



**METROPOLITAN GOVERNMENT OF  
NASHVILLE AND DAVIDSON COUNTY**

**OFFICE OF INTERNAL AUDIT**

**Professional Audit and Advisory Service**

**FINAL REPORT**

**Audit of the Metro Nashville Public  
Schools Food Services Program**

Date Issued: September 28, 2010

Office Location and Phone Number

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*The Metropolitan Nashville Office of Internal Audit is an independent audit agency  
reporting directly to the Metropolitan Nashville Audit Committee*

**EXECUTIVE SUMMARY**  
**September 28, 2010**

Results in Brief	Recommendations
<p>We performed an audit of the processes and controls in place pertaining to the Metro Public Schools Food Service Program, including the new point-of-sale system. Key audit objectives and conclusions are as follows:</p> <ul style="list-style-type: none"> <li>• <i>Were policies and procedures in place to assure employee on the job safety?</i>  Yes. No material weaknesses were observed.</li> <li>• <i>Were controls in place to assure all cafeteria revenue was real and properly accounted for?</i>  Yes. Results from the performed procedures indicate that controls were in place to ensure revenue was complete.</li> <li>• <i>Was revenue deposited in the bank within one business day?</i>  Yes. No material weaknesses were noted.</li> <li>• <i>Were expenditures accurately stated and in compliance with procurement regulations?</i>  Generally yes. We noted some exceptions involving equipment purchases, see Observation D.</li> <li>• <i>Were controls in place to assure inventory records were accurately stated?</i>  Generally yes. We noted some areas that could be improved, see Observation E.</li> <li>• <i>Were point-of-sale system controls in place to assure revenues were correct and complete?</i>  Generally yes. We did note some application controls could be improved, see Observation F.</li> <li>• <i>Was sensitive student information adequately protected in food service operations?</i>  No. We noted extra security measures should be added, see Observation G.</li> </ul>	<p>Food Services Department management should:</p> <ul style="list-style-type: none"> <li>• Ensure that procurement regulations are followed by implementing a method for determining when a bid expires so that purchases will not be made past the bid duration.</li> <li>• Implement a methodology to be able to review a-la-carte production records in a manner that could easily detect abnormalities.</li> <li>• Implement acceptance of online credit card payments for accounts as soon as possible.</li> <li>• Work with vendors to get standardized units offered to simplify the "Produce Price Quotations and Record of Order" forms.</li> <li>• Discontinue the breakfast supplement incentive paid to cafeteria managers or use these funds to encourage other Food Service Program goals.</li> <li>• Work closely with the point-of-sale vendor to ensure that the appropriate financial data is available.</li> <li>• Improve system controls to establish additional accountability and integrity over point-of-sale transaction data.</li> <li>• Improve computer security controls within the department to protect sensitive information.</li> </ul> <p>Management's response can be seen in Appendix A, page 17.</p>

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# INTRODUCTION

## AUDIT INITIATION

The approved Office of Internal Audit annual Audit Work Plan included an audit of Metro Nashville Public Schools Food Service Program. The primary basis for conducting this audit was due to the high dollar amount of revenues and expenditures associated with providing meals to students within Nashville and Davidson County. (Approximately, \$35 million for revenue and \$35 million in expenditures for fiscal year 2010.)

## BACKGROUND

The Metro Nashville Public Schools Food Service Department employs approximately 700 full-time and part-time workers in the central office and its 130 plus cafeterias. The Food Service Department has been, and is currently self sufficient, operating only on federal reimbursement revenue for lunches served and revenues brought in through the cafeteria. Those revenues include a-la-carte item sales and revenues from reduced and paying students.

Generally, public or nonprofit private schools of high school grade or under and public or nonprofit private residential child care institutions may participate in the United States Department of Agriculture National School Lunch Program and Breakfast Program. School districts and independent schools that choose to take part in the programs get cash subsidies and donated commodities from the U.S. Department of Agriculture for each meal they serve. In return, they must serve lunches and breakfasts that meet federal requirements, and they must offer free or reduced price meals to eligible children.

Under the basic school breakfast and lunch programs, household income determines whether a child pays for their meal or receives a reduced-price or free meal. Household income must be below 185 percent of the federal poverty level for a child to receive a reduced-priced meal, and the household income must fall below 130 percent of the federal poverty level for a child to receive a free meal. For the period July 1, 2009, through June 30, 2010, 130 percent of the poverty level was \$28,665 for a family of four; 185 percent was \$40,793.

As of March 22, 2010, 68.35 percent of the Metro Nashville Public School students were approved to receive free or reduced meal benefits through the National School Lunch Program and Breakfast Program. As a participant in these programs, the district receives federal reimbursement income for free, reduced, and paid breakfast and lunch meals served.

The basic federal cash reimbursement rates for the period July 1, 2009, through June 30, 2010, were as follows below: It should be noted that school food authorities that served more than 60 percent free and reduced lunches during the second preceding school year would be classified as 60 percent or

more in the chart below and would therefore receive slightly higher reimbursement rate under the lunch chart.

**Exhibit A.1 – Federal Reimbursement Lunch Rates for Continuous States**

School Lunch Reimbursement	Less than 60%	More than 60%
Paid	\$0.25	\$0.27
Reduced Price	2.28	2.30
Free	2.68	2.70

Source: United States Department of Agriculture website.

It is important to note that individual schools with more than 40% of their students’ lunches classified as free or reduced price are considered as “severe need” and may receive additional federal funding for reimbursable breakfast rates as noted in Exhibit A.2. Current Metro Nashville Public Schools monthly claim data indicates that most individual schools are classified as “severe need” for the breakfast program.

**Exhibit A.2 – Federal Reimbursement Breakfast Rates for Continuous States**

School Breakfast Reimbursement	Non-Severe Need	Severe Need
Paid	\$0.26	\$0.26
Reduced Price	1.16	1.44
Free	1.46	1.74

Source: United States Department of Agriculture website.

In Tennessee, the National School Lunch Program and Breakfast Program are administered by the Tennessee Department of Education, Division of School Nutrition Services. Metro Nashville Public School district’s Board of Education and the Food Service Department share local responsibility for program administration.

## FINANCIAL INFORMATION

Exhibit B below summarizes Food Services Department revenues and expenditures for fiscal years 2007 through 2010.

### Exhibit B – Metro Nashville Public School Food Service Revenues and Expenditures (Prepared by Auditor)

	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	Fiscal Year 2010
Revenues:				
Use of Money or Property	\$ 408,595	\$ 348,939	\$ 95,178	\$ 12,649.72
From Other Government Agencies	20,481,178	22,087,787	24,273,057	25,367,274
Charges for Services	10,248,015	9,458,205	8,682,209	7,147,103
Other	191,175	28,577	20,526	1,029
<b>Total Revenues</b>	<b>31,328,962</b>	<b>31,923,508</b>	<b>33,070,970</b>	<b>32,528,056</b>
Expenditures:				
Personal Services	-11,231,077	-11,900,475	-12,060,973	-11,980,504
Fringe	-5,543,209	-5,873,913	-5,417,750	-5,623,689
Other	-13,834,558	-15,143,472	-16,575,086	-15,510,495
<b>Total Expenditures</b>	<b>-30,608,845</b>	<b>-32,917,860</b>	<b>-34,053,809</b>	<b>-33,114,688</b>
(Over) under	\$ 720,118	\$ (\$994,351)	\$ (\$982,839)	\$(\$586,631.44)

Source: Enterprise One Financial Data

As the exhibit shows, the department has operated at an overall loss for the past three fiscal years. Additionally, the Food Services Department has lost some serving days. If serving days are not made up there is a lost opportunity to generate revenue.

During the 2009-2010 school year a total of 12 serving days were lost. The first five snow days were not made up, two more snow days and five flood days were made up by extending the remaining instructional days, or were waived.

## INFORMATION TECHNOLOGY

The Food Services Department employs a variety of information system hardware and software applications that work cooperatively, enabling the group to efficiently and effectively provide their services to customers.

### Chancery

Chancery Student Management System is Metro Nashville Public Schools student information management system. It is used by individual schools and Food Services Central Office personnel to access and maintain information about students. The major categories of information housed in the system include student demographics, enrollment, attendance, and grading. Chancery Student Management System is the hub of all data regarding a

student in this district. The system feeds information to all of the satellite “student centric” systems; including the Food Services system. In the case of the Food Services system; data is also fed back to Chancery on free and reduced lunch students.

### **WinSNAP**

WinSNAP, is a United States Department of Agriculture approved software system for Nutrient Standard Menu Planning. This nutrient analysis software allows schools to:

- Conduct an accurate nutrient analysis of recipes and menus
- Allow flexibility and variety in menu planning
- Measure compliance with the required nutrient standards for all of the menu options
- Plan menus for a week or longer in cycle format and a calendar
- Weight the nutrient analysis based on production forecasts
- Provide a nutrient source search
- Enter local recipes and processed foods
- Convert nutrient data labels
- Produce a production record

WinSnap connects to the back end databases through stored procedures to upload, retrieve, and present information.

### **WebSMARTT**

WebSMARTT powered by WinSNAP, is a comprehensive web-based foodservice management solution. WebSMARTT includes modules for point of sale and accountability, free and reduced application processing, ordering and inventory, and menu planning and production. The software has the capability of allowing schools to implement a full-cycle model where inventory is received at the site, recipes are prepared, inventory is depleted by sales information gathered during a single point-of-sale session, and orders are generated by menu plan cycle.

### **Enterprise One**

Enterprise One is the primary accounting software system used to record and report financial reporting transactions for the Metropolitan Nashville Government.

## **ACHIEVEMENTS/AWARDS**

The Food Services Department began implementation of an automated point-of-sale system utilizing computer terminals in each cafeteria at the beginning of the 2009-2010 school year. As of May 2010, point-of-sale implementation was already 81 percent complete a significant effort.

Metro Nashville Public Schools, Hull-Jackson Montessori Magnet School won the 2010 Best Practices Award for promoting a healthy school environment. The purpose of the best practices program is to encourage and reward outstanding practices in schools and food authorities in the state.

## **OBJECTIVES AND CONCLUSIONS**

1. *Were policies and procedures in place to assure employee on the job safety?*

Yes. The Food Services Department currently has policies and procedures in place to promote employee safety. In our tests, we reviewed maintenance logs and determined that the logs were current and basic repairs and upkeep on cafeteria equipment was documented. Additionally, these policies and procedures were reviewed with all cafeteria staff at the beginning of each school year during a two day in service orientation. We found no material discrepancies or control weaknesses during our test work.

2. *Were controls in place to assure all cafeteria revenue was real and properly accounted for?*

Yes. Our procedures were designed to ensure that controls were in place to ensure cafeteria revenue remains intact from the time it was received, deposited in the banking institution, and posted in the accounting system. We assessed the controls surrounding revenue collection within the new point-of-sale system. Results from the preformed procedures indicated that controls were in place and designed to ensure revenue collection was complete.

3. *Was revenue deposited in the bank within one business day?*

Generally yes. Our evaluation focused on determining if revenue received was deposited in the banking institution within one business day. We tested 119 randomly selected daily deposits totaling \$38,512. We traced the source documents to the journal entries and the amount posted in the bank account. No material weaknesses were noted.

4. *Were expenditures accurately stated and in compliance with procurement regulations?*

Generally yes. We reviewed the Food Service Department purchasing practices, procedures, and agreements. We conducted several tests to determine if procurement regulations were properly followed and that amounts charged were accurate in regards to the particular bid agreement.

- a. We reviewed 57 individual produce purchases to determine if the lowest bidder was selected. We noted 16 exceptions where the lowest bidder was not selected. For more detail please see Observation A, page 7.
- b. We also reviewed 26 randomly selected batches of direct food purchases to determine if the agreed upon bid price was charged by the vendor. From our review we did not note any discrepancies.

- c. We reviewed equipment purchases made from a particular vendor to determine if the purchases were made in accordance with the bid agreement. From our initial review of all transactions with this vendor, it was noted that several purchases were made past the bid time frame. For more detail please see Observation D, page 9.

5. *Were controls in place to assure inventory records were accurately stated?*

Generally yes. We found that all cafeterias conduct a monthly inventory and determine the value of unsold inventory in each location. We reviewed production records for a-la-carte items in order to determine if inventory levels for a-la-carte items were accurately stated. We judgmentally selected ten schools for review out of a sample of schools that had higher food costs as a percent of revenue. Our review of the ten schools included requesting production records for a-la-carte items sold and comparing those records to what was actually sold. Our review noted a need for enhancement regarding inventory control processes. For more detail please see Observation E, page 10.

6. *Were point-of-sale system controls in place to assure revenues were correct and complete?*

Generally yes. Our evaluation focused on assessing the current application controls within the new point-of-sale system. Application controls were designed to ensure the complete and accurate processing of data, from input to output. From the tests conducted, we noted some areas that could be improved. For more detail please see Observation F, page 12.

7. *Was sensitive student information adequately protected in food service operations?*

No. We conducted several tests to determine if sensitive information was adequately safeguarded. One test performed was a scan of eight randomly selected computers. The scan showed that none of the computers were current on Windows critical security updates. Additionally we determined that a file generated for the free and reduced lunch program contained sensitive student information that required additional security features. For more detail please see Observation G, page 13.

## OBSERVATIONS AND RECOMMENDATIONS

### ***A - Procurement Procedures Pertaining to Produce were not Consistently Followed***

Metro Nashville Public Schools Food Service Central Office solicits weekly quotes for produce items to ensure the best value is obtained. Cafeteria managers receive those quotes via electronic mail from the Central Office. The managers are then required to fill out the "Produce Price Quotations and Record of Order" form for the produce items they need each week, and then place the order with the vendor who has the lowest aggregate total. The vendor selected could vary from school to school depending on which particular items are ordered.

The Office of Internal Audit noted that in some instances the cafeteria manager did not go with the vendor that had the lowest aggregate total. This may have happened due to several reasons, such as: familiarity with one vendor, calculation error, inconsistent unit sizes and prices, or an event could be planned where quality would warrant going with a particular vendor. The Office of Internal Audit also noted that due to the volume of orders being placed, there is no pre-approval required before produce orders are placed. The Office of Internal Audit tested 57 "Produce Price Quotations and Record of Order" forms and 16 out of 57 or (28%) indicated that the vendor with the lowest aggregate total had not been used. However, the estimated total dollar amount lost was only \$121.61 in these specific noted instances. The total variance across all orders placed is unknown.

#### Criteria:

- Prudent business practice.
- *The COSO Internal Control-Integrated Framework* establishes a common definition of internal controls, standards, and criteria by which organizations can assess their internal control systems such as appropriate review of purchase orders.
- *Metro Schools Food Service Operational Procedures – Section X Orders/Receiving & Storage* – states each manager will complete the "Produce Price Quotations and Record of Order" form and then determine the vendor with the lowest aggregate price and place order.

#### Risk:

The Metro Nashville Public Schools food service program may lose money because produce is being purchased at a higher cost. Additionally questions could be raised if a particular vendor is frequently used when they are not the lowest bidder.

#### Recommendation:

Food Services Department management should work with vendors to get standardized units offered to simplify the "Produce Price Quotations and Record of Order" forms. Additionally, built in formulas should be placed in the

“Produce Price Quotations and Record of Order” spreadsheet forms to decrease the possibility of human error associated with mathematical calculations. Finally, orders should be forwarded to the Field Supervisor before placement, as an informational item, and so that a small sample could be periodically reviewed for compliance with guidelines. Field Supervisors could also spot trends and anomalies in vendor selection.

### ***B - Unnecessary Breakfast Supplement Pay for Managers***

The breakfast supplement pay no longer serves as an incentive to encourage participation in the breakfast program. A breakfast supplement was paid to permanently assigned managers of school cafeterias. The supplement was based on breakfast program participation rates. Food Services paid a total \$264,000 in breakfast supplement pay to cafeteria managers during fiscal years 2009 and 2010. Although the breakfast program supplement originally may have been a great incentive to encourage managers to begin a breakfast program, the federal government has since mandated that breakfast programs be made available in all schools where it was needed to provide adequate nutrition for children in attendance.

*Criteria:*

Prudent Business Practices

*Risk:*

Continuing to provide the breakfast supplement to cafeteria managers results in increased payroll expenses and a reduced Food Services fund balance.

*Recommendation:*

Food Services Department management should discontinue the breakfast supplement incentive paid to cafeteria managers or use these funds to encourage other Food Service Program goals.

### ***C - Monthly Profit and Loss Statements were not Available***

The monthly profit and loss statements for each individual school were not available during the 2009-2010 school year due to point-of-sale vendor difficulties in capturing and reporting the data correctly. Monthly profit and loss statements were normally provided to Cafeteria Managers and were available for our review for school years 2007-2008 and 2008-2009. The monthly financial statements are crucial to Cafeteria Managers so they can assess the current financial position of their cafeteria and make prudent management decisions. According to management, the vendor was having problems configuring formulas that would correctly drive the appropriate financial data into accurate financial statements, which in turn created more work for management having to continually test and review financial information for accuracy. Management also stated that monthly statements should be available to Cafeteria Managers during the upcoming 2010-2011 school year.

Criteria:

- Food Service Operational Procedures Section IV – Reports, Records, Procurement and Financial Procedures
- Prudent Business Practices

Risk:

Not having readily available financial information available for analysis can prevent cafeteria managers from being able to properly perform their job duties and make timely management decisions. Identifying significant irregularities among schools such as a decline in revenue, or fluctuating food costs, which could be an indicator of asset misappropriation or waste, would go undetected.

Recommendation:

Food Services Department management should work closely with the point-of-sale vendor to ensure that the appropriate financial data is properly captured, classified, and accurately reflected in the financial statements and quickly made available to Cafeteria Managers and Area Supervisors.

### ***D - Purchases were Made after Bid Expiration***

Food Services continued to purchase cafeteria equipment past the bid expiration date. The invitation to bid (#51879) was issued on April 19, 2006, with general specifications that stated "Metro reserves the right to purchase additional units during calendar year 2006." Food Services continually purchased equipment past the initial bid period of calendar year 2006. The purchases were made during the time period June 2007 through January 2008 for a total of approximately \$387,000. Food Services management stated that they were advised by Metro Nashville Finance's Division of Purchasing to extend the bid, although this was not formally documented. In an interview, Metro Purchasing explained that they did not advise the extension of this bid because it would not have been allowed under the procurement regulations.

Upon further discussion with Food Services Central Office Management, we obtained two letters from the vendor sent to the Director of Food Services, stating that they would extend their prices offered via the expired bid for calendar years 2008 and 2009. During a phone interview with the sales consultant for the vendor who sent the letters, they stated that the bid extension was initiated during a phone conversation with Food Services.

Criteria:

- National School Lunch Program
- School Breakfast Program
- Title 7, Code of Federal Regulations part 3016.36 (c) - Procurement

Risk:

Extending a bid past its expiration date should not be permitted because it eliminates open and fair competition. Fair and open competition is required

when procuring goods and or services. Additionally, the United States Department of Agriculture prohibits schools from using federal funds when procurement rules are not followed.

Recommendation:

Food Services Department management should ensure that procurement regulations are followed by implementing a method for determining when a bid expires so that purchases will not be made past the bid duration. If additional guidance or clarification is needed, the administrator of the program should be consulted.

**E - Food Costs as a Percent of Revenue Could be Improved at Some Locations**

In a report entitled, *Managing for Results in America’s Great City Schools 2009*, presented by the Council of the Great City Schools, specific performance measures and best practices were identified to improve non-instructional operations within school systems. In one benchmarking measure, food costs as a percent of revenue, an average median food cost percentage of 36.6 percent was provided based on 46 public school districts who responded to the survey. Overall district food costs for Metro Nashville was 34 percent in 2008 and 35 percent in 2009 which is lower than the median average. An additional factor that could negatively impact overall district food costs is inventory lost through spoilage or menu alterations due to inclement weather when school is planned but cancelled.

A comparison of the median food cost to individual school food costs within Metro show room for improvement at some Metro schools. The table below illustrates the number of schools with above average food costs.

**Exhibit C– Metro Nashville Public School Food Service above Average Food Costs**

Year	Number of Schools	Range of Food Cost as a Percent of Revenue
2008	30	37-60%
2009	43	37-55%

Source: Auditor Prepared From Financial Statements Provided By Metropolitan Nashville Public Schools Food Services

Total Food Services revenue amounted to \$30.24 million in 2008 and \$31.59 million in 2009. An additional savings of one percent in food costs would save over \$300,000 per year (significant when 2008 and 2009 losses were close to \$1 million). One recognized area of opportunity for revenue and profit enhancement was through the sale of a-la-carte items (single serving, separately priced items sold in addition to the menu meal). Some of these items were individually pre-packaged and sold as is. While a-la-carte items provide an excellent opportunity to enhance revenue, they also provide

opportunities for inventory loss through shrinkage (student or employee theft, failure to ring up, vendor shortages, etc.)

In order to determine if inventory was accurately stated and if shrinkage could be measured, we reviewed manually prepared production records for a-la-carte items (beginning item count minus ending item count) and compared them with items sold via the point-of-sale “item sales” revenue report.

Our review indicated that nine out of ten schools sampled had ending a-la-carte item counts that did not reconcile with what was reported as items sold in the point-of-sale revenue report. Factors such as miscounting items when calculating beginning items available for sale, incorrectly coding the item sold at the point-of-sale or not ringing up the item at all would cause the item counts not to reconcile. Other factors such as theft (student or employee) would also cause differences.

Currently no controls have been instituted to determine whether a-la-carte inventories are consistent with items sold. While this may be difficult to do with items such as bulk purchased cookies, homemade crispy treats, and others, it would easily be possible for prepackaged items such as drinks, ice cream deserts, potato chips, etc. The point of sale system will count items sold on a daily and weekly basis. A system could be created to keep track of items purchased, and inventoried at month’s end with a comparison made to items sold counts from the point-of-sale system.

Criteria:

- Food Service Operational Procedures Section IV – Reports, Records, Procurement and Financial Procedures
- Prudent business practices.

Risk:

Inaccurate records and a lack of visibility of food costs can prevent prompt management action to rectify preventable food cost losses. Lack of information on specific usage and number of units sold prevents an informed manager’s decision in forecasting food purchases or determining top sellers so that those items may be kept available.

Recommendation:

Food Services Department management should implement a methodology to be able to review a-la-carte production records in a manner that could easily detect abnormalities. One possible solution would be to utilize the “inventory update” feature within WebSMARTT. This feature would allow for a-la-carte ending inventory balances to be recorded and updated in the point-of-sale system. A report could then be generated of items on hand for a given school and could be used in conjunction with surprise inventory counts. Discrepancies could be identified and resolved. Another option would be to enhance already used production reports or Excel sheets to track purchases and reported sales of al-a-carte items and compare totals to the ending inventory of each item for al-a-carte items.

## ***F - Data Integrity Controls Could be Improved***

The current point-of-sale system has built in controls to ensure the integrity of transaction records. However, our review provided evidence of potential opportunities to improve internal controls regarding the integrity of cafeteria point-of-sale transactions as described below.

- Seven individuals were listed as having an active login access to the point-of-sale terminals that could not be identified as employees.
- Four individuals listed as having an active login access to the point-of-sale terminals were found to be terminated Food Service Department employees.
- Nine generic login access numbers were created for various Food Service Department employees some of which may be working in different school cafeterias on a daily basis. Generic logins make it difficult to determine which employee worked at which school site.
- The field used for entering notes regarding point-of-sale cash overages or shortages was set to allow null entry in the database allowing no explanation to be required.
- Food Services Central office requested Food Services Information Technology to perform data purges which deleted transaction records directly from the database. The purge removed historical records completely from the database without leaving an audit trail.

### Criteria:

IT Governance Institute's Control Objectives for Information Technology (COBIT 4.1) – *AI2.3 Application Control and Auditability* states: "Implement business controls, where appropriate, into automated application controls such that processing is accurate, complete, timely, authorized and auditable."

### Risk:

Insufficient control over data integrity could lead to possible misappropriation of assets.

### Recommendation:

Food Services Central Office management should improve system controls to establish additional accountability and integrity over transaction data by:

1. Restricting user access only to employees who directly work with point-of-sale terminals.
2. Establishing unique PIN numbers for each employee, and eliminate generic login numbers for roving cashiers and managers so that each transaction can be accounted for by each individual.
3. Enforcing entries in the notes field on daily cash reports so that an explanation is required for shortages and/or overages.
4. Discontinuing data purges directly from the database and use the void feature so that historical records are retained. Also discontinue use of the daily cash report for sites that have implemented point-of-sale.

5. Working with the Metro Nashville Public Schools Information Technology Department to enable the C2 trace feature in the WinSNAP SQL database and schedule the trace to cover non-food serving hours to monitor abnormal activities. Food Service Department management should request to review the trace report periodically.

### ***G - Controls Regarding Protection of Sensitive Information should be Enhanced***

A student's social security number was the only personally identifiable information Food Services uses to match the State's list of students directly certified for free and reduced lunch program benefits with the Metro Nashville Public Schools student enrollment records. The State's list was downloaded manually from their website. Scripts were processed to separate the matched students and unmatched students. The matched student list was then used to update the Food Services WinSNAP database daily. Files generated from the matching process contain each student's social security number. These files are currently saved on Food Service's server in plain text format without encryption and can be viewed through the WinSNAP application customer interface.

From the review performed, we identified the following weaknesses listed below.

- One employee saved a file containing student social security numbers in plain text format on their local computer desktop without encrypting or protecting the file with a password.
- One employee improperly granted another Food Service Information Technology employee the access rights to their shared folder which contained unencrypted files with student social security numbers.
- Eight out of eight selected Food Services computers which included two Information Technology computers, one Central Office computer, and five cafeteria managers did not have the Microsoft Windows critical security updates installed. These computers were connected to the same Windows update server at Metro Nashville Public Schools.
- Database tables containing student social security numbers were not encrypted at any level.
- Execution activities on the databases were not monitored.

#### ***Criteria:***

- Metro Nashville Public Schools Human Resource policy 3104 states: "All files, records, and documents containing confidential information about individuals should be protected by the most appropriate means. Electronic files should be protected through passwords and other measures to restrict access."
- ISO27002 10.4 Protection against malicious and mobile code. "Software and information processing facilities are vulnerable to the introduction of malicious code, such as computer viruses, network worms, trojan horses, and logic bombs. Users should be made aware of the dangers of malicious

code. Managers should, where appropriate, introduce controls to prevent, detect, and remove malicious code and control mobile code."

Risk:

The lack of comprehensive computer security controls exposes sensitive information to malicious exploitation and may cause Metro Nashville Public Schools legal and financial damages and loss of public trust.

Recommendation

Food Services Department management should improve computer security controls within the department to protect sensitive information. This process should include:

- Identifying information that needs to be protected as stated in Human Resource policy 3104.
- Determining the business uses of any sensitive information and restricting access only to the person(s) whose operational purpose and job responsibilities require use of sensitive information.
- Remove unnecessary presentation or distribution of sensitive information.
- Establish procedures to protect any identified sensitive information; (use password or encryption to protect local files, properly configure security logs and audit traces on servers and databases, and promptly install security updates and patches for Windows programs and vendor programs).
- Provide additional training to employees for security awareness and sufficient technical knowledge.

## ***H - Online Credit Card Pre-Payments are not Accepted***

Although not currently utilized, the point-of-sale system has the ability to process online credit card pre-payments to student's lunchroom fund accounts. If utilized, the system would allow parents the ability to pre-pay amounts for later use by the child when purchasing meals. Additionally, parents could review their child's meal purchases and spending history and be able to set specific meal spending limits for their child. Several neighboring counties have had this functionality in their schools for several years.

Metro Nashville Public Schools Food Services would benefit from the advantages that come along with implementing the online prepayment functionality. Some of the advantages would include a possible increase in sales, less cash being handled by cashiers, and a decrease in the amount of non sufficient fund checks necessitating research and collection actions.

The contractual agreement between Metro Schools and the point-of-sale vendor states that "during phase 1 of this agreement, contractor and Metro will develop a solution to process online credit card pre-payments using Metro's credit card processor. This solution must be agreed upon by both parties in order for the contract to proceed." Food Service management states that the online functionality for accepting credit card payments was not

available because the point-of-sale vendor cannot utilize Metro's current credit card processor because the two systems were incompatible.

Through discussions with Metro Finance Division of Treasury, it was stated that the point of sale vendor, School-Link Technologies had agreed to utilize Metro's credit card processor as stated in the contractual agreement, although use of their website "my lunch money" would require using their credit card processor. Use of the website would allow the added functionality for parents such as low balance notifications and reviewing purchasing history.

Criteria:

- Contract between Metropolitan Government of Nashville and Davidson County and School-link technologies for Licensing of Software Products and Services, section 1.02 part i.
- Treasury Policy #15 – Credit and Debit Card Acceptance: "It is not mandatory for Metro departments and agencies to accept credit and debit cards as payment forms. However, if they choose to do so, they are required to utilize the services and procedures established by the Metro Treasurer for this purpose."

Risk:

If online payments were accepted certain risks such as, having less cash on hand for cashiers to manage, and a decrease in the amount of non sufficient fund checks could be minimized leading to better management over day to day operations.

Recommendation

Food Services Department management should implement the acceptance of online credit card payments for accounts as soon as possible. Additionally, Food Services management should work with the point-of-sale vendor and the Metro Treasurer to determine a feasible solution.

# GENERAL AUDIT INFORMATION

## STATEMENT OF COMPLIANCE WITH GAGAS

We conducted this performance audit from March 2010 to July 2010 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 observations and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our observations and conclusions based on our audit objectives.

One observation was communicated separately to Metro Nashville Public Schools Food Service Program management due to security strategy concerns.

## SCOPE AND METHODOLOGY

The audit period focused primarily on the period July 1, 2008, through May 31, 2010, financial balances, transactions, and performance on the processes in place during the time of the audit.

The methodology employed throughout this audit was one of objectively reviewing various forms of documentation, including written policies and procedures, financial information, various forms of data, reports and information pertaining to the Food Service program. Additionally, management, administrative and operational personnel were interviewed and directly observed.

## CRITERIA

In conducting this audit, Metro Nashville Public School's Food Service program processes were evaluated for compliance with:

- *The Committee of Sponsoring Organizations Internal Control- Integrated Framework*
- *IT Governance Institute's Control Objectives for Information Technology (COBIT 4.1) – A12.3 Application Control and Auditability*
- National School Lunch Program
- School Breakfast Program
- Title 7, Code of Federal Regulations part 3016.36 (c) - Procurement
- Metro Nashville Public Schools Food Service Operational Procedures and Instructions
- Prudent Business Practices

## STAFF ACKNOWLEDGEMENT

Carlos Holt, CPA, CFF, CIA, CFE, CGAP - Audit Manager  
Jane Terry, CFE – In Charge Auditor  
Tracy Carter, CFE - Staff Auditor  
Qian Yuan, CISA - Staff Auditor

## **APPENDIX A. MANAGEMENT RESPONSE**

- Management's Responses Starts on Next Page –



METROPOLITAN  
**Nashville**  
PUBLIC SCHOOLS

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*Fred Carr*  
*Chief Operating Officer*

September 20, 2010

Mr. Mark Swann  
Metropolitan Auditor  
Office of Internal Audit  
222 3<sup>rd</sup> Avenue North, Suite 401  
Nashville, TN 37201

Re: Food Service Audit Report 2010

Dear Mr. Swann:

This letter is to acknowledge receipt of the report entitled, "Final Draft 2010 MNPS Food Service Audit Report". This department has reviewed and evaluated all of the observations and recommendations contained in the report. As a result, MNPS, working in cooperation with the Food Service Department, are in the process of implementing recommendations and/or improvements to the processes involved.

Metropolitan Nashville Public Schools expresses its appreciation for your assistance and support during the audit process. Recommendations for improving the operation of MNPS functions are always welcome.

Sincerely,

Fred Carr  
Chief Operating Officer

FC/pg

**Audit of the Metro Nashville Public Schools Food Service Program  
Management Response to Audit Recommendations**

Audit Recommendation	Response to Recommendation / Action Plan	Assigned Responsibility	Estimated Completion
<p><b>A.</b> Food Services Central Office management should work with vendors to get standardized units offered to simplify the “Produce Price Quotations and Record of Order” forms. Additionally, built in formulas should be placed in the “Produce Price Quotations and Record of Order” spreadsheet forms to decrease the possibility of human error associated with mathematical calculations. Finally, orders should be forwarded to the Field Supervisor before placement, as an informational item, and so that a small sample could be periodically reviewed for compliance with guidelines. Field Supervisors could also spot trends and anomalies in vendor selection.</p>	<p><b>Accept</b></p> <p>Produce procurement is under review for modification of processes. Modifications will potentially involve changes to ordering units, the order form and the order process.</p>	<p>Sheila Clark</p>	<p>On-going</p>
<p><b>B.</b> Food Services Central Office management should discontinue the breakfast supplement incentive paid to cafeteria managers.</p>	<p><b>Accept</b></p> <p>The breakfast supplement has been discontinued.</p>		<p>Implemented</p>
<p><b>C.</b> Food Services Central Office management should work closely with the point-of-sale vendor to ensure that the appropriate financial data is properly captured, classified, and accurately reflected in the financial statements and quickly made available to Cafeteria Managers and Area Supervisors.</p>	<p><b>Accept</b></p> <p>Management continues to work with the point of sale vendor to meet these important objectives.</p>	<p>Sheila Clark</p>	<p>On-going</p>
<p><b>D.</b> Food Services Central Office management should ensure that procurement regulations are followed by implementing a method for determining when a bid expires so that purchases will not be made past the bid duration. If additional guidance or clarification is needed, the administrator of the program should be consulted.</p>	<p><b>Accept</b></p> <p>Procurement guidelines will be reviewed.</p>	<p>Sheila Clark</p>	<p>On-going</p>
<p><b>E.</b> Food Services Central Office management should implement a methodology to be able to review a-la-carte production records in a manner that could easily detect abnormalities. One possible solution would be to utilize the “inventory update” feature within WebSMARTT. This feature would allow for a-la-carte ending inventory balances to be recorded and</p>	<p><b>Accept</b></p> <p>Additional functionality features of the new point of sale system will be reviewed for implementation to strengthen current business practices.</p>	<p>Sheila Clark</p>	<p>On-going</p>

**Audit of the Metro Nashville Public Schools Food Service Program  
Management Response to Audit Recommendations**

Audit Recommendation	Response to Recommendation / Action Plan	Assigned Responsibility	Estimated Completion
<p>updated in the point-of-sale system. A report could then be generated of items on hand for a given school and could be used in conjunction with surprise inventory counts. Discrepancies could be identified and resolved. Another option would be to enhance already used production reports or Excel sheets to track purchases and reported sales of al-a-carte items and compare totals to the ending inventory of each item for al-a-carte items.</p>			
<p><b>F. Food Services Central Office management should reassess its transaction flow and improve system controls to establish additional accountability and integrity over transaction data. We recommend the following controls for Food Service to consider:</b></p> <ol style="list-style-type: none"> <li>1. Restrict user access only to employees who directly work with point-of-sale terminals.</li> <li>2. Establish unique PIN numbers for each employee, and eliminate generic login numbers for roving cashiers and managers so that each transaction can be accounted for by each individual.</li> <li>3. Enforce entries in the notes field on daily cash reports so that an explanation is required for shortages and/or overages.</li> <li>4. Discontinue data purges directly from the database and use the void feature so that historical records are retained. Also discontinue use of the daily cash report for sites that have implemented point-of-sale.</li> <li>5. We also recommend that Metro Nashville Public Schools IT server group to enable the C2 trace feature in the WinSNAP SQL database and schedule the trace to cover non-food serving hours to monitor abnormal activities. Food Service management should request to review the trace report periodically.</li> </ol>	<p><b>Accept</b> All terminated employees are purged from the system at year end and scrutiny to existing logins performed. Software functionality does not allow mid-year deletion.</p> <p>Software functionality does not allow for 'roaming profiles', therefore the generic logins are necessary. FS maintains a site assignment log documenting roving employees' daily work sites. Also, the notes field in the software is utilized to track all use by roving employees.</p> <p>Overages and shortages outside of an established range require an explanation in the notes field via FS business practices and policy. Compliance is monitored through weekly review of reports. POS software functionality does not have the option capability to set a requirement for an explanation in the notes field.</p> <p>Void feature being referenced is unavailable in the custom daily cash report spreadsheet created by POS vendor however use of the daily cash report is discontinued in sites that have implemented point of sale.</p> <p>Security measures on the database tables and monitoring of execution activities on the databases are the responsibility of the MNPS Server Support Group and the request has been made for these measures.</p>	<p>Tim Rock</p> <p>Tim Rock</p> <p>Sheila Clark</p> <p>Sheila Clark</p> <p>Tim Rock</p>	<p>On-going</p> <p>On-going</p> <p>On-going</p> <p>On-going</p> <p>On-going</p>

**Audit of the Metro Nashville Public Schools Food Service Program  
Management Response to Audit Recommendations**

Audit Recommendation	Response to Recommendation / Action Plan	Assigned Responsibility	Estimated Completion
<p><b>G.</b> Food Services Department management should establish security infrastructure within the department within the department to protect sensitive information. This process should include:</p> <ul style="list-style-type: none"> <li>• Identifying information that needs to be protected as stated in Human Resource policy 3104.</li> <li>• Determining the business uses of any sensitive information and restricting access only to the person(s) whose operational purpose and job responsibilities require use of sensitive information.</li> <li>• Remove unnecessary presentation or distribution of sensitive information.</li> <li>• Establish procedures to protect any identified sensitive information; (use password or encryption to protect local files, properly configure security logs and audit traces on servers and databases, and promptly install security updates and patches for Windows programs and vendor programs).</li> <li>• Provide additional training to employees for security awareness and sufficient technical knowledge.</li> </ul>	<p><b>Accept</b></p> <p>Security updates and patches for Windows and vendor applications were updated ending August 31 and Food Service has now migrated to a new updating system.</p> <p>Access to sensitive student information has been restricted to appropriate users. Managers' computers have restricted access and managers are instructed to 'lock' it when not in use.</p> <p>MNPS policy provides additional protection by forcing password changes for all users periodically. Managers do not have access to the local database.</p> <p>Security guidelines are covered at all POS training sessions.</p>	<p>Tim Rock</p> <p>Tim Rock</p> <p>Tim Rock</p> <p>Tim Rock</p>	<p>On-going</p> <p>On-going</p> <p>On-going</p> <p>On-going</p>
<p><b>H.</b> Food Services Central Office management should implement the acceptance of online credit card payments for accounts as soon as possible. Additionally, Food Services management should work with the point-of-sale vendor and the Metro Treasurer to determine a feasible solution.</p>	<p><b>Accept</b></p> <p>This feature remains a part of the technology plan to be implemented when details to enable a successful outcome are established.</p>	<p>Jay Nelson and MNPS</p>	<p>2011</p>