State of New York
Office of the State Comptroller
Division of Management Audit and State Financial Services

METROPOLITAN TRANSPORTATION AUTHORITY
NEW YORK CITY TRANSIT

THE AUTOMATED FARE COLLECTION PROGRAM ADMINISTERING OUT-OF-SYSTEM SALES

REPORT 96-S-65

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Comptroller

State of New York
Office of the State Comptroller

Division of Management Audit and
State Financial Services

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Mr. E. Virgil Conway
Chairman
Metropolitan Transportation Authority
347 Madison Avenue
New York, NY 10017

Dear Mr. Conway:

The following is our report addressing New York City Transit's Automated Fare Collection Program relative to administering out-of-system sales.

This audit was done according to the State Comptroller's authority as set forth in Article X, Section 5, of the State Constitution. We list major contributors to this report in Appendix A.

Office of the State Comptroller
Division of Management Audit
and State Financial Services

February 4, 1999

Executive Summary

Metropolitan Transportation Authority
New York City Transit
The Automated Fare Collection Program
Administering Out-of-System Sales

Scope of Audit

In 1991, the Metropolitan Transportation Authority (MTA) - New York City Transit (Transit) implemented the Automated Fare Collection (AFC) program. The program is gradually replacing the token-based system with one that allows riders to use a swipe card called the MetroCard as payment of fare. Implementation of the MetroCard was intended to enable Transit to provide its customers with flexible pricing, discounts, and other conveniences that would increase ridership. Initial marketing efforts were handled between 1992 and 1996 by the Card Company, a subsidiary established for the purpose by the MTA, Transit's parent agency. In May 1996, the MTA transferred marketing and other MetroCard functions to Transit's Out-of-System Sales -- Merchant Services/MetroCard Sales Unit (Merchant Services). Merchant Services is now responsible for recruiting merchants to sell MetroCards, processing orders, tracking deliveries, billing and collections, and ordering and maintaining MetroCard inventories. During the period July 1996 through December 1996, Merchant Services reported $8.7 million in sales, representing purchases of more than 522,000 MetroCards.

Our audit covered the period June 1996 through June 1997. We also analyzed some of the Card Company's MetroCard-marketing activities, that took place between 1992 and 1996. Our audit addressed the following questions:

- Does the Merchant Services Unit's accounting procedures and controls allow it to monitor MetroCard sales and revenue transactions effectively?

- Should Transit continue to contract with an independent sales organization to solicit potential MetroCard merchants or perform this function in-house?

Audit Observations and Conclusions

We found that the Merchant Services Unit lacked the procedures and controls it needs to account for its Sales and Revenue transactions. Furthermore, many of the record-keeping procedures in place were not being followed by Merchant Services staff. Without proper controls, the

risk exists that not all receivables are collected and that merchant accounts are credited accordingly. We also found a need for Transit to strengthen the supervision and training of its employees. We identified one Unit manager who had been allowed to conduct MetroCard sales transactions on behalf of Transit without any formal recording of his activities. In some instances, MetroCards were being delivered to private residences. Also, sales credits were being issued to merchants without any controls for the approval, recording, or tracking of the credit. In addition, there were no controls to monitor the activities of the independent sales organization that was working under contract. We found that the agent had been allowed to circumvent Transit's procedures for the direct transfer of monies from merchant accounts, and had been authorized to take direct possession of the monies involved. (See pp. 5-9)

Transit officials indicated that a new contract for services will give the contractor new responsibilities such as ordering and storing MetroCards, accepting and delivering merchant orders, and providing billing services. With Citywide implementation of the MetroCard and the public's increased acceptance of it, more merchants are likely to be interested in selling it, thus bringing Merchant Services from the 2,100 merchants at the time of our fieldwork closer to its goal of 3,500 merchants. We believe Transit should reassess its decision to contract out these services. In addition, merchants may experience needless delays in dispute settlement because records could be fragmented between the contractor and Merchant Services. We believe these services can be done by well-trained in-house staff. (See p. 9)

Errors in data entry were a major problem in the Merchant Services Unit that prevented the issuance of timely and accurate management reports. For example, we found 855 instances in which the MetroCard batch number had been entered in the computer twice, thereby overstating the inventory by 21,350 cards with a total value of $359,175. In another instance, the entry of four incorrect batch sizes resulted in an overstatement of inventory by $1.2 million. We also found that 295 transactions had the same batch number posted to 2 or more different merchants, despite the fact that, a batch could be sold just once to a given merchant. In another instance, 458 batch numbers that an employee had classified as sold could not be found on the database more than two months after they were entered. (See pp. 11-19)

Comments of MTA and Transit Officials

We provided a draft copy of this report to MTA and Transit officials for their review. Their comments have been considered in the preparation of this final report and are included as Appendix B.

Transit officials replied that they agreed with most of the audit recommendations and have implemented or planned to implement them. However, they maintained their position that a vendor should perform some of

Merchant Services' activities (e.g., ordering and storing MetroCards) and planned to proceed to contract for services.

Contents

Introduction

Background

The Metropolitan Transportation Authority (MTA) is a New York State-chartered public benefit corporation created by the Legislature in 1965 to deliver transportation services for the Metropolitan New York area. The MTA is governed by a Board whose 17 members are appointed by the Governor. In 1991, the MTA began to implement the Automated Fare Collection (AFC) program, a computerized fare management and marketing system that would allow riders to use a swipe card instead of a token as payment of fare. The swipe card, known as the MetroCard (card), was to replace the token that had been used for decades. Made of thin plastic like credit or charge cards and issued in denominations ranging from $1.50 to $80, it was expected to enable the MTA to provide its customers with flexible pricing, discounts, and other conveniences that would help achieve its goal of increased ridership.

By 1992, the MTA had established a subsidiary, known as the Card Company, to ensure that the design, testing, and installation of MetroCard technology were coupled with a vigorous marketing effort. The Card Company's mission was to develop and distribute informational materials to customers, develop a comprehensive system for selling the MetroCard to out-of-system retail locations, and provide technical advice to the MTA and its agencies concerning integrated-fare policy options (bus and subway transfers).

One of the main objectives of the Card Company was to seek and secure a partnership with a private sector company. According to this plan, the partner, a bank institution, would assume, the functions of customer service, card issuance and control, merchant terminal management, merchant relations, settlement, and information systems. In return, the MTA would provide the venture with finance, audit, and legal functions; and technical standardization services, including the maintenance of current card-payment technology and the management of both hardware and software.

However, on May 10, 1996, the MTA Chairman announced that the MTA and the Card Company would no longer pursue a private venture. The Chairman explained that the new strategy was to "focus MTA energies and efforts on the successful installation of the MetroCard system in the remaining stations." Subsequently, the Card Company was "mothballed" and its responsibilities were divided between the MTA and New York City Transit (Transit), the MTA's affiliate that operates the buses and subways. Under the new arrangement, Transit would be responsible for

the installation of the MetroCard system, customer services, and out-of-system sales. The MTA would be responsible for directing MetroCard policy and marketing, moving forward to integrate the MetroCard as a unified fare medium for all Authority affiliates, and exploring non-transit uses of the card. Shortly after the transfer of operations, Transit's Out-of-System Sales - Merchant Services/MetroCard Sales Unit (Merchant Services or Unit) officials issued a memo to Transit's President expressing their concern over the many adverse conditions inherited from the former Card Company. Among them were concerns over the mechants and the services provided to them, as well as the software systems used to record and monitor transactions which were "filled with bugs and glitches and were not integrated."

Use of the MetroCard has grown rapidly; since July 1, 1997, riders have been able to employ it on all Transit buses and at all of the system's 468 subway stations; and to transfer between the subway and Transit buses, Staten Island Rapid Transit trains, and franchised buses without paying an additional fare.

Merchant Services handles the sales to merchants of pre-valued MetroCards, which have already been assigned a specific value such as $15 or $40. The Unit is responsible for recruiting merchants to sell MetroCards, processing orders, tracking deliveries, billing and collections, and ordering and maintaining MetroCard inventories. For the period of July 1996 through December 1996, Merchant Services reported sales of $8.7 million, representing purchases of more than 522,000 MetroCards. With an annual budget of $5.2 million, the Unit is staffed by 13 employees representing $632,000 in personal services costs.

Audit Scope, Objectives and Methodology

The scope of our audit covers actions taken by Transit's Merchant Services Unit from the time the Card Company was mothballed in June 1996 through June 30, 1997. It also includes an analysis of some of the activities that took place during the Card Company's existence (1992 through 1996), such as database entries, reports, and contractual agreements that had or might have had a direct impact on the Unit's operations.

One of our audit objectives was to determine whether Merchant Services' accounting procedures and controls allow it to monitor MetroCard sales and revenue transactions effectively. We reviewed the Unit's policies and procedures for controlling sales activity as well as those for the monitor-

ing of sales and revenue transactions. A second objective was to assess the need for Transit to contract for the services of an independent sales organization rather than perform the activities in-house.

Transit officials did not provide all of the documents requested, such as merchant folders or the histories for four batches of MetroCards that could not be accounted for. As a result, we could not: determine if merchants were qualified and appropriately investigated prior to entry into the program; reconcile purchase request with deliveries and collections; and trace sales credit entries to supporting documentation. They also insisted on being present for most of our meetings with Unit employees -- preventing them from speaking freely to our staff.

Except for the impairments to our work as described above, we did our audit according to generally accepted government auditing standards. Such standards require that we plan and do our audit in such a way that Transit operations included in our audit scope are assessed adequately. They also require that we understand Transit's internal control systems and the level of its compliance with laws, rules, and regulations that are relevant to our audit scope. An audit includes examining, on a test basis, evidence that supports transactions recorded in the accounting and operating records and applying other auditing procedures that we consider necessary in the circumstances. An audit also includes assessing the estimates, judgments, and decisions made by management. Except for any effect that these impediments may have had on the audit, we believe that our audit provides a reasonable basis for our findings, conclusions, and recommendations.

We use a risk-based approach to select activities for audit. Therefore, we focus our audit efforts on those activities we have identified through a preliminary survey as having the greatest probability for needing improvement. Consequently, by design, we use finite audit resources to identify where and how improvements can be made. Thus, we devote little audit effort to reviewing operations that may be relatively efficient or effective. As a result, we prepare our audit reports on an "exception basis." This report, therefore, highlights those areas needing improvement and does not focus on activities that may be functioning properly.

Internal Control and Compliance Summary

Our consideration of Transit's MetroCard internal control structure identified material weaknesses in data-entry and report generating controls that are further explained in the section of this report entitled "Data-Entry

Errors and Ability to Issue Reports." We also noted other matters involving the internal control structure, as well as matters relating to compliance with laws, rules and regulations that should be addressed by Transit. These matters are presented throughout the report.

Comments of MTA and Transit Officials

We provided a draft copy of this report to MTA and Transit officials for their review and comment. Their comments have been considered in preparing this final report and are included as Appendix B.

Transit officials replied that they agreed with most of the recommendations made in the audit and have implemented or planned to implement them during 1998. However, officials did not agree that Merchant Services should not be outsourced and planned to move forward with contracting out. In addition, they concluded that upon further review, the consultant's work did not warrant any corrective action. Regarding the scope impairment, Transit officials replied that they did not take any action that would have denied the auditors access to certain records. They believe that where records were not provided it is because they were not "obtainable" as a result of the Card Company not transferring all of the historical data.

We believe that Transit officials should reassess the decision to outsource services because they have a Merchant Services Unit where these activities could be handled. In the case of the adequacy of the consultant's work, we have noted Transit's response and recognize that this is a situation where we have reached different conclusions about the consultant's reports.

Within 90 days after 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 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 therefor.

Merchant Services Unit - MetroCard Sales Activities

Each Merchant Services manager has the authority to ask Transit's High Production and Encoding Facility (Encoding Facility) to deliver MetroCards to a contracted carrier's warehouse where they are stored while each card's batch number is entered by Merchant Services personnel into a database. When a sales outlet requests an order of cards, Merchant Services prepares a sales order and faxes it to the warehouse, where the order is counted out, packaged and delivered. Warehouse personnel also record the batch number(s) on the shipping document. Upon confirmation by the carrier that a delivery has been made, Merchant Services links the sales order to the specific batch number(s) in the database and generates a sales invoice. The buyer's account number is added to a computerized list of merchants to be billed; then the list is transmitted for collection to a contracted independent sales organization, which is authorized to transfer money directly from the merchant's account into a Transit account. This electronic transfer is commonly referred to as a "sweep" of the accounts.

Monitoring of Employee Activities

We found that Merchant Services officials had little control over the activities of one of its managers, and were allowing him to act independently and without supervision. He was conducting sales transactions on behalf of Transit without controls that would ensure that the activities had been recorded properly and that all moneys were collected. In addition, this individual neither reported his activities to his supervisor nor submitted financial statements or maintained accurate ledgers to record his sales. Because the Unit had no controls for monitoring the use of the MetroCard order forms such as multiple signature forms, multiple copies of the completed order form, a log book, and sequentially-numbered forms corresponding to the log numbers; he could order cards directly from Transit's Encoding Facility and have them delivered anywhere without being questioned about the validity of the order. This employee was not only sending cards directly to non-merchant corporations but on three occasions he sent a total of 340 cards, valued at $3,400, to private residences of corporate employees.

Although Unit supervisors were aware of some of these activities, they took no action to stop them. They explained that this practice was a carryover from the operations of the Card Company, which had allowed business organizations to make special purchases of cards for their employees and clients. Furthermore, the supervisors contended that

Merchant Services was responsible only for retail merchant sales and that no provisions had been made for special sales. But, in fact, Merchant Services had taken over the activities of the Card Company, which included both functions; and thus should have established controls for monitoring the accounts and overseeing the activities of Unit employees. According to Unit officials, all types of out-of-system sales have been recorded in the MAS 90 accounting system since January 1997.

Transit officials told us that the manager who sent cards to the private homes of corporate employees had been disciplined and given a written warning. However, when we asked for a copy of the warning, they did not provide it. They also told us that the employee resigned prior to completing written documentation of those transactions.

After the manager left, Unit officials attempted to reconstruct the employee's card-handling activities. However, it is doubtful that all transactions have been identified or that all the moneys owed have been collected. For example, Unit officials were in the process of resolving a company's outstanding balance during our audit. However, because records might be missing, the officials themselves did not know exactly how much money was owed. They estimated the debt at more than $4,000, and were relying on the company's records to resolve the issue. We did not receive any information that this issue had be resolved.

Undocumented Sales Credits

According to Merchant Services procedures, the Unit issues credits to merchants who claim that cards were missing from their MetroCard orders. The credit is computed manually and applied against any future purchases by the merchant.

Our review found that the Unit had no controls for approving, recording, or tracking merchant credits. In lieu of a tracking system, Unit personnel simply ask the merchant to remind them, when they make a subsequent purchase, that a credit should be issued. We also found no computerized controls that would prevent an unauthorized entry of credits to a merchant account, and no listing of merchants who had been issued credits or billed a price other than the standard rate.

Our review of Merchant Services' October 1996 detailed report of $1.7 million in sales identified 22 entries of unsupported credits with a total value of $1,731. While this particular amount is not a large proportion of the total, the lack of controls can allow such a problem to go

undetected; and there is a risk that the amount could grow. A check of the merchants' history screen on the computer found no notation to indicate why a credit had been issued to seven merchants with a total of $492 in credits. We also found that the Unit's personnel did not follow up to validate any of these merchants' claims, even if the merchant claimed that an entire batch, consisting of either 25 or 50 cards, had not been received. In such cases, Unit personnel could have easily identified the missing batch number by reviewing the shipping documents. Merchant Services officials could also request an investigation to determine whether the cards had been used, or whether the cards should be rendered inactive by canceling their batch numbers before a credit is issued.

Unit officials provided us with documentation that a log and file on all credit/debit adjustments has been maintained since April 1997. We noted that the adjustments require the approval of a manager and that the System Administrator conducts a periodic review of credits on the system and matches them to the log. Unit officials also advised us that computer security controls are now in place.

Monitoring the Activities of the Contracted Independent Sales Organization and Merchant Recruitment

Merchant Services officials estimated that 3,500 merchants will be needed to provide enough opportunities for Transit riders to purchase the MetroCard conveniently throughout the City. In November 1993, before marketing activities were transferred to the Merchant Services Unit, the Card Company had contracted with an independent sales organization to identify and recruit new merchants into the program, conduct credit investigations, and collect payment on behalf of the MTA. The contract, valued at $680,000, ended in December 1996. Until a new contract is awarded, Transit is utilizing temporary contracts with four other firms. As of May 30, 1997, the Unit had enrolled 2,100 merchants in the program -- 60 percent of the goal.

Merchants were allowed to pay for their MetroCard purchases either through a direct wire transfer or through a sweep (electronic transfer) from their checking accounts into a Transit account. The sweep arrangement was facilitated by a sales contractor, which was allowed to circumvent the direct transfer of money from the merchants' accounts into the Transit account by crediting (fronting) the funds to Transit, then reimbursing itself from the actual collections. While this process provided an immediate payback to Transit, it allowed the contractor to take actual possession of the money collected. In addition, the contractor's activities

were unsupervised because the Merchant Services Unit had not required timely, detailed transaction reports to be reconciled against the original sweep request. Thus, there were no assurances that the merchant accounts were being swept for the correct amount. It also prevented the Unit from maintaining accurate merchant balances and made it impossible for the Unit to refuse new orders from merchants who still owed Transit money from previous orders. When the sales firm's contract had expired it billed Transit for the return of approximately $128,000 in overpayments -- the result of fronted money the contractor claimed had never been collected from the merchants.

Prior to January 1997, there was also little control over the acceptance of new applications from merchants. We asked to see rejected applications that had been submitted by the former contractor and reviewed by Merchant Services. But Unit officials did not show us any applications, explaining that the former merchant approval process was lax. They said every new applicant was accepted at first. It was not until the contract ended, officials explained, that they began to reject many of the last-minute applications submitted by the independent sales organization. They said they considered the down-to-the-wire applications to be attempts to receive additional money from Transit before the contract ended.

Merchant Services began to take a different approach to the merchant application review process in January 1997 by reissuing a modified version of the former Card Company's procedures. Our review found that some of these procedures could still be improved. For example, Unit officials had not noted their reasons for rejecting the applicants whose applications we reviewed. When we asked a Unit official to explain why no reasons were noted on the applications, he informed us that there would be no need to record the reason because it would be "obvious" if one looked at the form. However, when the same person was shown an application at random, he was unable to tell us immediately why it had been rejected. Our subsequent review indicated that reasons are now being noted on the applications.

In addition, none of the merchants we contacted had been notified of their rejection; Unit officials would provide only verbal notice if a merchant called to inquire about an application.

We also found that some merchants may have been rejected unfairly. One facet of the review process included a view of the merchant's checking account balance. However, Unit officials did not inform merchants that

they expected to find a minimum balance of $50 in the account; a lower balance could have resulted in a rejected application.

Transit officials indicated that a new contract for sales organizations will give the contractor added responsibilities, such as ordering and storing of MetroCards, accepting and delivering of merchant orders, and providing billing services. With Citywide implementation of the MetroCard and the public's increased acceptance of it, more merchants are likely to be interested in selling it, thus bringing Merchant Services closer to its goal of 3,500 merchants. In addition, merchants may experience needless delays in dispute settlement because records could be fragmented between the contractor and Merchant Services. Transit should reassess its decision to contract out these services. We believe they can be performed by well-trained in-house staff. Transit officials disagreed with our position, arguing that they would be more effective in an oversight role, concentrating on analytical planning.

Recommendations

1. Use Transit's Encoding Facility records to reconstruct all private transactions conducted by the former manager who operated without supervision. Investigate all unresolved and questionable transactions.

2. Establish controls over the MetroCard order forms by requiring, for example, the use of two signature forms, multiple copies, a log book, and sequentially-numbered forms corresponding to log numbers. Reconcile these forms periodically to copies maintained at Transit's Encoding Facility.

3. Establish a log for the recording and tracking of all merchant credits.

4. Investigate and resolve the $128,000 in overpayments claimed by a former sales organization, so that merchant accounts can be adjusted accordingly.

5. Establish procedures for verifying that missing batches are reduced before a credit or replacement batch is issued.

Recommendations (continued)

6. Inform all merchants about the $50 minimum balance requirement, document in the appropriate record the reasons for rejecting merchant applications and notify the merchant in writing of the decision.

7. Reassess its decision to contract with a sales firm for services that could be performed by a well-trained and adequately supervised in-house staff. In addition, determine what oversight and monitoring will be necessary to provide reasonable assurance that the vendor is performing its duties according to contract terms.

Data-Entry Errors and Ability To Issue Reports

Errors in data entry were a major problem in the Merchant Services Unit that prevented the issuance of timely and meaningful reports. Without these reports, Merchant Services officials could not adequately monitor and review the activities of their employees; correct data-entry errors; issue reliable reports; and track or maintain merchant accounts.

Unit officials stated that the various components of their accounting system's program module (e.g., accounts receivable, general ledger, inventory, and sales) appeared to be "incompatible," making it difficult to issue reliable reports. They claimed that when the modules were updated in the early part of 1996, the former Card Company did not properly test the newly-installed modules. If it had been performed properly, such testing might have alerted management to reporting problems. However, when we asked Unit officials to provide us with evidence of a module-caused error, they could not. Unit officials contend that the system data are accurate and that they have back-up documentation to validate all transactions.

Data-Entry Errors

Merchant Services uses MAS 90 accounting software to process its daily workload. The software consists of interactive program modules such as inventory management, sales order, accounts receivable, general ledger, and report master. We asked Unit officials to provide us with copies of the sales and inventory database records that had been maintained since the MetroCard program began. They were able to give us copies of the sales database that contained entries for all sales up to February 10, 1997; but they could provide us with inventory records only for the period between March 1996 and March 1997. Unit officials informed us that there were problems with extracting data for the earlier period. However, they did not elaborate. We also reviewed some of the Unit's detailed data-entry reports.

In our review of the sales database extract, as well as some of the supporting documentation, we found numerous errors that had a direct effect on the Unit's ability to monitor inventory, track sales and collections, and issue accurate reports. Many of the errors could have been easily detected or eliminated by data-entry edits, that test the reasonableness of the posting. In addition, the use of protected cells within the database would allow access only to authorized personnel and would

prevent changes to data already entered. We also found that Unit managers consistently relied on the information being provided by their staff. The managers could have detected many of the errors if they had reviewed the data-entry process and detailed transaction reports.

Our review of the sales database found 295 transactions indicating that two or more merchants were sold the same MetroCard batch -- at least one Unit employee had discovered a way to change the availability of a previously-sold batch number and assign it again to other merchants. Facilitated by the lack of controls in the Unit's computer system that would prevent the reuse of batch numbers, this practice caused the inventory amounts to be overstated because the true batch number remained available on the system as unsold. Coupled with the Unit's inability to produce records, it could have resulted in improper transactions with no supporting documentation. We also experienced major problems in our attempts to view merchant records; despite our numerous requests, Unit officials never provided us with a merchant folder that we could review. As a result, we could not: determine if merchants were qualified and appropriately investigated prior to entry into the program; reconcile purchase request with deliveries and collections; and trace sales credit entries to supporting documentation.

When questioned, an employee informed us that a shipping document occasionally contains a batch number that, according to the computer, has already been sold. In such cases, he said, he contacts the carrier to verify the accuracy of the number(s) recorded on the shipping document. If necessary, the employee said, he makes the batch number available again for assignment to the second merchant. During our review, we found that the employee had not contacted the carrier as he had claimed; nor did he attempt to resolve the accuracy of the first posting by reviewing the merchant's folder. When we reviewed the shipping documents for two batch numbers assigned to the same merchants, we found that the correct batch numbers had been listed for the earlier (first) shipping document. However, the second and more recent document did not list the batch numbers in question. Therefore, the batch numbers could not have been confirmed with either the delivery company or the merchant, as claimed by the employee. Furthermore, the carrier's air bill number, which is similar to an invoice number, had been entered incorrectly for both of the delivery tickets, making it difficult to trace transactions. Without the correct numbers, it took us several hours to locate just two air bill documents at the warehouse facility. After we informed Unit officials of this practice, they presented us with a more recent sample. We also found that, although the earlier document had contained the correct batch

number, the latter document made no reference to the batch number in question.

We found several other errors in the sales database that contributed to the Unit's inability to issue timely and accurate management reports. For example, 855 batch numbers had been entered twice in the database and sold once. The duplicate entry added to the inventory total, and overstated the amount by 21,350 cards valued at $359,175. Although we were working with limited documentation, we concluded that the errors had been made by Unit employees who had entered a batch-availability number higher than one. When employees enter new batch numbers into the system, they enter the numeral 1 to indicate that it is available for one use. When the batch is sold, the availability-counter deducts one, leaving a balance of zero. However, it is possible for the employee to make the batch available more than once. During one of our visits, we noted that a batch had been entered with an availability number of 21. When we brought the error to the employee's attention, he made no attempt to correct the entry. He explained that the error would correct itself when the batch was sold; at that time, he said, the number would change to zero. But, according to our discussion with a Unit official, the error would not correct itself; the batch would remain available on the system for another 20 attempts to use it. As a result, the inventory balance would be overstated.

In another example of 1,025 entries, which included 1 debit and credit entry, the batch sizes had been entered incorrectly into the database. In most instances, the batch size was doubled for each entry, resulting in an overstatement of inventory by 151,200 cards. These are errors that could have been detected during data entry or during a supervisory review of the detailed transactions report, because batch sizes are usually 25 or 50 cards each. Computer edits could also have detected and prevented the error.

We found data-entry errors throughout the system. For example, we found that two batches of 25 cards had been entered as 39,925 and 27,525 cards; and that two other batches of 50 cards had been entered as 25,100 and 13,250 cards. The net effect of these 4 errors alone, after the cards were sold, would result in an overstatement of inventory by 105,650 cards valued at $1.2 million. Other errors that we found on the database included the use of both 900-series batch numbers and other types of numbers that fell outside the range of valid batch numbers, such as figures with seven digits instead of six. Some of the database errors we found could not be explained easily. For example, we found 1,150 credit entries (sales) totaling 28,750 cards, but no corresponding debit entries in the

database. This finding contradicted Unit officials' statements that it is not possible to post a sale unless the batch is first inventoried (debited).

According to Merchant Services officials, Unit staff no longer have the ability to enter inventory data in the MAS 90 system. For example, new batch numbers are now transmitted to the Unit by the Encoding Facility, already entered on a disk. Thus, Merchant Services employees have far fewer opportunities to make data-entry errors. However, management has to train and supervise its staff properly, otherwise employees may continue to find shortcuts and change data without appreciating its negative effect on the monitoring and reporting process.

For example, we found that one employee, acting independently, had created a "dummy" list to generate sales invoices. We were given several lists of batch numbers this employee claimed had been sold. However, he also claimed that Transit's Encoding Facility had not transmitted these particular batch numbers to the Unit for data entry. We reviewed a list of 458 batch numbers created on January 29, 1997, that cast serious doubts on the employee's claims. The list consisted of valid batch numbers that had not been entered into the Unit's MAS 90 database system. Even with the assistance of a Unit official, we could not locate the numbers on the Unit's database more than two months after they were created. We also found that, contrary to the employee's claims, the Unit had received documentation from Transit's Encoding Facility to support many of the numbers, which had been listed more that two months before the employee had classified them as dummy. Furthermore, we found that several of the batch numbers had not been sold as the employee claimed until several months after they were designated as sold. Although we asked the employee for documentation to support his claims, he provided us with none.

Monthly Sales Reports

We asked Merchant Services management to provide us with copies of the Unit's monthly MetroCard sales reports for the period from July 1996, when the Unit took over this function, until January 1997. In response, Unit management argued that it was Transit's policy not to distribute "unaudited data" to outside entities. However, when the reports were finally provided, we discovered that no such reports had existed before our request. In fact, sales reports for the first six months of the Unit's operation were not issued until March 1997. Moreover, officials in Transit's Operational Accounting office who attempted to use these reports to reconcile Merchant Services inventory and accounts receivable informed

us that the materials provided to them were unacceptable. They said the reports contained no support data or reconciliations to show the reader how the figures had been determined. Furthermore, they were not given other required reports, such as the inventory and accounts receivable.

Our own review, along with the limited documentation provided to us by Merchant Services staff, casts doubt on the reports' accuracy and usefulness. We noted that the net sales totals listed for November 1996 were incorrect; they were simply a copy of the October 1996 totals. In addition, our review of the special sales support documents for the period of October to December in the same year found that the October net sales amount was incorrect. According to the support documentation, $11,475 was written off in "an exchange for advertising." Thus this amount should have been deducted from gross sales as an allowance to arrive at a net sales amount in the report.

We also asked to review the Merchant Services supporting documentation for each month covered by the report. However, after extensive delays and claims by Unit officials that providing such copies would take too much staff time, we decided to review only the documentation for the October entries. Our limited review of the supporting documentation found errors that had resulted in an understatement of net sales revenue. For example, we found that the sales discount had been applied twice in transactions involving mixed sales (e.g., $15 and $40 batches), causing the net sales amount to be understated. Although we did not review the support documentation for the other months in our sample, it is likely that similar errors had also occurred in the remaining months, rendering the reports inaccurate and therefore unusable for reconciling to actual collections. Our review of the merchants' invoices found that these computational errors did not affect the amounts they were charged.

The Unit could not issue reports on a timely basis partly because it did not close out each month's sales activity on the MAS 90 accounting system. The accounts would be left open for two or more months, and the accumulated sales activities for all of these months would be commingled into one report (a Unit official would run a special program to redistribute the sales back into the appropriate months). We noted that this was a recurring problem within the Unit. During one of our visits, we learned that the activities had again been left open for the period of January 1997 through March 1997. If Merchant Services management had supervised its staff properly and had issued timely reports, this problem would not have gone undetected for three months.

Consignment Inventory Reports

To monitor the MetroCard inventory level and the processing activity at the contractor's warehouse facility, Merchant Services prepares a monthly consignment inventory report. The issuance and review of these reports is crucial to Transit's operation, not only for preventing stockouts, but, more importantly, for identifying inventory shortages that may be the result of an intentional act. Our review of the consignment inventory reports for the period of May 1996 through September 1996 found numerous errors in work performed by a Unit that is basically an accounting operation designed to market and sell the MetroCard. Moreover, the Unit's manager was unable to offer any reason why the reports were in such condition, and inhibited all of our attempts to identify the conditions that had led to the reports' inaccuracies.

Besides the unreliability of the figures in the reports, closing and opening inventory balances did not match, and the addition used to arrive at many of the totals listed in the report was not correct. For example, mathematically, the closing balance for the $15 cards in the September report was understated by 220,300 cards, as indicated in the following table:

	MetroCards Per Report	MetroCards Per Audit	Difference
Opening Balance	147,750 cards	147,750 cards	
Additions	230,000	230,000	
Subtotal	377,750 cards	377,750 cards	
Less Sales	79,400	79,400	
Closing Balance	78,050 cards	298,350 cards	220,300 cards

The net effect of these differences was that the dollar value of the inventory was also misstated. Moreover, the report contained no footnotes to explain the discrepancy or caution the reader about any problems that had occurred during the month; thus it was impossible to reconcile the book balance with the actual numbers of cards being maintained at the contractor's warehouse. Unit employees relied solely on the contractor's records for determining inventory levels and re-order points.

Subsequently, Unit officials indicated that they simply copied what was in the reports. As an example, they provided us with some of the documentation used to prepare the September report. Our review found numerous errors that should have been detected by a quick scan of the documents, and corrected. Furthermore, not all amounts had been copied as Unit officials had claimed. It appears that some amounts were changed simply to make them look more realistic; in fact, they were meaningless. For example, the opening balance for the $15 cards was a negative quantity of 147,790, with a negative value of $2.2 million. Since it is impossible to have a negative inventory amount, the Unit employee simply posted the amount as a positive. Likewise, the closing inventory amount was a negative 78,050 cards. Again, the employee chose to report a positive amount. In addition, because he entered incorrect unit costs, (e.g., a card value of $3,030 instead of $15), the ending inventory value was reported as a negative value of $14.1 million. Then, realizing that this was incorrect, the employee had multiplied the ending balance of cards by $15 to obtain a closing balance of $1.2 million. Other errors included entries of incorrect and duplicate batch numbers and incorrect card quantities (e.g., an entry of 5,050 cards instead of 25). All of these errors had a direct effect on the report's overall accuracy. Furthermore, the September 1996 report carried forward prior months' errors, echoing reporting errors carried over from Card Company records made as early as December 1995.

Another problem contributing to the Unit's inability to maintain accurate inventory balances was the late posting of batch numbers to the MAS 90 database system. We took a sample of 91 batches from our inventory check and compared them to the database. We found that 40 batches had still not been listed on the database more than three months after our inventory check.

Although the carrier held a substantial inventory, neither the MTA nor Transit had conducted a physical inventory check to reconcile the warehouse inventories with those reported by Merchant Services or the former Card Company, as allowed under the contract on a quarterly basis. After our discussion with MTA internal auditors, it was agreed that we would conduct a joint inventory count and reconcile it with Merchant Services records. Our joint review found that the contractor had $1.1 million more in MetroCard inventory than the amount reported by Merchant Services. Thus, all of these cards had been placed at risk. Furthermore, they could not account for four batches valued at $2,750 that, according to warehouse records, should have been in stock. Our review found that activity had been recorded on one or more cards in each

of the four batches. On three separate occasions, we requested information on the status of all four batch numbers; Merchant Services officials never provided us with such documentation.

Subsequent to the completion of our field work, Transit officials advised us that they have begun taking and reconciling of inventories as of October 20, 1997.

Accounts Receivable Reports

The Merchant Services Unit claimed an average of $1.4 million in monthly net sales during its first six months of operation. We asked Unit officials to provide us with copies of their accounts receivable reports for the period of August 1996 through January 1997. In response, we were given one report dated February 6, 1997. Our review of this report, as well as the Unit's procedures for monitoring accounts receivable and collections, found that the controls in place for monitoring the accounts were inadequate, and that no reconciliation had been done to determine whether all the money due Transit had actually been collected. Moreover, Unit officials claimed that this was the first report they had produced, and that no other report had been prepared either by them or by the former Card Company. However, we were able to obtain copies of accounts receivable reports from earlier periods.

Our review of the accounts receivable procedure found that accounts were being credited before money was collected. A Unit employee informed us that all receivables are recorded on a disk and sent to a contracted independent sales organization for collection. But before that happens, the contractor prints the names of merchants who will be charged and submits them for review and approval by the Merchant Services Unit. Once approved, each of the merchants' accounts is credited by a Unit employee as having been collected. If the money is not collected, Merchant Services contacts the nonpaying merchants again and resubmits their names for the next collection. However, the accounts receivable entries for these merchants are not reversed in cases of nonpayment. When we questioned this practice, a Unit manager informed us that Merchant Services has never reversed a credit entry. Furthermore, she stated that "industry standards" agree that the liability should be removed from the system. However, as a safeguard, she said that, Unit officials block such merchants' accounts to prevent them from ordering additional cards.

We know of no industry standard that calls for the removal of any receivable before it is collected. Doing so would prevent the tracking and

aging of the account, as well as the reconciliation with actual receivables; and it could allow the commission of an illegal act, such as the reduction or elimination of a merchant's debt. In addition, we noted several inconsistencies in the Unit officials' claims. If the receivables had been credited shortly after submission to the contractor for collection, there should have been no open or outstanding balances. Thus, there would be no basis for placing a block on a merchant's account. Moreover, the February 6, 1997, accounts receivable report contained an outstanding balance of $2.8 million. Theoretically, if all accounts had been credited after they were submitted for collection, these balances would not exist.

We reviewed several merchant accounts with outstanding balances and found that blocks had not always been placed on the accounts in a timely manner or placed as Unit employees had claimed. For example, we found that one merchant had an outstanding balance of $17,074, representing several purchases throughout the period of May 16, 1996 to April 3, 1997, before a block was finally placed on his account. In another example, no blocks were placed on the accounts of one merchant with three locations, despite the fact that he had respective outstanding balances of $2,531, $2,386, and $1,447 at his sites.

We also found that the Merchant Services Unit did not reconcile receivables with collections. Therefore, officials had no assurances that merchant accounts submitted for collection would not get lost in the process, or that all collections would be deposited properly into Transit's account. Moreover, the Unit's failure to reconcile the accounts and credit the merchant after moneys were collected made it difficult to resolve merchant billing problems. For example, Unit officials informed us that one merchant's account had been billed twice in error for $16,800. However, they could not produce any records to show what had caused the error. Our follow-up with the merchant found that it took Merchant Services approximately four months to resolve this issue. Furthermore, the merchant had to produce all of the supporting documentation; Unit officials had informed her that they had no records that could be used to verify the mistake.

Recommendations

8. Require that Merchant Services employees have adequate data-entry and bookkeeping skills and are supervised properly.

9. Install computer edits and protected cells to prevent data manipulation and to minimize data-entry errors. Periodically audit the database to assess its integrity.

10. Take a more active role in the supervision and direction of employee activities to verify that procedures are followed and that all work is documented properly.

11. Complete database postings in a timely manner and that Unit supervisors review them for accuracy.

12. Require that Merchant Service officials produce reports that are timely and accurate and that they are distributed to other Transit Units in a timely manner.

13. Take periodic inventory counts at the contractor's warehouse facility, and reconcile them with the balances maintained by Merchant Services. Investigate and resolve all discrepancies.

14. Credit merchant accounts at the point of collection.

15. Block all merchant accounts after two unsuccessful collection attempts.

16. Reconcile all collections with merchant accounts to determine that no account is lost.

17. Maintain detailed and accurate merchant records and resolve problems promptly.

Performance of Consultant

Shortly after Merchant Services took over the Card Company functions, Transit awarded a $150,000 contract for the services of a consulting firm. The firm, which was to analyze the Unit's processes and recommend improvements, issued reports on September 16, 1996, and November 25, 1996. The first presented an overview of Merchant Services, describing various procedures the Unit follows and reports it prepares. The consultant's conclusion was that the Unit produced too much paperwork, employed too many manual processes, and used a computer system that could neither produce accurate reports nor expand to accommodate new processes. The second report provided solutions to the problems mentioned in the first. One recommended solution was to contract with the same consultant to design and maintain a computer hardware and software system that would both meet the needs of the Unit and streamline its paperwork process. Merchant Services officials decided that many of the changes suggested by the consultant could be addressed by in-house staff and that a newly-designed system would not be necessary.

Transit may not have received all of the services for which it contracted. For example, one of the objectives of the consultant's study was to identify existing and potential problems. Accordingly, the consultant had sought to understand Merchant Services' business process through interviews with staff members, observation of work and process flows, and an analysis of documents describing Unit procedures. However, we found that the consultant did not identify many of the Unit's problems. The consultant's reports simply restated several of the procedures from the Unit's manual, allowing the reader to conclude that the Unit's current controls, procedures, and reports were adequate. They did not alert Transit management to the Unit's procedural weaknesses.

Several of the procedures mentioned in the first report were not being performed by Merchant Services as described. For example, the report stated that MetroCard inventory levels are checked daily between the Unit's database and the contractor's warehouse facility, and that the cards are replenished when they reach a minimum threshold level. On the contrary, our review found that the Unit relied solely on the contractor's reports. There were no established minimum-threshold levels, and the Unit could not confirm the inventory levels with its database because there were so many data-entry errors. In another example, the consultant's report allowed the reader to conclude that the activities of independent sales organizations were monitored, and cited Transit's reviews of

merchant applications, its reconciliations of collections, and its timely notification of independent sales organizations' unsuccessful collection attempts. In contrast, we found that the independent sales organizations' activities were not monitored carefully; merchant applications were accepted routinely; reconciliations were not performed; and the independent sales organizations did not notify the Unit properly about unsuccessful collection attempts.

We also found that the consultant report gave the impression that the Unit regularly issued an extensive list of reports, such as the accounts receivable and daily transaction register. However, many of these reports were either not produced or contained numerous errors that rendered them ineffective in the monitoring and reporting of Unit activities.

The consultant's report did not identify the major causes of the Unit's problems: its managers' failure to supervise, review, and train its staff properly; and the excessive number of data-entry errors made by its own employees. The consultant did not say the Unit's staff was responsible for any of its problems. It did note that untimely deliveries of MetroCards by Transit's Encoding Facility had a negative effect on Merchant Services operations. The report claimed that these late deliveries had caused delays that resulted in back-ordered sales and slower deliveries to merchants. We do not agree with the consultant's conclusions. Our review of eight MetroCard orders that were processed before the consultant report was issued found that six had been filled in a timely manner, while the seventh was just one day late and the eighth was filled four days late. The lateness of the two delays would not have been severe enough to create a stock-out situation that would have prevented Merchant Services from serving its customers.

Transit officials disagreed with our position, stating that the consultant had addressed the objectives of his scope, which were "to identify … for future growth and direction." However the complete statement of objectives in the work scope were "to identify process and functional flows throughout the Division, identify existing problems and potential problems, identify organizational goals, define high-level business requirements, and to provide general recommendations for future growth and direction." We believe the consultant did not meet all of these parameters, for example, existing and potential problems were not identified.

Recommendation

18. Review the consultant's support for its findings and, if warranted, seek reimbursement or ask that the work be redone.

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E. Virgil Conway
Chairman

Metropolitan Transportation Authority
State of New York

July 8, 1998

Mr. William P. Challice
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Office of the State Comptroller
Bureau of Management Audit & State Financial Services
270 Broadway, 19th Floor
New York, New York 10007

Re: MTA NYC Transit Automated Fare Collection Program Administering Out-of-System Sales-- New York State Comptroller's Report -- #96-S-65

Dear Mr. Challice:

On March 24, 1998, the Office of the State Comptroller issued the above-referenced draft audit report.

I am furnishing you with the attached response from New York City Transit, which addresses each recommendation contained in the audit report.

Sincerely,

Attachment

Appendix B

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Lawrence G. Reuter
President

New York City Transit

June 10, 1998

Honorable E. Virgil Conway
Chairman
Metropolitan Transportation Authority
347 Madison Avenue
New York, NY 10017

Re: New York State Comptroller Audit Report #96-S-65
Automated Fare Collection Program Administering Out-of-System Sales

Dear Chairman Conway:

MTA New York City Transit has reviewed the State Comptroller's draft report on the above subject and has the following comments on their findings and recommendations.

Although the report mentions New York City Transit's concern over the adverse conditions inherited from the Card Company in June 1996, it is important to recognize that along with assuming responsibility for that operation, MetroCard Sales was contending with phenomenal growth in merchant enrollment and a concomitant expansion in sales. Initially, it was not possible to simultaneously identify and correct all problems and deal with the significant increase in sales activity.

That was the situation in which we found MetroCard Out-of-System Sales in mid 1996. As was pointed out to the State Comptroller's auditors on several occasions it takes time to resolve most problems. In many situations, there is a learning curve that must be overcome before there is even an understanding that problems indeed do exist. Once areas for improvement were identified, we immediately took steps to correct and improve on what we found. Since we understood that we required assistance, MTA Audit Services and Electronic Data Systems (EDS) were called in to identify areas that needed improvement and to recommend ways to ensure accountability where it was lacking.

Today, the merchant sales operation is vastly improved from the one that the Comptroller's auditors found in 1996. We now have over 3,000 merchants on board who generate monthly sales of approximately $9M – a six-fold increase since the audit's period of review. We have achieved levels of accountability that are far greater than what the State Comptroller found, because we have gained experience and have implemented recommendations from several reviews that provided an independent and unbiased analysis of our merchant sales operation.

With the foregoing in mind, please note that management agrees with most of the recommendations made in the audit. We have already implemented or will implement by the end of the second quarter, 1998 most of the Comptroller's recommendations. We gave detailed responses with supporting documentation to each of the recommendations.

With regard to recommendation 7, we have reassessed the plan to outsource many of Merchant Services' functions, but still plan to go forward with contracting out. The business case has already been made, and our intention is to outsource and provide sufficient in-house oversight controls to make the program an efficient and cost effective operation.

Within the limits of the MAS90 accounting program, we have installed computer edits. Protected cells are not an option with the MAS90 software. External procedures that complement and integrate the MAS90/Merchant Room environment have been implemented to heighten data integrity and security.

Recommendation 18 asks that we review the consultant's work "and, if warranted, seek reimbursement or ask that the work be redone." After a revisit, we still feel that the consultant performed appropriately and delivered a report that addressed the scope of work called for under the contract.

Although we appreciate the value of much of the audit efforts and findings we do not agree that NYC Transit denied auditors access to certain information. Contrary to the auditors opinion, management presence at certain meetings was to ensure that the auditors were provided with accurate and up to date information. At the time of the audit the Out-of-Systems Sales operation at NYC Transit was new and rapidly growing. The staff was not always aware of all the detailed information required by the auditors. On January 6, 1998, a representations and assurances letter was forwarded to the Office of the State Comptroller in which we confirmed "to the best of our knowledge and belief" that all ***obtainable*** records and related data were made available to the auditors. The audit report failed to include that fact, although we had made several requests that this information be made part of the findings. If records were missing as a result of the Card Company's failure to transfer all historical files to us or because they simply did not exist, then we could not make the information available to the auditors.

Finally, MTA Audit Services issued two extensive audit reports to improve controls since the NYS Comptroller began this review. It is our understanding that later this year they will perform a follow-up review on the status of the recommendations.

Sincerely,

Lawrence G. Reuter
President

cc: G. Carrano