**Port Authority**
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**INTERNAL AUDIT DEPARTMENT**

**Audit of the**
**Annual Physical Inventory**

**Fiscal Year 2017**

**Issued: July 2017**

**Performance Audit**

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## EXECUTIVE SUMMARY

### INTRODUCTION

Port Authority internal auditors observed the fiscal year (FY) 2017 annual physical inventory (Inventory).   The purpose of the Inventory is to ensure that the on hand quantity for each inventory item is accurately recorded in the PeopleSoft financial system so that transit operations are supported by having materials and supplies available when needed.   For FY 2017, material and supply expenditures were approximately $20.2 million or 5.1% of total expenses of $397 million (per the audited financial statements as of June 30, 2016).

### OBJECTIVES, SCOPE AND METHODOLOGY

The audit objectives were to determine the adequacy of internal controls for the Inventory and to determine if items were accurately counted, variances and adjustments were recorded correctly in PeopleSoft and the cut off process was properly followed for requisitions and receivers issued before and after Inventory.  The scope of the audit was the FY 2017 Inventory.

We observed the employees as they counted the inventory items, and we independently tested a sample of the inventory counts, the accuracy of the inventory cut off process and assisted in resolving variances.

### STATEMENT OF OPINION

In our opinion, in general, the FY 2017 Inventory was conducted in a manner that provides reasonable assurance that inventory items were accurately counted, adjustments to on hand quantities were recorded correctly in PeopleSoft, the cut off process was properly followed for requisitions and receivers issued before and after Inventory and significant variances were resolved and recorded correctly in PeopleSoft.  We made an advisory comment to improve internal controls and business processes going forward as summarized in this report.

### STRENGTHS NOTED DURING THE AUDIT

1)  Cut off processes were well controlled.  All 60 (100%) of the requisitions and receivers reviewed as part of the inventory cut off testing were processed according to cut off instructions.

2)  The process for handling emergency requisitions was properly followed and 100% of the emergency requisitions tested were processed according to the emergency requisition instructions.

3)  Personnel at the South Hills Village location are beginning to use the $4^{th}$ level identifier in recording the location of items in bins.  Using the $4^{th}$ level identifier allows each part to have its own bin location and assists in identifying and locating the parts in a specific bin.

## RESULTS OF TEST COUNTS

Based on our statistically valid sample and a margin of error of plus or minus 4%, we are 95% confident that the true accuracy rate of item counts in the population is between 83.8% and 91.8%.

## ADVISORY COMMENT 1 – REVIEW AND ADEQUATE RESOLUTION OF ITEMS ON QUERIES NEEDED PRIOR TO START OF INVENTORY

Thirty items (with an average cost equal to or greater than $2.00) that were in more than one bin location in PeopleSoft had not been reviewed and adequately resolved prior to the start of the Inventory. These items were listed on one of the two PeopleSoft queries that were run prior to the start of Inventory. The queries are used to determine if there are any items in more than one bin location in PeopleSoft. When items in more than one bin location in PeopleSoft are not reviewed and adequately resolved prior to the inventory, there is a risk that quantities can be misstated in PeopleSoft.

## RECOMMENDATION

We recommend the following:

1) The manager of purchasing and inventory should run two queries for all business units approximately one month prior to the start of future annual physical inventories. The specific queries have been discussed with applicable personnel in the Purchasing and Materials Management Department. A copy of the results from both queries should be sent to Internal Audit Department personnel.

2) Prior to the start of future annual physical inventories, items appearing on both of these queries should be:

   a. counted at each location shown on the queries,
   b. physically moved to their default bin location (if necessary),
   c. transferred to their default bin location in PeopleSoft via a bin-to-bin transfer (if appropriate), and inventory adjustments should be processed (if necessary).

3) After this process is completed, both of these queries should be run again and items listed on these queries should be adequately resolved prior to the FY 2018 Annual Physical Inventory.

## MANAGEMENT RESPONSE

Management concurs with this audit recommendation and the two queries will be run for all business units approximately one month prior to the start of future annual physical inventories. Items appearing on both of these queries will be:

   a. counted at each location shown on the queries,
   b. physically moved to their default bin location (if necessary),

c. transferred to their default bin location in PeopleSoft via a bin-to-bin transfer (if appropriate), and inventory adjustments will be processed (if necessary).

After this process is completed, both of these queries will be run again and any items that are still listed on these reports will be resolved prior to the start of the FY 2018 Annual Physical Inventory.

Target Date: Prior to the start of the FY 2018 Annual Physical Inventory.

**FOLLOW UP ON OUTSTANDING RECOMMENDATIONS FROM PREVIOUS AUDITS**

We made one observation/recommendation during the previous audit and the recommended change has been implemented.

**Observation/Recommendation 1 from the FY2016 audit – Audit Items in PeopleSoft in More than One Bin Location**

During our review of business unit 140CS (Manchester), we observed items with quantities (greater than 0) in more than one bin location in PeopleSoft. As a result of this observation, a query was created which identified items with quantities in PeopleSoft (greater than 0) in more than one bin location.

We recommended that personnel should run this query and items identified by this query with an average cost equal to or greater than $2.00, (with quantities greater than 0 in more than one bin location in PeopleSoft), should be counted, physically moved to their default bin location (if necessary), transferred to their default bin location in PeopleSoft via a bin to bin transfer (if appropriate), and inventory adjustments should be processed (if necessary).

**Current Status:** Implemented.

# INTRODUCTION

Port Authority internal auditors observed the fiscal year (FY) 2017 annual physical inventory (Inventory). The Inventory is coordinated by Purchasing and Materials Management Department personnel. Its purpose is to ensure that the on hand quantity for each inventory item is accurately recorded in the PeopleSoft financial system so that transit operations are supported by having materials and supplies available when needed. This Inventory was performed from February 10, 2017 through February 12, 2017. For FY 2017, material and supply expenditures were approximately $20.2 million or 5.1% of total expenses of $397 million (per the audited financial statements as of June 30, 2016).

# OBJECTIVES, SCOPE AND METHODOLOGY

The audit objectives were to determine the adequacy of internal controls for the Inventory and to determine if:

- Items were accurately counted,

- Dollar variances of at least $250.00 ($150.00 at the garage inventory locations) and a quantity variance of at least 10 percent were resolved and recorded correctly in PeopleSoft,

- Adjustments to on hand quantities were properly recorded in PeopleSoft, and

- The cut off process was properly followed for requisitions and receivers issued before and after Inventory. The cut off is the time at which system processing of receivers and requisitions is suspended in PeopleSoft. The purpose of the cut off testing is to determine if:

  o Items that were physically received and placed in stock prior to the start of counting were included in PeopleSoft's on hand quantities,

  o Items that were physically received and not placed in stock prior to the start of counting were not included in PeopleSoft's on hand quantities,

  o Requisitions that were filled and shipped prior to the start of counting were processed in PeopleSoft so that the on hand quantities in the system are reduced prior to counting,

  o Items removed from stock after counting has begun (emergency requisitions) are added to the physical count if the item was removed from stock before it was counted,

  o Items physically received while the Inventory is in progress are held at the receiving dock instead of being placed in Inventory, and

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o Employees do not resume filling requisitions, stocking items and processing requisitions and receivers in PeopleSoft until after the Inventory is finalized and the cut off is ended.

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.

We observed the employees as they counted the inventory items and we tested inventory counts and the cut off process at the Manchester, South Hills Village and South Hills Junction locations. We tested the accuracy of the inventory cut off process by tracing a sample of requisitions and receivers to the transaction history records in PeopleSoft to ensure that they were processed in PeopleSoft at the correct time in relation to the cut off. We also assisted in resolving variances. In addition, at these three locations and at the Ross and West Mifflin operating locations, we tested the accuracy of on hand quantities recorded by the employees conducting the Inventory by independently counting a sample of inventory items and comparing our counts with the counts on the count sheets.

## STATEMENT OF OPINION

In our opinion, in general, the FY 2017 Inventory was conducted in a manner that provides reasonable assurance that inventory items were accurately counted, adjustments to on hand quantities were recorded correctly in PeopleSoft, the cut off process was properly followed for requisitions and receivers issued before and after Inventory and significant variances were resolved and recorded correctly in PeopleSoft. We made an advisory comment to improve internal controls and business processes going forward as summarized in this report.

## STRENGTHS NOTED DURING THE AUDIT

Strengths noted during the audit included the following:

1) Cut off processes were well controlled. All 60 (100%) of the requisitions and receivers reviewed as part of the inventory cut off testing were processed according to cut off instructions.

2) The process for handling emergency requisitions was properly followed based on the emergency requisition process implemented during the FY 2016 annual physical inventory. All 23 (100%) of emergency requisitions tested were processed according to the emergency requisition instructions.

3) Personnel at the South Hills Village location are beginning to use the 4th level identifier in recording the location of items in bins. Using the 4th level identifier allows each part to have its own bin location and assists in identifying and locating the parts in a specific bin.

## RESULTS OF TEST COUNTS

Based on our statistically valid sample and a margin of error of plus or minus 4%, we are 95% confident that the true accuracy rate of item counts in the population is between 83.8% and 91.8%.

Using attribute sampling for a population size of 13,499 items with an average cost of at least $2.00, a statistically valid sample of 156 items was selected for testing. Internal Audit Department personnel counted each item in the sample and compared our count to the count recorded on the count sheets. Any discrepancies were resolved by having storeroom personnel recount item count discrepancies. We noted 19 errors (an overall accuracy rate of 88%). In addition to the systematically selected test counts from our sample, 306 judgmentally selected test counts were performed by Internal Audit Department personnel during the Inventory. Of these 306 counts, 290 counts were determined to be correct and 16 counts were incorrect (an overall accuracy rate of 95%). The tables below summarize the results of the testing.

Summary of Systematically Selected Test Counts

| Location | Number of Items with an Average Cost of at Least $2.00 | Number of Test Counts | Number of Count Discrepancies | Number of Accurate Counts | Percentage of Accurate Counts |
|---|---|---|---|---|---|
| Manchester | 9,318 | 111 | 15 | 96 | 86% |
| South Hills Village | 2,347 | 24 | 2 | 22 | 92% |
| South Hills Junction | 1,834 | 21 | 2 | 19 | 90% |
| Totals | 13,499 | 156 | 19 | 137 | 88% |

Of these 156 test counts, 147 items had a unit of measure of "each" and 9 items had a unit of measure of something other than "each" such as "case" or "set". We determined that 3 of these 9 items were incorrectly counted by the inventory count crews (an accuracy rate of 67%). For the 147 items with a unit of measure of "each", 16 were incorrectly counted (an accuracy rate of 89%).

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Summary of Judgmentally Selected Test Counts

| Location | Number of Test Counts | Number of Count Discrepancies | Number of Accurate Counts | Percentage of Accurate Counts |
|---|---|---|---|---|
| Manchester | 106 | 6 | 100 | 94% |
| South Hills Village | 50 | 2 | 48 | 96% |
| South Hills Junction | 50 | 0 | 50 | 100% |
| West Mifflin | 50 | 5 | 45 | 90% |
| Ross | 50 | 3 | 47 | 94% |
| Totals | 306 | 16 | 290 | 95% |

Of these 306 judgmental test counts, 298 items had a unit of measure of "each" and 8 items contained a unit of measure of something other than "each" such as "case" or "set". We determined that all items were counted correctly by the inventory count crews (an accuracy rate of 100%). For the 298 items with a unit of measure of "each", 16 were incorrectly counted (an accuracy rate of 95%).

Note that the accuracy rates discussed above estimate the accuracy of the counts that are made by the inventory count crews. This accuracy rate should not be compared with the Purchasing and Materials Management Department's estimate of the accuracy rate at which the on hand quantities of inventory items are maintained in PeopleSoft's records.[1]

## ADVISORY COMMENT 1 – REVIEW AND ADEQUATE RESOLUTION OF ITEMS ON QUERIES NEEDED PRIOR TO START OF INVENTORY

Thirty items (with an average cost equal to or greater than $2.00) that were in more than one bin location in PeopleSoft had not been reviewed and adequately resolved prior to the start of the Inventory. These items were listed on one of the two PeopleSoft queries that were run prior to the start of Inventory. The queries are used to determine if there are any items in more than one bin location in PeopleSoft. We note that, as we requested, Purchasing and Materials

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[1] Purchasing and Materials Management Department staff calculates their accuracy rate, which is reported on the Recap of Inventory Results – FY 2017 Inventory Accuracy report, for items with an average cost of at least $2.00 by dividing the number of items with no variances and the number of items with minor variances as determined by the Purchasing and Materials Management Department staff, by the total number of items with an average cost of at least $2.00. The Purchasing and Materials Management Department staff defines a minor variance for the Manchester, South Hills Village and South Hills Junction warehouses locations as one that is less than $250.00 in value and 10% in quantity. For the garage locations, a minor variance is defined as one that is less than $150.00 in value and 10% in quantity.

Management personnel implemented the review, count and adequate resolution of the items after the Inventory and inventory adjustments were processed (if necessary).

When items in more than one bin location in PeopleSoft are not reviewed and adequately resolved prior to the inventory there is a risk that quantities can be misstated in PeopleSoft because an incorrect inventory adjustment may be processed as a result of the quantity counted during the Inventory (at the default bin location) being added to quantity in PeopleSoft (at the non-default bin location).

**RECOMMENDATION**

We recommend the following:

1) The manager of purchasing and inventory should run the following two queries for all business units approximately one month prior to the start of future annual physical inventories and send the results of both of these queries to the manager of inventory operations and distribution, who should coordinate with applicable supervisory personnel at each location (which has items listed on the queries) for review and adequate resolution (as detailed in #2 below):

   a. The query which identifies inventory items with quantities greater than 0 in a non-default bin location, and
   b. The query which identifies instances when inventory items have quantities greater than 0 in more than one bin location in PeopleSoft.

   The specific queries have been discussed with applicable personnel in the Purchasing and Materials Management Department. A copy of the results from both queries should be sent to Internal Audit Department personnel.

2) Prior to the start of future annual physical inventories, items appearing on both of these queries should be:

   a. counted at each location shown on the queries,
   b. physically moved to their default bin location (if necessary),
   c. transferred to their default bin location in PeopleSoft via a bin-to-bin transfer (if appropriate), and inventory adjustments should be processed (if necessary).

3) After this process is completed, both of these queries should be run again by the manager of purchasing materials and reviewed again by the manager of inventory operations and distribution, who should coordinate with applicable supervisory personnel at each location to review and adequately resolve any items that are still listed on these reports prior to the start of the current year's annual physical inventory. The queries can also be periodically generated throughout the year and used to determine if there are any items in the storeroom with more than one bin location in PeopleSoft.

**MANAGEMENT RESPONSE**

Management concurs with this audit recommendation and these two queries will be run for all business units approximately one month prior to the start of future annual physical inventories and the results of both of these queries will be sent to the manager of inventory operations and distribution, who will coordinate with applicable supervisory personnel at each location for review and adequate resolution. Items appearing on both of these queries will be:

    a. counted at each location shown on the queries,
    b. physically moved to their default bin location (if necessary),
    c. transferred to their default bin location in PeopleSoft via a bin-to-bin transfer (if appropriate), and inventory adjustments will be processed (if necessary).

A copy of the results from both queries will be sent to Internal Audit Department personnel.

After this process is completed, both of these queries will be run again and any items that are still listed on these reports will be resolved prior to the start of the FY 2018 Annual Physical Inventory.

Target Date: Prior to the start of the FY 2018 Annual Physical Inventory.

## FOLLOW UP ON OUTSTANDING RECOMMENDATIONS FROM PREVIOUS AUDITS

We made one observation/recommendation during the previous audit and the recommended change has been implemented.

**Observation/Recommendation 1 from the FY2016 audit – Audit Items in PeopleSoft in More than One Bin Location**

During our review of business unit 140CS (Manchester), we observed items with quantities (greater than 0) in more than one bin location in PeopleSoft. As a result of this observation, a query was created which identified items with quantities in PeopleSoft (greater than 0) in more than one bin location.

We recommended that personnel should run this query and items identified by this query with an average cost equal to or greater than $2.00, (with quantities greater than 0 in more than one bin location in PeopleSoft), should be counted, and physically moved to their default bin location (if necessary), transferred to their default bin location in PeopleSoft via a bin to bin transfer (if appropriate), and inventory adjustments should be processed (if necessary).

**Current Status:** Implemented.

## ACKNOWLEDGEMENTS

Members of the Internal Audit Department thank Tony Trona, Director of Purchasing and Materials Management, Justin Cava, Manager of Purchasing Materials, Mike Musillo, Manager of Inventory Operations and Distribution, Bernie Faccenda, Assistant Manager, Inventory, Tom Kaczmarski, Stores Supervisor–FL, Tim Bell, Stores Supervisor-Rails, Jason Lamb, Stores Supervisor–Relief-FL, inventory counters and data entry clerks for their cooperation and assistance during this audit.

Participating auditors were Sheila Dillard, Maria Nickerson, Rick Thimons and Willie Westbrook.

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Sheila Dillard, Director, Internal Audit Department          Date

Disclaimer:

This report is intended solely for the information and use of Port Authority management for decision making purposes. It is not intended for use by any other party.

## ATTACHMENT A – BUSINESS PROCESS FOR PUTAWAY AND DEPLETION

Putaway Process:

When an inventory item arrives at the receiving dock, the receiver takes possession of it and enters the receiving information into PeopleSoft which then stages the batch of items that are to be placed into the Inventory. The stockperson then places the items into the correct bin in Inventory. At the Manchester and South Hills Junction locations, the storeroom supervisor runs a process called "Complete Putaway" which increases the on hand quantities for all items that are in the staged batch status. At the South Hills Junction location, the "Complete Putaway" process is done at the time of receiving the item. At the South Hills Village location, the "Complete Putaway" process is run automatically as part of the receiving process.

Depletion Process:

When an item needs to be removed from Inventory, the employee who needs it initiates the process by submitting a material stock request online in PeopleSoft. PeopleSoft includes this item on its pick list which is generated nightly. After the item has been picked from the shelf, the supervisor provides feedback to PeopleSoft to notify the system that the item is no longer in Inventory. At South Hills Village, a batch process runs every half hour to look for new material stock requests and a Pick Sheet prints at the stockperson's printer. The stockperson then fulfills the order and closes the order in the system by performing the "Material Picking Feedback" process, which confirms, ships and depletes the items that have been fulfilled. At all locations the depletion process is run nightly to automatically, reduce on hand quantities for which feedback has been entered into PeopleSoft.