

**Inventory Audit
(June 30, 2010)**

AUGUST, 2010

DURHAM



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CITY OF MEDICINE

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DURHAM



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Memorandum

To: Audit Services Oversight Committee
From: Germaine F. Brewington, Director of Audit Services
Date: August 24, 2010
RE: Transmittal of Inventory Audit (June 30, 2010)

Attached is the Inventory Audit report on the City of Durham's inventory valuation as of June 30, 2010. The purpose of the audit was to determine if the inventory value recorded on the City's general ledger as of June 30, 2010 was fairly stated.

This report presents the results, observations and recommendations of the engagement. City management partially concurs with the recommendation made by the auditors. Management's response is included in the attached report.

The Audit Services Department appreciates the contribution of time and other resources from the employees of various City Departments including Finance, Fleet Maintenance, and Water Management in the completion of this audit.

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BACKGROUND INFORMATION

Annually, the Audit Services Department conducts an audit of the City's yearend inventory procedures and valuation. Historically, departments are chosen based on the total recorded value of their inventory. The emphasis of this audit is to determine if the inventory value recorded on the City's general ledger was fairly stated as of June 30, 2010.

Each department utilizes its own unique inventory system. They include purchased computer software programs (Faster and CityWorks) or spreadsheet applications. The Finance Department adjusts the inventory valuation recorded on the City's general ledger at yearend, based on the physical inventory count.

The City values its inventories using the weighted average cost method (which approximates the first-in, first-out method). The value of the City's inventory as of June 30, 2010 was \$1,853,716 compared to \$1,967,875 as of June 30, 2009.

The Departments or Divisions selected for the June 30, 2010 inventory observation and valuation are as follows:

- Finance Department – Duplicating and Graphics
- Fleet Management Department
- Water Management Department – Plant Maintenance
- Water Management Department – Water Supply and Wastewater Treatment
- Water Management Department – System Maintenance

Purpose

The Audit Services Department performed this audit to determine if the inventory value recorded on the City's general ledger as of June 30, 2010 was fairly stated.

We conducted this performance audit in accordance with generally accepted governmental auditing standards. Those standards require that we plan and perform the audit to obtain sufficient and 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.

Results in Brief

The City's inventory value reflected on the general ledger was fairly stated as of June 30, 2010. A summary of our results follows:

Finance Department- Duplicating and Graphics

There were 127 items included in the Finance Department's Duplicating and Graphics Division. Audit staff selected 10 items to test and no exceptions were noted.

Fleet Management Department

The Fleet Management Department inventory consisted of 1,694 parts valued at \$327,134. Audit staff randomly selected 107 parts and verified the number of units recorded to the physical units on hand without exception. In addition, 20 items were randomly selected to verify the per unit costs without exception.

Water Management-Water Supply and Wastewater Treatment

Audit staff selected all of the water treatment and wastewater treatment chemicals and supplies at the Brown, Williams, North Durham, and South Durham facilities. The lubricants and chemicals were accurately measured with one exception. The total dollar amount of the discrepancy was immaterial. The value of these chemicals and supplies totaled \$313,386 on June 30, 2010.

Water Management-System Maintenance

The Water Management-System Maintenance Division inventory consisted of 594 items valued at \$ 959,919. Audit staff randomly selected 50 items from inventory and verified the number of units recorded to the physical units on hand. A few discrepancies were noted. The total dollar amount of the discrepancies was immaterial to the inventory as a whole. Fifteen items were randomly selected and the cost per unit was verified without exception.

EXECUTIVE SUMMARY (CONTINUED)

Water Management-Plant Maintenance

The Water Management-Plant Maintenance Division's recorded stockroom inventory consisted of 2,850 parts valued at \$79,297. The bioxide chemical which totaled 10,900 gallons was valued at \$22,345. The total inventory for the Plant Maintenance Division totaled \$101,642.

The Audit Services staff randomly selected 116 items (17% of total value of inventory) to verify the units recorded to the actual units on hand. Twenty-five of these 116 items were traced from the floor to the inventory list without exception. Test counts revealed 9 exceptions between the units recorded and the physical count. The impact of the discrepancy on the value of total inventory was immaterial. In addition, 20 items were randomly selected to verify the per unit costs. No exceptions were noted.

Audit Services staff also interviewed the supervisor and discussed the recommendations from the 2009 Inventory Audit. The Water Management Department has not implemented part of Recommendation 1.

- The Water Management-Plant Maintenance Division should fully utilize all of the features included with the CityWorks software. Fully utilizing this software will provide management more timely and useful information to manage and control their inventory.

OBJECTIVES, SCOPE AND METHODOLOGY

Objectives

The objectives of the audit were to determine if the inventory value recorded on the City's general ledger was fairly stated as of June 30, 2010 and to determine if the procedures used to value the inventory were adequate. We were also aware of fraud risks.

Scope

The scope of this engagement included: 1) verifying the inventory valuation recorded on the City's general ledger as of June 30, 2010; and 2) evaluating the adequacy of internal controls over the inventory count performed by each department or division.

Methodology

To accomplish the objectives of this audit, audit staff performed the following steps:

- Interviewed appropriate personnel with respect to procedures used in counting and valuing inventory at yearend;
- Randomly selected a sample of inventory items at each location and, using physical inspection, verified the number of units on hand;
- Randomly selected a sample of items at each location and, using invoices or other documents, verified the per unit cost;
- Randomly selected a sample of items at each location and recalculated the extensions and footings included on the inventory reports; and
- Traced and agreed the department – division totals per the inventory reports to the final June 30, 2010 general ledger.

During the audit the staff also maintained an awareness to the potential existence of fraud.

As required by generally accepted accounting principles, the City of Durham reports in its Comprehensive Annual Financial Report (CAFR) the value of its inventory at yearend. The inventory consists of certain materials and supplies used in maintaining the City's facilities, infrastructure, fleet, fuel, postage, communication equipment, and print shop supplies. The inventory balance as of June 30, 2010 is \$ 1,853,716 compared to \$1,967,875 as of June 30, 2009.

Following are the detailed results for each Department or Division.

- **Finance Department- Duplicating and Graphics**

On June 30, 2010, the Audit Services staff visited the Finance Department-Duplicating and Graphics Division to review their inventory procedures and to verify the valuation of their inventory. An interview was conducted with the Duplicating and Graphics Supervisor. The Duplicating and Graphics Division utilizes a CityWorks application to value inventory. The perpetual inventory tracking function is not utilized. The Division relies on periodic physical counts at yearend to record and value inventory.

The Duplicating and Graphics Division's inventory consisted of 127 items valued at \$40,798. Audit Services staff selected 10 items to test and no exceptions were noted between the recorded amounts and the actual amounts on hand. In addition, no exception was noted in the verification of the costs per unit per the Inventory Valuation Report to the invoices. The Division had adequate controls in place when performing the inventory count.

- **Fleet Management Department**

On June 30, 2010, the Audit Services staff visited the Fleet Management Department to review their inventory procedures and to verify the valuation of their inventory. Audit staff interviewed personnel at the Department and discussed the inventory procedures performed. The Fleet Management Department utilizes the purchased software program "Faster". The Fleet Management Department utilizes the perpetual inventory functionality of the software.

The Fleet Management Department inventory consisted of 1,694 parts valued at \$327,134. Audit Services staff randomly selected 107 parts and verified the number of units recorded to the physical units on hand without exception. In addition, 20 items were randomly selected to verify the per unit cost. No exceptions were noted. The Division had adequate controls in place when performing the inventory count.

- **Water Management-Water Supply and Wastewater Treatment**

On June 28 and June 29, 2010, personnel from the Audit Services Department visited the Brown, Williams, North Durham, and South Durham Treatment Facilities to review and discuss their inventory procedures and to verify the valuation of their inventory. The

inventory value recorded on the general ledger is adjusted at yearend to agree with the actual amounts on hand at yearend. It would not be practical for these treatment facilities to maintain a perpetual inventory system. Each of the facilities maintains approximately a dozen individual chemicals and lubricants. Audit staff verified the unit count of all items included in their inventories. One exception was noted. The treatment facilities had adequate controls in place when performing the inventory count.

- **Water Management-System Maintenance**

On June 30, 2010, personnel from the Audit Services Department visited the Systems Maintenance and Construction Division of the Water Management Department. Audit staff interviewed personnel at the Division and discussed the inventory procedures performed. This Division utilizes a purchased software program "CityWorks". The perpetual inventory functionality is used to manage the inventory. Annually, the Division performs a physical inventory count and adjusts the recorded count to the actual units on hand. The June 30, 2010 inventory count revealed minor differences between the actual units on hand and the units recorded in the perpetual inventory system. The net dollar effect was less than 2% of the recorded value.

The Water Management-System Maintenance Division inventory consisted of 594 items valued at \$959,919. Audit staff randomly selected 50 items from inventory and verified the number of units recorded to the physical units on hand. A few minor discrepancies were noted. Fifteen items were randomly selected and the costs per unit were verified without exception. The Division had adequate controls in place when performing the inventory count.

Audit Services staff interviewed the supervisor and discussed the recommendation from the 2009 Inventory Audit report. Following is a summary of the recommendation made in the 2009 Inventory Audit and the status of the recommendation.

FY 2009 Recommendation 1

All inventory, regardless of where it physically resides, must be counted and included in the yearend inventory if title passes to the City by June 30th. *Status: Fully implemented*

- **Water Management-Plant Maintenance**

On June 30, 2010, the Audit Services staff visited the Water Management - Plant Maintenance Division to review and discuss their inventory procedures and to verify the valuation of their inventory. There were 2,850 parts valued at \$79,297 included in their inventory as of June 30, 2010. The audit staff randomly selected 116 items (17% of total value of inventory) to verify the units recorded to the actual units on hand. Twenty-five of these 116 items were traced from the floor to the inventory list without exception. Test counts revealed 9 exceptions between the units recorded and the

AUDIT RESULTS (CONTINUED)

physical count. The impact of the discrepancy on the value of total inventory was immaterial. In addition, 20 items were randomly selected to verify the per unit costs without exception. The Division had adequate controls in place when performing the inventory count.

Audit Services staff interviewed the supervisor and discussed the recommendations from the 2009 Inventory Audit report. Following is a summary of the recommendations made in the 2009 Inventory Audit report and the status of each recommendation.

FY 2009 Recommendation 1

The Water Management-Plant Maintenance Division should fully implement the following recommendations from the previous [2008] Inventory Audit:

- The Water Management-Plant Maintenance Division should fully utilize all of the features included with the CityWorks software. Fully utilizing this software will provide management more timely and useful information to manage and control their inventory.
- The Water Management-Plant Maintenance Division should examine all the items that are located in the warehouse that are not included in the valuation and should examine the items in the storeroom that are included in the valuation. A determination should be made as to their obsolescence and items that are obsolete should be discarded. All remaining items should be counted and included in the inventory records.

Status: Partially implemented. The Department is not fully utilizing all of the features included with the CityWorks software.

FY 2009 Recommendation 2

The Water Management-Plant Maintenance Division should review the inventory list and ensure that duplicates do not exist. In addition, all items in the warehouse should be included on the inventory list. *Status: Fully implemented*

FY 2009 Recommendation 3

The Water Management- Plant Maintenance Division should discard obsolete items from the warehouse and inventory list. *Status: Fully implemented*

FY 2009 Recommendation 4

Immediate training on the CityWorks functionality to ensure the proper removal of duplicate items and the addition of new items is needed for accurate recording of inventory parts. *Status: Fully implemented*

Recommendation 1

The Water Management-Plant Maintenance Division should fully implement the following recommendation from the previous Inventory Audit:

- The Division should fully utilize all of the features included with the CityWorks software. Fully utilizing this software will provide management more timely and useful information to manage and control their inventory.

MANAGEMENT'S RESPONSE

To: Germaine Brewington, Director of Audit Services
From: Donald F. Greeley, Director, Water Management
Date: September 9, 2010
Subject: 2010 Inventory Audit Report

The following is the management's response to the recommendation included in the Inventory Audit dated June 30, 2010.

Recommendation 1:

The Water Management-Plant Maintenance Division should fully implement the following recommendation from the previous Inventory Audit:

- The Division should fully utilize all of the features included with the CityWorks software. Fully utilizing this software will provide management more timely and useful information to manage and control their inventory.

Management's Response:

We partially concur. We agree on the importance of managing and controlling the Plant Maintenance Division's inventory in a timely and useful manner; however, fully implementing the CityWorks software suite may not be the best tool for managing and controlling inventory, as well as the work process in the Plant Maintenance Division.

The Division is beginning the implementation of an asset management program. This program lays out a foundation of work management that includes: the planning and scheduling of work, inventory control, and work completion/closeout as an integrated process. This is typically done through an integrated Computerized Maintenance Management System (CMMS). CityWorks is a CMMS that has work management and inventory control modules; however, the basis of its operation is a Geographical Information System (GIS), which is not completely applicable to handling plant equipment and assets. As part of implementing the asset management program, the Department will identify, purchase and implement a CMMS to manage plant work and the Division's inventory.

Until that time, the Division will continue to control the Division's inventory in a way that provides timely and useful information to manage and control the inventory.

Implementation Date:

We anticipate the identification, purchasing, and implementation of the best CMMS to be a 12 to 18 month process for the Plant Maintenance Division.

In the meantime, the current system of inventory control will be used to manage and control the inventory. A Microsoft Access database is being used to provide a fully functional inventory control system which includes receiving, issuing, replenishment and reporting. Status of the inventory is available at all times.