Wasteful Spending, GAO-08-1069T (July 31, 2008); Veterans Affairs: Lack of Accountability and Control Weaknesses Over IT Equipment at Selected VA Locations, GAO-07-1100T (July 24, 2007).

between $331, 500 and $470,730. Agency management could provide no explanation as to the location of the missing laptops.

GPO could not account for the laptops in part because management did not establish standard operating procedures to implement written policies on property control and accountability for laptops. In addition, internal controls within GPO for preventing the loss of laptops need improvement as evidenced by the inability of the Agency to produce reports of either acquisition or disposition of laptops, or to account for laptops from purchase to final disposition.

Finally, GPO did not meet its objectives outlined in GPO Instruction 705.29, "IT End User Asset Management,"[3] for maintaining a centralized end user asset management program that verifies duplicative purchases are not made, and gathers information for disaster recovery planning.

While unknown, the failure to adequately account for laptops may have resulted in the inadvertent exposure of sensitive GPO business information about acquisitions and human capital, as well as the manufacture and issuance of security documents such as U.S. passports.

Recommendations. We made seven recommendations to management that, if implemented, will help improve control and accountability over laptops. Specifically, we recommended that GPO:

- Develop standard operating procedures that cover laptop acquisition, storage, delivery, return and accounting procedures.

- Improve laptop recordkeeping procedures conducive to sound inventory management by recording current location and the last actual end user and storing those records in a searchable, retrievable, and reportable format.

- Inventory laptops annually to ensure that the actual number of laptops and recorded number of laptops are equivalent, and investigate and resolve all differences.

- Update the Agency Oracle automated accounting system to enable it to track laptops from initial acquisition through final disposition and to produce reports useful for managing and monitoring GPO's laptop inventory.

- Update and then keep up to date the list of assigned Property Manager Assistants and ensure that each Property Manager Assistant knows their responsibility for property management.

[3] Issued November 9, 2005.

Management's Response. GPO management concurred with each of the report's recommendations and has planned corrective actions that we consider responsive to the recommendations.

Introduction

The portability of a notebook or laptop computer makes it a useful tool for telecommuting, and can thus facilitate the important Continuity of Operations (COOP) function.[4] GPO issues laptops to about one in four employees. Between 2005 and 2009, GPO records show that employees were issued 629 laptops with a total purchase price of $1,389,855 (an average of approximately $2,210 per laptop). The GPO organizations with the greatest number of laptops received during that time were Information Technology and Systems (IT&S) (148), Customer Services[5] (107), Executive Offices (52), Library Services and Content Management (51), and Human Capital (49).

Property Management Guidelines. GPO Instruction 825.18A, "Internal Control Program," May 28, 1997 (Instruction 825.18A), requires that managers implement controls that will prevent the loss of assets. GPO took the guidance several steps further through the implementation of GPO Directive 810.11B, "Property Management Program," dated June 6, 2003 (Directive 810.11B), and GPO Instruction 705.29, "IT End User Asset Management," dated November 9, 2005 (Instruction 705.29). Basic requirements from those guidelines are as follows:

- Directive 810.11B, which specifically includes computer equipment, provides the framework for the GPO property management program. The directive requires that GPO control and account for property through a formal system of appointed Property Managers and Property Manager Assistants. Directive 810.11B designates the GPO Comptroller as the Property Management Officer, who is responsible for maintaining an Agency-wide property accountability and control system.

- Instruction 705.29 adds to the control and accountability requirement by directing the Office of IT&S, Division of End User Support (EUS) as the property custodian and organization responsible for inventory of IT assets, including laptops. According to Instruction 705.29, EUS "will manage all facets of the IT asset management process for end user equipment including the ordering, procuring, receiving, issuing, distributing, tracking, managing, and collecting of all equipment used by end users."

GPO Laptop Acquisition and Issuance Responsibilities. Although Instruction 705.29 places responsibility on EUS to manage the flow of laptop accountability from acquisition to delivery to employee issuance, no written procedures or instructions exist on the process of laptop acquisition and issuance. Through review

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[4] GPO Directive 645, "Telework Program," states, "Telework is a flexible workplace program that permits employees to work at home or at other approved locations away from the principal office site." The program is also an integral part of the agency's plans for COOP.

[5] The Division of End User Support records noted only Customer Services. GPO has since separated Customer Services into the offices of Print Procurement and Agency Accounts and Marketing.

of the requirements of Directive 810.11B and Instruction 705.29, as well as observation and discussions with those GPO organizations involved in the acquisition, storage, and delivery of laptops to GPO employees, we identified the following personnel and functions responsible for laptop accountability from purchase to receipt by the end user.

- **Department/Service/Office/Staff heads** are responsible for property (laptops) management within their respective organizations and for designating a Property Manager Assistant responsible for maintaining effective laptop control and accountability for their respective cost center.

- **The Office of Acquisitions** procures laptops from the primary GPO supplier, Dell Computer Corporation, and records related purchase information in GPO's Oracle automated accounting system.

- **The Central Receiving Section**, under the Office of Plant Operations' Division of Quality Control and Inventory Management, accepts deliveries of laptops at the delivery dock.

- **The Production Material Section**, also under the Division of Quality Control and Inventory Management, stores the delivered laptops in a secure storage cage located on the ground floor of the Central Office in Washington, D.C.

- **Office of IT&S, EUS** retrieves laptops from the Production Materials Section's secure storage cage as needed, stores the laptops in the EUS storage cage while preparing the laptops for use, then delivers laptops to end users. EUS assigns GPO property numbers, affixes the corresponding labels to each laptop upon delivery, and records the information in its tracking records.

- **The Office of Finance and Administration's Office of Financial Reporting** enters monthly laptop distribution data into the Agency's Oracle automated accounting system.

This information is presented in more detail in Appendix B.

Laptop Returns and Replacements. Instruction 705.29 requires that EUS "coordinate all computer moves and transfers (including return to Stores) of all computer equipment." When an end user leaves GPO or needs a replacement computer, the end user or the end user's supervisor completes a help desk ticket transmitted by e-mail to EUS to notify them to remove or replace a computer. An EUS technician then retrieves the computer from the end user's work area and takes the computer to the EUS storage cage located on the 7th floor of GPO Building B. EUS then holds the laptop in the EUS storage cage for 2 weeks in the event the previous user needs to retrieve information, before a technician sanitizes the laptop's hard drive.

If the computer is useable—often referred to as serviceable—EUS sanitizes the computer and it remains in the EUS storage cage until prepared for another end user. If not useable, EUS destroys the computer's hard drive and the computer is brought to the Shipping and Bailing Section of the Division of Quality Control and Inventory Management (formerly the GPO Stores Division) in preparation for disposal, along with a completed GPO Form 2051, "Return to Stores." A copy of GPO Form 2051 is also provided to the GPO property accountant for updating financial system records (see Appendix B).

During the audit, the Property Disposal Technician responsible for recording items returned to the Shipping and Bailing Section informed us that no laptops had ever been returned to Shipping and Bailing. In addition, neither EUS nor the GPO Property Accountant could produce any GPO Forms 2051 for any returned laptops. As of April 21, 2010, 122 laptops were in the EUS storage cage. The Director of EUS stated that his staff had retrieved those 122 laptops from end users and they were no longer useable. The Director stated that he was holding those laptops in that location pending completion of the audit.

OIG Investigation. In December 2008, the GPO Office of Inspector General (OIG), Office of Investigations (OI) was notified that approximately 20 laptop computers were missing from the storage cage in EUS. During the investigation, the OI could not determine final disposition for 19 of the laptops and concluded that there was a lack of security and inventory controls in EUS, as well as a general disregard for property management controls outlined in Directive 810.11B.

Findings and Recommendations

Finding A. Missing Laptop Computers

We tested a statistical sample of issued laptops to determine if they were locatable.[6] Based on our statistical sampling, we project with 99-percent confidence that GPO could not account for anywhere between 150 and 213 laptops that it issued between 2005 and 2009 to Agency and contractor employees. At an average purchase price of $2,210 per laptop, the cost of the missing laptops was between $331,500 and $470,730. This lack of accountability occurred because management did not comply with GPO Instruction 705.29 by establishing standard operating procedures for property control and accountability with regard to laptops. As a result, potentially sensitive GPO information pertaining to acquisitions, human capital, and manufacture and issuance of passports and security credentials may have been at risk of exposure. In addition, GPO may not have met the objectives outlined in Instruction 705.29 for preventing duplicative purchases and preparing for effective disaster recovery planning.

GPO Property Management Requirements

Requirements for laptop control and accountability are in Instruction 825.18A, Directive 810.11B, and Instruction 705.29.

Instruction 825.18A requires that GPO managers implement any controls necessary that will prevent loss of assets. The instruction specifically states that:

> Department, Service, Staff, and Office heads are responsible for the development and maintenance of internal controls within their respective programs, functions, and activities, to prevent or deter the loss or abuse of public assets.
>
> Management controls must provide reasonable assurance and safeguards to protect assets against waste, loss, unauthorized use, and misappropriation.

Directive 810.11B, which encompasses real property such as land and buildings as well as personal property such as computers, equipment, furniture, machinery, and motor vehicles, states that:

> Government property at the GPO is controlled through a system of Property Managers that are responsible for property management within their respective organization.
>
> The Property Manager has ultimate responsibility for making and communicating judgments and decisions about the acquisition,

[6] See Appendix A for our Statistical Sampling Methodology.

> classification, use, assignment, disposal, and protection of accountable property.

Instruction 705.29 required that EUS serve as the property custodian and be responsible for inventory of IT end user equipment, including laptops. The guidance requires specifically that the Division of EUS:

> a. Work with assigned contacts in each business unit to collect all surplus end user equipment;
>
> b. Serve as the property custodian and be responsible for the inventory of all end user equipment including but not limited to; desktops, laptops, printers, tablets, wireless devices, secure-id [identification] cards, scanners, facsimile equipment, photocopiers, etc.;
>
> c. Coordinate all computer moves and transfers (including return to Stores) of all computer equipment;
>
> d. Perform an annual audit of all end user equipment.

Missing Laptops Sample

We randomly selected a statistical sample of 304 laptops from the universe of 629 laptops that, according to GPO documentation, the Agency issued to employees and contractors between 2005 and 2009. We tested the items in the sample to determine whether any of the laptops could be located. Our testing revealed that of the 304 laptops in that sample, GPO could not locate, or otherwise account for 88 (28.9 percent) laptops. The organizations with the largest number of missing laptops are shown below in Table 1.

Table 1. GPO Organizations with the Most Missing Laptops

GPO Organization(s)	Missing Laptops
Print Procurement	5
Human Capital	11
IT&S[1]	20
IT&S[2]	29
All Other GPO Organizations	23
Total Missing Laptops from Sample	88

1. These missing laptops were issued directly to IT&S employees.
2. These missing laptops were originally issued to non-IT&S employees but returned to IT&S for replacement or due to employee separation.

None of the 88 missing laptops was among the 122 laptops stored in the EUS storage cage (as of April 21, 2010). Based on a 99-percent confidence level, we project that there are between 150 and 213 total missing laptops. We computed this projection by extrapolating the sampling results to all laptops issued between 2005 and 2009 as detailed in Appendix A.

Table 2. Statistical Sampling Data

Laptops Issued by GPO from 2005 to 2009	**629**
Audit Sample Size[1]	**304**
Missing Laptops from Sample	**88**
Percentage of Missing laptops in Sample[2]	**28.9 percent**
Precision Range	**+/- 5 percent**
Upper Estimate of Missing laptops[3]	**213.23**
Lower Estimate of Missing Laptops[4]	**150.33**
Best Estimate of Missing Laptops[5]	**181.78**

1. Random sample size for a 99 percent confidence level as determined by statistical sampling software.

2. 88 divided by 304.

3. 33.9 percent of 629.

4. 23.9 percent of 629.

5. 28.9 percent 629.

Property Management Procedures Not Established or Followed

The missing laptops were a direct result of GPO not following the property management procedures outlined in both Directive 810.11B and Instruction 705.29. Specifically, GPO did not accomplish the following:

- establish written standard operating procedures for managing the acquisition, management, tracking, inventory, and disposition of laptops;
- maintain accurate and current records;
- perform periodic inventories;
- ensure that separating employees returned their laptops; and
- maintain an effective force of Property Manager Assistants to support EUS in tracking laptops.

Ineffective Recordkeeping. Instruction 705.29 requires that EUS manage all facets of the IT asset management process for end user equipment including ordering, procuring, receiving, issuing, distributing, tracking, managing, and collecting IT equipment that end users utilize. However, EUS did not have any written procedures that implemented the responsibilities outlined in Instruction 705.29. Furthermore, records for laptop issuances were inaccurate, outdated, and hampered EUS's ability to locate particular laptops or for conducting an inventory. Specifically:

- EUS could not produce a report of all laptops issued by name, location, and property number. Rather than using the Agency's Oracle automated accounting system or an Excel spreadsheet to record data of laptop issuances, EUS maintained a separate .pdf file for each of the 629 laptops issued, thus making searching and sorting records or producing useful reports difficult. In addition, EUS maintained a separate file listing laptops end users returned to EUS and subsequently stored in the EUS cage. No link between the two databases existed.

- The laptop issuance records often did not reflect the actual end user. Thirty-nine of the end users of record reported they never received the laptop listed in the records. For 13 of the 88 missing laptops, the end user of record was an organization's Property Manager Assistant and not the actual end user. In many of those cases, the Property Manager Assistant had moved to another responsibility or another organization and had no records of laptop issuances. As a result, EUS never updated the laptop issuance records, which made physically locating the laptop in question virtually impossible. Finally, EUS records did not list an end user for four laptops.

- EUS records did not always reflect the current location of a laptop. Records did not contain the current location because EUS did not establish a process for properly updating its records when laptops were transferred between organizations or users. For 29 of the 88 missing laptops, the end user of record stated that EUS had replaced and picked up the laptop in question. EUS could not locate those laptops.

- In three instances, the laptop that the end user did possess did not have a GPO Property Identification Number (PIN), as GPO 810.11B[7] requires and as a result, we could not make a positive confirmation.

[7] GPO 810.11B states that the GPO PIN is important to the property management system as it serves as a unique identifier for both property accounting and accountability. The PIN is used as a key for accessing, controlling, and maintaining records on accountable property. The PIN is also instrumental in distinguishing like property and in controlling the chain of custody for property items from acquisition to final disposition.

No Periodic Inventory. Directive 810.11B requires that the Property Management Officer (GPO Comptroller) conduct, coordinate, and/or request a physical inventory of any property of the GPO at any time. In addition, Instruction 705.29 requires that EUS "perform an annual audit of all end user equipment." Neither the Property Management Officer nor EUS have ever performed an inventory or audit of laptops.

No Collection of Laptop Upon Employee Separation. GPO Directive 610.16, "Procedures for Employees Separating From the GPO," December 13, 2007, requires that any separating employee turn in a GPO Form 2938, "Separation Clearance and Property Return Checklist," upon separating from the Agency. Form 2938 requires the signature of an EUS representative verifying that the separating employee returned all laptops. Despite this requirement, our audit sample identified nine former GPO employees whose laptops could not be located. Of the nine, an EUS representative signed off on the Form 2938 for 4 laptops, certifying that the separating employee had returned their laptop. EUS could not, however, locate the laptop. For the remaining five former employees, the Office of Human Capital could not locate their respective Form 2938s.

Ineffective Property Manager Assistant Network. GPO Directive 810.11B requires that GPO cost center managers designate, in writing, a Property Manager Assistant within their organization. The primary responsibility of each Property Manager Assistant is to maintain adequate and effective property accountability and control for their respective GPO cost center codes. Directive 810.11B further requires that cost center managers promptly replace any retiring and transferring Property Manager Assistants by designating a new representative. The guidance requires that appointments of Property Manager Assistants must be in writing and promptly reported to the Office of Finance and Administration. Instruction 705.29 also requires that EUS work with assigned contacts in each business unit (that is, Property Manager Assistants) to collect any surplus end user equipment.

On March 4, 2010, the Office of Finance and Administration provided us with their list of GPO's Property Manager Assistants. However, the list was outdated and, therefore, was not useful in tracking the laptops. When we contacted the listed Property Manager Assistants, we found that most were either unaware of their designation or unfamiliar with their responsibilities. As a result, Property Manager Assistants did not perform many of the essential components of the Agency's Property Management System, including the periodic inventories and maintaining accurate records of laptops issued to employees.

Risk of Exposure of Sensitive Information

With as many as 213 laptops projected missing, GPO risked exposing sensitive information, particularly information maintained by employees in the areas of security documents, audits and investigations, acquisitions, and human capital. The GPO Director of Information Security stated that beginning October 10, 2008, EUS installed encryption software on all of the laptops EUS issued. In addition, EUS

stated that it sanitizes unusable laptop hard drives as a matter of course. However, EUS issued 68 of the 88 missing laptops from our sample, before October 10, 2008; therefore, they did not have encryption software. Furthermore, except for one missing laptop described below, GPO could provide no evidence that it sanitized or destroyed the hard drives for the other missing laptops. Twenty-eight of the 68 missing laptops were assigned to GPO employees who had access to sensitive information, including:

- Two former Security and Intelligent Documents (SID) employees including the former Product Security Manager who performed risk assessments of e-passport supply chain vendors and suppliers. The Director of Information Security provided documentation that showed the date the former employee's laptop was sanitized; however, neither the Director of Information Security nor the Director of EUS could locate the laptop.

- An OIG auditor who performed audits of SID e-passport operations.

- Three Office of Acquisition employees (five laptops), including the Chief Acquisition Officer, with regular access to sensitive procurement data.

- Thirteen Office of Human Capital employees, at least some who may have had access to both Personally Identifiable Information (PII)[8] and sensitive GPO information.

- Seven Print Procurement employees with access to sensitive contract data.

Not Meeting End User Asset Management Objectives

By not accounting for all issued laptops, GPO did not meet, as Instruction 705.29 outlines, its objective for a centralized end user asset management program. The guidance requires that management programs:

- Forecast and monitor the usage of end user assets and verify duplicative purchases were not made.

- Identify end user equipment for verifying that GPO is in compliance with licensing agreements.

- Identify underused and obsolete IT assets.

[8] GPO Directive 825.41, March 30, 2010, "Protection of Personally Identifiable Information" states, "Loss, compromise, or disclosure of PII may lead to identity theft or other fraudulent use that could result in substantial harm, embarrassment, inconvenience, or unfairness to individuals. Appropriate measures are, therefore, necessary to protect PII from unauthorized use, access, disclosure, or sharing and to protect related information systems from unauthorized access, modification, disruption, or destruction."

- Recognize trends involving particular pieces of hardware and assist IT personnel to prevent users from encountering problems caused by insufficient memory, disk space, or power.

- Gather information for disaster recovery planning, purchasing, and maintenance, as well as for financial planning.

Recommendations

1. The Public Printer should direct that GPO Business Unit Managers (a) update their portion of the Property Manager Assistant list and provide the updated list to the GPO Comptroller and Director of End User Support, (b) disseminate to each appointed Property Manager Assistant, their responsibilities for property management and accountability as outlined in Directive 810.11B, (c) appoint new Property Manager Assistants as soon as previous assistants leave the office, and (d) require completion of a GPO Form 2938, "Separation Clearance and Property Return Checklist," for any separating employees and submit completed forms to the Office of Human Capital in a timely manner.

The Chief Information Officer should direct that the Director of End User Support:

2. Develop written, standard operating procedures that implement the responsibilities outlined in Instruction 705.29.

3. Improve laptop recordkeeping by (a) accurately recording in the laptop issuance records, the actual end user for each individual laptop, (b) updating the records to reflect changes in the name and location of the end user including returns to the Division of End User Support, and (c) use a recordkeeping format that reflects sound inventory management practices and procedures such as reporting, monitoring, sorting, and testing by using the Oracle automated accounting system or an Excel spreadsheet.

4. Annually conduct a wall-to-wall inventory that will ensure property management records for laptops issued in GPO agree with actual inventory, and investigate and resolve all differences. Based on the inventory results, update the laptop issuances records as necessary and report all differences to the Office of Finance and Administration and to the Office of Inspector General as appropriate.

Management's Response. Management agrees with the recommendations. Management plans to revise Directive 810.11B and to develop a special project called the Accountable Item Management System, which will incorporate all of the corrective actions cited in Recommendations 1 through 4. By January 14, 2011,

management plans to conduct a wall-to-wall inventory of all laptops purchased since 2005. The complete text of management's response is in Appendix D.

Evaluation of Management's Response. Management's planned action is responsive to the intent of recommendations 1 through 4. The recommendations are resolved but undispositioned, and will remain open for reporting purposes pending completion of the revised Directive 810.11B, completion of the wall-to-wall inventory of laptops, and implementation of the Accountable Item Management System.

Finding B. No Tracking of Laptop Purchases

GPO did not track laptops from original acquisition to final disposition. This management control weakness occurred because (1) GPO did not begin the tracking of laptops until after EUS picked up the laptops from the Production Materials Section's storage cage and brought the laptops to their own storage cage, and (2) neither EUS nor the Office of Finance and Administration staff, who entered laptop data into GPO's Oracle automated financial system, entered the associated purchase order number. As a result, no link existed from laptop inventory records to the original purchase orders, and we could not attest that GPO was able to account for every laptop purchased. Furthermore, because GPO did not begin its laptop tracking process until EUS personnel picked up the laptops and brought them to their own storage cage, an increased risk of loss was present from the time the laptops arrived at GPO until the time EUS assigned the GPO property tag, which could have been as many as several weeks.

GPO Property Tracking Requirements

Directive 810.11B, which provides the framework for the GPO property management program, states:

> Property accountability includes responsibilities for such tasks as tracking the movement of assets, recording changes in physical condition, and verification of physical counts. Physical control is a critical property management function exercised in concert with receiving, maintaining, and disposing of property. Property Managers exercise this responsibility and maintain proper control over an organization's assets through record keeping, effective policies and procedures, and appropriate security controls.

Instruction 705.29 establishes that EUS will manage all facets of the IT asset management process, "including the ordering, procuring, receiving, issuing, distributing, tracking, managing, and collecting all equipment used by end users."

No "Cradle-to-Grave" Tracking

Neither EUS nor the Office of Finance and Administration could produce a report of the GPO laptops from purchase through final disposition. GPO had two separate processes for tracking laptops: (1) one process in which GPO tracked laptops from the acquisition purchase order to their arrival at the Central Receiving Section, and (2) another process in which GPO tracked laptops from issuance by EUS to the actual users' organization. However, no link existed between the two tracking processes, making it impossible to track a laptop from initial purchase through final disposition.

GPO Laptop Acquisition/Distribution Process

There were several steps involved in processing the laptops. When the Office of Acquisition Services ordered laptops (usually about 20 at a time from Dell Computer Corporation), the Office of Acquisitions recorded the transaction in GPO's Oracle automated accounting system, which included a description of the laptops purchased, the costs, and the purchase order number. Once the Central Receiving Section received a shipment of laptops, it notified EUS for confirmation that the shipment conformed to the order. When EUS confirmed that the shipment was correct, the Production Materials Section prepared a delivery receipt and placed the laptops and the delivery receipt in its storage cage.

When EUS received a request to install a new laptop, an EUS employee would retrieve the laptop from the Production Materials Section and bring it to the EUS storage cage on the 7th floor of GPO's Central Office. An EUS employee would then start tracking each individual laptop by assigning a property number, affixing a GPO property tag, and creating a Personal Computer Request form that recorded data such as cost, description of laptop, user, and cost code. EUS did not record the associated purchase order number.

EUS consolidated the data from the Personal Computer Request Forms monthly and provided the forms to the Office of Finance and Administration's Property Accountant. The Property Accountant then entered a new record in the Oracle automated accounting system based on the information received. That information included the dollar amount of the laptops, the corresponding property numbers, and the assigned cost center code (not individuals). Because the data recorded did not include the associated purchase order number, no link existed from the laptop to the original purchase order.

Risks of Loss

Because GPO did not link laptop property numbers to the original purchase order, we could not validate GPO's ability to account for every laptop purchased. Further, because GPO did not track laptops until EUS retrieved them and assigned a property tag, there was an increased risk that a laptop could disappear anytime between when GPO first received it until EUS assigned the property number, without being detected through an inventory process.

The GPO Manager of Quality Control and Inventory Management, who oversees both the Production Materials Section and the Central Receiving Section, acknowledged that if someone took a computer from the storage cage in the Production Materials Section, along with its attached paperwork, no record would exist that the computer was ever in the area or that it was mishandled. The Manager agreed that this control weakness could be resolved by entering information from all paperwork related to laptops, from the time the Agency receives the laptops to the time of final disposition, into the agency's Oracle automated accounting system. Doing so would

enable laptops to be quickly located and inventoried, would identify laptops that are stolen or missing, and would serve as a deterrent to anyone considering stealing IT equipment.

Recommendations

We recommend that the Chief Information Officer require that the Director of End User Support:

5. Begin the laptop tracking process as soon as it receives the laptops at the Central Receiving Office by recording both the serial number of the laptop and purchase order. Update each record per Recommendation 3, when EUS eventually issues the laptop to an end user.

6. Provide the GPO Property Accountant any corresponding purchase orders as part of the monthly data submission.

7. As part of the annual inventory/audit of laptops, in Recommendation 4, and to ensure that all purchased laptops are properly accounted for, include steps in the inventory process to (a) trace a sample of issued laptops to the original purchase order, and (b) trace a sample of purchase order data to final disposition of the laptop.

Management's Response. Management agrees that the process to track laptops starts with the issuance of a purchase order and ends when the asset is retired. Requirements for an improved tracking process from purchase order to retirement will be included as part of the revised directive 810.11B and the implementation of the Accountable Item management System (see Appendix D).

Evaluation of Management's Response. Management's planned action is responsive to the intent of recommendations 5 through 7. The recommendations are resolved but undispositioned, and will remain open for reporting purposes pending completion of the revised Directive 810.11B and implementation of the Accountable Item Management System.

Appendix A. Objectives, Scope, and Methodology

We performed the audit from November 2009 through June 2010 at the GPO Central Office in Washington, D.C. We conducted the audit in accordance with generally accepted government auditing standards.

Objective

The objectives of the audit were to determine whether GPO (1) could account for all Agency laptop purchases, and (2) had adequate controls in place that would prevent the loss or theft of laptops.

Scope and Methodology

To accomplish our objectives, we performed the following:

- Researched Federal and GPO criteria on property management;

- Reviewed audit reports on laptop accountability and controls performed at other Federal agencies;

- Interviewed staff from the:

    - GPO Office of IT&S - the Director of Operations, Director of Information Security, and Director of End User Support
    - GPO Office of Finance and Administration - Chief Financial Officer, Controller, Director of Financial Reporting, and GPO Property Accountant.
    - GPO Office of Plant Operations - the Manager of Quality Control and Inventory Management and the Supervisory Inventory Management Specialist
    - GPO Office of Acquisitions - the Chief of Specialized Procurements; and Chief of General and Paper Procurement

- Performed a walk-through and documented the laptop order, delivery, storage, and disposition process (see Appendix B);

- Performed an inspection of the GPO main building receiving area and storage cage and EUS storage cage; and

- Tested a sample of issued laptops to determine if they could be located and identified (see Statistical Sampling Methodology).

Statistical Sampling Methodology

To test whether GPO could account for all issued laptops, we selected a statistical random sample of issued laptops to confirm that each sampled laptop could be located and identified. For each issued laptop, EUS prepared a Personal Computer Request form. Among the information recorded on the Personal Computer Request were the name, organization, date, and a description of the hardware. EUS saved each form in .pdf format and stored those files on a compact disc (CD). We obtained Personal Computer Request forms for each laptop issued between 2005 and 2009 and recorded information from the forms into an Excel spreadsheet. There were 629 laptop issuances during that time. We numbered each issued laptop from 1 through 629, thus creating our audit universe.

Using EZ Quant sampling software available through the Defense Contract Audit Agency[9] and applying a precision level of 99 percent, we obtained a random sample of 304 of the 629 Personal Computer Request forms/laptop issuances. For a 99-percent confidence level, EZ Quant required a sample size of 304 and generated 304 random numbers between 1 and 629 that we assigned to the audit universe to form the audit sample. We tested the laptop issuances in the sample by locating the laptop and physically confirming the tag number. If the end user was not located in Washington, D.C., or was a telecommuter, we accepted a photograph of the tag number. In several instances, we accepted the end user's statement that the employee had the laptop with that tag number. In our attempt to locate the laptops, we contacted, in order: (1) the listed Property Manager Assistant, (2) the listed end user, (3) the "referred-to" Property Manager Assistant and end user, (4) the Director of EUS, and (4) each GPO Business Unit Manager.

Management Controls Reviewed

The details of our examination of management controls, the results of our examination, and noted management control deficiencies are contained in the report. Implementing the report's recommendations should improve those management control deficiencies.

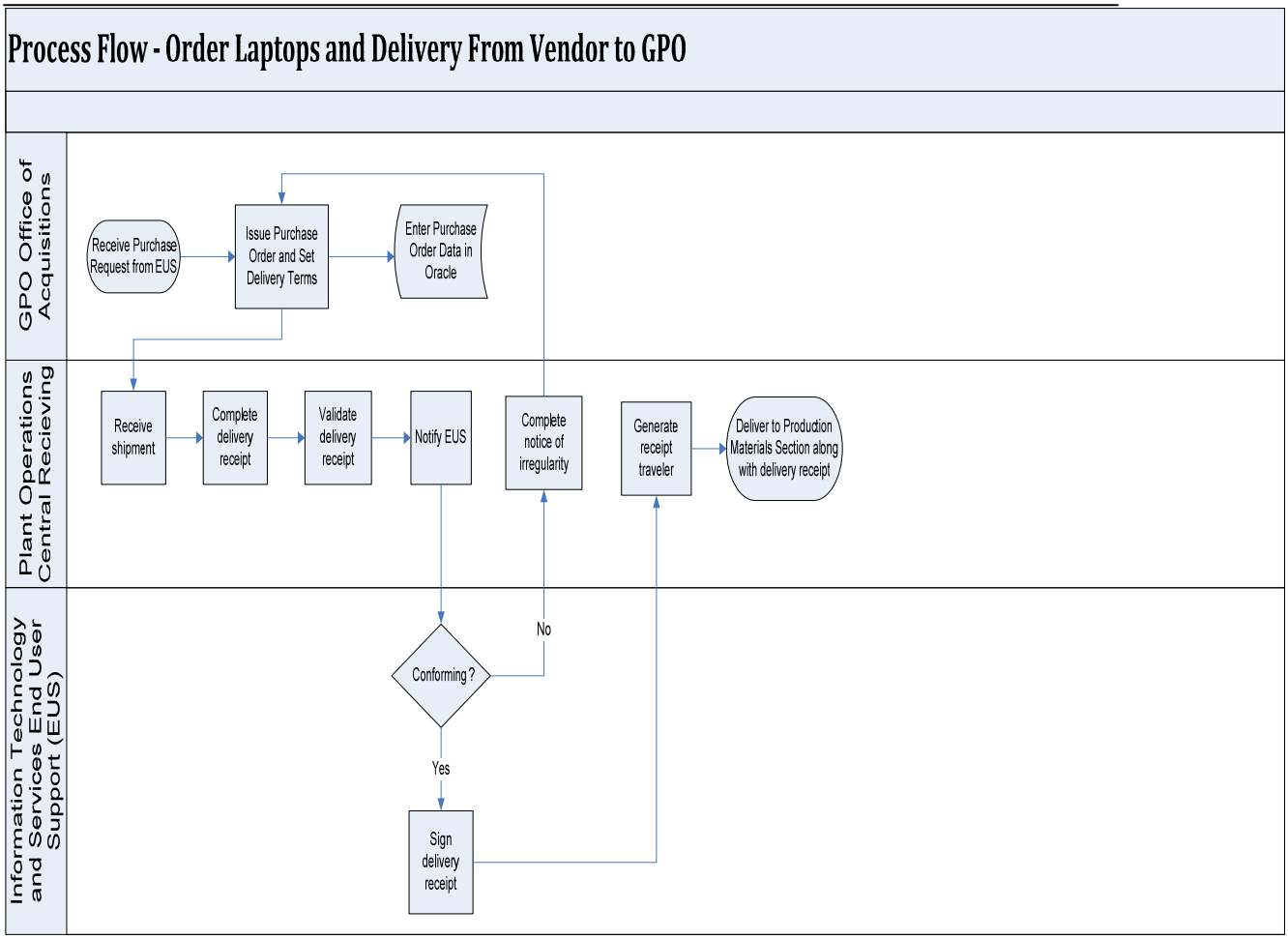
Computer Generated Data

We did not rely on any computer-processed data for this audit.

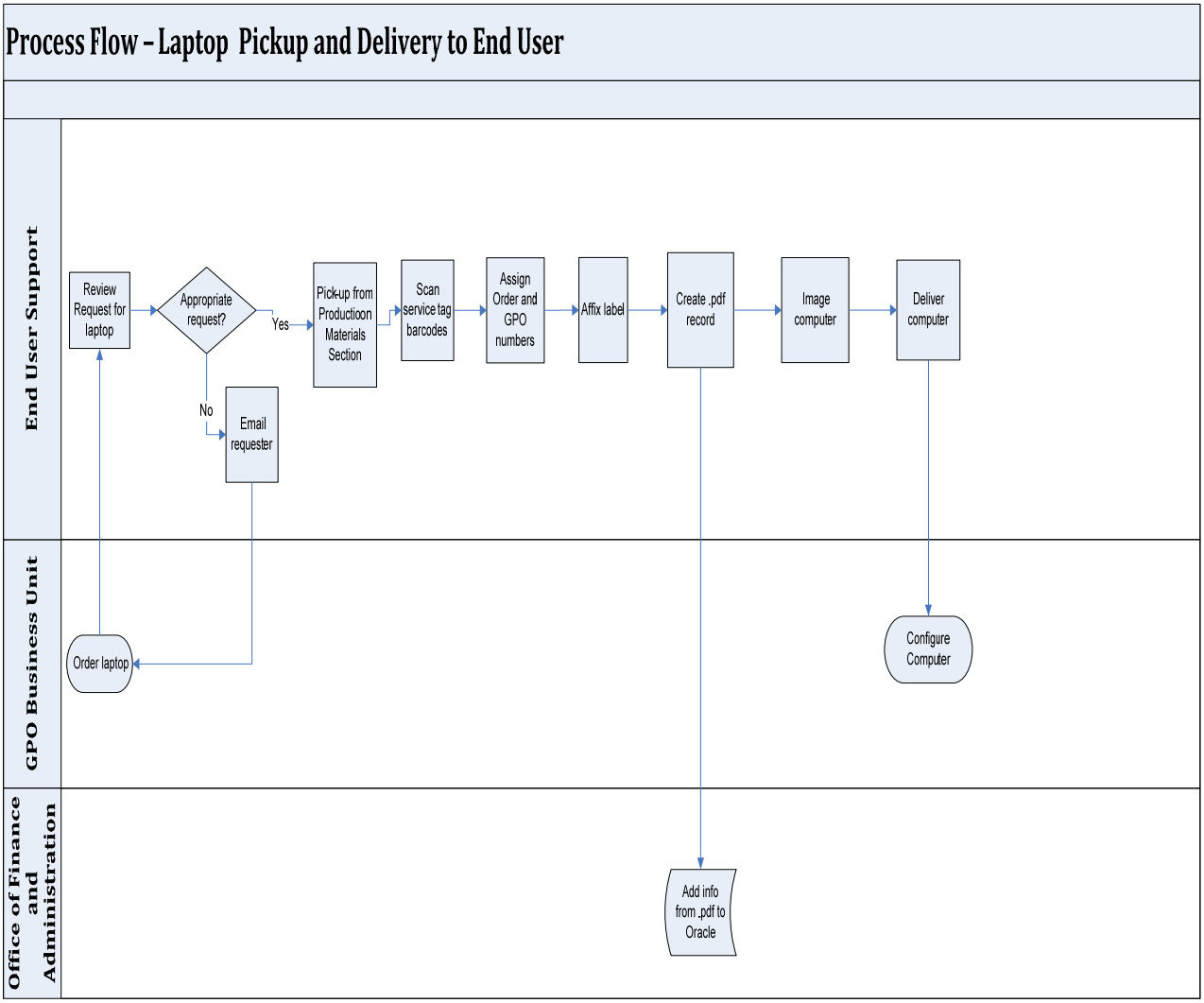
[9] The Defense Contract Audit Agency is under the authority, direction, and control of the Under Secretary of Defense (Comptroller)/Chief Financial Officer, Department of Defense. The Defense Contract Audit Agency performs all necessary contract audits for the Department of Defense and provides accounting and financial advisory services regarding contracts and subcontracts. The Defense Contract Audit Agency also provides contract audit services to other Federal agencies as appropriate.

Appendix B. Laptop Acquisition, Distribution, and Disposition Process

The GPO Office of Acquisitions places orders with the vendor, usually Dell Computer Corporation.

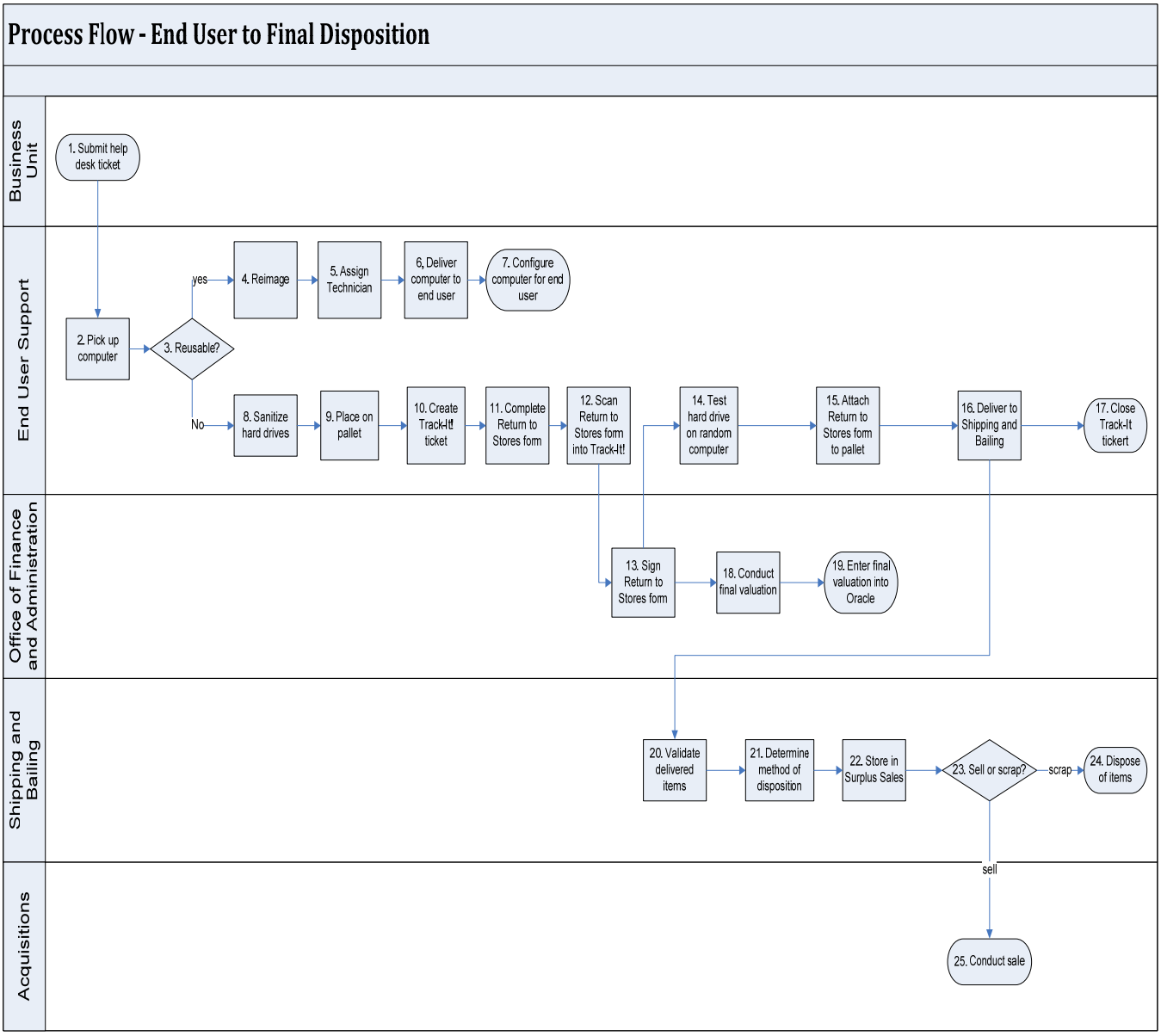


Once the orders are accepted, the GPO Office of Plant Operations, Production Materials Division stores the laptops until EUS picks them up. When EUS picks up the laptops and brings them to its own storage cage, personnel assign a GPO property tag before delivery to the end user/GPO employee as shown below.



Appendix B

When an end user leaves GPO or needs a replacement computer, a help desk ticket is transmitted by e-mail to EUS to notify them that the computer needs to be removed or replaced. EUS then retrieves the computer from the end user's work area and takes it to the EUS storage cage located on the 7th floor of GPO Building B. If the computer is serviceable, it will remain in the EUS storage cage until it can be prepared for another end user. If the computer is not serviceable, its hard drive is sanitized and the computer is returned to the Shipping and Bailing Section of the Division of Quality Control and Inventory Management in preparation for disposal. GPO has followed this process for the returns of desktop computers. No laptops have ever been returned to the Shipping and Bailing Section.



Appendix C. Acronyms Used in the Report

CD	Compact Disc
COOP	Continuity of Operations
EUS	Office of Information Technology and Systems, Division of End User Support
IT	Information Technology
IT&S	Office of Information Technology and Security
OI	Office of Investigations
OIG	Office of Inspector General
PII	Personally Identifiable Information
PIN	Property Identification Number
SID	Office of Security and Intelligent Documents

Appendix D. Management's Response

U.S. GOVERNMENT PRINTING OFFICE
QUALITY ASSURANCE OFFICE, EXECUTIVE OFFICES

Memorandum

Date:	18 October 2010
Attn Of:	Chief Management Officer (CMO)/Chief of Staff (COS)
Subject:	Management Response to Audit of Laptop Control and Accountability-OIG Report No. 10-xxx
To:	Assistant Inspector General for Audits and Inspections
Background:	This is management's response to the draft report, dated July 29, 2010, regarding the OIG's review of the ability of the agency to account for issued laptop computers.

OIG investigations afford the agency a beneficial perspective on operational performance. Six laptops listed as missing (OGC) have been located subsequent to the OIG report and the depreciated value of the missing units is computed to be $44,520 (23.1% of the acquisition cost, implying a lower potential exposure than $428,740); however, management is in agreement with the overarching recommendation that the agency must improve process and procedures for end-to-end laptop asset accounting and that responsibility for effective asset tracking extends beyond the Office of Information Technology and Systems (IT&S).

Finding A: **Missing Laptop Computers.**

Recommendation 1: *The Public Printer should direct that GPO Business Unit Managers*

(a) update their portion of the Property Manager Assistant list and provide the updated list to the GPO Comptroller and Director of End User Support,

(b) disseminate to each appointed Property Manager Assistant, their responsibilities for property management and accountability as outlined in Directive 810.11B,

(c) appoint new Property Manager Assistants as soon as previous assistants leave the office, and

(d) require completion of a GPO Form 2938, "Separation Clearance and Property Return Checklist", for any separating employees and submit completed forms to the Office of Human Capital in a timely manner.

Response 1: Requirements for improvement of property management through an improved process need to align with an updated version of Directive 810.11B, and from this, detailed requirements can be developed for centralizing asset accountability, instead of merely clarifying the existing procedure. Management intends to revise the entire issuance

and return process for multiple types of assets assigned to individuals, beginning with laptops. To ensure a clean starting position, within 90 days (by 14 Jan 2011), management will conduct and record a 'wall–to–wall' inventory of all laptops purchased since 2005, ensuring laptops in use are assigned to an individual and a business unit, units awaiting assignment in a business unit or EUS are accounted for, retired assets are properly disposed of, retired/missing assets are taken off the books, and assets pending disposition or retirement are assigned to and physically controlled by EUS.

Recommendation 2: *The Chief Information Officer should direct that the Director of End User Support should develop written, standard operating procedures that implement the responsibilities outlined in Instruction 705.29.*

Response 2: Management partially agrees. A project should be developed to cover this recommendation. For the purpose of this response, the project will be referenced as the *Accountable Item Management System*. This project would incorporate the concepts of Instruction 705.29 into an improved methodology of issuance and returns, and terminate Instruction 705.29 as an active SOP (Standard Operating Procedure).

Recommendation 3: *The Chief Information Officer should direct that the Director of End User Support should improve laptop recordkeeping by*

(a) accurately recording in the laptop issuance records, the actual end user for each individual laptop,

(b) updating the records to reflect changes in the name and location of the end user including returns to the Division of End User Support, and

(c) use a recordkeeping format that reflects sound inventory management practices and procedures such as reporting, monitoring, sorting, and testing by using the Oracle automated accounting system or an Excel spreadsheet.

Response 3: Management agrees that improved asset recordkeeping is required. Today, business and functional units can reassign, relocate, and return (for salvage) IT equipment without the knowledge of IT&S staff. Requirements for an improved process need to align with an updated version of Directive 810.11B, and from this, detailed requirements can be developed. These requirements will lead to the development of agency-wide standard operating procedures and tools to support the expectations. A formal project, the *Accountable Item Management System*, will be sponsored by the Chief Management Officer (CMO) to coordinate this agency-wide initiative.

Recommendation 4: *The Chief Information Officer should direct that the Director of End User Support annually conduct a wall–to–wall inventory that will ensure*

property management records for laptops issued in GPO agree with actual inventory, and investigate and resolve all differences.

Based on the inventory results, update the laptop issuances records as necessary and report all differences to the Office of Finance and Administration and to the Office of Inspector General as appropriate.

Response 4: Management agrees that improved asset accountability is required. Requirements for improved reporting and corrective action processes, including the frequency of cycle counts, audits, etc., and tools to support the expectations need to align with an updated version of Directive 810.11B, and from this, detailed requirements can be developed. A formal project, the *Accountable Item Management System*, will be sponsored by the CMO to coordinate this agency-wide initiative.

Finding B: No Tracking of Laptop Purchases

Recommendation 5: *The Chief Information Officer should require that the Director of End User Support begin the laptop tracking process as soon as it receives the laptops at the Central Receiving Office by recording both the serial number of the laptop and purchase order. Update each record per Recommendation 3, when IT&S End-User Services eventually issues the laptop to an end user.*

Response 5: Management agrees that the process to track laptops starts very early in the process. In fact, we believe that it starts when a purchase order is issued and ends when the asset is retired. Requirements for an improved process need to align with an updated version of Directive 810.11B, and from this, detailed requirements can be developed. These requirements will lead to the development of agency-wide standard operating procedures and tools to support the expectations. A formal project, the *Accountable Item Management System*, will be sponsored by the CMO to better utilize GBIS to track assets.

Recommendation 6: *The Chief Information Officer should require that the Director of End User Support provide the GPO Property Accountant any corresponding purchase orders as part of the monthly data submission.*

Response 6: See comments in Response 5 above. Information about Purchase Orders in GBIS being available to the GPO Property Accountant should be part of the operating procedures and tools to support expectations.

Recommendation 7: *The Chief Information Officer should require that the Director of End User Support should, as part of the annual inventory/audit of laptops in Recommendation 4, and to ensure that all purchased laptops are properly accounted for, include steps in the inventory process to*

(a) trace a sample of issued laptops to the original purchase order, and

(b) trace a sample of purchase order data to final disposition of the laptop.

Response 7: See comments in Response 5 above. Procedures for the GPO Property Accountant and the appropriate Business Unit Property Manager Assistants to audit a sample of laptops from purchase order (PO) to final disposition should be part of the operating procedures and tools to support expectations.

Summary: We believe that these recommendations will result in improvement in the execution of management responsibilities regarding stewardship of assets ultimately owned by the American taxpayer. Thank you for this opportunity.

John van Santen
Director, Quality Assurance

Appendix E. Status of Recommendations

Recommendation No.	Resolved	Unresolved	Open/ECD*	Closed
1	X		April 30, 2011	
2	X		April 30, 2011	
3	X		April 30, 2011	
4	X		April 30, 2011	
5	X		April 30, 2011	
6	X		April 30, 2011	
7	X		April 30, 2011	

*Estimated Completion Date

Appendix F. Report Distribution

Government Printing Office

Public Printer
Deputy Public Printer
Acting Chief Management Officer
Chief Technology Officer
Chief Information Officer
Acting General Counsel
Chief Human Capital Officer
Chief Acquisition Officer
Chief Financial Officer
Managing Director, Library Services and Content Management
Managing Director, Publication and Information Sales
Managing Director, Official Journals of Government
Managing Director, Plant Operations
Managing Director, Security and Intelligent Documents
Managing Director, Agency Accounts and Marketing
Managing Director, Print Procurement
Director of Congressional Relations
Director of Equal Employment Opportunity
Director of Quality Assurance
Director of Operations Support
Director of Labor Relations
Manager of Environmental Services

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