



City of New York

OFFICE OF THE COMPTROLLER

Scott M. Stringer
COMPTROLLER



FINANCIAL AUDIT

Marjorie Landa

Deputy Comptroller for Audit

Audit Report on the New York City
Office of the Actuary's Controls over Its
Computers and Computer-Related
Equipment

FM18-095A

May 23, 2018

<http://comptroller.nyc.gov>



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
SCOTT M. STRINGER

May 23, 2018

To the Residents of the City of New York:

My office has audited the Office of the Actuary (OA) to determine whether, in relation to its computers and computer-related equipment, it complied with the Department of Investigation's (DOI's) *Standards for Inventory Control and Management* (DOI Inventory Standards) and maintained effective internal control systems as required by Comptroller's Directive #1. We audit entities such as the OA as a means of increasing accountability and ensuring that City operations function as intended and in the best interest of the public.

The audit found that the OA failed to comply with several procedures prescribed by the DOI Inventory Standards and failed to maintain effective internal control systems as required by Comptroller's Directive #1. As a result, the OA's inventory records for its computers and related items were incomplete and contained inaccurate information. Specifically, during observations of computers and related equipment at the OA's office, the audit identified inaccuracies and instances of noncompliance in the OA's inventory management and record keeping. Moreover, the evidence the agency provided was insufficient to show that it performs periodic inventory counts in accordance with the DOI Inventory Standards. Finally, the OA did not segregate duties among its staff in relation to its inventory of computers and related equipment or establish compensating controls as required by Comptroller's Directive #1 and the DOI Inventory Standards. Based on the omissions and inaccuracies identified in the OA's inventory records and procedures, the audit concluded that risks of loss and mismanagement exist with respect to the OA's computers and related equipment.

The audit made nine recommendations, including that the OA should: maintain complete and accurate records of all equipment in accordance with the DOI Inventory Standards and update inventory records promptly as changes occur; ensure that only sequentially-numbered property identification tags are assigned and affixed to all valuable equipment and accurately recorded on the inventory list; ensure that all unused computers and related equipment are relinquished in accordance with the requirements of the City's relinquishment policy; ensure that key responsibilities for the management of computers and related equipment are adequately segregated or that compensating controls are implemented; and ensure that an annual inventory count is performed and adequately documented in accordance with the DOI Inventory Standards.

The results of the audit have been discussed with OA officials, and their comments have been considered in preparing this report. Their complete written response is attached to this report. If you have any questions concerning this report, please e-mail my Audit Bureau at audit@comptroller.nyc.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott M. Stringer".

Scott M. Stringer

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THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER FINANCIAL AUDIT

Audit Report on the New York City Office of the Actuary's Controls over Its Computers and Computer- Related Equipment

FM18-095A

EXECUTIVE SUMMARY

The New York City Office of the Actuary (OA), a non-mayoral City agency, provides actuarial information and services to the five major actuarially-funded New York City Retirement Systems and Pension Funds (NYCRS), the City's nine variable supplements funds, two tax-deferred annuity programs, six group life insurance funds, three closed pension funds, and the New York City Health Benefits Program.

Between July 1, 2015 and January 10, 2018, the OA purchased 113 computers and related items at a total cost of \$56,918. As of January 24, 2018, the OA maintained an inventory of 272 computers and related items.

The objective of this audit was to determine whether the OA, in relation to its computers and computer-related equipment, complied with the Department of Investigation's (DOI's) *Standards for Inventory Control and Management* (DOI Inventory Standards) and maintained effective internal control systems as required by Comptroller's Directive #1.

Audit Findings and Conclusion

The audit found that, with respect to its inventory of computers and related equipment, the OA failed to comply with several procedures prescribed by the DOI Inventory Standards and failed to maintain effective internal control systems as required by Comptroller's Directive #1. As a result, the OA's inventory records for its computers and related items were incomplete and contained inaccurate information. Although we found no instances of missing equipment, because the inventory list was incomplete and contained inaccuracies, we were unable to determine whether anything was missing.

Specifically, during our audit observations of computers and related equipment at the OA's office, we identified inaccuracies and instances of noncompliance in the OA's inventory management and record keeping. Moreover, the evidence the agency provided was insufficient to show that it performs periodic inventory counts in accordance with the DOI Inventory Standards. Finally, the OA did not segregate duties among its staff in relation to its inventory of computers and related

equipment or establish compensating controls as required by Comptroller's Directive #1 and the DOI Inventory Standards. Based on the omissions and inaccuracies identified in the OA's inventory records and procedures, we conclude that risks of loss and mismanagement exist with respect to the OA's computers and related equipment.

Audit Recommendations

To address the issues raised by this audit, we make nine recommendations, including the following:

- The OA should maintain complete and accurate records of all equipment in accordance with the DOI Inventory Standards and update inventory records promptly as changes occur.
- The OA should ensure that only sequentially-numbered property identification tags are assigned and affixed to all valuable equipment and accurately recorded on the inventory list.
- The OA should ensure that all unused computers and computer-related equipment are relinquished in accordance with the requirements of the City's relinquishment policy.
- The OA should ensure that key responsibilities for the management of computers and computer-related equipment are adequately segregated or that compensating controls are implemented.
- The OA should ensure that an annual inventory count is performed and adequately documented in accordance with the DOI Inventory Standards.

Agency Response

In its response, the OA agreed in substance with all of the audit's nine recommendations.

AUDIT REPORT

Background

The OA is a non-mayoral City agency that provides actuarial information and services to the five major actuarially-funded New York City Retirement Systems and Pension Funds, the City's nine variable supplements funds, two tax-deferred annuity programs, six group life insurance funds, three closed pension funds, and the New York City Health Benefits Program. The OA's services include computation of employer contributions and member benefits, preparation of annual updates of the financial status of the NYCERS, determinations of suitability of the actuarial assumptions and methods used to fund the NYCERS and recommendations for change, and actuarial valuation of the assets and obligations of the other post-employment benefits programs administered by the City and the NYCERS. The OA provides the above-mentioned information and assessments to the boards of trustees and staffs of the NYCERS, to the City and other employers and labor organizations whose employees or members participate in the NYCERS, and to fiscal oversight entities, City and State legislators, and the public.

For Fiscal Year 2017, the OA expended \$4 million for personal services and \$2.7 million for other than personal services—supplies, materials, and services necessary to support agency operations.¹ It is funded entirely by the City. During the period July 1, 2015 through January 10, 2018, the OA purchased 113 computers and related items at a total cost of \$56,918. As of January 24, 2018, the OA maintained an inventory of 272 computers and related items, according to its records, which it tracked using an Access database. The OA's inventory list included CISCO telephones, monitors, printers and "thin clients."² Approximately six years ago, the agency converted to a virtual machine (VM) environment, using thin clients rather than desktop computers. According to the OA's chief information officer, the conversion decreased the risk of theft because the thin clients in a VM environment cannot operate properly without their associated backup system, which in this case is available only in the OA's office.³ The OA's office has security cameras installed for added safeguarding of the space and its contents.

In accordance with the City Charter, Administrative Code, and Rules of the City of New York, the Mayor, the City Comptroller, and other oversight agencies have established rules and regulations to standardize administrative, financial, and management procedures across all City agencies. With regard to City agencies' control, tracking and safeguarding of physical assets, the DOI Inventory Standards establish specific controls over inventory, which among other things call for agencies to maintain permanent inventory records, centrally, for all non-consumable goods with a useful life of more than one year. In addition, Comptroller's Directive #1, *Principles of Internal Control*, outlines specific internal control functions that are necessary in satisfying the agency's overall responsibility for successfully achieving its assigned mission and assuring full accountability for resources. With respect to inventory control in particular, City agencies are responsible for developing and implementing their own, agency-specific, written policies and procedures that, at a minimum, include all of the requirements established by the DOI Inventory Standards.

¹ Other than personal services is part of the expense budget and used for the purchases of goods, supplies, and equipment.

² A thin client is a stateless, fanless desktop terminal that has no hard drive. Features typically found on a desktop computer, including applications, sensitive data, and memory, are instead housed in the agency's data center where they are accessed by the thin client.

³ A virtual machine app creates a virtualized environment—called a "virtual machine"—that behaves like a separate computer system, complete with virtual hardware devices. The VM runs as a process in a window on the current operating system.

Objectives

We conducted this audit to determine whether the OA, in relation to its computers and computer-related equipment, complied with the DOI Inventory Standards and maintained effective internal control systems as required by Comptroller's Directive #1.

Scope and Methodology Statement

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The audit scope was July 1, 2015 to January 24, 2018. Please refer to the Detailed Scope and Methodology at the end of this report for specific procedures and tests that were conducted.

Discussion of Audit Results with the OA

The matters covered in this report were discussed with OA officials during and at the conclusion of this audit. A preliminary draft report was sent to the OA and discussed at an exit conference held on May 1, 2018. On May 4, 2018, we submitted a draft report to the OA with a request for written comments. We received a written response from the OA on May 21, 2018. In its response, the OA agreed in substance with all of the audit's nine recommendations and stated that "[t]he Comptroller's audit of the New York City Office of the Actuary's ('OA') controls over computer and computer-related equipment has been instructive, and will aid in our efforts to improve the OA's daily operations and ongoing internal control mechanisms."

The full text of the OA's response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

The audit found that, with respect to its inventory of computers and related equipment, the OA failed to comply with several procedures prescribed by the DOI Inventory Standards and failed to maintain effective internal control systems as required by Comptroller's Directive #1. As a result, the OA's inventory records for its computers and related items were incomplete and contained inaccurate information. Although we found no instances of missing equipment, because the inventory list was incomplete and contained inaccuracies, we were unable to determine whether anything was missing.

Specifically, during our audit observations of computers and related equipment at the OA's office, we identified 14 pieces of equipment on site that were not included in the OA's inventory records, 19 items that were listed with incorrect serial numbers, 6 items listed with incorrect asset tag numbers, and gaps of 84 tag numbers in what should have been a range of continuous, sequentially-numbered property identification tags the OA assigned to its equipment. Moreover, the evidence the agency provided was insufficient to show that it performs complete, periodic inventory counts in accordance with the DOI Inventory Standards. Finally, the OA did not segregate duties among its staff in relation to its inventory of computers and related equipment or establish compensating controls as required by Comptroller's Directive #1 and the DOI Inventory Standards.

Based on the omissions and inaccuracies identified in the OA's inventory records and procedures, we conclude that risks of loss and mismanagement exist with respect to the OA's computers and related equipment.

In addition, under other matters, we found that the OA charged purchases totaling \$38,334 to incorrect object codes and that the OA has not been filing the annual *Financial Integrity Statement* required by Comptroller's Directive #1.

These issues are discussed in detail in the following sections of this report.

Incomplete and Inaccurate Inventory Records

We examined the OA's inventory records and visually observed a sample of 104 equipment items in the OA's premises. We found that 47 of the 104 sampled items (45 percent) were not correctly reflected on the inventory list. The following inaccuracies and instances of non-compliance with the DOI Inventory Standards were found in relation to the 47 pieces of equipment: 14 items observed in the OA's premises (13 percent of the sample) were not included on its inventory list; 19 items (18 percent) were listed with incorrect serial numbers; 6 items (6 percent) were listed with incorrect asset tag numbers; 3 items (3 percent) were listed in locations other than where they were found; 2 items (2 percent) were recorded twice on the inventory list; and 11 unused/obsolete items (11 percent) were kept in the office, including 6 items that remained on the OA's inventory list, rather than being relinquished and removed from the list in accord with Citywide policies. The results of our inventory count are shown in the Table below.

Table

Inaccuracies and Instances of Noncompliance in the OA's Inventory Management and Recordkeeping

Item Description	Items Tested	Items Not Included on Inventory List	Duplicate Items on the Inventory List	Items Listed with Incorrect Serial Number	Items Listed with Incorrect Asset Tag Number	Items Listed with Incorrect Location	Unused/ Obsolete Items Kept in Office
Monitors	33			9	2		5
Thin Clients and other External Hard Drives	7	1					1
Printers / Scanners / Copiers	13	5		2			1
Servers and Related Equipment	18	2		2	2		1
Phones and Related Equipment	24		2	6		3	
Laptop	1	1					1
Kapp Equipment ⁴	2				2		
IPad	1						
Security Cameras	3	3					
Fax Machine	1	1					1
Hand Scanning	1	1					1
Total	104	14	2	19	6	3	11

Section 28 of the DOI Inventory Standards requires that City agencies maintain “[p]ermanent records . . . centrally, to track all non-consumable goods issued to each agency unit, including type of equipment, manufacturer, serial number, agency control number, condition, location, date issued, and the person(s) responsible for maintenance.”⁵ However, the entries for all 272 items on the OA’s inventory list were missing the date each item was issued and its condition.

Further, the same section also requires that City agencies assign and affix to their valuable items readable, sturdy property identification tags marked “Property of the City of New York” with sequential internal control numbers. However, based on our review of the OA’s inventory list and unused asset tags, we found that the OA did not utilize its asset tags sequentially. As a result, the sequential range of asset tag numbers the OA used during our audit scope period encompassed 6 gaps with 14 numbers unaccounted for and 70 numbers skipped.

In addition, Section 9 of the DOI Inventory Standards requires that agencies develop and use a “relinquishment policy for the evaluation and disposal of obsolete inventory, applicable to central storage areas and end-users.” An agency salvage officer should be designated to inspect and

⁴ Smart Kapp is a whiteboard that allows the saving and sharing of information.

⁵ A commodity is considered non-consumable if it has a life expectancy of more than a year.

certify the obsolescence of goods deemed obsolete, and the type, condition and quantity of all items presented for relinquishment should be recorded in accordance with Citywide requirements. Relinquished items should be deleted from the agency's inventory log, "under adequate control." At the OA, however, we noted during our observations that 11 computer-related items in the office were no longer in use and appeared to be obsolete, as confirmed by OA officials, who informed us that the items had already been replaced. Six of those items remained on the inventory list, and the other five items were not listed in any inventory record the OA provided to us.

Complete and accurate inventory records are required to enable each City agency to track the location of each item in its custody, identify items eligible for relinquishment, and make decisions with regard to the necessity of purchasing new equipment. Inaccuracies in recording serial numbers and in the issuance and recording of what should be unique, sequentially-numbered property tag/internal control numbers undercut the effectiveness of an agency's inventory tracking system and increase the risk of misappropriation or theft.

Recommendations

The OA should:

1. Maintain complete and accurate records of all equipment in accordance with the DOI Inventory Standards and update inventory records promptly as changes occur.

The OA's Response: "Inventory information has been updated and corrected . . . [t]he OA will closely track all additions and changes to the inventory and will perform updates as changes occur to the new inventory."

2. Ensure that all necessary information for each item of computer-related equipment is included on the inventory list.

The OA's Response: "Inventory information has been . . . migrated and consolidated onto a single relational database with additional fields added to be consistent with the data fields required by DOI Inventory Standards."

3. Ensure that only sequentially-numbered property identification tags are assigned and affixed to all valuable equipment and accurately recorded on the inventory list.

The OA's Response: "A new set of bar-coded Property Identification tags has been ordered and a new inventory count will be conducted to re-establish a baseline for our inventory system. The new asset tags will be affixed to the inventoried equipment sequentially."

4. Ensure that all unused computers and computer-related equipment are relinquished in accordance with the requirements of the City's relinquishment policy.

The OA's Response: "Unused and obsolete equipment identified during the inventory will be relinquished promptly in compliance with the City's relinquishment policy."

Management Has Not Established Adequate Internal Controls

Written Inventory Procedures for Computers and Computer-Related Equipment Are Not Adequate

Section 6 of the DOI Inventory Standards states, in part, “Agency management is responsible for ensuring that there are policies and procedures and that these are updated to include the requirements established in these standards.” The standards specifically require that agency inventory records include for each item the type of equipment, manufacturer, serial number, agency control number, condition, location, date issued, and the person(s) responsible for maintenance.

The OA has established a written Asset Management Policy and Procedure, but that procedure omits certain elements required by the DOI Inventory Standards. Specifically, although the OA’s procedure (1) specifies that inventory entries must include each item’s serial number, current location and for each new item, an agency barcode identifier; (2) prescribes instructions for removing items from inventory when they are disposed of; and (3) requires an annual inventory count, it does *not* expressly require inventory records to identify the manufacturer, date issued, condition, asset tag number, and person responsible for the maintenance of each item. Further, although the OA’s procedure states that it defines “the roles and responsibilities of the IT administrators and equipment users and the process flow,” neither the OA’s procedure nor any supplementary document provided to us clearly defines the roles of the OA’s employees or prescribes detailed instructions for managing the office’s inventory of computers and computer-related equipment.

The absence of clear written policies and procedures that define the limits of individuals’ authority within a City office or agency can result in confusion among the staff as to what their responsibilities are leading to no one to take responsibility or alternatively to staff being allowed excessive discretion that can increase opportunities for undetected thefts and other dishonest activities. A lack of specificity in office procedures and staff responsibilities also renders it more difficult to hold individuals accountable for their actions and failures to act.

Inadequate Segregation of Duties

The OA did not ensure proper segregation of duties over its inventory process or alternatively, adequate compensating controls. The OA’s network administrator was solely responsible for managing all aspects of the office’s inventory system and items from July 2015 through December 2016. From January 2017 through February 2018, two individuals—the network administrator and the OA’s chief information officer—interchangeably shared those responsibilities, including: entering, updating and editing the inventory list; tagging and moving the equipment within the office; and conducting an annual inventory count.

Comptroller’s Directive #1 requires that physical inventories—counts—be conducted and supervised by individuals independent of the departments maintaining the assets. The DOI Inventory Standards require City agencies to reduce the risk of error and fraud by establishing a separation of duties between the employees who handle the assets that constitute an agency’s inventory and those who record inventory transactions. The DOI Inventory Standards recognize, though, that in small organizations, full segregation of duties may not always be feasible and state that in such instances agencies should establish compensating controls, such as increased

managerial- and supervisory-level reviews of inventory-related transactions. However, we found no evidence that the OA established such compensating controls.

The combination of inadequate segregation of duties and a lack of compensating controls increases the risk of the undetected loss or theft of equipment items because several key processes intended to aid in the identification of errors and fraud are or may be executed by a single individual.

Insufficient Evidence That Periodic Inventory Counts Are Performed in Accordance with the DOI Inventory Standards

The OA did not provide sufficient evidence that it performs periodic inventory counts of its computers and computer-related equipment in accordance with the DOI Inventory Standards. According to those standards, an agency should conduct a physical count of all stored goods at least once a year to ensure the accuracy of the perpetual inventory records. That outcome is accomplished by having individuals independent of the inventory operation compare the physical inventory count totals with the regularly updated (“perpetual”) inventory records and by independent investigation of any discrepancies. All reconciliation adjustments made as a result of such counts and investigations are submitted to management for approval.

However, we found that the documentation provided for the 2017 inventory count was insufficient to evidence that the OA performed the count in accordance with the DOI Inventory Standards. Performing periodic inventory counts under management review is an essential control in ensuring that variances are identified, that the needs of an operation for equipment and other items are accurately determined, met and fulfilled, and that obsolete items are removed.

Recommendations

The OA should:

5. Review and update its inventory procedures to clearly delineate its staff’s responsibilities for computers and computer-related equipment in conformity with the DOI Inventory Standards and the specific needs and operations of the OA.
6. Ensure that key responsibilities for the management of computers and computer-related equipment are adequately segregated or that compensating controls are implemented.
7. Ensure that an annual inventory count is performed and adequately documented in accordance with the DOI Inventory Standards.

The OA’s Response to Recommendations 5, 6 and 7: “The ACCO, with supervision of OA’s General Counsel, has assumed oversight of inventory control, including requisite independent inventory counts and the Salvage Officer duties. These assignments will be reflected in the OA’s written IT Inventory Procedures.”

Other Matters

Incorrect Object Codes Used for Purchases of Computers and Computer-Related Equipment

We found that the OA used incorrect object codes for computer-related purchases we reviewed for the period July 1, 2015 through January 10, 2018.

To properly account for purchases of goods and services, the City's Chart of Accounts establishes the object codes that agencies should use to classify each purchase made. The Chart of Accounts requires that agencies charge "Data Processing Supplies" to object code 1990, "Purchases of Data Processing Equipment" to code 3320, and "Data Processing Equipment Maintenance – Contractual" to code 6130.

However, our review of 24 invoices for purchases the OA made from July 1, 2015 through January 10, 2018, totaling \$163,546, found that 9 of the invoices included purchases, totaling \$38,334, that were charged to incorrect object codes. For example, on two invoices the OA's purchases of licenses and software applications were misclassified as purchases of data processing equipment under object code 3320, rather than as purchases of data processing supplies under the correct object code, 1990. In addition, on four invoices, service charges were misclassified as purchases of data processing equipment under object code 3320, rather than as payments for contractual maintenance of such equipment under the correct object code, 6130. Finally, the purchase of an iPad was misclassified under object code 1990—as a purchase of data processing supplies—rather than under the correct object code, 3320, as a purchase of data processing equipment.

The OA's staff stated that the charges to incorrect object codes had resulted from the office's following the budget-coding designations found in prior purchase orders and the coding practices previously established by the retired director of administration. While those explanations may account for how the errors were made, charging purchases to incorrect object codes can compromise management's ability to plan for future budgets.

Recommendation

The OA should:

8. Follow the City's Chart of Accounts to ensure that purchases are charged to the correct object codes.

The OA's Response: "The OA has reviewed the current purchasing procedure and will adjust its process to ensure that all future purchases are encoded properly using the correct object codes on the chart of accounts."

The OA Is Not Filing the Annual Agency Financial Integrity Statement Mandated by Comptroller's Directive #1

Comptroller's Directive #1, *Principles of Internal Control*, provides, among other things, an effective framework to assist City agencies in assessing and protecting their own fiscal integrity.

In that regard, Directive #1 also reaffirms and enhances the Office of the Comptroller's requirement that each agency file with the Comptroller's Office the agency's annual *Financial Integrity Statement*, together with an accompanying *Directive #1 Checklist, Agency Evaluation of Internal Controls*. To that end, each year the City Comptroller's Office and the Mayor's Office of Operations jointly provide the heads of the City's agencies, authorities, boards, commissions and corporations (collectively agencies) with a memorandum and instructions for filing that year's *Financial Integrity Statement*. The annual statement is an integral part of Directive #1 and is intended to help each City agency determine with reasonable assurance whether its internal controls are adequate and to identify any serious weaknesses that should be corrected. Weaknesses in an agency's internal controls can create a climate for fraud, inefficiency and inaccurate financial reporting. The agency head is required to sign the statement, which constitutes a formal opinion regarding the adequacy of the agency's internal control structure. That opinion is supposed to be supported by the *Directive #1 Checklist* that agency personnel are required to complete. The audit found no evidence that the OA filed an annual agency *Financial Integrity Statement* during our audit scope period.

Recommendation

The OA should:

9. Ensure that its annual *Financial Integrity Statement* and *Directive #1 Checklist* are properly completed and filed.

The OA's Response: "The OA is in the process of finalizing the Financial Integrity Statement and Directive #1 and expects to submit it shortly."

DETAILED SCOPE AND METHODOLOGY

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS). Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The audit scope was July 1, 2015 to January 24, 2018.

To obtain an understanding of the rules with which the OA is required to comply, we obtained and reviewed relevant sections of Comptroller's Directive #1, *Principles of Internal Control*; DOI Inventory Standards; the Department of Information Technology and Communications' *Portable Data Security Policy* and *User Responsibilities Policy*; the Department of Citywide Administrative Services' *Electronic Waste Relinquishment Policy*; and the City's Chart of Accounts' *Description of Object Codes for Other Than Personal Services*.

To gain an understanding of the OA's controls over its inventory of computers and computer-related equipment, we interviewed OA officials about the tasks they perform and their duties and responsibilities regarding the purchasing and inventory of computers and computer-related equipment. To identify potential vendors of computers and computer-related equipment to the OA, we sorted the OA's payment request data in the City's Financial Management System by vendor and filtered the vendor data for possible computers and computer-related equipment purchases. We then obtained the agency's inventory list of computers and computer-related equipment, which, as of January 24, 2018 contained 272 items. We reviewed the inventory list for information called for by the above mentioned rules, such as item name, item description, serial number, asset tag number, location and condition. We documented the results and findings of our audit procedures using narrative memoranda, spreadsheets and schedules.

We obtained and reviewed the OA's purchase invoices for computers and computer-related equipment for our scope period and traced those to the OA's current inventory list to verify the accuracy of the information on the inventory list, determine whether the purchases were properly classified with correct object code and identify any equipment not on the inventory list. We also obtained and reviewed the OA's relinquishment list for Fiscal Year 2015 and credit memos for our scope period to trace any unlisted or returned equipment, respectively.

To further assess the accuracy and completeness of the inventory list, we selected a sample of 104 items and conducted a physical inventory count. Of the 104 items, 67 were selected from the inventory list.⁶ Further, we judgmentally selected 20 additional items from the inventory list where the serial number or asset tag number was duplicated or where the serial number on the purchase invoice did not match the serial number on the inventory list. We matched the item name, item description, serial number, asset tag number, location and condition with the information on the inventory list provided. During our observations, while walking through the OA's premises, we selected 17 additional computers and computer-related equipment items to

⁶ The 67 items were selected as follows: Of the 228 items, we randomly selected 23 items from the four major inventory categories: phones, thin clients, monitors and printers. In addition, we selected all 44 items that were listed in the remaining inventory categories.

determine whether they were reported on the OA's inventory list and whether the information on the inventory list matched the information on the equipment.

Because we did not use a statistical sample, the results of our testing cannot be projected to the entire population. However, the results of the tests provided a reasonable basis for us to evaluate the OA's controls over its inventory of computers and computer-related equipment.



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SHERRY S. CHAN
CHIEF ACTUARY

May 21, 2018

Ms. Marjorie Landa
Deputy Comptroller for Audit
City of New York
Office of the Comptroller
1 Centre Street
New York, NY 10007-2341

Re: Audit Report on the New York City Office of the Actuary's Controls over Its Computers
and Computer-Related Equipment

Dear Ms. Landa:

The Comptroller's audit of the New York City Office of the Actuary's ("OA") controls over computer and computer-related equipment has been instructive, and will aid in our efforts to improve the OA's daily operations and ongoing internal control mechanisms.

The OA acknowledges the Comptroller's recommendations, and will make all reasonable attempts to bring its practices in line with the Department of Investigation's (DOI) Inventory Standards and in compliance with the Fiscal Control standards outlined in the Comptroller's Directive # 1.

Attached, please find the OA's responses to the recommendations in the draft report below.

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May 21, 2018
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- 1. Maintain complete and accurate records of all equipment in accordance with the DOI Inventory Standards and update inventory records promptly as changes occur.**
- 2. Ensure that all necessary information for each item of computer-related equipment is included on the inventory list.**
- 3. Ensure that only sequentially-numbered property identification tags are assigned and affixed to all valuable equipment and accurately recorded on the inventory list.**
- 4. Ensure that all unused computers and computer-related equipment are relinquished in accordance with the requirements of the City's relinquishment policy.**

Response to #1 - #4

The OA has discontinued the use of spreadsheets and asset tag ranges to track inventory by equipment category. Inventory information has been updated and corrected as well as migrated and consolidated onto a single relational database with additional fields added to be consistent with the data fields required by DOI Inventory Standards.

A new set of bar-coded Property Identification tags has been ordered and a new inventory count will be conducted to re-establish a baseline for our inventory system. The new asset tags will be affixed to the inventoried equipment sequentially.

The OA will closely track all additions and changes to the inventory and will perform updates as changes occur to the new inventory.

Unused and obsolete equipment identified during the inventory will be relinquished promptly in compliance with the City's relinquishment policy. The OA is committed to relinquish all unused or any equipment reaching the end-of-life promptly in the future.

- 5. Review and update its inventory procedures to clearly delineate its staff's responsibilities for computers and computer-related equipment in conformity with the DOI Inventory Standards and the specific needs and operations of the OA.**
- 6. Ensure that key responsibilities for the management of computers and computer-related equipment are adequately segregated or that compensation controls are implemented.**
- 7. Ensure that annual inventory count is performed and adequately documented in accordance with the DOI Inventory Standards.**

Ms. Marjorie Landa
May 21, 2018
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Response to #5 - #7

The ACCO, with supervision of OA's General Counsel, has assumed oversight of inventory control, including requisite independent inventory counts and the Salvage Officer duties. These assignments will be reflected in the OA's written IT Inventory Procedures.

- 8. Follow the City's Chart of Accounts to ensure that purchases are charged to the correct object codes.**

Response to #8

The OA has reviewed the current purchasing procedure and will adjust its process to ensure that all future purchases are encoded properly using the correct object codes on the chart of accounts.

- 9. Ensure that its annual Financial Integrity Statement and Directive #1 Checklist are properly completed and filed.**

Response to #9

The OA is in the process of finalizing the Financial Integrity Statement and Directive #1 and expects to submit it shortly.

Best Regards,



Sherry S. Chan
Chief Actuary

cc: Mr. Beltrao Baptista - New York City Office of the Actuary
Mr. Michael Samet - New York City Office of the Actuary
Keith Snow, Esq. - New York City Office of the Actuary