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## HIGHLIGHTS

Highlights of City Auditor Report #0801, a report to the City Commission and City management

### WHY THIS AUDIT WAS DONE

During a prior Audit of Fleet Parts Operations (2003), we were unable to provide assurances over accountability for fuel due to inadequate and unreliable fuel records. The purpose of this audit was to review current fuel operations to provide assurances that: fuel is properly safeguarded and accounted for as to fuel purchased, received, dispensed, and in inventory; fuel is bought and sold internally and externally at competitive prices; and fuel purchases and operations comply with applicable laws, policies, and contracts.

### WHAT WE RECOMMEND

We provided recommendations to further enhance fuel operations, by:

1. Enhancing the monthly fuel reconciliation processes, and implementing oversight controls to compensate for the lack of segregation of duties;
2. Implementing additional controls over department-specific fuel tanks not managed by Fleet;
3. Implementing additional physical and logical controls over FuelMaster dispensing unit cabinet keys, and user ids and passwords; and
4. Updating fuel operations procedures and implementing performance measures to evaluate fuel operations efficiencies and effectiveness.

We also provided recommendations to:

5. Further enhance compliance with state fuel tax laws by filing additional returns and related amended returns to obtain eligible refunds related to diesel fuel purchased for off-road use; and
6. Process contract amendments according to City policy.

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Audit conducted by Beth Breier, CPA, CISA, Audit Manager

October 18, 2007

## FLEET FUEL OPERATIONS

*Management has significantly improved the accountability for and safeguarding of fuel, and supports further recommended improvements.*

### WHAT WE CONCLUDED

Since 2003, the accounting for and safeguarding of fuel has greatly improved. Management acquired and implemented the FuelMaster® Fuel Management System (FuelMaster), implemented a monthly reconciliation process to account for the fuel inventory, and implemented improved processes to track purchased and dispensed fuel. Overall, we concluded:

- ✓ The City bought fuel at competitive prices and sold fuel at competitive prices to internal and external customers.
- ✓ The billing processes were improved to bill for fuel dispensed as recorded in the FuelMaster system.
- ✓ Fuel purchased, dispensed, and in inventory was accounted for.
- ✓ Monthly vehicle usage, cost, and mileage reports, and fuel dispensed to individuals through personal accountability keys were distributed and readily available for departments to review.
- ✓ There were adequate physical and system security controls over access to fuel pumps and tanks.
- ✓ Fuel operations complied with applicable environmental laws.

Areas where improvements were needed related to:

- The monthly reconciliation processes did not include all tanks and deliveries, and a system process was not being performed accurately.
- One person was performing too many key procedures in fuel operations resulting in a lack of segregation of duties.
- Fuel operations procedures were outdated, and the performance measures were not being used to assist in managing fuel operations.
- The City did not file all eligible fuel tax refund returns and the prior returns submitted needed to be amended. Net eligible refunds amounts are estimated to be \$26,666.
- An amendment to the fuel contract was not properly processed.



**Audit of  
Fleet Fuel Operations**

**AUDIT REPORT #0801**

**October 18, 2007**



Copies of this audit report #0801 may be obtained from the City Auditor's web site (<http://talgov.com/auditing/index.cfm>), by telephone (850 / 891-8397), by FAX (850 / 891-0912), by mail or in person (City Auditor, 300 S. Adams Street, Mail Box A-22, Tallahassee, FL 32301-1731), or by e-mail ([auditors@talgov.com](mailto:auditors@talgov.com)).

Audit conducted by:  
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## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>SCOPE, OBJECTIVES &amp; METHODOLOGY .....</b>	<b>5</b>
<b>BACKGROUND .....</b>	<b>7</b>
<b>SUMMARY OF AUDIT RESULTS AND RECOMMENDATIONS .....</b>	<b>16</b>
<b>ACCOUNTING FOR AND SAFEGUARDING OF FUEL.....</b>	<b>17</b>
<b>PURCHASING AND BILLING OF FUEL .....</b>	<b>31</b>
<b>COMPLYING WITH LAWS, POLICIES, AND CONTRACTS.....</b>	<b>32</b>
<b>CONCLUSION .....</b>	<b>37</b>
<b>APPOINTED OFFICIAL’S RESPONSE.....</b>	<b>39</b>
<b>APPENDIX A – PROPOSED ACTION PLAN .....</b>	<b>40</b>
<b>APPENDIX B – PICTURES OF VARIOUS CITY FUEL EQUIPMENT.....</b>	<b>42</b>

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# *Audit of Fleet Fuel Operations*



Sam M. McCall, CPA, CGFM, CIA, CGAP  
City Auditor

*Report #0801*

*October 18, 2007*

## *Executive Summary*

*Many improvements  
have been made in the  
accounting for and  
safeguarding of fuel in  
Fleet as a result of  
management's actions.*

This audit addresses Fleet fuel operations during the period October 1, 2005, through July 31, 2007. The purpose of this audit is to provide assurances that: fuel was properly safeguarded and accounted for as to fuel purchased, received, dispensed, and in inventory; fuel was bought and sold internally and externally at competitive prices; and fuel purchases and operations complied with applicable laws, policies, and contracts.

Since the Audit Report on Fleet Parts Operations (#0303), we concluded that the accounting for and safeguarding of fuel has greatly improved. In the 2003 audit, we were unable to provide assurances over accountability for fuel due to inadequate and unreliable fuel records. Since then, improvements were made by management to acquire and implement the FuelMaster® Fuel Management System (FuelMaster), implement a monthly reconciliation process to account for the fuel inventory, and implement improved processes to track purchased and dispensed fuel.

We noted areas where controls were in place, as well as areas where improvements can be made to further enhance fuel operations processes related to the accounting for and safeguarding of fuel. We concluded that:

- Fuel operations staff has implemented adequate processes and controls to track and record fuel purchased and received and dispensed by vehicle (or person). Additionally, fuel operations staff has implemented a monthly reconciliation process to fully account for the fuel inventories at the two largest fuel

dispensing sites (Fleet main site and police station). This accounts for a majority (85%) of total fuel inventory capacity.

Areas where additional controls over the accounting for fuel could be implemented include: 1) providing independent oversight over fuel inventory adjustments and reconciliations to compensate for a lack of segregation of duties; 2) increasing the number of tanks (from 85% to 100%) included in the monthly reconciliation process; 3) inputting all fuel purchases into the FuelMaster system, including fuel delivered to power plants and picked up in the Fleet fuel trucks; 4) implementing a process to test the accuracy of the electronic tank monitoring system; 5) implementing better tracking, monitoring, and reconciling of fuel dispensed through the department-specific fuel tanks; and 6) utilizing the correct processes within the FuelMaster system to ensure that the calculated and FuelMaster system balances are the same.

- Fleet management implemented various security (physical and system) controls to limit access to fuel at the 15 managed fueling sites. Examples include cameras at the main fueling site to monitor and capture fueling transactions, locating tanks behind fences or close to employee activity, locks on hoses, and system time-out settings (turn off dispensing capability after a certain amount of time without any activity).

Additional controls that would further enhance the safeguarding of fuel include assigning an independent systems administrator to the FuelMaster system, strengthening the user security and password management controls within the FuelMaster system, and improving the tracking of assigned manual (supervisor) keys to the FuelMaster controller dispensing unit cabinets.



- During the audit period, fuel purchases were ordered by an authorized person, and fuel invoices were approved by an appropriate person and charged to the proper account in the City's financial system.
- The City bought fuel at competitive prices and sold fuel at competitive prices to internal and external customers. Departments and external agencies (Leon County) were billed the correct amounts.
- The City complied with applicable environmental laws.
- The City did not file for all eligible fuel tax refunds related to diesel purchased for use by off-road vehicles. From January 2005 through June 2007, the City received over \$465,000, but was eligible for an additional \$26,666 for taxes paid on diesel fuel purchases used in off-road vehicles. Prior submitted fuel tax refund returns should be amended to exclude previously included fuel purchases that should be claimed on the additional fuel tax refund returns.
- Overall, fuel operations complied with the City policies and procedures.

We noted one item of noncompliance with the City Procurement Policy when changes to the contract were not authorized using a required contract amendment. Additionally, we recommended that Fleet update the current fuel operations procedures to reflect current operations and systems, and develop and implement performance measures to assess and evaluate Fleet fuel operations.

We would like to acknowledge the full and complete cooperation and support of Fleet management and staff, Accounting Services, and

employees from Syn-Tech Systems, Inc., (developer and owner of the FuelMaster).

# *Audit of Fleet Fuel Operations*



Sam M. McCall, CPA, CGFM, CIA, CGAP  
City Auditor

**Report #0801**

**October 18, 2007**

## ***Scope, Objectives & Methodology***

*The audit objectives included determining if fuel was properly accounted for and safeguarded, bought and sold at competitive contract prices, and whether operations complied with applicable laws, policies, and contracts.*

The scope of this audit was to review Fleet fuel operations during the period October 1, 2005, through May 31, 2007, and selected subsequent fuel activities through July 31, 2007.

Our audit objectives were to provide assurances that:

- Fuel was properly safeguarded and accounted for as to fuel purchased, received, dispensed, and in inventory.
- Fuel was bought and sold (internally and externally) at competitive prices.
- Fuel purchases and operations complied with applicable laws, policies, and contracts.

Our methodology included identifying and analyzing the amount of fuel, oil, and lubricants purchased and dispensed to City departments for fleet vehicles, and performing specific audit procedures to answer the audit objectives.

To provide assurances that fuel was properly safeguarded and accounted for, we: interviewed staff; reviewed contracts and industry practices; observed fuel ordering, delivery, procurement, inventory, and reconciliation processes; and analyzed configuration settings and data in the FuelMaster® Fuel Management System (FuelMaster). We obtained an understanding of the physical controls at the fueling sites and observed selected sites to determine whether there were adequate controls in place. [See pictures in Appendix B.]

To provide assurances that fuel was bought at competitive and contract prices, we reviewed contract terms, tested fuel purchases and deliveries recorded in FuelMaster, fuel operations records, and the City's PeopleSoft financial system. We recalculated the fuel cost on invoices for accuracy and compliance. We also compared fuel prices on invoices to the industry five-day average price at the Bainbridge, Georgia, fuel terminal (for all of the invoices tested, the City received fuel from this location) as posted by the Oil Price Information Service (OPIS). OPIS, a widely accepted fuel price benchmark for supply contracts and competitive positioning, provides a weekly publication with fuel prices for each distribution location.

To assure that fuel was billed at competitive prices to departments and external agencies, we determined fuel dispensed through the FuelMaster system, traced the gallons dispensed through the FASTER Fleet Management System to the Fleet billing database, and reconciled the amount of fuel dispensed to the amount billed through Accounts Receivable records. We also recalculated the fuel overhead rates for accuracy and reasonableness.

*Our audit procedures included interviewing staff and experts from state and local agencies, recalculating overhead rates, reconciling the fuel inventory, analyzing records and transactions, and determining compliance with applicable laws, ordinances, and policies.*

To provide assurances that fuel operations complied with applicable state and federal laws and City ordinances and policies, we interviewed City fuel, environmental safety, and accounting staff, County environmental inspectors, Florida Department of Environmental Protection inspectors and Florida Department of Revenue fuel tax auditors. We also reviewed Florida Statutes, Florida Administrative Code, Code of Federal Regulations, City ordinances and policies, and City supporting documentation to determine compliance.

The scope of this audit did not include fuel operations at StarMetro, the City's mass transportation system.

We conducted this audit in accordance with the International Standards for the Professional Practice of Internal Auditing and generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

**Background**

For Fleet operations, the majority of dollars spent on fuel was purchased for vehicle use through Fleet Management. Table 1 shows the dollars spent on fuel during the last three fiscal years (through May in fiscal year 2007).

**Table 1  
Fuel Purchases for Vehicle Operations for  
Fiscal Years 2005, 2006 and 2007 (8 months)**

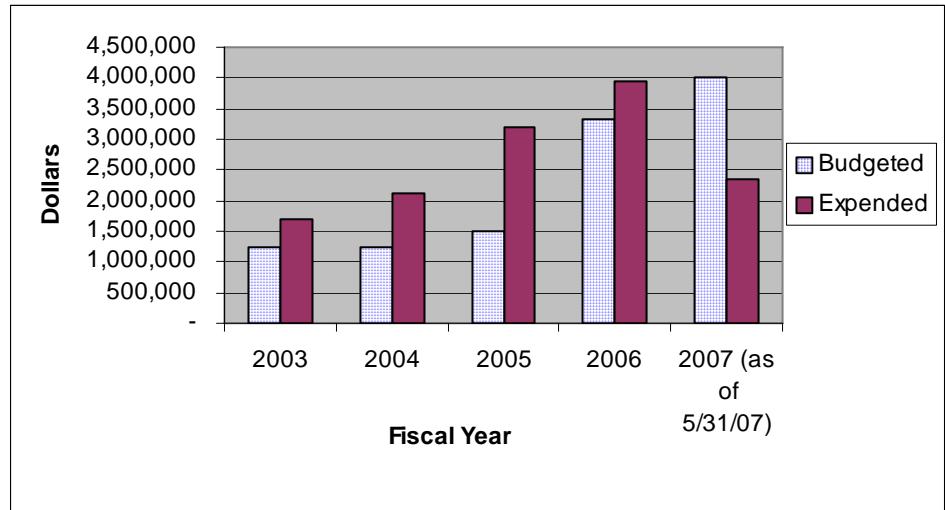
	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007 (through May)</b>
Fleet	\$ 3,202,224	\$ 3,843,393	\$ 2,606,694

Source: Purchases from the City financial system

Figure 1, on the next page, shows the amount the City budgeted and spent on fuel during the last four complete fiscal years. In FY 2007, the City has budgeted \$4 million for the cost of Fleet fuel.

**Figure 1**  
**Budgeted to Actual Expenditures for Fleet Fuel**  
**in Fiscal Years 2003-2006**

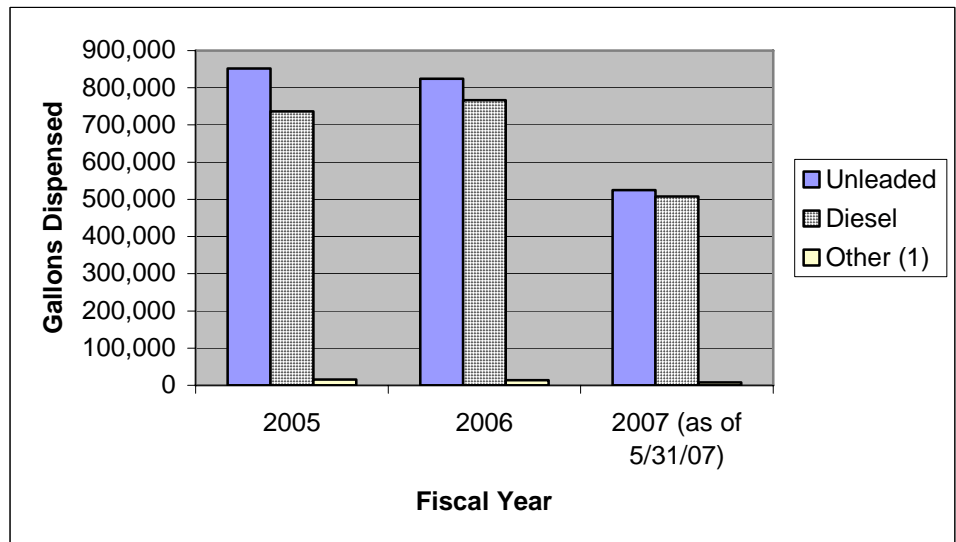
*For FY 2007, the City budgeted \$4 million for fuel.*



Source: City financial reports

Figure 2 (chart and data) shows the gallons of fuel dispensed during the last three fiscal years (through May in fiscal year 2007).

**Figure 2**  
**Gallons of Fuel and Oils Dispensed for Vehicle Operations**  
**for Fiscal Years 2005, 2006 and 2007 (8 months)**



Type of Fuel	FY 2005		FY 2006		FY 2007 (8 months)	
	Gallons	%	Gallons	%	Gallons	%
Unleaded	852,050	53%	824,074	51%	524,477	50%
Diesel	736,491	46%	766,982	48%	507,631	49%
Other (1)	15,192	1%	13,368	1%	7,729	1%
<b>Totals</b>	<b>1,603,733</b>	<b>100%</b>	<b>1,604,424</b>	<b>100%</b>	<b>1,039,838</b>	<b>100%</b>

Source: Gallons dispensed from the FuelMaster system

Note: (1) Includes: Oil 15W-40, Oil 5W-30, ATF DEX II, AW 68 Hydraulic Oil, Tractor Hydraulic

*Fleet spent more for fuel in fiscal year 2006 than in 2005 due to the increase in fuel cost rather than an increase in fuel usage.*

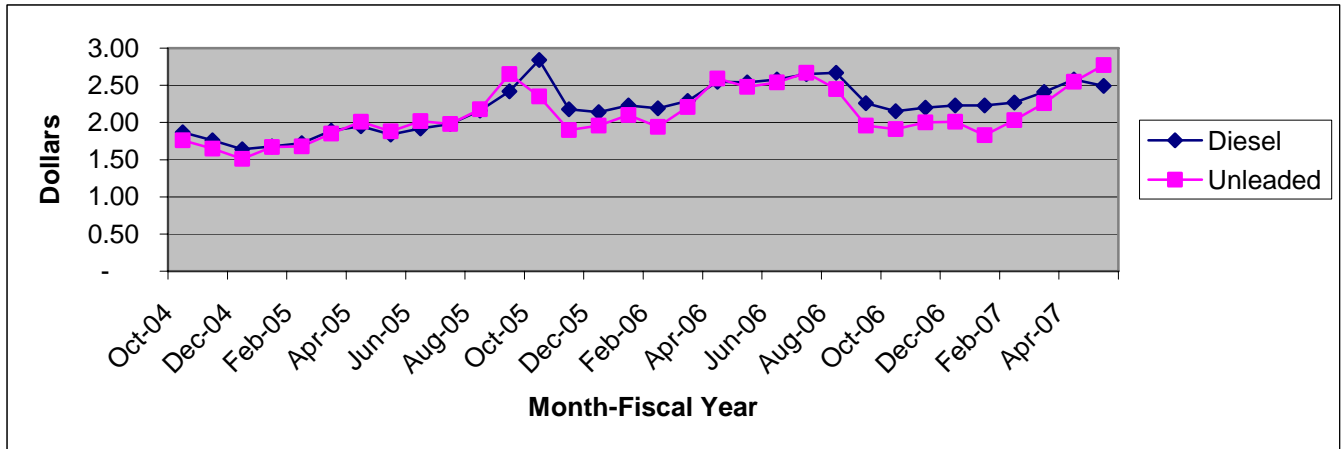
The amount Fleet has paid for fuel has increased in each of the last four complete fiscal years. However, as shown above in Table 1 and Figure 1, fuel usage slightly declined between fiscal years 2005 and 2006, while the cost of fuel increased. Table 2 below shows the average cost for fuel for fiscal years 2005 through May 2007. Additionally, Figure 3 charts the fuel costs across the same period.

**Table 2**  
**Average Cost of Fuel for Fiscal Years 2005-2007**

Fiscal Year	Diesel Average Price	Unleaded Average Price
2005	\$1.90	\$1.90
2006	\$2.43	\$2.26
2007 (1)	\$2.32	\$2.17

Source: Fuel invoices  
Note: (1) Through May 31, 2007

**Figure 3**  
**Average Price of Unleaded and Diesel Fuel from October 2004 through May 2007**



Source: Fuel invoices

Fleet purchases fuel from the City’s fuel contract. The current contract to procure fuel was established through a competitive bidding process that took place in fall 1999. The City contracted with Eli Roberts & Sons, Inc., (contractor) to procure fuel from January 2000 through December 2005, with the provision for two (2) one-year contract extensions. The City has processed two contract amendments and the current contract expires on December 31, 2007. The contract

terms allow for the fluctuation of fuel price through the calculation of fuel cost as described below in Figure 4:

**Figure 4**  
**Contract Terms that Determine the City’s Fuel Cost**

<p><b>Documented wholesale product cost/gallon</b> (note 1)</p> <p>+ \$.01 per gallon markup</p> <p>+ freight per gallon charge (pre-agreed upon rates)</p> <p>+ <u>required Florida taxes per gallon</u></p> <p><b>Price per gallon charged to the City</b></p>
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Note: (1) Wholesale cost paid by contractor at the source terminal. Most fuel delivered to the City originated in Bainbridge, Georgia.

During the last three years, freight cost increased by .003 for unleaded fuel and .004 for diesel fuel. Procurement is currently working with Fleet to develop a request for proposal to be released in fall 2007 to obtain competitive bidding for a new fuel contract.

*There are 15 fueling sites citywide with a capacity to store 75,500 gallons unleaded and 44,050 gallons diesel.*

Fleet manages its fuel operations from the main Fleet operations site on Dupree Street and distributes fuel to vehicles and equipment through 15 fueling sites located at the Fleet main site, the police station, nine fire stations, two park facilities, and two power plants. At these fueling sites, a total capacity of 119,550 gallons of fuel is stored in 16 unleaded fuel tanks (75,500 gallon capacity) and 15 diesel fuel tanks (44,050 gallon capacity). The fuel contractor makes regular deliveries to the Fleet operations facilities, police station, and to the power plants upon request.

The majority of fuel was dispensed from Fleet main site and TPD. Table 3 shows the gallons dispensed from the largest fueling sites in FY 2006.



**Table 3**  
**Gallons Fuel Dispensed in Fiscal Year 2006 by Fueling Site**

<b>Fueling Site</b>	<b>Total Gallons Dispensed FY 2006</b>	<b>Percent Fuel</b>
Main Site	1,139,576	72%
TPD	316,104	20%
Remaining 13 sites	135,376	8%
<b>Total</b>	<b>1,591,056</b>	<b>100%</b>

Source: FuelMaster system

*There are various physical and system security controls at each fueling site to minimize the risk of the theft of fuel.*

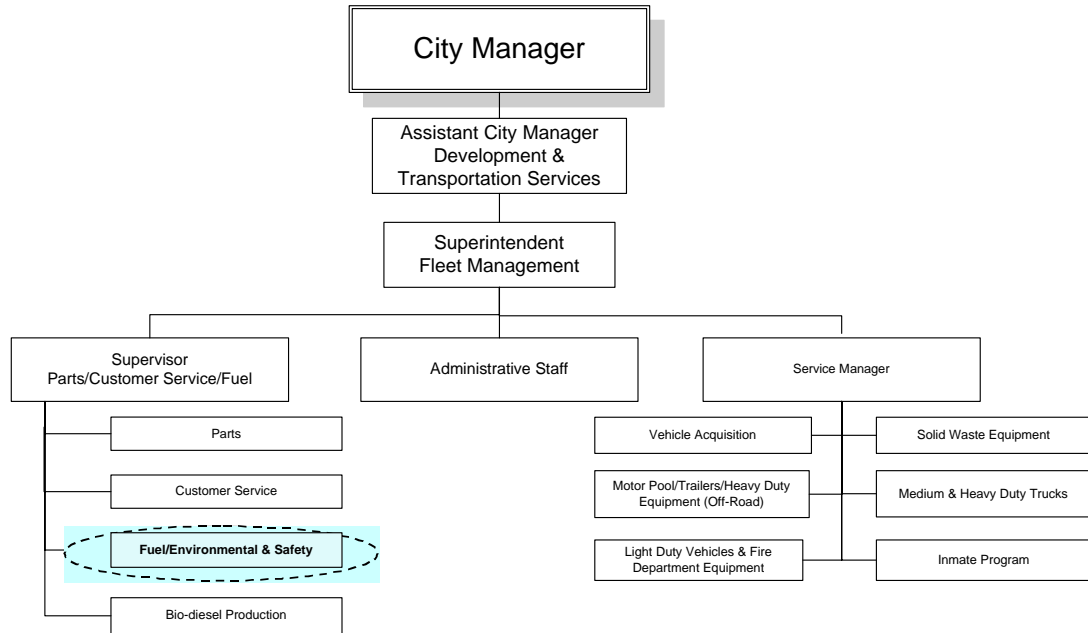
Each of the fueling sites contains some level of physical security controls. For example, the Fleet main site fuel pumps are located next to the Customer Service entrance surrounded by a 10-foot fence with the entrance and exit gates remaining open. There are cameras recording activity at the fuel pumps 24 hours/seven days a week. TPD’s fueling pumps are located behind the police station. At this time, access is not limited by a fence or gates to the parking area. However, gates limiting access to the police station parking areas have been installed and are scheduled to be activated in the near future. This will limit access to the fuel pumps only to authorized police vehicles and employees.

*Fleet also operates a fuel delivery truck to supply the smaller tanks at the fire stations, as well as larger equipment stationed throughout the City.*

In addition to these fueling sites, Fleet operates a fuel delivery truck to deliver fuel upon request to large equipment out in the field and department-specific tanks (used only for equipment at specific department maintenance facilities) located throughout the City.

Fuel operations are conducted within the Parts/Customer Service/Fuel Section within Fleet, as shown in Figure 5 on the next page.

**Figure 5  
Fleet Organization Chart for Fiscal Year 2007**



Source: Fleet Management

Fleet fuel operations are housed at the main Fleet facility on Dupree Street and consist of following activities:

- 1) Purchasing all fuel to be used by department vehicles and equipment;
- 2) Monitoring the fuel inventory, ensuring that fuel is available in all tanks (with the exception of the tanks at the power plants), and accounting for all fuel purchased, dispensed, and on-hand;
- 3) Delivering fuel to 12 fueling sites that do not receive deliveries direct from the contractor;
- 4) Delivering fuel to department managed tanks (at water plants, Airport, and Jake Gaither Golf Course), emergency generator tanks (at City Hall, Electric Plant, Police Department, Public Works, Utility Customer Business Service Call Center facility, water wells, and sewer pumping stations);

- 5) Delivering fuel to large equipment out in the field (generators, cranes, bulldozers, etc.);
- 6) Monitoring related fuel environmental (in conjunction with Utility Business and Customer Services) and tax laws (in conjunction with Accounting Services) to ensure that the City is in compliance;
- 7) Maintaining the fuel dispensing equipment at each of the 15 fueling sites;
- 8) Tracking and recording fuel usage by vehicle and/or fuel key; and
- 9) Billing departments and external agencies the proper amount for their amount of fuel usage.

A 5% overhead rate is applied to the cost of fuel sold to departments and external agencies to cover the direct and indirect cost to manage fuel operations. Periodically, Accounting Services and Fleet conduct a cost analysis to determine the rates for fuel overhead. The last analysis was performed in 2005.

*1,644,527 gallons of fuel were dispensed in FY 2006, and 1,063,026 were dispensed during the first eight months of FY 2007.*

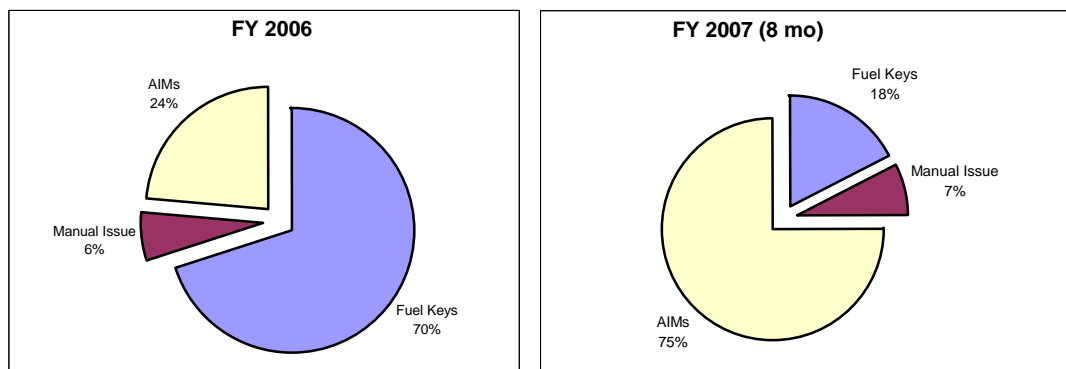
In September 2004, Fleet implemented FuelMaster, the fuel management system, to track both fuel and oil purchased and dispensed for the City. FuelMaster replaced an older fuel management system that had not been working effectively and contained inaccurate fuel usage data. The validity and reliability of the fuel information in FuelMaster improved greatly and is providing Fleet management a method to better manage fuel operations in the City.

*The FuelMaster system provides security features to prevent unauthorized fueling, including “passive fueling” and time-out fueling settings.*

Along with the implementation of FuelMaster, Fleet has also installed a “passive fueling“ capability, called Automotive Information Modules II (AIMs) on the newer vehicles. AIMs, along with FuelMaster, allow drivers of the vehicle to pull up to a City fuel pump and begin fueling without any additional actions, such as inputting user id, vehicle id, and vehicle mileage prior to being authorized to pump fuel. Authorization is established through the AIM units installed on the vehicle’s fuel tank opening and the fuel hoses’ dispensing handle. [See Appendix B for pictures of AIMs.] Additional security features are obtained through the FuelMaster software settings, such as how many “zero” transactions can occur prior to being logged on error reports and the number of seconds between when authorization is obtained and pumping begins. Such controls provide additional access controls to prevent unauthorized fueling through “piggy-backing,” which is dispensing fuel to an unauthorized vehicle after obtaining access to fuel an authorized vehicle.

As shown in Figure 6 below, the method in which fuel is dispensed shifted from fuel keys (70%) in FY 2006, to AIMs (75%) in FY 2007 (through eight months).

**Figure 6**  
**Number of Gallons Dispensed**



Source: FuelMaster system

AIMs also provide the ability for specific vehicle information to be uploaded into FuelMaster and then passed on to FASTER, the Fleet Management System. Such vehicle information is used to assist in scheduling vehicle maintenance and identifying potential maintenance issues. The City still maintains older vehicles that do not have the newer technology to support AIMs. To obtain fuel for these vehicles, users must have a vehicle fuel key and obtain authorization by inputting a valid user id and the vehicle’s mileage. [See Appendix B for pictures of a fuel key and FuelMaster controller unit.] Table 4 shows the number of authorized vehicles and equipment and the method used to obtain fuel.

**Table 4  
Number of Authorized Vehicles and Equipment  
and Method to Obtain Fuel**

<b>Method</b>	<b>Number</b>	<b>Percent</b>
AIMs (City vehicles only)	1,272	59%
Vehicle fuel keys (1)	704	32%
Personal accountability keys (used for smaller equipment)	192	9%
<b>Total</b>	<b>2,168</b>	<b>100%</b>

Source: FuelMaster system

Note: (1) Includes 45 County keys and 659 City keys

Equipment included in the City’s vehicle fuel keys (in the table above) that do not use the AIMs are shown below in Table 5:

**Table 5  
Breakdown of Types of Vehicles and Equipment that use  
Vehicle Fuel Keys (Identified in Table 3 above)**

<b>Type of Equipment</b>	<b>Number</b>	<b>Percent</b>
Motorcycles, tractors, and other large equipment	204	31%
Vehicles older than 1996 and/or where it is not cost efficient to install the AIM	406	62%
Tanks	12	2%
Water pumps and wells	37	6%
<b>Total</b>	<b>659</b>	<b>100%</b>

Source: FuelMaster system

While the majority of fuel purchased by Fleet is used internally by City departments, Fleet sells available fuel to County departments. Forty-five vehicle fuel keys have been assigned to Leon County Public

Works and EMS vehicles. The County purchases fuel at the same cost as City departments (cost + 5% overhead). As shown in Table 6, since October 2005, the County has only purchased 14,197 gallons of fuel totaling \$36,184 from the City. This is less than 1% of total fuel dispensed through the FuelMaster system.

**Table 6  
Amount of Fuel Used by Leon County  
in Fiscal Years 2006 and 2007 (8 months)**

	<b>FY 2006</b>	<b>FY 2007 (8 months)</b>
<b>Dollars</b>	\$19,212	\$16,972
<b>Gallons</b>	7,782	7,145

Source: FuelMaster system and Accounts Receivable records

*Summary of Audit  
Results and  
Recommendations*

Overall, the results of our audit showed that since the prior Audit Report on Fleet Parts Operations in 2003, the accounting for and safeguarding of fuel has greatly improved. For the 2003 audit, we were unable to provide assurances over accountability for fuel due to inadequate and unreliable fuel records. Since then, management has implemented a new FuelMaster system, dispensing equipment, and fuel operating and monitoring processes. Our testing indicated the City has bought fuel at competitive prices and sold fuel to internal and external customers at competitive prices. Supporting documentation and interviews with local and state inspectors, auditors, and environmental monitors indicated that the City has complied with applicable environmental and tax laws over the last three years.

While the fuel operating processes have improved since 2003, we noted some areas where additional improvements could be made to further enhance fuel operations. The following sections discuss the improvements related to each audit objective, areas where processes can still be improved, and associated recommendations.

## Accounting for and Safeguarding of Fuel

*Improvements have been made to better account for and safeguard the City's fuel.*

As stated above, the accounting for and safeguarding of fuel has greatly improved since the prior audit in 2003. Fleet has implemented the following system, equipment, and processes:

- There are adequate physical security controls to control access to the fuel pumps at the fueling sites through the use of one or more of the following security features:
  - Tanks at the main site, TPD site, power plants, and parks facilities are behind fences. [See Appendix B for pictures of tanks.]
  - Cameras are used at the main site to record activity at the fuel pumps.
  - Fuel hoses at the power plants are locked when not used. [See Appendix B for pictures of dispensing units.]
- Fleet implemented the FuelMaster system providing the ability to fuel vehicles and equipment with and without fuel keys through AIMs installed directly on a City's vehicle. Use of this system has greatly improved the accuracy of reporting vehicle fuel usage and mileage. The AIMs provide for passive fueling while providing added security features to prevent unauthorized persons from accessing fuel. Additionally, the AIM units provide additional physical contact features (between the fuel hose and the vehicle) and security settings to prevent unauthorized fuel from being dispensed through "piggy-backing" (dispensing fuel to an unauthorized vehicle after obtaining access to fuel an authorized vehicle). System settings include a time-out setting to turn off the hose after so much time has elapsed without fueling and pre-set maximum limits per transaction and per day.

- For access to fuel for vehicles that do not have AIMs, a person must insert an authorized physical vehicle fuel key assigned to an authorized vehicle into the FuelMaster dispensing controller and input an active user ID into a keypad along with vehicle mileage. Distribution of fuel keys for vehicles (vehicle keys) or persons (personal accountability keys) is centralized in the Fleet Fuel Operations Section. To control keys, there is only one assigned key per vehicle (typically stored on the vehicle key chain) and one assigned personal accountability key per person for those employees that need to fuel equipment that are not assigned vehicle keys. When a fuel key is lost, either vehicle key or personal accountability key, a new key will be issued by the fuel operations supervisor. In FuelMaster, when a replacement key is issued, the lost key becomes invalid and cannot be used to dispense fuel. This control prevents the use of multiple authorized keys for vehicles or persons.
- A monthly reconciliation process is conducted for all 30 tanks that distribute fuel through Fleet. For 23 of the smaller tanks, partial steps are taken to reconcile the fuel inventory. For the seven largest tanks, a complete reconciliation procedure is performed to account for the fuel purchased, dispensed, and on-hand. By limiting the monthly reconciliation process to the seven largest tanks, Fleet is accounting for 85% of the City's total Fleet fuel capacity and approximately 90% of the fuel purchased and dispensed. Our testing of the accuracy of the inventory reconciliation worksheets for the seven tanks across fiscal years 2005 and 2006 estimated that the difference between the **book ending inventory balance** and **actual ending inventory balance** (physically measured) was 2% of the final ending inventory.



Figure 7 below shows how the difference was calculated for fiscal year 2006.

**Figure 7**  
**Comparing the Gallons of Fuel per the Book Ending Inventory Balance to the Actual Ending Inventory Balance for Fiscal Year 2006**

<b>Beginning Inventory</b>	<b>+</b>	<b>Purchased</b>	<b>-</b>	<b>Dispensed</b>	<b>=</b>	<b>Book Ending Inventory</b>
82,494	+	1,594,541	-	1,591,057	=	85,978

<b>Book Ending Inventory</b>	<b>-</b>	<b>Actual Ending Inventory</b>	<b>=</b>	<b>Difference</b>
85,978	-	87,813	=	1,835

<b>Difference / Actual Ending Inventory</b>	<b>=</b>	<b>% Difference</b>
1,835 / 87,913	=	2%

<b>Difference / Purchases</b>	<b>=</b>	<b>% Difference</b>
1,835 / 1,594,541	=	.1%

<b>Difference / Dispensed</b>	<b>=</b>	<b>% Difference</b>
1,835 / 1,591,057	=	.1%

- Monthly vehicle fuel usage, cost, and mileage reports, and fuel dispensed to personal accountability keys are distributed and readily available to departments for review. Additionally, supervisors are requested to verify that personal accountability keys are issued to authorized persons and that the amount of fuel billed to each department by key is appropriate.
- Monthly fuel delivery reports are sent to departments showing the amounts delivered to emergency generator tanks and department-specific tanks. These tanks are located at water treatment plants,

water and sewer pumping stations, Airport, City Hall, and Public Works. Supervisors are asked to verify the amount of fuel received and are provided the opportunity to report any discrepancies.

- Controls over fuel purchases were improved to ensure that fuel purchased was accounted for and paid timely according to contract.
- The billing processes were improved to bill for fuel dispensed as recorded in the FuelMaster system.

*There are still areas that can be improved to further enhance accounting for and safeguarding of fuel.*

While there have been major improvements in accounting for fuel within Fleet fuel operations, there are still some opportunities to improve fuel operations. Such improvements are related to implementing additional oversight controls over the fuel operations to compensate for the lack of segregation of duties in the fuel operations processes, and improving the fuel reconciliation processes. Improvements related to safeguarding of fuel include strengthening the logical security within the FuelMaster system and better tracking of assigned manual keys to the FuelMaster controller dispensing unit cabinets.

Each of these is discussed further below with recommendations provided at the end of this section.

There is a lack of segregation of duties within fuel operations, in that the fuel operations supervisor purchases fuel, receives fuel, reconciles and adjusts fuel inventory in the FuelMaster system, and manages the FuelMaster system configuration and security settings.

*Additional internal controls are needed to compensate for the lack of segregation of duties in the management of the fuel operations.*

*No one person should control all aspects of a transaction or event.*

APP 630, "Internal Control Guidelines," notes that key duties and responsibilities in authorizing, processing, recording, and reviewing transactions and events should be segregated among individuals to reduce the risk of error or inappropriate actions. No one individual should control all aspects of a transaction or event. Key duties include: authorizing, approving, and recording transactions or events; issuing and receiving assets; making payments; and reviewing transactions or events.

During our audit, we noted that Fleet management had assigned fuel operations to two persons in the Parts Section, and they have implemented processes to operate as efficiently as possible. Our reconciliation testing and review of transactions did not identify any unaccounted missing fuel. While we did not identify any fraudulent activities, we noted that there is not an adequate segregation of duties in place to protect the integrity of the fuel receipts and inventory processes. Specifically, the fuel operations supervisor is responsible for managing all fuel operations in Fleet and performs such duties as purchasing and receiving fuel, reconciling and adjusting fuel inventory in the FuelMaster system monthly, and managing the FuelMaster system configuration and user security settings.

Without an adequate segregation of duties in performing the key duties within fuel operations, there is an increased risk that error, theft, or inappropriate actions could occur and not be detected in a timely manner. Management has indicated that there is not additional staff that could be assigned in the fuel operations to provide an adequate segregation of duties.

*Recommendations are provided to compensate for the lack of segregation of duties in the management of fuel operations.*

In order to compensate for the lack of segregation of duties, we recommend that additional oversight be provided over the fuel operations. Such oversight controls could include: supervisory approval of fuel purchases (already performed); regular management review of system generated reports of adjustments made to the inventory and of the use of supervisory key to the fuel dispensing unit cabinet; conducting a periodic independent inventory of fuel and reporting results to Fleet and Accounting management; and/or defining a tolerance level (% and gallons) to "red flag" potential problems in fuel inventory.

The Fleet fuel reconciliation process, while much improved, can be further enhanced by accounting for 100% of the inventory, inputting all fuel deliveries into the FuelMaster system, utilizing the correct FuelMaster system processes, periodically testing the accuracy of the electronic tank monitoring system.

Without a complete and accurate reconciliation process and good controls over access to the FuelMaster system and cabinet keys, there is an increased risk that fuel could be lost due to equipment failure or theft.

- **Fleet's monthly reconciliation process has not included all fuel tanks, but has included seven fuel tanks representing 85% of the fuel capacity for the City.**

In April 2005, Fleet management changed their reconciliation process from reconciling all 30 fuel tanks to only reconciling the largest seven tanks. Fleet management's decision was based on the following factors:

*Fleet management decided to focus their monitoring efforts on the seven largest fuel tanks (making up 85% of the capacity).*

- a) Fleet experienced a year of very positive (very little deviation between calculated and physical inventories) monthly reconciliations giving Fleet management assurance that the fuel inventory was materially accurate.
- b) The seven tanks made up the large majority of fuel activity (85% capacity and 90% of fuel purchases in FY 2006).
- c) The level of work to reconcile all 30 tanks is extensive. Currently, the FuelMaster system is not capable of producing a reconciliation report and fuel operations staff manually reconciles the tank inventory. Fleet management felt that staff time could be better spent working on other fuel operations activities.

As shown in Table 7, the seven tanks account for 85% of the capacity, and 90% of gallons purchased in FY 2006 and 92% of gallons purchased in FY 2007 (through May).

**Table 7  
Capacity of Tanks Included in Monthly Reconciliation**

Tanks	Gallons Capacity	Capacity Percent	FY 2006 Gallons Purchased	FY 2006 %	FY 2007(1) Gallons Purchased	FY 2007 % (1)
7 Tanks Reconciled	102,000	85%	1,439,151	90%	946,676	92%
23 Tanks Not Reconciled	17,550	15%	153,790	10%	86,261	8%
<b>Totals</b>	<b>119,550</b>	<b>100%</b>	<b>1,594,541</b>	<b>100%</b>	<b>1,032,937</b>	<b>100%</b>

Source: FuelMaster system

Note (1): FY 2007 included eight months of transactions through May 2007.

To enhance the reconciliation process, we recommend incorporating all 30 tanks into the full reconciliation process instead of limiting it to the seven largest tanks.

- **Fleet has not been inputting all fuel purchases into the FuelMaster system.**

The fuel purchased and delivered to the two power plants and fuel picked up at the contractor's distribution site in the City's fuel delivery truck have not been recorded in the fuel management system. During our testing of 60 fuel purchases (54 at Fleet and 6 at StarMetro), approximately 10% of Fleet transactions (17,000 of 172,000 gallons) were not recorded in FuelMaster. The non-recorded transactions were either 1) picked up in the fuel truck or 2) delivered to the power plants.

*Fleet has not been inputting into the FuelMaster system gallons of fuel delivered to the power plants or picked up by the fuel truck, but it has been recording the gallons of fuel dispensed from these sources.*

In FYs 2006 and 2007 (eight months through May), the gallons purchased that were not input into the FuelMaster system accounted for approximately 10% and 8%, respectively. However, fuel dispensed from the power plants and fuel truck is recorded in FuelMaster; therefore, fuel is recorded "going out," but not "coming in." The result is that there is less fuel recorded "coming in" the system and more fuel recorded "going out" of the system. Since these smaller tanks are not included in the complete monthly inventory reconciliation process, the differences are not shown.

To enhance the reconciliation process, we recommend inputting all fuel purchases into the FuelMaster system, including fuel delivered to power plants and picked up in the Fleet fuel trucks.

*Fuel operations staff was not performing the correct system process in FuelMaster to adjust the inventory balance.*

*Without performing the correct sequence of transactions, a report of adjustments made to the inventory could not be produced.*

- **The monthly reconciliation process was not being performed using the correct system processes to adjust the monthly ending inventory balance in the FuelMaster system.**

During the monthly reconciliation process of the seven largest tanks, fuel operations staff inputs the month-ending actual reading into the FuelMaster system. This actual reading is obtained either through a physical reading using a measuring stick or an electronic reading using the Veeder-Root system. During our testing of the reconciliation process, there was a difference between the system balance and the calculated balance when these balances should have been exactly the same. We were also not easily able to identify the adjustments being entered to correct the monthly inventory balance.

We conducted additional tests on reconciliations conducted between February and May 2007. As shown in Figure 8, the calculated and FuelMaster system ending inventory balances should be the same, with the only possible difference being that all fuel purchases were not being entered.

**Figure 8  
Formulas for Calculated Ending Inventory and FuelMaster Ending Inventory**

Calculated Ending Inventory =	Beginning Inventory	+ Fuel purchases	- Fuel dispensed transactions
FuelMaster Ending Inventory =	Beginning Inventory	+ Fuel purchases <b>entered</b>	- Fuel dispensed transactions

First, we determined that all purchases were **not** being input (see bullets on pages 23-24), but this did not account for all of the differences.

Further research by the fuel operations supervisor identified that he was not using the correct process in the FuelMaster

system and the result was the additional difference between the calculated balance and the system balance. After consultation with the FuelMaster vendor, the fuel operations supervisor determined the correct steps to follow and he began utilizing this process in the August 2007 reconciliation.

To enhance the reconciliation process, we recommend utilizing the correct processes within the FuelMaster system to ensure that the calculated and FuelMaster system balances are the same.

- **There is not a process to periodically test the accuracy of the electronic tank monitoring system used to measure the fuel inventory in Fleet's seven largest fuel tanks.**

Fleet utilizes Veeder-Root automatic tank gauges to measure the fuel inventory of the seven largest tanks (between 12,000 and 30,000 gallons). Fuel operations depend upon the Veeder-Root readings to support the month-end inventory "stick reading." For all other tanks, fuel operations staff manually measures the gallons of fuel. The vendor that created the Veeder-Root equipment recommends periodic maintenance and testing procedures to provide assurance that the tank monitoring sensors are accurate. Fleet has not performed such procedures during the last two fiscal years. Instead they have relied on the monthly reconciliations and gallons delivered as indicated on the invoices to identify any potential malfunctions in the equipment.

*A process should be implemented to periodically test the accuracy of the electronic tank monitoring systems used by Fleet to measure the large tank inventory levels.*

Fleet fuel staff had regularly recorded the gallons delivered according to the Veeder-Root's system and not the gallons delivered according to the invoice. When fuel was delivered to the tanks, there was typically a slight difference between the



amount of fuel delivered as recorded by the contractor and the amount of fuel input into the tank according to the Veeder-Root system. For fiscal years 2006 and 2007, the average differences are shown in Table 8. While the differences were not material, it could have been an indication that either the tank monitoring system or the contractor’s meter was not accurate. Periodic testing of the accuracy of the Veeder-Root tank monitoring sensors would provide assurances that the inventory levels were accurate.

**Table 8  
Average Differences between Gallons delivered  
According the Invoice and Tank Monitoring System  
for Fiscal Years 2006 and 2007**

<b>Tank Fuel Type</b>	<b>FY 2006 Gallons Purchased (Invoice)</b>	<b>FY 2006 Gallons Difference (Invoice - Veeder-Root)</b>	<b>FY 2006 % Difference</b>	<b>FY 2007 Gallons Purchased (Invoice)</b>	<b>FY 2007 Gallons Difference (Invoice - Veeder-Root)</b>	<b>FY 2007 % Difference</b>
Unleaded - All tanks	829,097	6,817	0.82%	523,005	6,798	1.30%
Diesel - All tanks	765,444	3,766	0.49%	511,008	1,862	0.36%
Only 7 Reconciled Tanks (Diesel and Unleaded)	1,439,151	10,583	0.74%	946,676	8,660	0.91%

Source: Fleet fuel reconciliation reports

*Recommendations are provided to enhance the periodic fuel reconciliation processes.*

To enhance the reconciliation process, we recommend implementing a process to test the accuracy of the electronic tank monitoring system. We also recommend that Fleet input the gallons delivered per the invoice into the FuelMaster system instead of the gallons received per the Veeder-Root system.

Outside of Fleet, there was only a limited tracking of fuel usage for the six department-specific diesel tanks.

There are five department-specific diesel fuel tanks maintained and managed at department facilities. The departments with the tanks and the amount of fuel delivered to the tanks are provided in Table 9.

**Table 9**  
**Gallons of Diesel Delivered to Department-Specific Tanks in Fiscal Years 2006 and 2007 (through July 31, 2007)**

Department-Specific Tanks	FY 2006 Gallons Delivered	FY 2007 (through 7/31/07) Gallons Delivered
Airport	2,114	2,550
Jake Gaither Golf Course	1,237	764
TP Smith Water Plant	870	2,579
Water Satellite Facility 1	1,271	427
Water Satellite Facility 2	-	751
<b>Total</b>	<b>5,492</b>	<b>7,072</b>

Source: Fleet FASTER system billing records

*There are five smaller fuel tanks used by specific departments that are not periodically reconciled.*

Fleet records the amount of fuel delivered to these tanks, but does not track the fuel dispensed to the vehicle or person. Each department indicated that they require employees to log the date/time, amount of fuel dispensed, and employee’s name. However, there are no procedures performed to reconcile the fuel inventory on a periodic basis (i.e., beginning inventory + fuel delivered – fuel dispensed = ending inventory). Fleet sends monthly reports to the five department supervisors asking them to verify the amount of fuel delivered to their department-specific tanks. These diesel tanks are typically located within the department maintenance facilities behind fences and are to be locked nightly. [See Appendix B for pictures of tanks and dispensing units.]

While there is a lower risk of theft with diesel fuel than unleaded fuel, and the amount of fuel dispensed through these department-specific tanks is not material in consideration of the fuel operations (in FY 2006, 5,492 gallons was .3% of the total 1,644,527 gallons of fuel purchased), the fuel is still more vulnerable to theft since there is not any reconciliation of the fuel inventory. City staff use the fuel to

operate equipment (including off-road equipment). Gallons delivered during the first eight months of 2007 range between 427 and 2,579.

We recommend that Accounting Services reassess the controls over fuel inventories at the department-specific tanks and provide guidance regarding controls that need to be implemented.

Physical and logical security controls should be enhanced to further protect the City's fuel inventory.

As noted earlier, Fleet management has implemented improvements related to the physical security and system security over fuel operations and inventories. During our audit, we noted three additional areas where improvements should be made related to supervisory keys, FuelMaster system administrator responsibilities, and user id and password security. These are each discussed further below along with recommendations.

Without adequate safeguarding of fuel inventories, systematically and physically, there is an increased risk that an unauthorized person could gain access to either the FuelMaster system or dispensing units. With such unauthorized access, a person could inadvertently or purposefully obtain fuel or damage the integrity of the data in an unnoticed manner.

- **The tracking of the supervisory keys to the FuelMaster dispensing unit cabinets needs to be better managed.**

*Controls over the supervisory keys should be better managed and tracked.*

With this key, a person can unlock the fuel dispensing unit cabinet, turn off the fuel tracking, and dispense fuel without it being recorded. [See Appendix B for pictures of FuelMaster controller unit.] If this occurred at one of the 23 tanks not being fully reconciled, it could go unnoticed. It would only be potentially identified if a "high enough volume" of fuel were

missing during the comparison of monthly physical readings to the electronic inventory levels of the tanks.

To improve the physical safeguards over the City's Fleet fuel inventories, we recommend Fleet management develop and maintain a listing of persons possessing keys to the FuelMaster controller dispensing unit cabinets and actively monitor reports to identify any questionable dispensing of fuel through use of the manual key.

*User controls within the FuelMaster system need to be enhanced to adequately secure configuration and data.*

- **A systems administrator should be assigned for the FuelMaster system different from the fuel operations supervisor.**

This will create a better separation of duties by not having the same person administer the system and manage the fuel operations. To improve the system security over the City's Fleet fuel inventories, we recommend Fleet management assign a systems administrator for the system different from the fuel operations supervisor.

- **Tighter user id and password controls and processes to monitor security events within the application should be implemented.**

During our fieldwork, we noted there were only three assigned user ids in the FuelMaster system, and password controls were virtually non-existent. The user ids are generic and have been shared among the fuel operations staff. While there are not many employees that would normally have reason to access FuelMaster, there is an increased risk that an unauthorized person could access the system and either inadvertently or purposefully perform unauthorized functions or damage the

integrity of the data and such actions would not be identified in a timely manner.

To improve the system security over the City's Fleet fuel inventories, we recommend Fleet management assign individual user ids so that there is accountability for actions taken and transactions entered in the FuelMaster system, and implement adequate password management controls within the FuelMaster system.

Subsequent to our fieldwork, Fleet management assigned the Fleet Business Systems Analyst as the new FuelMaster system Administrator and began implementing better user id and password controls.

### **Purchasing and Billing of Fuel**

For the audit period, we conducted tests of transactions to provide assurance that the City was purchasing fuel at competitive prices and selling fuel to internal and external customers at appropriate prices. We concluded that the City bought fuel at competitive prices and sold fuel at competitive prices to internal and external customers. Specifically, our testing of 60 randomly selected invoices indicated that:

- The City bought fuel using the contract terms at a reasonable cost comparable to the wholesale price for unleaded and diesel fuel as posted by the Oil Price Information Service (OPIS). OPIS is a widely accepted fuel price benchmark for supply contracts and competitive positioning. Fuel operations staff uses this service to compare fuel prices on contractor invoices to ensure the City is paying a fair price for fuel.

*Fuel was ordered by and approved by authorized persons, and all fuel purchases were charged to the proper account in the financial system.*

*The City bought and sold fuel at competitive prices to external and internal customers.*

- The fuel overhead rate Fleet charged to departments was at an appropriate level. Fuel overhead rates were last calculated and adjusted by Accounting Services in 2005 (5%). We recalculated the estimated overhead rates for 2006 and 2007 in two different manners, one including administration costs and one without administration costs (see Table 10 below).

**Table 10**  
**Audit Recalculated Overhead Rates for Fiscal Years 2006 and 2007,**  
**Including Administrative Costs and Not Including Administrative**  
**Costs**

Overhead Type	OH Rate	FY 2006 w/ Admin	FY 2006 w/o Admin	FY 2007 w/ Admin	FY 2007 w/o Admin
Fuel	5%	5.1%	4.0%	5.2%	4.0%

Source: Audit recalculation of Fleet management overhead rates

- The amounts charged to City departments and external agencies were accurate for the amount of fuel dispensed to their respective vehicles and tanks.

Additionally, we noted that fuel deliveries were ordered by authorized persons, fuel invoices were approved by an appropriate Fleet supervisor, and fuel purchases were charged to the proper account in the City’s financial system.

We only noted one instance of non-compliance with the City’s Procurement Policy when a change to the contract was not properly authorized and documented using a required contract amendment. This issue is discussed further on page 36 in the section addressing compliance with applicable laws, policies, and contracts.

**Complying with Laws, Policies, and Contracts**

*The City complied with applicable environmental and fuel tax laws.*

To identify the laws applicable to the City’s fuel operations, we interviewed staff from the City, Leon County Growth and Environmental Management, Florida Departments of Environmental Protection and Revenue, reviewed selected sections in the Florida

Statutes, Florida Administrative Code, Code of Federal Regulations, and City supporting documentation for compliance. We also reviewed City policies and contracts relevant to the fuel operations. The only contract relevant to this audit was the contract for fuel procurement with Eli Roberts & Sons, Inc.

Based upon our audit procedures, we concluded that the City has complied with applicable environmental laws. We did however note that improvements could be made related to filing for all eligible fuel tax refunds, complying with the contract processes defined in City Procurement Policy 242CP, updating department fuel operations procedures, and developing and utilizing performance measurements to assess the efficiency and effectiveness of fuel operations. Each of these areas is discussed further below.

The City has not submitted all fuel tax refund returns to receive all eligible fuel tax refunds.

*The City is eligible to receive two types of refunds for fuel taxes paid on unleaded and diesel fuel.*

Municipalities are eligible to receive two types of fuel tax refunds: 1) for gallons of unleaded and diesel purchased for “on-road” use; and 2) for gallons of diesel fuel purchased for “off-road” use.

For the on-road fuel tax refunds, the Department of Revenue requires municipalities to exclude purchases of unleaded and diesel fuel for off-road use on those returns. The off-road diesel fuel tax refunds include fuel used by self-propelled or stationary equipment (Florida Statutes Chapter 206 and Florida Administrative Code Section 12B-130) in off-road cases. Clarifications obtained from the Department of Revenue Fuel Tax Division indicated that off-road, self-propelled equipment includes tractors, backhoes, bulldozers, etc. Off-road stationary equipment includes both “power-drawn” equipment (including most farm equipment), and “power-driven” equipment (including mowers, aerators, etc.). The Department of Revenue allows municipalities to

submit a return to claim fuel tax refunds for up to three years after the taxes were paid.

*Fuel tax refund returns filed in 2005 and 2006 mistakenly included ineligible purchases of diesel fuel for off-road use.*

During our audit, we noted that Accounting Services had regularly submitted fuel tax returns for unleaded and diesel purchased. The City's 2007 on-road fuel tax returns properly excluded purchases for off-road use. However, the 2005 and 2006 on-road fuel tax returns mistakenly included diesel purchases for off-road use.

Accounting Services began submitting fuel tax refund returns for diesel purchased for off-road use in the last quarter of 2006. Staff had not previously realized that the City was eligible for a fuel tax refund for off-road usage of diesel fuel. Therefore, while the off-road use was ineligible for the on-road fuel tax refunds, the diesel purchases for off-road use was eligible for the off-road fuel tax refunds.

In addition, we noted that the fuel usage reported by Fleet to Accounting Services was not consistently applied on the fuel tax refund returns. Specifically, diesel usage reported for large individually identified equipment was applied each time, whereas diesel usage dispensed to a person for use in smaller "power-driven" equipment was not. This was due to uncertainty of Accounting Services staff as to which City equipment met the criteria to be off-road equipment. According to the Department of Revenue's clarification of off-road equipment, diesel purchased for use in the smaller "power driven" equipment was also eligible.

*There was some uncertainty as to which equipment met the criteria for "off-road" use.*

Including the gallons of diesel fuel used for off-road equipment provided by Fleet, Accounting Services staff recalculated the off-road fuel tax returns for calendar years 2005 through 2007. Table 11 shows the amounts eligible and received for both on-road and off-road fuel tax refunds. Based on both returns, the net additional amount that



The City could receive an additional \$26,666 in fuel tax refunds.

could have been received for fuel tax refunds by the City was estimated to be \$26,666.

**Table 11**  
**City Fuel Tax Refunds for On-Road and Off-Road:**  
**Amount Eligible vs. Amount Received**

Fuel Tax	FY 2005	FY 2006	FY 2007 (first 2 quarters)	Totals
Amount City was eligible to receive for fuel purchases for on-road use	\$ 168,563	\$ 179,471	\$ 90,803	\$ 438,838
Amount City received (both gallons purchased for on-road and off-road use was included in 2005 and 2006)	\$ 182,690	\$ 190,315	\$ 92,107	\$ 465,112
Amount over refunded	\$ (14,127)	\$ (10,843)	\$ (1,304)	\$ (26,274)
Amount City was eligible to receive for diesel fuel purchased for off-road use	\$ 28,093	\$ 25,831	\$ 14,072	\$ 67,996
Off-road received	\$ 0	\$ 5,449	\$ 9,607	\$ 15,056
Additional amount of refunds City could have received	\$ 28,093	\$ 20,382	\$ 4,465	\$ 52,939
<b>Net additional refunds that could have been received for both fuel tax returns</b>	<b>\$ 13,966</b>	<b>\$ 9,539</b>	<b>\$ 3,161</b>	<b>\$ 26,666</b>

Source: Accounting Services staff recalculation

Without using a consistent definition of off-road equipment in both Accounting Services and Fleet, there is an increased risk that Fleet will not track and report the appropriate information to Accounting Services, who in turn, will not report the appropriate information to the Department of Revenue to obtain the correct “off-road” fuel tax refunds.

We recommend that Accounting Services 1) work with Department of Revenue to identify the off-road equipment that meets the eligibility for fuel tax refunds and 2) work with Fleet to ensure that the correct information is tracked and reported to complete all applicable fuel tax returns. We also recommend that Fleet and Accounting Services gather the necessary information to submit prior returns to request past eligible tax refunds and submit amended returns to exclude off-road use purchases on the on-road fuel tax returns.

A contract amendment was not properly processed for an approved change to the fuel purchase agreement.

*Changes to contract terms and pricing should be processed through a contract amendment.*

Fleet approved a change to the fuel contract for the addition of diesel cleansing additives in September 2005, but did not process a contract amendment to include this cost on all future diesel purchases. City Procurement Policy 242CP defines a contract amendment as "Any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provision of the contract, accomplished by mutual action of the parties to the contract." The policy also requires City employees to make Procurement Services aware of changes to contracts and to process contract amendments through the procurement cycle.

In order to assure that the amounts paid on invoices comply with contracts, we recommend that changes made to services, products, and/or costs of those services and/or products be processed through Procurement Services as a contract amendment according to the City Procurement Policy 242CP.

The fuel operations procedures should be updated to reflect current business processes.

*The fuel operations procedures need to be updated.*

The fuel operations procedures exist to document the procedures related to managing fuel inventory, including recording of fuel delivered, system recording of fuel dispensed, and recording of the periodic manual inventory levels, monthly reconciliations of fuel, and reporting inventory, purchase, and fuel tax related information to Accounting Services. The current procedures were last updated in July 2005. Since then, the FuelMaster system has been upgraded and the reconciliation process has been changed. We recommend that Fleet update the fuel operations procedures to better reflect the operating procedures performed by staff.

Fleet is not using performance measures to evaluate the efficiency and effectiveness of fuel operations in the City.

*Performance measures can assist management in evaluating fuel operations.*

Performance indicators serve as a control activity to provide management with a way to analyze operating and/or financial data to assess and evaluate their operations [APP 630, “Internal Control Guidelines”]. Fleet is currently using one output measure to evaluate fuel, “number of gallons of fuel dispensed.” While output measures are important to management, such measures do not provide management the ability to evaluate the efficiency or effectiveness of fuel operations.

With appropriate performance measures in place, management will be provided useful information to assist them in focusing decisions and activities on clear and measurable results toward meeting the goals of fuel operations within Fleet and the City. We recommend Fleet management develop and implement additional performance measures to assist in evaluating the efficiency and effectiveness of fuel operations. Such measures should consider resource requirements (inputs), outputs, and efficiency and effectiveness measures (outcomes).

## ***Conclusion***

Our review of the City’s Fleet fuel operations indicated that many improvements were made to the fuel operations since the prior Audit Report on Fleet Parts Operations conducted in 2003 (#0303). In the 2003 audit, we were unable to provide assurances over accountability for fuel due to inadequate and unreliable fuel records. Since then, improvements were made by management to acquire and implement a new fuel management system, FuelMaster, implement a monthly reconciliation process to account for the fuel inventory, and implement improved processes to track purchased and dispensed fuel. Based on

our audit procedures for the audit period, we made the following conclusions:

- The accounting for and safeguarding of fuel has greatly improved since the implementation of the FuelMaster system and dispensing equipment, and fuel operating and monitoring processes.

Our recommendations to further enhance the accounting for fuel included implementing additional oversight controls over the fuel reconciliation process to minimize the risks associated with a lack of segregation of duties over the fuel operations and periodic inventory procedures and improving the monthly fuel reconciliation processes.

Our recommendations to further enhance the safeguarding of fuel included assigning an independent systems administrator over the FuelMaster system, strengthening the logical security within the FuelMaster system, and improving the tracking of assigned manual keys to the FuelMaster controller dispensing unit cabinets.

- Our audit testing indicated the City bought fuel using the contract terms at reasonable and competitive prices and sold fuel at reasonable and competitive prices to internal and external customers.
- The City has complied with applicable environmental laws.

Regarding revenue fuel tax laws, we noted that improvements could be made related to filing for all eligible fuel tax refunds, amending previously filed fuel tax returns, complying with the contract processes defined in City Procurement Policy 242CP, updating department fuel operations procedures, and

developing and utilizing performance measurements to assess the efficiency and effectiveness of fuel operations.

We would like to acknowledge the full and complete cooperation and support of Fleet management and staff, Accounting Services management and staff, and employees from Syn-Tech Systems, Inc., (developer and owner of FuelMaster®).

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***Appointed Official's  
Response***

**City Manager:**

I am extremely pleased that the City Auditor found that the accounting for and safeguarding of fuel has greatly improved since their last audit of this activity. Having appropriate controls and safeguards over fuel is a priority of the Fleet Management Division. The action steps identified will further enhance the operations in this area. I would like to thank the City Auditor's staff, Fleet Management and Accounting Services for their efforts on this audit.

<b>Appendix A – Proposed Action Plan</b>		
Action Steps	Responsible Employee	Target Date
<b>A. Objective:</b> <i>To compensate for the lack of segregation of duties</i>		
1. Implement additional oversight controls over the fuel operations. Such oversight controls could include: supervisory approval of fuel purchases (already performed); regular management review of system generated reports of adjustments made to the inventory and of the use of supervisory key to the fuel dispensing unit cabinet; conducting a periodic independent inventory of fuel and reporting results to Fleet and Accounting management; and/or defining a tolerance level (% and gallons) to "red flag" potential problems in fuel inventory.	Terry Lowe, Fleet Superintendent  Rick Feldman, Accounting Services Manager	6/30/08
<b>B. Objective:</b> <i>To enhance controls related to the fuel reconciliation process</i>		
1. Incorporate all 30 tanks into the full reconciliation process (rather than limiting it to the seven largest tanks).	Terry Lowe, Fleet Superintendent	9/30/07
2. Input all fuel purchases into the FuelMaster system, including fuel delivered to power plants and picked up in the Fleet fuel trucks.	Terry Lowe, Fleet Superintendent	9/30/07
3. Utilize the processes within the FuelMaster system to ensure that the calculated inventory balance and the FuelMaster system inventory balances are the same.	Terry Lowe, Fleet Superintendent	9/30/07
4. Implement a process to test the accuracy of the electronic tank monitoring system.	Terry Lowe, Fleet Superintendent	3/31/08
5. In the FuelMaster system, input the gallons delivered per the invoice (rather than the gallons delivered per the Veeder-Root system).	Terry Lowe, Fleet Superintendent	9/30/07
6. Accounting Services reassess the controls over fuel inventories at the department-specific tanks and provide guidance regarding controls that need to be implemented.	Rick Feldman, Accounting Services	6/30/08

<b>C. Objective: <i>To improve the safeguards over the City’s Fleet fuel inventories</i></b>		
1. Develop and maintain a listing of persons possessing keys to the FuelMaster controller dispensing unit cabinets and actively monitor reports to identify any questionable dispensing of fuel through use of the manual key.	Terry Lowe, Fleet Superintendent	9/30/07
2. Assign a systems administrator for the system different from the fuel operations supervisor.	Terry Lowe, Fleet Superintendent	9/30/07
3. Assign individual user ids so that there is accountability for actions taken and transactions entered in the FuelMaster system.	Terry Lowe, Fleet Superintendent	9/30/07
4. Implement adequate password management controls within the FuelMaster system.	Terry Lowe, Fleet Superintendent	9/30/07
<b>D. Objective: <i>To ensure that the City is consistently filing for all eligible fuel tax refunds</i></b>		
1. Fleet and Accounting Services work together to develop a process to identify what off-road equipment meets the eligibility for fuel tax refunds and ensure that the correct information is provided to complete all applicable fuel tax returns.	Terry Lowe, Fleet Superintendent Rick Feldman, Accounting Services Manager	3/31/08
2. Accounting Services should gather the necessary information from Fleet to submit past eligible tax refunds and submit amended returns to exclude “off-road” fuel purchases on the “on-road” fuel tax returns.	Rick Feldman, Accounting Services Manager	9/30/07
<b>E. Objective: <i>To ensure that the fuel operations processes are operating as intended and efficiently and effectively</i></b>		
1. Update the fuel operations procedures to reflect current operating procedures performed by staff.	Terry Lowe, Fleet Superintendent	3/31/08
2. Develop and implement performance measures to assist in evaluating the efficiency and effectiveness of fuel operations. Such measures should consider resource requirements (inputs), results (outputs), and efficiency and effectiveness measures (outcomes).	Terry Lowe, Fleet Superintendent	3/31/08

# Appendix B – Pictures of Various City Fuel Equipment

Large fuel tanks at a main facility



Fuel tanks at a field location





**FuelMaster controller unit**



**FuelMaster key**



**Automotive Information Module II (AIM) – Example 1**



**AIM – Example 2**



**Fuel tanks and pumps at a field location**



**Fuel pump at a field location**



**Fuel tank at a field location**



**Dispensing unit at a field location**

