OFFICE OF THE NEW YORK STATE COMPTROLLER

DIVISION OF STATE GOVERNMENT ACCOUNTABILITY

Metropolitan Transportation Authority – New York City Transit / Staten Island Railway

Selected Aspects of Railcar Fleet Maintenance

Report 2009-S-68

Thomas P. DiNapoli

This page is left intentionally blank.

Table of Contents

This page is left intentionally blank.

State of New York
Office of the State Comptroller

Division of State Government Accountability

September 15, 2011

Mr. Jay Walder
Chairman and Chief Executive Officer
Metropolitan Transportation Authority
347 Madison Ave
New York, NY 10017

Dear Mr. Walder:

The Office of the State Comptroller is committed to helping State agencies, public authorities and local government agencies manage government resources efficiently and effectively and, by so doing, providing accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit of *Selected Aspects of Railcar Fleet Maintenanc*e at New York City Transit and Staten Island Railway. This audit was performed pursuant to the State Comptroller's authority under Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

Office of the State Comptroller
Division of State Government Accountability

This page is left intentionally blank.

EXECUTIVE SUMMARY

Audit Objectives

Our objectives were to determine whether the Metropolitan Transportation Authority (MTA) -New York City Transit (Transit) and the MTA-Staten Island Railway (Railway) (1) has standards and procedures for the maintenance of its railcar fleet, (2) performs railcar maintenance in compliance with these standards and procedures, and (3) has a comprehensive maintenance plan for its railcar fleet.

Audit Results -Summary

Adhering to a schedule of inspections and maintenance for subway railcars is necessary for safe and efficient operations. Transit and Railway have established systems of regularly-scheduled inspections and maintenance. In addition, Transit's goal is that the schedule of inspections is met at least 80 percent of the time. We found that Transit subway car inspections are not always done on schedule. Our review of 409 inspections for 30 cars from 3 maintenance shops showed that 50 of the inspections (12.2 percent) were not done within Transit's expected inspection schedule. In addition, Transit's own reporting system shows about 23 percent of inspections do not meet the schedule. However, it appears Transit is close to its goal. We also found that the required Scheduled Maintenance System (SMS) work was not always done. For example, 18 cars in our sample required 30 SMS procedures. We found that 12 of the 30 procedures were only partially done.

At Railway we reviewed the inspection records for 10 cars from January 1, 2007 through October 8, 2009. We determined that 32 of 211 inspections (15.2 percent) were not done within required time frames. For example, 19 inspections were done up to 83 days late.

In addition, we estimate savings of $2.3 million if Transit changes its inspection cycle schedule for the 3,252 cars in its newest car classes from 66 days to 73 days. Furthermore, we estimate Railway could save more than $283,000 annually if it conformed to Transit's present 66-day inspection cycle. It should be noted that this recommendation is not intended to lower standards, but rather to enable the MTA to achieve maximum efficiency and consistency. (Railway officials suggest the possible savings are much lower, but they did not consider all costs such as supervision and parts. At our closing conference, Transit officials told us that they would be changing the inspection cycle for newer cars.)

We reviewed Transit's 2006 Rail Fleet Management Plan required by the Federal Transit Administration (FTA). This plan is being updated and Transit officials did not provide us with a draft copy. They did state that most of the provisions for inspections and maintenance are unchanged from 2006. Section III of the 2006 plan deals with inspection and maintenance for keeping their rolling stock in a "State of Good Repair."

Our report contains nine recommendations for improving controls and cost savings over the maintenance operations. MTA officials agreed with our recommendations and have taken action to implement them.

This report, dated September 15, 2011, is available on our website at http://www.osc.state.ny.us. Add or update your mailing list address by contacting us at: (518) 474-3271 or
Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, NY 12236

Introduction

Background

The Metropolitan Transportation Authority's (MTA) New York City Transit (Transit) operates 26 subway lines that run through the boroughs of New York City excluding Staten Island. As of December 11, 2009, this includes 656 miles of tracks covered by subway fares (revenue tracks), 468 stations, 6,330 subway cars, and 470 work cars, which include diesel locomotives as well as flat cars and various types of equipment. Transit subway ridership in 2008 was about 1.6 billion. In addition, the Staten Island Railway (Railway), which reports organizationally through Transit's Department of Subways, operates 63 cars and 22 stations across 29 miles of track on Staten Island. Railway's annual ridership was about 4.38 million in 2008. The cars comprising the Transit and Railways fleet are estimated to have a replacement value of $2.7 million each, according to Transit's 2010-2014 Capital Plan.

Transit's Department of Subways has 14 railcar maintenance shops. This includes 13 that are responsible for cars running on revenue tracks and one that is responsible for non-revenue cars. In addition, the Department of Subways has a Division of Car Equipment that operates two overhaul shop complexes, which perform preventive maintenance and repairs requiring specialized equipment or skills not available in the maintenance shops. The Department of Subways has a Rail Fleet Management Plan dated May 2006 that includes parameters and requirements of the maintenance and inspection of the subway fleet. While the Plan was being updated at the time of our audit, Transit officials informed us that the maintenance and inspection parameters would not change.

The Department of Subways inspections cover the entire car, from the connectors that pick up the power from the third rail, to the motors that drive the trains, to the decals affixed inside the train cars. In addition, SMS activities and procedures involve extensive work such as rebuilding or replacement of major components of the cars.

For Transit cars, the practice is that an inspection should be performed every 66 days (plus or minus 5 days) or every 10,000 miles (plus or minus 1,000 miles) – whichever comes first. Overall, Transit's goal is that 80 percent of its cars will be inspected within these intervals. Transit officials explained that this goal was established as a result of a 1999 audit performed by the Federal Transit Administration and has not been revised since then. Transit had been piloting an inspection interval for newer class cars that required inspection every 73 days (plus or minus

5 days) or every 11,000 miles (plus or minus 1,000 miles) – whichever came first. However, Transit has not yet implemented that standard.

Although Railway has not been subject to the Federal Railroad Administration (FRA) inspection regulations since 1987, it has continued to follow FRA requirements that its Multiple Unit Locomotives be inspected at no longer than a 92-day interval and no sooner than a 30-day interval. In 1997, as a result of an audit by the MTA Auditor General, Railway increased the inspection interval to no longer than 45 days. Railway does not use a mileage parameter to set inspection intervals.

The effectiveness of railcar maintenance can be assessed by such measures as the on-time performance of required inspections. Another key measure is the Mean Distance Between Failures (MDBF) for the cars. The MDBF represents the number of miles the fleet of cars has been running divided by the number of operating failures attributable to the cars over a stated period of time. It is also important that the inspection intervals are adequate and cost-effective and that a comprehensive maintenance plan is available to all employees.

With regard to MDBF, we noted that Transit reports considerable improvement in this performance measure over the past several years. For 1997, Transit's MDBF was 77,161 miles. In comparison, for the year ended September 2009, Transit's MDBF was 142,961 miles: an 85-percent improvement over 1997.

Audit Scope and Methodology

We audited selected aspects of Transit's and Railway's railcar maintenance program for the period January 1, 2007 to November 30, 2009. To accomplish our objectives, we interviewed officials at Transit and Railway and employees at the selected maintenance and overhaul shops. We also contacted two other transportation agencies to obtain information about their railcar maintenance program.

We reviewed Transit's Rail Fleet Management Plan and read reports from the FTA. We met with the MTA's contracted engineering firm to obtain an understanding of its contract work and to determine whether this work would have an impact on our audit. Based on our meetings, we determined that the engineering firm's work would not have an impact on our audit as planned.

We judgmentally selected four maintenance shops to review: Coney Island, East New York, Corona, and Clifton (Staten Island). We also reviewed the Coney Island Overhaul Shop. We selected a sample of cars from each shop to determine if all of the inspections required by their schedule were performed on time. Our sample included 15 cars selected

judgmentally and 25 selected randomly. For Transit's cars, we reviewed 409 inspections performed from January 2007 to November 2009. For Railway's cars, we reviewed 211 inspections performed from January 2007 to October 2009.

For the 30 Transit cars selected in our sample, we reviewed the SMS work performed. Our purpose was to determine if all the required work had been done. We requested that the maintenance shops and the Coney Island overhaul shop provide us with any records of SMS work. Also, we checked the RSMIS system to see what work had been required and what had actually been done.

We also observed inspections performed on 16 subway cars - 4 each at Transit's Coney Island, East New York, and Corona maintenance shops, which had been selected judgmentally, and 4 for the Staten Island Railway, at the Clifton maintenance shop – to determine if Car Inspectors were following procedures.

We conducted our 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.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

Authority

This audit was performed pursuant to the State Comptroller's authority under Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

Reporting Requirements

A draft copy of this report was provided to MTA officials for their review and comment. Their comments were considered in preparing this final audit report and are included in their entirety at the end of this report.

Within 90 days of the final release of this report, as required by Section 170 of the Executive Law, the Chairman of the Metropolitan Transportation Authority shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.

Contributors to the Report

Major contributors to this report include Carmen Maldonado, Robert Mehrhoff, Anthony Carbonelli, Richard Moriarty, Altagracia Rodriguez, Slamon Sarwari and Katie Brent.

Audit Findings and Recommendations

Measuring Effectiveness of Railcar Maintenance

Performance of Inspections

We found that both Transit and Railway had established inspection intervals for their cars. While inspections were usually performed on time, there was still an opportunity for improvement because this was not always the case.

New York City Transit

We examined whether Transit established standards and procedures for the maintenance of its railcar fleet, and found that it did. These standards show the inspections and other maintenance work that should be performed for each type of railcar, and the required frequency for this work using both time and mileage (e.g., 66 days, with a range of plus or minus 5 days or 10,000 miles, with a range of plus or minus 1,000 miles, whichever limit is reached first).

Transit uses its Rolling Stock Maintenance Information System (RSMIS) to collect, record, and manage maintenance data for its fleet of 6,330 cars. We were informed that shops are not required to maintain written records of inspections once the data has been entered into RSMIS.

We examined whether the inspections were being performed in compliance with the standards. We selected a sample of 30 cars at three maintenance shops, and reviewed the inspection documentation for these rail cars from January 2007 or to date of first service, on Transit's RSMIS system. There were 409 inspections performed for these 30 cars. Of the 409, fifty (12 percent) were not performed within Transit's parameters. Of these, 14 were performed early and 36 were done late. We also examined Transit's Timeliness of Inspection Report for the period January 2007 to July 2009. While we did not audit the Inspection Report results, the Report shows that, on average, Transit performed 78 percent of its inspections on time. This is very close to Transit's goal that 80 percent of inspections for FTA-funded railcars should be completed on time. The goal was established as a result of a 1999 FTA triennial review that found Transit was not inspecting its cars in a timely manner. The FTA required Transit to report on timeliness until at least 80 percent of inspections were completed on time for three consecutive quarters. Transit officials told us that the 80-percent goal has not been re-evaluated.

We were told that one of the reasons cars were being inspected early or late was that accurate mileage figures for the cars were not available at the time the inspections were scheduled. Mileage figures are compiled by Transit's Rapid Transit Operations Division and are data-entered into RSMIS. We were told by the maintenance shops that there was a seven- to eight-day delay in entering that data, which meant that the shops had to estimate the probable mileage to schedule inspections. Also, cars could have been in for repairs, or SMS work, at the time their inspections become due.

We asked whether the Timeliness of Inspection Report was reviewed by Transit management and we were told that this Report was not regularly distributed to management. We believe this Report should be shared with management officials to ensure that they have information about the work achieved and can take steps to improve performance where goals are not met.

In their 2006 Rail Fleet Management Plan, Transit calculated the minimum number of cars to be inspected at each of its maintenance shops. When we visited the maintenance shops, the superintendents told us that they had a daily quota of inspections to be performed. We reviewed this quota, comparing it to the number of cars assigned to the shops. We found that, by meeting the quotas, the maintenance shops should be able to inspect 100 percent of their assigned cars in less than the 71-day maximum period between inspections. Accordingly, we recommend that Transit evaluate raising its 80 percent goal for on time inspections.

Staten Island Railway

We visited Railway's maintenance shop in October 2009. At that time, we noted that the shop's computerized car database had not been updated since January 2009. Railway officials at the maintenance shop told us that they had no direct line supervisors/foremen, and supervision was supplied by the maintenance superintendent and his two deputies. They also informed us that they were aware that they do not have all the documentation to support their work, but they were nevertheless performing the inspections and other work as required. At a subsequent meeting with Railway officials, they informed us that the Railway was in the process of moving to Transit's RSMIS to track their maintenance.

We examined whether the inspections were being performed in compliance with the standards. We randomly selected 10 of the 63 cars in service. The Railway maintains manual records of inspections on what it refers to as Blue Sheets. These sheets are a holdover from when Railway was performing its inspections according to Federal Railroad

Administration requirements. We found that there is a Blue Sheet for each car showing inspections performed on that car dating back to the 1990s. Each inspection is signed off by the person who performed the inspection.

Railway inspects its cars every 45 days. It does not use a mileage component for determining when an inspection is due. We accepted inspections performed between 40 and 50 days as on-time because this mirrors Transit's practice, which allows for 5 days before or after the standard.

To determine when each car was inspected, we reviewed the Blue Sheets from January 1, 2007, through October 19, 2009. We found a total of 197 inspections in that period and determined that 32 inspections (16 percent) were not performed timely. One was performed early (38 days from the prior inspection) and 31 were performed from 51 to 240 days late.

Railway officials replied that 12 of the inspections identified as performed late were the result of a failure to post intervening inspections on the Blue Sheets. To support these inspections, officials supplied records from the maintenance shop trouble book used to document problems that arise with cars, including those in the shop for inspection. While the trouble book indicates that the cars pertaining to the 12 late inspections were at the shop, there is no evidence that the cars were actually inspected. Railway did not provide a reason the remaining 20 inspections were not done in a timely manner.

Railway officials informed us they are in the process of reviewing their maintenance procedures, including the scheduling, timing, and content of inspections.

Recommendations

1. Increase the timeliness of input of mileage data in RSMIS.

   (MTA-Transit officials replied to our draft audit report that they agree with the recommendation and have made some improvement, although there is a genuine need for further gains in timeliness. They are reviewing opportunities for automation and other system enhancements and for supporting the mileage data compilation effort. SIR officials replied they do not use RSMIS to track either mileage or maintenance-related data.)

2. Monitor when inspections are occurring and the reasons they are not performed in a timely manner to ensure that, at a minimum, they meet the established goal of 80 percent.

(SIR officials concur with the recommendation. They added that SIR is currently exceeding its goal of 80 percent. MTA-Transit officials replied that they monitor performance and know why inspections are not done within the time and mileage window. They added every car cannot be inspected within the window for various reasons, such as SMS work has already been scheduled.)

Auditor's Comments: MTA-Transit officials did not address the fact they were not completing at least 80 percent of inspections on time. While they indicate they are monitoring performance, they do not state how the information obtained will be used to improve performance. Thus, MTA-Transit officials have to use the information to identify ways to improve inspection performance.

3. Re-assess the 80-percent goal for timeliness of inspections to determine whether a higher goal would be appropriate.

   (SIR and MTA-Transit officials replied to our draft report that they are open to the idea of increasing the goal and will assess its potential for gradual implementation subject to the realities of operational constraints. MTA-Transit officials added that they have to work with RTO to improve the recording of mileage and the improvements in the MDBF as a positive indication of their current practices.)

4. Make sure that the Timeliness of Inspection Report is distributed to Transit's senior management.

   (Both SIR and MTA-Transit officials concur with the recommendation and will take action to implement it.)

5. Monitor all Railway cars to ensure that inspections are performed timely and are documented properly.

   (SIR officials concur with the recommendation and have taken action to implement it.)

Inspection Cycles *New York City Transit*

Over half of Transit's current fleet of cars was purchased in the past 10 years. Over one-fifth of the current fleet is composed of cars purchased in the past five years. The remaining fleet was purchased in the mid-to late 1980s. The newer cars were purchased with advanced technologies that were intended to make them easier and less costly to maintain. As an example, there was a pilot program to extend the inspection cycle of the newest cars (the R-142, R-143, and R-160) from 61-71 days to 68 -78 days, and from 9,000-11,000 miles to 10,000-12,000 miles. As of December 15,

2009, this pilot was stopped, reportedly due to technical problems with the computer system that maintains inspection records.

As of December 2009, Transit had 3,252 cars in these newest classifications. Using an estimated average cost that was provided by Transit and changing the interval of inspection cycle from 66 days (plus or minus 5 days) to 73 days (plus or minus 5 days), we estimate that Transit would save $2.3 million annually. (At our closing conference, Transit officials advised us that they would be changing the inspection cycle for newer cars. Subsequently, a 2010 budget document noted that Transit changed the cycle to 11,000 miles and 73 days for the newer cars.)

Staten Island Railway

Railway inspects its cars on a 45-day cycle. It does not use mileage as a factor in determining when to inspect. We found that, prior to 1997, the Railway had been inspecting its cars on a 30-day cycle, a holdover from its procedures when the Railway was subject to FRA regulations. Railway had not been subject to these regulations since 1987, when freight service was suspended. In 1997, an MTA audit report recommended that the Railway change from the 30-day cycle to a 45-day cycle, to save costs. Railway officials agreed and Railway has been using the 45-day cycle ever since. However, they have not sought to adhere to Transit's inspection cycle and Transit has not required them to do so.

We obtained monthly mileage records for Railway's cars for September 2009. The September revenue mileage for the entire fleet was 190,584 miles; the average mileage per car was about 2,978 for the 64 cars. If the Railway inspected its cars on Transit's 66-day schedule, on average the Railway's cars would have gone about 6,551 miles between inspections on a 45-day cycle and the Railway will perform 511 inspections per year, just over eight inspections per car on average. Inspecting the cars on a 66-day basis (the mid-point of Transit's current 61-to 71-day parameter for inspections) will result in 348 inspections per year, an average of about 5.5 inspections per car. The difference in the number of inspections is 163.

Using a Railway-provided estimate of $1,085 of labor costs plus a Transit-provided estimate of $300 material cost per inspection, the total cost per inspection for a Railway car is $1,385. (Railway's estimate does not include a factor for overhead and fringe benefit.) Applying this cost per inspection and assuming that Railways went from a 45-day inspection interval to the 66-day inspection interval currently used by Transit, we estimate that the Railway would save about $283,942 annually. We recommend that Railway evaluate extending its rail car inspection interval to 66 days

(plus or minus 5 days) to achieve savings and to be consistent with the standards set by Transit.

Recommendations

6. Determine the possible savings from extending the inspection interval for the newest classes of cars.

   (SIR officials concur with the recommendation and will evaluate the car inspection interval prior to the arrival of the first replacement fleet cars that will arrive in approximately 2015-2018. MTA-NYCT officials replied that, in 2010, they formally extended the inspection time and mileage interval for both the New Millennium fleet as well as the Legacy subway fleet and the R-46 cars.)

   Auditor's Comments: We question the decision to wait more than four years to evaluate and implement a revised inspection interval and strongly urge MTA executive management to revisit this position. As pointed out in the report, SIR has been operating under a 45-day interval established in 1997 in response to an audit and, according to its response to Recommendation 7, changed it to 66 days in 2010. It should also be noted that Transit has revised its interval without delay and has included its Legacy and R-46 cars.

7. Evaluate extending Railway's car inspection interval to 66 days (plus or minus 5 days).

   (SIR officials replied the car inspection interval was increased from 45 days to 66 days in January 2010.)

Scheduled Maintenance Service Work

Transit conducts SMS work at specific intervals: 4 years, 6 years, 7 years, and 12 years. In our sample of 30 cars, 12 were not yet required to have SMS work. For the remaining 18 cars, we determined that 16 of the 30 required procedures were partially done (12) or not done at all (4).

In response to our preliminary findings, Transit provided documentation to support that some of the procedures were done. For others, they did not provide any documentation to support that the work was done.

Recommendation

8. Determine why the scheduled SMS procedures were not performed as required, and implement procedures to correct the problem(s).

   (SIR officials replied that they had completed a comprehensive SMS program in 2010. They acknowledged the documentation deficiencies identified in the audit and have implemented improvements. They plan to develop a formal SMS Program modeled after NYCT's. MTA-Transit officials replied that all SMS work has been done. As a result, they do not accept the finding and the associated recommendation.)

Auditor's Comments: We stand by our audit results that MTA-Transit officials could not demonstrate that the SMS work was done despite several requests for the information and returning to review records after the preliminary findings report was issued.

Comprehensive Maintenance Plan

The Federal Transit Administration (FTA) provides funding to Transit and the Railway in the form of grants for various purposes. One requirement of these grants is that the recipient has to create a Rail Fleet Management Plan to manage its system and to maintain the equipment purchased by the grants. Transit has a Rail Fleet Management Plan, which includes inspection and maintenance schedules, dedicated locations for performing the inspections and maintenance, approximate time frames for the length of time each activity should take, and calculated costs for maintenance. The Quality Assurance Unit, within Transit's Car Equipment Division, conducts regular audits of the maintenance processes. Audits by both the FTA and the Metropolitan Transportation Authority's independent engineer, Hill International, agree that Transit has an effective maintenance plan.

The Railway does not have a Rail Fleet Management Plan or a maintenance plan. In addition, Railway is not covered by Transit's plan. Railway officials attributed this to the fact that the entire fleet consisted of just 64 cars.

Railway officials also told us that, although the Railway reports to Transit's Department of Subways, it operates independently from Transit. We note that Railway does submit data to Transit, but does not provide regular reports such as routine maintenance and repairs. As a result, Department of Subways executive management does not have information regarding part of the railcar fleet and has less assurance it is maintained properly.

Transit officials explained that fundamental differences between Railway and Transit maintenance operations mandate that they have approached, and will continue to approach, maintenance differently from Transit. For example, the physical isolation of Railway has meant that it has not been able to participate fully in updates and upgrades that have taken place in Transit. Also, although the cars in use on Railway are of the same type as Transit's R-44 car, Railway cars have equipment not found on Transit's R-44, such as a slip-slide system. Transit officials also stated that significant aspects of Transit's 4-, 6-, 7- and 12-year Scheduled Maintenance System program are not included in Railway's maintenance program at all.

It is important that Railway ensures that railcars are maintained properly, including overhauls. We note that the 2010-2014 MTA Proposed Capital Program (Program) includes the replacement of the Railway's 64 R-44 cars and the acquisition of 16 additional cars, at a total cost of $217 million.

Recommendation

9. Department of Subways management should require Railway to operate under Transit's Rail Fleet Management Plan for maintaining railcars in accordance with standards and procedures established for Transit's fleet, and require Railway to report performance results regularly to senior management.

   (SIR officials concur with the recommendation and indicate complete implementation cannot be achieved until the new fleet is procured; however, in the interim, SIR management will continue to submit regular performance reports to senior management.)

Agency Comments

347 Madison Avenue
New York, NY 10017-3739
212 878-7200 Tel
212 878-7030 Fax

Jay H. Walder
Chairman and Chief Executive Officer

Metropolitan Transportation Authority
State of New York

July 18, 2011

Ms. Carmen Maldonado
Audit Director
The Office of the State Comptroller
123 William Street – 21st Floor
New York, New York 10038

Re: Report #2009-S-68 - MTA New York City Transit/Staten Island Railway Selected Aspects of Railcar Fleet Maintenance

Dear Ms. Maldonado:

This is in reply to your letter requesting a response to the above-referenced draft audit report.

I have attached for your information the comments of Mr. Thomas F. Prendergast, President, MTA New York City Transit, which address this report.

Sincerely,

Michael J. Fucilli
MTA Auditor General

Attachment

2 Broadway
New York, NY 10004-2207
646 252-5800 Tel
646 252-5815 Fax

Thomas F. Prendergast
President

New York City Transit

July 14, 2011

Ms. Carmen Maldonado
Audit Director
Office of the State Comptroller
Division of State Government Accountability
123 William Street - 21th Floor
New York, NY 10038

Re: Selected Aspects of Railcar Fleet Maintenance at New York City Transit and Staten Island Railway Audit (2009-S-68)

Dear Ms. Maldonado:

This is provided as a response to the recommendations in the Draft Audit regarding Selected Aspects of Railcar Fleet Maintenance at NYC Transit (NYCT) and Staten Island Railway (SIR). Responses are provided by each Agency. It is important to note that NYCT has undergone several organizational changes over the past three years, with new leadership in place at the most senior levels in Subways, including Car Equipment. The current leadership, myself included, appreciates the opportunity to review this draft and provide our comments.

Recommendation #1 - Increase the timeliness of input of mileage data in RSMIS.

SIR Response: SIR does not utilize RSMIS to track either mileage or maintenance related data.

NYCT Response: We agree that there needs to be more timely input of mileage data. This has been reviewed several times and there has been some improvement although there is a genuine need for further gains in timeliness. We are reviewing opportunities for automation and other system enhancements. We hope to identify gains in the use of various forms of automated data to support the mileage data compilation effort, which has historically been a very paper-intensive effort.

Recommendation #2 - Monitor when inspections are occurring and the reasons they are not performed in a timely manner to ensure that, at a minimum; they meet the established goal of 80 percent.

SIR Response: SIR concurs with the recommendation.
Inspections are currently logged on "Blue Sheets" at the time of inspection and entered into an Inspection Log for separate tracking. SIR is currently exceeding its goal of 80 percent.

NYCT Response: We do monitor our performance pertaining to scheduled inspections and we know the reasons why certain inspections are not within the time and mileage window. It is not possible to inspect every car within the window because of priority work such as SMS or the fact that cars may already be shopped for scheduled or unscheduled repairs when they are due for inspections. However, we can confidently state that our efforts in managing inspection operations and meeting quality standards have been successful. As indicated in the draft audit report, 88% of the sampled cars were exactly within the window and an additional 4% were early. We do everything possible to minimize variances from our scheduling targets.

Recommendation #3 - Re-assess the 80 percent goal for timeliness of inspections to determine whether a higher goal would be appropriate.

SIR Response: Similar to NYCT, below, SIR is open to the idea of increasing the goal and will assess its potential for gradual implementation subject to the realities of operational constraints.

NYCT Response: We are open to the idea of increasing the goal and will assess its potential for gradual implementation subject to the realities of operational constraints. Our analysis shows that early and late inspections are mostly driven by both scheduled priorities or unscheduled car holds, and so cars which may be inspected late have already been shopped. We will also have to work with RTO to improve the recording of mileage data so that Shop Superintendents can more accurately estimate when cars should be brought in for their scheduled inspections as referenced in our response to Recommendation #1. The existing 80% goal has afforded necessary, but reasonable, flexibility in managing and scheduling a large and complex program of fleet maintenance, which has resulted in improved reliability for the subway car fleet. It is important to realize that Engineering standards and principles go into making these decisions, and the results reflect positively on the actions taken. As the draft audit report states, the MDBF statistic for 2009 was 142,961, an 85% improvement over the comparable figure for 1997 (77,161). The May 2011 12-month MDBF for the subway car fleet is 174,330.

Recommendation #4 - Make sure that the Timeliness of Inspection Report is distributed to Transit's senior management.

SIR Response: SIR concurs with the recommendation.
The Inspection Log is forwarded to the Vice President and Chief Officer and the Assistant Chief Officer, Operations, every month. In the future, it will be forwarded to the Senior Vice President, Subways, also.

NYCT Response: We concur and will distribute this report to senior Subways management.

Recommendation #5 - Monitor all Railway cars to ensure that inspections are performed timely and are properly documented.

SIR Response: SIR concurs with the recommendation.
The Log and "Blue Sheets" are compared to ensure timely inspections and accurate records by the Superintendent, Mechanical, at the Clifton Shop.

Recommendation #6 - Determine the possible savings from extending the inspection interval for the newest classes of cars.

SIR Response: SIR concurs with the recommendation.
The evaluation for the anticipated car inspection interval of the replacement fleet will be performed prior to arrival of the first replacement cars which will arrive approximately in 2015 – 2018.

NYCT Response: As indicated in the draft audit report we have formally extended the inspection time and mileage intervals for both the New Millennium fleet (R142 through R160 contracts) as well as the Legacy subway fleet (R62 through R68A cars) and the R46 cars. This was put into operation in 2010 and is reflected in the budget.

Recommendation #7 - Evaluate extending Railway's car inspection interval to 66 days (plus or minus five days.)

SIR Response: SIR concurs with the recommendation.
The car inspection interval was increased from forty-five (45) days to sixty-six (66) days in January 2010.

Recommendation #8 - Determine why the scheduled SMS procedures were not performed as required and implement procedures to correct the problem(s).

SIR Response: The SIR fleet is in a state of good repair as a result of the comprehensive SMS program that was completed in 2010. SIR acknowledges the documentation deficiencies identified in the audit and has implemented improvements. With the planned acquisition of a replacement fleet, a formal SMS Program, modeled after NYCT's, will be developed.

NYCT Response: As was previously communicated to the Auditors, there are no documented cases of SMS procedures not being performed. All cars going through SMS receive all of the work called for in the Detailed Plan and associated work scopes. We, therefore, cannot accept this finding and the associated recommendation.

Recommendation #9 - Department of Subways management should require Railway to operate under Transit's Rail Fleet Management Plan for maintaining railcars in accordance with standards and procedures established for Transit's fleet and require Railway to regularly report performance results to senior management.

> **SIR Response:** SIR concurs with the recommendation. Complete implementation cannot be achieved until a new fleet is procured; however, in the interim, SIR management will continue to submit regular performance reports to senior management. This report includes mean distance between failures and details regarding mechanical failures, including actions taken to resolve these failures.

Thank you again for the opportunity to review and submit comments on this Draft Audit.

Sincerely,

Thomas F. Prendergast
President

cc: C. Bianco