



STAFF REPORT INFORMATION ONLY

TTC Audit Report – Contract Administration for the Purchase of Subway Cars

Date:	February 19, 2015
To:	TTC Audit Committee
From:	Head of Audit, Joseph L. Kennelly

Summary

A review has been completed of the contract for the purchase of the “Toronto Rocket” subway cars from Bombardier Transportation North America Inc. (Bombardier). The purpose of the review was to assess the adequacy of contract administration controls to ensure adherence to key contract terms and conditions, and that any identified control risks are minimized to protect the TTC’s interest.

Responsibility for the contract administration is with the TTC’s Materials and Procurement Department in the Corporate Services Group; and, responsibility for the TTC’s project management is with the Subway Operations area of the Rail Cars and Shops Department in the Operations Group.

The audit testing indicated that there are no significant process or contract administrative control risks. Controls reviewed were found to be acceptable; consequently, there are no recommendations required to be made.

Financial Impact

The recommendation in this report has no financial impact.

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Attachment

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TORONTO TRANSIT COMMISSION

**Audit Report
of
Contract Administration
for the Purchase of Subway Cars**

**Corporate Services Group
Materials and Procurement Department**

**Covering Period:
January 2012 to June 2014**

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Executive Summary

A review has been completed of the contract for the purchase of the “Toronto Rocket” subway cars from Bombardier Transportation North America Inc. (Bombardier). The purpose of the review was to assess the adequacy of contract administration controls to ensure adherence to key contract terms and conditions, and that any identified control risks are minimized to protect the TTC’s interest.

Responsibility for the contract administration is with the TTC’s Materials and Procurement Department in the Corporate Services Group; and, responsibility for the TTC’s project management is with the Subway Operations area of the Rail Cars and Shops Department in the Operations Group.

The main audit focus was on both process and contract administrative controls. Process controls were primarily the responsibility of the TTC project management team overseeing the delivery and acceptance of the subway vehicles. The contract administrative controls covered the contractual deliverables and milestone targets, as well as the contract amendments. The results of the audit testing were discussed with the Head of Materials and Procurement and the Director – Project Procurement on September 17, 2014, and with the Head of Rail Cars and Shops on September 29, 2014.

The audit testing indicated that there are no significant process or contract administrative control risks. Controls reviewed were found to be acceptable; consequently, there are no recommendations required to be made.

We wish to thank the staff in the Materials and Procurement Department and the Operations project team for all the assistance provided to us during the conducting of our review, and diligent in providing us with supporting documentation to our audit enquiries.

Conclusion

TTC’s management of the purchase of subway cars from Bombardier has been performed with due care and diligence in protecting the TTC’s interests. Over the duration of the contract, changes to the contract were properly supported by amendments, and milestone targets were monitored.

The TTC management has also been proactive in reviewing the contract performance, and will look to implementing improved contract processes in any future contracts that the TTC may enter into with Bombardier.

Head of Audit

Background

In 2006 the TTC entered into a contract with Bombardier Transportation North America Inc. (Bombardier) to develop a new generation of subway car named the “Toronto Rocket” (TR). The initial order was for 39 TR train sets with each train set composed of six subway cars linked together which were to replace the aging H4 and H5 subway cars.

In May 2010 TTC exercised the option to purchase 21 additional TR train sets to replace the aging H6 subway cars and 10 TR train sets for the Toronto-York Spadina Subway Extension (TYSSE) project. Options for spare parts inventory, special tools and equipment were also exercised at this time. In April 2014, an additional 10 TR train sets were ordered in anticipation of future ridership growth.

The total authorized amount for all 80 TR train sets, including amounts for design and other amendments, spare parts inventory, special tools and equipment is approximately \$1.5 billion. This amount includes all applicable taxes, allowances for escalation and one-time adjustments for foreign currency exchange rate variances.

Audit Scope and Objective

Scope

- review of contract administration controls over contract P31PD05761 with Bombardier for the purchase of new TR train sets
- review of contract documentation from January 2012 to June 2013 for the base order of 39 TR train sets
- review of contract documentation for the subsequent exercising of options for additional train sets and spare parts in July 2013 and April 2014

Objective

- to assess the adequacy of contract administration controls to ensure adherence to key contract terms and conditions, and that any identified control risks are minimized to protect the TTC's interests

Audit Methodology

- discussions were held with contract administration staff in the Materials and Procurement Department under the Corporate Services Group
- contract files including amendments were reviewed
- discussions were held with TTC project management staff within the Subway Operations area of the Rail Cars and Shops Department under the Operations Group
- supporting project management files and various correspondence were reviewed
- site verification and observation of spares inventory were conducted
- sample of payment certificates were examined for completeness and approvals
- review of relevant TTC Board reports regarding the contract with Bombardier

Analysis and Recommendations

Finding #1

Process Controls

Objective: To assess the adequacy of contract administration controls to ensure adherence to contract terms and conditions.

Analysis: The following process controls were reviewed and found acceptable:

New Vehicle Delivery and Acceptance

Processes are followed to track the actual delivery and acceptance of all new TR train sets. Liquidated damages associated with delivery schedule deviations are being calculated in accordance with contract terms.

Warranty Periods

Warranty periods for new train sets are tracked in accordance with contract terms.

Reliability Performance

Processes are followed to monitor adherence to stated reliability performance targets.

Contract Amendments

Processes are in place to ensure all agreed upon pricing for approved amendments are documented. Pricing for additional train sets and parts options exercised were reconciled to agreement terms.

Milestone Management

Processes are followed to monitor adherence to identified contract milestones and ensure payments are processed accordingly.

Recommendation:

The process controls reviewed were found acceptable: consequently, there are no recommendations required to be made.

Management Response:

Not required.

Finding #2

Contract Administrative Controls

Objective: To ensure that any identified contract administrative control risks are minimized to protect the TTC's interests.

Analysis: A review of significant contract general conditions was performed, and selected contract administrative controls were audited as follows:

Completion and Acceptance (General Condition 28)

In determining final acceptance, subway car deficiencies have been identified as to what is a minor and major deficiency. Deficiencies classified as a major must be satisfactorily resolved prior to the final acceptance.

Warranty (General Condition 29)

In order to ensure the TTC's interest is not compromised, the warranty controls process has been enforced in accordance with the departmental procedure of warranty management. Parts used by Bombardier for warranty repair are stored in a separate physically secured location which is segregated from TTC inventory parts.

Shop Drawings (General Condition 41)

The shop drawing packages of "as built" drawings is a milestone contract deliverable, and their delivery supports the transfer of title to the TTC.

Configuration Control (General Condition 46)

The TTC's Subway Maintenance System (SMS) is used to manage the subway configuration information. All serialized parts have been tracked and recorded from production to final acceptance hand-over in both hardcopy and electronic copy form. Changes to the configuration have been included by means of the tracking work orders and updating the SMS with the changed information. In addition, Bill of Materials information has been provided indicating the parts numbers of major suppliers and vendors.

Software Documentation Requirements (General Condition 53)

Documentation of the system software forms contractual milestones which have been delivered.

Escalation (General Condition 58)

Escalation calculations are defined by milestone target and statistical indices are verified with the dates of each milestone. The calculations are updated for any changes or adjustments to the published statistics catalogue.

Commission Supplied Products (General Condition 60)

Due to the integration of the Automatic Train Control (ATC), this condition was introduced to address any potential issues with receiving processes, inspection and liabilities. Controls over the ATC inventory are in place, and

inventory has been subject to physical count verification. Adherence to ATC milestones is monitored by the TTC project management team.

Contractor Performance Review

Although not a contractual requirement, discussions with the TTC project management team indicate that efforts have been made to implement improved processes in any future contracts with Bombardier. Such efforts should result in improved contract performance by both the TTC and Bombardier, and TTC project management is commended for taking such initiative.

Recommendation:

The contract administrative controls reviewed were found acceptable; consequently, there are no recommendations required to be made.

Management Response:

Not required.

APPENDIX A

Summary of Recommendations, Management Responses and Action Plans

Finding #	Recommendation	Agree	Disagree	Management Responses	Completion Date
1	The process controls reviewed were found acceptable: consequently, there are no recommendations required to be made.	Yes		Not required.	Not required.
2	The contract administrative controls reviewed were found acceptable; consequently, there are no recommendations required to be made.	Yes		Not required.	Not required.