

**TTC AUDIT COMMITTEE
REPORT NO. 34**

MEETING DATE: May 12, 2014

SUBJECT: TTC AUDIT REPORT – AUDIT OF QUALITY CONTROL –
CORPORATE SERVICES GROUP, MATERIALS AND
PROCUREMENT DEPARTMENT, MATERIALS MANAGEMENT
SECTION

INFORMATION ITEM:

RECOMMENDATION

It is recommended that the TTC Audit Committee receive for information the attached TTC Audit Report.

01-27



TORONTO TRANSIT COMMISSION

AUDIT OF QUALITY CONTROL

CORPORATE SERVICES GROUP MATERIALS AND PROCUREMENT DEPARTMENT MATERIALS MANAGEMENT SECTION

Covering Period:
January 2012 to March 2013

TTC AUDIT DEPARTMENT
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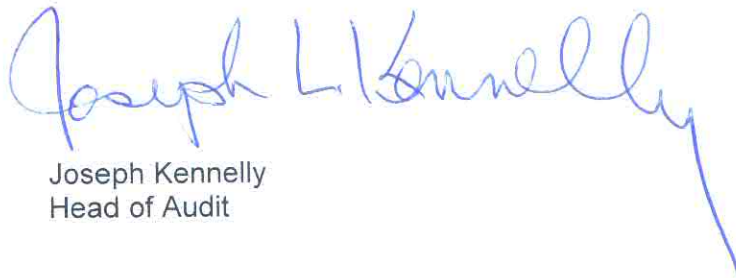
EXECUTIVE SUMMARY

An audit to assess the procedures and controls over the Quality Control area of the Materials Management Section has been completed. An Exit Meeting was held on February 6, 2014 with the Chief – Financial and Administration Officer, the Head of the Materials and Procurement Department and the Director – Materials Management Section to discuss the results of the audit.

The results of the audit tests indicated that the processes and controls for conducting quality control inspections were adequate. However, there is no process to periodically review and confirm the continued inclusion of items requiring quality control inspections in the inspection process nor is there a process to determine if all engineered parts requiring inspections have been identified. In addition, there is no process to track supplier history and experience with respect to the quality of their products. These deficiencies have been brought to Management's attention and audit recommendations were made to address the deficiencies.

While there was general agreement on the audit findings, Management's opinion is that existing processes and ongoing improvements to the materials management system are sufficient to address the concerns.

We wish to express our thanks to the staff of the Materials Management Section for their cooperation and assistance during the course of this audit.



Joseph Kennelly
Head of Audit



Dante Torralba
Audit Manager

BACKGROUND

The Materials Management section of the Materials and Procurement (M&P) Department monitors TTC's inventory for bus, subway, streetcar and building material and provides support to ensure user needs are met. Within the Materials Management section, the Inventory Management area is responsible for monitoring, ordering and maintaining all inventory material from suppliers and vendors for all TTC end users.

Inventory Management is also responsible for quality control of goods flagged for inspection prior to accepting into the TTC Inventory. The Quality Control area emphasizes testing of critical parts flagged as requiring inspection prior to acceptance into inventory. The area has two inspectors responsible for testing components to ensure quality standards are maintained and to uncover defects. In 2012, there were 1,098 inspections conducted.

An audit of the Inventory Management area in 2012 identified weaknesses related to the Quality Control area. The TTC Audit Committee expressed concerns on the reported deficiencies and requested assurance that they have been addressed.

This audit reviewed the Quality Control function which conducts testing on approximately 2,000 inventory stock codes that require a Certificate of Compliance. The audit verified whether the changes resulting from the 2012 audit recommendations were implemented.

AUDIT SCOPE AND OBJECTIVES

Scope: The audit scope included an assessment of the processes and controls over the Quality Control area of the Materials Management section of the Materials and Procurement Department (M&P), including physical and recordkeeping controls to determine that the controls are operating as expected, and the information maintained is accurate, complete and available when needed.

The review covered the period from January 2012 to March 2013.

Objectives: To assess the management and operational controls to ensure:

- the adequacy and effectiveness of the controls over the quality control process
- that safety critical components are inspected and that they meet established standards
- procedures and processes are in place to measure and report on key activities

AUDIT METHODOLOGY

To achieve the audit objectives, we reviewed the processes and controls for conducting quality control inspections on materials received. Our audit methodology included the following:

- interviews and discussions with Materials Management staff
- review of policies, procedures documentation and records for quality control inspections
- observations of quality control inspections and examination of inspection documentation and recording
- evaluation of management controls and practices
- other procedures deemed appropriate

CONCLUSION

Processes and controls for conducting quality control inspections were found to be adequate. However, there is no process to periodically review the items already approved for quality control inspections to determine if they should continue to be inspected, nor, is there a process to determine if all engineered parts have been identified as requiring inspections. In addition, there is no process to track the non-conformance reports by supplier and no reports to indicate the history of the supplier with respect to the quality of their products.

ANALYSIS AND RECOMMENDATIONS

FINDING #1

INVENTORY ITEMS TO BE INSPECTED

OBJECTIVE: To ensure that there is an adequate process in place to determine what inventory items require quality control inspections.

ANALYSIS: Approximately 2,000 line items are flagged for inspection. A documented process has been established for approving or rejecting items which have been requested to be added to the quality control inspection process. The review of the requisition process to have items added to the quality control inspection process was found to be adequate. However, the following areas for improvement were noted:

- There is no process to periodically review the items already approved for quality control inspections to determine if they should continue to be included in the inspection process. Historical data may indicate that certain items may no longer require inspections.
- There is no process to determine if all engineered parts have been identified as requiring inspections. Non-inspected parts are put into inventory. Parts are shipped to the requesting department, who must deal with defects and deficiencies after the part has been installed.

RECOMMENDATION: Management should ensure that:

- items on the inspection list are periodically reviewed to confirm that a quality control inspection of the listed items is still justified
- there is a process to determine that all critical inventory parts have been identified, and assessed if inspections are required

**MANAGEMENT
RESPONSE:**

Items on the inspection list are only removed if the Operation/Engineering group decides that this part no longer requires Quality Control (QC) inspection. This rarely occurs because the parts can be bought from various manufacturers who may have not produced this part in the past. The majority of parts that are on QC inspection are made to TTC drawings so therefore, it is important to continue to monitor the quality of product coming into the TTC.

A report has been developed to run on a yearly basis which captures critical part items, as part of IFS cataloging characteristic, and part is made to a TTC drawing. Any part that is found to be in this group will be highlighted to Operation Engineering group who will make the determination if the part should have a of QC inspection.

Responsibility: Director - Materials Management

Completion Date: Not applicable

Status: Completed

FINDING #2

SUPPLIER QUALITY MANAGEMENT

- OBJECTIVE:** To ensure that an effective process is in place to rank suppliers' performance and track the quality of vendors' products over time.
- ANALYSIS:** The Quality Control Inspectors complete Non-Conformance Reports that detail the parts inspected, the supplier and the reasons for non-conformance. These reports are filed in chronologically order by date of inspection. M&P communicates to the supplier the results of the tests conducted on individual purchase orders. There is no process to track the non-conformance reports by supplier and there are no reports to indicate the history of the supplier with respect to the quality of their products.
- RECOMMENDATIONS:** Management should ensure that:
- quality control inspection data for suppliers is monitored, tracked and reviewed
 - quality control deficiencies are communicated to the Operations departments and the Purchasing section
- Management should also evaluate the feasibility of a cost-recovery system when stock outs and delayed revenue equipment repairs occur due to parts that do not conform to standards.
- MANAGEMENT RESPONSE:**
- QC inspections data is available to Purchasing when they perform a Vendor Performance review through the existing Access programs. This information will become more visible when all documentation is entered into IFS. Queries are available on IFS and through reports on Crystal BOE in the TTC Intranet.
- When an item is rejected by QC Inspectors the Analysts are informed and as necessary, share this information with the Operations group and with the Buyer. If a manufacturer requests a deviation on a supplied product the Engineering group is consulted and they will determine if acceptable or rejected at which time the manufacturer end users are advised.

Responsibility: Director – Materials Management

Completion Date: Not applicable

Status: Completed