WENDY GREUEL
CONTROLLER

March 29, 2012

Honorable Antonio R. Villaraigosa, Mayor
Honorable Carmen Trutanich, City Attorney
Honorable Members of the Los Angeles City Council

Record level gas prices have affected all of us – and the City is no exception. Many Angelenos are forced to decide between filling up their cars with fuel and putting food on their tables, and the effects are felt far and wide. Today, I am releasing an audit of the Controls Over the City's Fuel Use. This audit found that, in general, departments do not monitor their fuel transactions sufficiently to identify potential abuses or problems and, as a result, the City's taxpayers cannot be assured that fuel is appropriately used. Abuse of the City's fuel supply is unacceptable at any time, and preventing abuse is necessary now more than ever given the high cost of fuel.

The City purchases about 13.8 million gallons of fuel annually at a cost of approximately $28.6 million. With this much fuel at risk, the City needs to maintain strong controls to ensure that every last gallon of fuel is accounted for and that City management oversees and controls its use. Having found millions of dollars worth of gas that was not properly monitored, my audit shows that this is clearly not the case.

This audit reveals that procedures are not in place to monitor the distribution of fuel. Over $7 million spent Citywide on fuel was dispensed through three methods that expose the City to high risk:

- Bypass transactions ($1.2 million): when a locked panel is removed and an electronic switch is deactivated from a fuel control terminal;
- Keypad entry transactions ($3.9 million): when a City employee using an LAPD fuel site uses the override button and is only required to input a vehicle number to obtain fuel; and
- Master card transactions ($2 million): when a site supervisor uses a general 'master card' to override the system which should only be used when a vehicle's fuel card or vehicle information transmitter is malfunctioning or missing.

Due to a lack of monitoring, most departments were unaware of these high risk transactions. In addition, the audit found approximately 150,000 transactions that

recorded negative mileage or greater than 2,000 miles since the vehicle's last fueling. These are also considered high-risk transactions, and with appropriate monitoring, departments could have questioned whether these were caused by system errors, unintentional manual override that need to be corrected through staff training, or reflected as intentional misstatements by staff, indicating inappropriate fuel use.

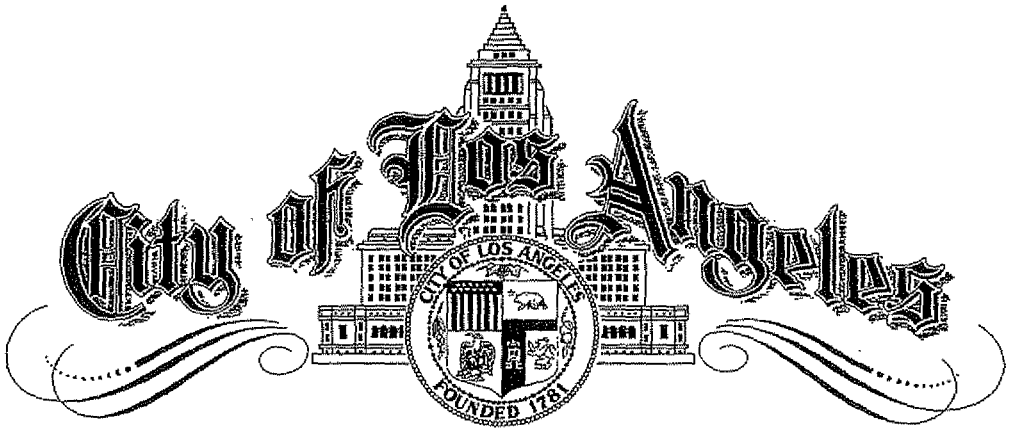
Beginning in 1999, the City has paid a vendor in excess of $12 million to implement and maintain a fuel automation system. However, departments are not using the system's capabilities to monitor fuel usage. If they had, they could have identified the extent of high risk transactions, as well as data inaccuracies being generated by the system.

To better account for fuel usage, I recommend that the City establish a Fuel Task Force in the Department of General Services to develop general guidelines for controlling and monitoring fuel use; that employee access to bypass the information tracking system be restricted; that fuel logs be maintained at each fuel site to record fuel dispensed using bypass modes and master cards; that regular department-wide physical inventories of fuel cards be conducted to limit fraudulent expenditures; and that logs to record fuel dispensed from above ground tanks be maintained since they are not currently recorded.

The City's controls over fuel usage is another example of how simple changes to the City's business practices can strengthen controls to save millions of dollars. I urge the Mayor, Council and all City departments to make the changes in my Controller's Accountability Plan immediately, to better control the City's fuel costs and ensure that every dollar is spent responsibly for mission-related fuel consumption and that no City funds are spent without adequate monitoring and oversight. Departments must be more vigilant and more accountable for their fuel usage. I look forward to seeing departments implementing these recommendations immediately – the City cannot afford to wait.

Sincerely,

WENDY GREUEL
City Controller



WENDY GREUEL
CONTROLLER

March 29, 2012

Charlie Beck, Chief of Police
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Los Angeles, CA 90015

Dear Gentlemen:

Enclosed is a report entitled, "Controls Over Fuel Usage." A draft of this report was provided to your Department on February 9, 2012. Comments provided by your Department at the exit conference were evaluated and considered prior to finalizing this report.

Please review the final report and advise the Controller's Office by April 30, 2012 on planned actions you will take to implement the recommendations.

If you have any questions or comments, please contact me at (213) 978-7392.

Sincerely,

FARID SAFFAR, CPA
Director of Auditing

Enclosure

cc: Gaye Williams, Chief of Staff, Office of the Mayor
Eileen M. Decker, Deputy Mayor
Romel Pascual, Deputy Mayor
Matt Karatz, Deputy Mayor
Miguel A. Santana, City Administrative Officer
Gerry F. Miller, Chief Legislative Analyst
Richard Drooyan, President, Police Commission
Genethia Hudley-Hayes, President, Board of Fire Commissioners
Barry A. Sanders, President, Recreation and Parks Commissioners
Archie Purvis, President, LACC Commission
William S. Epps, President, Affordable Housing Commission
Independent City Auditors

City of Los Angeles
Office of the Controller

Controls Over the City's Fuel Use

March 29, 2012

Wendy Greuel
City Controller

TABLE OF CONTENTS

CONTROLS OVER THE CITY'S FUEL USE

EXECUTIVE SUMMARY

The Controller's Office has completed an audit of the Controls Over the City's Fuel Use. The objective of the audit was to assess the controls in place to ensure that fuel purchased by the City is used only for City-authorized purposes. The audit covered fuel dispensed from City fueling sites (excluding proprietary departments), as well as fuel purchased by City employees directly from commercial gas stations through authorized credit cards.

Background

The City directly purchases about 13.8 million gallons of fuel (unleaded, diesel, compressed natural gas, and liquefied natural gas) annually, at a cost of approximately $28.6 million. A contracted distributer delivers the fuel to 141 City fuel sites, which include dispensing stations with pumps (similar to a gas station) as well as free-standing tanks. The fuel sites are used exclusively for fueling City vehicles and equipment, including emergency and fleet vehicles, helicopters, boats, large equipment (e.g., garbage disposal trucks), and small equipment (e.g., power tools). The majority of the 141 sites are located at police stations (22 sites) and fire stations (68 sites). By maintaining its own fuel sites, the City achieves operational efficiencies since in most cases it would not be practical to obtain the fuel directly from a commercial gas station. In addition, by purchasing large volumes of fuel, the City achieves cost savings.

The City contracted with EJ Ward, Inc. in June 1999 to implement a fuel automation system which allows for the centralized monitoring of fuel levels at City fuel sites, as well as monitoring of fuel usage by transaction. In 2003, the City awarded a contract to EJ Ward to provide hardware and software modifications and to maintain the City's fuel automation system for a total of $5.5 million that covers the period from October 1, 2003 to September 30, 2012.

The EJ Ward system provides for automated authorization, and it stores all City fueling transactions. The EJ Ward System interfaces with unleaded, diesel, CNG, and LNG dispensing devices. Each fuel transaction occurring at a City site is recorded in a database, managed by GSD.

Authorized employees can also obtain fuel using Voyager credit cards at commercial gas stations when it is not practical to obtain fuel from a City fuel site. For the last two fiscal years, Voyager card purchases totaled about $1 million annually.

Scope and Methodology

Our audit was performed in accordance with Generally Accepted Government Auditing Standards (GAGAS) and covered fuel used between January 1, 2009 and March 15, 2011. In conducting our audit, we analyzed fueling records from the EJ Ward System and from Voyager card activity during the audit period, and then selected samples of records for further review. We also reviewed manual logs of fuel transactions, card use and vehicle use, and we reviewed key documents such as fuel records, fuel purchases, card inventories, monthly statements, financial records, and contracts. Our review focused primarily on fuel used for passenger vehicles and emergency vehicles.

Our audit findings and recommendations were based on our review of controls and processes at five departments: Los Angeles Police Department (LAPD), Los Angeles Fire Department (LAFD), Recreation and Parks (RAP), Los Angeles Housing Department (LAHD) and Los Angeles Convention Center (LACC). In selecting these departments, we analyzed data from the City's fuel database containing 2.1 million fueling transactions made between January 2009 and March 2011 at City fuel pumps, and from other databases containing purchase transactions at commercial gas stations. These five departments were selected for review because they showed an increasing number of high risk fueling transactions, such as those made without using a fuel card (bypass transactions), duplicate transactions, and weekend/after-hour transactions. We also reviewed processes at the Department of General Services (GSD) due to its centralized role in ordering fuel, issuing fuel cards, maintaining the Fuel Automation Report Center, receiving statements of Voyager transactions, and working with vendors to resolve problems at the fuel sites.

Summary of Audit Results

Our audit found that, in general, departments do not monitor their fuel transactions to identify potential abuses or problems that require corrective action. As a result, the City cannot be assured that fuel use is minimized and that personal use of fuel is not occurring. We also noted weaknesses in controls over fuel cards and continuing problems related to system reliability. The following summarizes the audit's key findings:

- **With the exception of LAPD, departments do not utilize the data available through the Fuel Automation Report Center to monitor fuel use for potential problems or abuse. Thus, inappropriate fueling transactions could occur without being detected and fuel costs may not be minimized.**

  Departments who manage vehicle fleets are expected to access the Fuel Automation Report Center on a regular basis to review fuel use transactions for potential problems or abuse. Although some occasionally review selected transactions related to specific problems, except for LAPD, which monitors transactional data through its own Vehicle Management System, none of the other four departments we reviewed had implemented procedures for such monitoring

using the reporting mechanism available through the Fuel Automation Report Center. Such monitoring would provide assurance of appropriate management oversight. Our review noted the following high-risk transactions, which generally could not be explained since departments were not aware of them due to the lack of monitoring.

- ***Bypass transactions*** can only occur when a locked panel is removed and an electronic switch is deactivated from a fuel control terminal. This allows fuel to be dispensed without recording the identifying vehicle data typically required by the System. Pumps are only supposed to be put in bypass mode during maintenance or if a fuel card or Vehicle Information Transmitter (VIT) will not function. During our audit period, we noted 132,000 bypass transactions Citywide, accounting for 877,000 gallons of fuel (valued at approximately $1.2 million) that was dispensed without any identifying criteria of what vehicle or purpose the fuel was for.

  About half of the fuel dispensed through bypass transactions occurred at DPW-Sanitation yards for LNG fuel. The five departments we visited accounted for 151,000 of the gallons dispensed through the bypass mode. The departments we visited stated they rarely place pumps in this mode; however, due to their lack of specific monitoring, they were not aware of the number of bypass transactions occurring at their fuel sites, nor did they maintain records to show when the pumps were placed in bypass, or to identify the appropriate use of fuel that was dispensed while in that mode. Regardless of the site location or fuel type, bypass transactions should be minimized, and supplementary logs should be used to provide a secondary control to ensure that all fuel dispensed can be attributed to a City vehicle/equipment and is for authorized purposes only.

- ***Keypad entry transactions*** occur when a City employee at a LAPD fuel site uses the override button, and is only required to input a vehicle number to obtain fuel. The override should only be used in emergencies when a VIT, fuel card, or master card does not work, and was designed to ensure that emergency vehicles would not be delayed for refueling. However, Citywide, 1.9 million gallons of fuel, with an estimated cost of $3.9 million, was dispensed via the keypad entry mode during the period from January 1, 2009 through March 15, 2011.

  Since the keypad entry mode should only be used when another method does not work, we would expect the number of these entries to be minimal, especially for non-emergency vehicles. Overall, about 21% of the LAPD's transactions (based on gallons dispensed) originate through keypad entry transactions. In addition, we noted approximately 220,000 gallons of fuel, with an estimated cost of $450,000, was dispensed via keypad entries for vehicles that were not part of LAPD and LAFD fleets. LAPD has requested that GSD and EJ Ward work to enhance controls over these transactions.

- ***Master card transactions*** are initiated by a site supervisor using a generic "master card", which is not tied to a specific vehicle, as is the case for regular fuel cards or VIT. These transactions require manual input of vehicle information, and are therefore considered higher risk. We noted 56,000 master card transactions accounting for over one million gallons of fuel (at a cost over $2 million) dispensed using master cards, which should be used only when a vehicle's fuel card or VIT is malfunctioning or missing. Generally, departments do not maintain logs for master card transactions, and were therefore unable to explain or verify the necessity of these transactions.

- ***Negative odometer and high mileage transactions.*** For each fueling transaction, the System records the vehicle's current odometer reading automatically (through VIT) or as manually entered into a keypad by the user. Recording the miles driven between fill-ups is one method to determine reasonable fuel use. We identified over 94,000 transactions that recorded negative mileage and almost 55,000 transactions with greater than 2,000 miles since the vehicle's last fueling. GSD stated that a large percentage of these were caused by user input errors, so the fueling was not prevented by the System. However, such illogical transactions should, at a minimum, trigger an alert that requires the user to take positive action to override the alert. Since departments do not regularly monitor their fueling transactions, they were unaware of these questionable transactions, or potential system problems.

Departments should also use the System to monitor after-hour and weekend transactions, and high-volume transactions.

Transactions related to fuel dispensed at commercial gas stations are recorded on Voyager statements. While LAFD and LAPD regularly monitor their Voyager purchasing activity, GSD receives the statements for Voyager cards issued to all other City departments. However, GSD performs only a limited review of those transactions, since it is not familiar with departments' specific operational needs to determine reasonableness or potential abuse.

➢ **Departments do not conduct regular and documented physical inventories of fuel cards, which increases the risk of inappropriate fuel transactions. In addition, master cards at RAP and LAFD should be better secured.**

Authorized employees can obtain fuel using four types of fuel cards: regular fuel cards, master cards, can cards, and Voyager cards. Fuel cards should be closely controlled through a reliable inventory count, and kept in secure locations with access restricted to authorized users. None of the five sampled departments have policies requiring regular physical inventories of fuel cards, or a periodic comparison of cards in their possession to those noted as having been issued to the department

by GSD. We discovered significant differences between the counts reported by GSD and the number of cards reported to the Controller by user departments, as well as differences between the departments' own listing and the cards that could be located.

While regular fuel cards are tied to specific vehicles, master cards can be used to dispense fuel for any vehicle at City pumps; therefore, their use creates a high-risk transaction. At two RAP locations and three LAFD fuel sites we visited, the master cards were not secured under lock and key.

- **The City's system for reporting its fuel transactions continues to produce errors. These errors have not been corrected by GSD or the System's vendor, EJ Ward. Also, transaction limits, which were designed to minimize inappropriate fueling transactions, are not fully functioning in the System.**

  Automated systems should be designed to prevent and detect errors from processing, and should be sufficiently reliable to provide a useful tool for management oversight through monitoring. Using our audit software, we noted the following errors with the City's automated fuel management system during the audit period: approximately 1,400 duplicate records; 127 transactions with non-existent vehicle numbers; thousands of negative and unreasonable mileage transactions; and other anomalies such as more than 1,700 gallons recorded as being dispensed to one vehicle on a single day, as well as supposedly inaccurate transactions that occurred after hours. GSD considered many of these system errors to be caused by malfunctions at the fueling terminals or by power spikes. However, in order to be effective, a system should process all transactions accurately and produce management reports of any irregular or questionable transactions. Despite spending more than $12 million to implement and maintain this System, many of these problems remain, which have been reported as continuing issues over several years.

  The usefulness of any automated data management system is reliant on the accuracy of the data it contains. In order to provide department management with the necessary means to monitor and control the fuel dispensed through the City's pumps, the data provided by the fuel automation system must be accurate. GSD, in coordination with departments who are the primary users of City fuel, should assess the costs and benefit of upgrading or replacing the System to minimize continuing system problems.

- **Not all fueling transactions are recorded in the database.**

  The City has several freestanding tanks and above ground tanks that hold up to 5,000 gallons of fuel. Although at least about 400,000 gallons of fuel is dispensed from these tankers annually, these transactions are not recorded in the City's fuel system. Therefore, its usage cannot be tracked to specific vehicles or equipment.

- **Departments have not established policies and procedures for checking-out vehicles and maintaining trip logs.**

  For departmental pool vehicles, appropriate authorization procedures and logs that record trip and fueling information can be a useful tool for monitoring appropriate City use. Logs should be maintained by vehicle, and generally include the dates and time of use, individual driver, odometer readings, trip destination/purpose, and fueling information. We reviewed the policies and procedures for checking-out vehicles and maintaining trip logs at four departments. Although three of the four departments maintained vehicle logs and/or utilized check-out procedures, the process of controlling the vehicles' use and related fuel usage through these mechanisms was not operating as intended and the logs often contained missing data.

Review of Report

A draft of this report was provided to GSD, LAPD, LAFD, RAP, LAHD, and LACC on February 9, 2012. We discussed the draft report with management from these departments at exit meetings held between February 15, 2012 and February 29, 2012, and we considered comments and additional information provided by these departments in finalizing this report.

The departments were in general agreement with the findings and recommendations. Each department acknowledged that improvements need to be made to strengthen controls over fuel use, and each department reported that it had begun to address many of the issues shortly after auditors had apprised management of these issues during our audit fieldwork. Following are examples of actions reported by departmental management.

GSD – The department now provides Voyager card fuel use reports and bypass transaction reports to other departments. In addition, GSD has enhanced its procedures for identifying potential errors in the fuel database.

LACC – The department established policies and procedures for regular reviews of fuel use. LACC also completed an inventory of fuel cards.

LAFD – The department periodically reviews fuel use reports and follows up with corrective actions. LAFD also now maintains logs of master card transactions.

LAHD - The department established policies and procedures for regular reviews of fuel use. LAHD also has strengthened controls over vehicle check-outs and the maintenance of trip logs.

LAPD – The department modified its system to better identify anomalies in transactions so they can be investigated. LAPD also began maintaining logs of master card

transactions, and is working to strengthen controls related to transactions initiated by keypad entry.

RAP – The department reviews fuel use reports on a regular basis, and has also reduced the number of Voyager cards.

We would like to thank management and staff from these six departments for their cooperation and assistance during the audit.

CONTROLLER'S ACCOUNTABILITY PLAN

RECOMMENDATIONS	PAGE REFERENCE	MAYOR ACTION REQUIRED	COUNCIL ACTION REQUIRED	DEPARTMENT ACTION REQUIRED
SECTION I. FUEL USE MONITORING				
1. GSD should convene regular meetings with departmental representatives of fuel/fleet managers to work towards cooperative solutions to better manage the City's fuel use (i.e., a "Fuel Task Force"). This could include developing general guidelines for controlling and monitoring fuel use, and assisting departments in using automated tools that are available, such as developing exception reports. Such guidelines and other information that could support departments in these efforts should be made available on GSD's website.	25			GSD
2. The Mayor should direct Departmental management to establish policies and procedures for controlling and monitoring their fuel use, based on GSD-developed guidelines.	26	X		
3. LAPD and GSD should work with the fuel system vendor to restrict the use of the keypad function to emergency vehicles and by requiring employee/badge numbers to be entered when fueling these vehicles.	26			LAPD GSD

4. The Mayor should direct management of user departments to implement adequate monitoring procedures over fuel use. This should include monitoring the following high-risk transactions: a) Bypass b) Keypad Entry (for LAPD) c) Master Card d) Negative Odometer e) High Mileage f) After Hour and Weekend g) High Volume	26	X		GSD LAPD LAFD RAP LAHD LACC
5. The Mayor should direct management of user departments with responsibility over fuel sites to ensure that each fuel site maintain logs to record fuel dispensed using the bypass mode and master cards. These logs should be reconciled, at least on a sample basis, to data from the Fuel Automation Report Center, and departmental managers should review these logs to identify any potential problems.	26	X		GSD LAPD LAFD RAP LACC
6. The Mayor should direct management of user departments with responsibility over fuel sites to establish procedures prohibiting the use of master cards at sites other than their assigned sites.	26	X		GSD LAPD LAFD RAP LACC
7. GSD should explore the feasibility of programming the EJ Ward System so that master cards can only be used at sites they are assigned to.	26			GSD

8. GSD, in coordination with user departments, should determine why a high number of negative odometer and high mileage transactions are occurring.	26			GSD
9. GSD should provide City departments with Voyager statements or electronic files of Voyager Card transactions for their review, along with the directive and suggested guidelines for departmental management to monitor purchase transactions to ensure appropriate use.	28			GSD
10. GSD should remind City departments that utilize Voyager cards of the City's policy regarding refueling at City sites, and how to locate maps and hours of operation of the City fuel sites. Suggestions for how best to strengthen internal departmental procedures regarding this issue is an example of an item to be discussed at regular Fuel Task Force meetings, referred to in Recommendation #1.	28			GSD

SECTION II. FUEL CARD CONTROLS				
11. The Mayor should direct departments to conduct regular department-wide physical inventories of fuel cards and to reconcile the inventories to GSD's records. Both the physical inventory and reconciliation should be documented.	30	X		GSD LAPD LAFD LAHD RAP LACC
12. LACC management should request GSD to transfer all cards used by security staff physically located at LACC to GSD's fuel card inventory	30			LACC
13. In future fuel card reports, GSD management should annotate the reports to indicate that LAFD and LAPD administer their own Voyager programs and that the reported figures on GSD's report only include cards used for helicopters.	30			GSD
14. RAP and LAFD management should ensure that master cards are maintained in secure locations, with access restricted to only authorized individuals.	31			RAP LAFD
SECTION III. SYSTEM RELIABILITY				
15. GSD management should develop solutions to resolve continuing system problems, which could include penalizing the vendor for inaccurate data that was accepted and processed by the System, exploring the feasibility of replacing the current system, and ensuring that proper tests are conducted prior to purchasing/implementing a system.	34			GSD

16. GSD management should regularly monitor fuel transactions to identify instances where pre-established transaction limits do not appear to be functioning correctly.	34			GSD
17. The Mayor should direct departments with tankers and above ground tanks to maintain logs to record fuel dispensed from the tankers. Information recorded should include the date, quantity dispensed, and the vehicle ID or equipment number. Management at departments should periodically review the logs to determine whether they are being completed properly and that the fuel is being used for appropriate City purposes.	35	X		LAFD RAP
SECTION IV. VEHICLE USE MONITORING				
18. The Mayor should direct departments who have pool vehicles to establish formal policies and procedures related to checking-out vehicles and maintaining trip logs. These policies and procedures should address the types of vehicles covered by the policies/procedures.	37	X		LAPD LAFD RAP LAHD LACC
19. The Mayor should direct departmental management to regularly monitor for compliance with the department's vehicle check-out and trip log maintenance procedures.	37	X		LAPD LAFD RAP LAHD LACC

BACKGROUND, SCOPE, AND METHODOLOGY

Background

The City purchases about 13.8 million gallons of fuel (unleaded, diesel, compressed natural gas, and liquefied natural gas) annually, at a cost of approximately $28.6 million. The fuel is dispensed at 141 City fuel sites (excluding proprietary departments), which include pump stations and freestanding tanks. Nine City departments have responsibility for control and management of fuel sites, as noted below. The majority of these sites are located at police and fire stations. While the department responsible for oversight is generally determined by the site's location, it is also generally the primary user of the fuel dispensed from that site. However, any City authorized vehicle/individual may receive fuel at any City fuel site. The fuel pumps are unmanned; however, each site has a designated fuel site supervisor to assist employees should they encounter problems in obtaining fuel.

Responsible Department	No. of Fuel Sites
LAFD	68
LAPD	23
Street Services	20
Rec & Parks	12
Sanitation	10
DOT	3
GSD	3
LACC	1
Zoo	1
Total	**141**

Authorized employees can also obtain fuel using Voyager credit cards at commercial gas stations when traveling outside the City or when a City site is not close by. For the last two fiscal years, Voyager card purchases totaled about $1 million annually.

According to fueling records from the City's fuel system, diesel and unleaded fuel comprise most of the fuel consumed by the City. The table below shows total gallons used by the City and by selected departments during the audit period.

Table 1: Total Fuel Dispensed at the City Sites for Selected Departments January 1, 2009 to March 15, 2011

Citywide Fuel Usage		LAPD	LAFD	RAP	LACC	LAHD
Fuel Type	Quantity (in gallons)	Quantity (in gallons)	Quantity (in gallons)	Quantity (in gallons)	Quantity (in gallons)	Quantity (in gallons)
CNG & LNG	6,713,709	0	0	3,979	0	0
Diesel	8,693,050	37,693	1,809,333	270,095	1,679	0
Unleaded	14,234,360	7,512,489	542,727	1,306,902	4,132	4,737
Total	**29,641,119**	**7,550,181**	**2,352,060**	**1,580,976**	**5,811**	**4,737**

Source: GSD's Fuel Database (EJ Ward System)

Fueling Authorization Methods

Designated City employees can obtain fuel for City vehicles or equipment dispensed through pumps or tanks at City sites through any of the following methods:

- **VIT**: Most of the City's vehicles purchased since 2003 are Vehicle Information Transmitter (VIT) equipped. During fueling, this system automatically transmits information to the fuel system such as vehicle number, odometer reading, type of fuel, quantity and fuel site location. For VIT equipped vehicles, employees do not need to use a fuel card or enter any information into the System.

- **City Fuel Cards**: A substantial number of vehicles and equipment continue to use City fuel cards to obtain fuel by the user swiping the card through a card reader at a City fuel pump, and entering the vehicle number and the odometer reading on a keypad directly into the System. These cards are mostly assigned to vehicles, meaning that an employee with a particular fuel card can only use that card to fill up a specific vehicle. However, at LAPD, some fuel cards are assigned to individuals (primarily staff who use motorcycles), so the use of the card is not restricted to a particular vehicle.

- **Can Cards**: These cards are used in a manner similar to fuel cards, but have use limits, such as five gallons per transaction and a maximum of two transactions per day. Can cards are typically used for fueling small equipment or specialized equipment.

- **Master Cards**: These cards are assigned to City fuel sites and are supposed to be used only in emergencies, such as when a vehicle's fuel card is not functioning. Staff are required to enter the vehicle number and the odometer reading on the fuel pump's keypad when a master card is used.

- **Bypass Transactions**: City pumps can be put in bypass mode, which allows fuel to be dispensed without the use of a fuel card or through the VIT system. This typically occurs when the pumps are undergoing maintenance, or there is a system failure. Only authorized staff at the fuel pump site, or authorized GSD or contractor staff have the ability to place a pump in the bypass mode. For bypass transactions, a vehicle number is not required to be entered through the keypad.

- **Keypad Entry**: At LAPD fuel sites, a City employee can override the requirement for a fuel card or VIT system at the fuel pump to get fuel without either a fuel card or VIT. Vehicle fueling is authorized by pressing the override button at the pump and inputting the vehicle number and the odometer reading on the keypad.

Authorized City employees can also obtain fuel at commercial gas stations using Voyager credit cards. Generally, a code must be entered at the pump for the card to function, and the vehicle number and odometer information is entered at that time.

Table 2 provides a breakdown of the number of transactions and gallons dispensed by each fueling method. The Table shows that for the period from January 1, 2009 through March 15, 2011, the majority of gallons dispensed (65%) was through the VIT function.

Table 2: City Fuel Authorization Methods
From January 1, 2009 to March 15, 2011

Type of Fueling	Description	No. of Transactions	Fuel Quantity (in gallons)
Employee Key Fueling	Fuel Cards assigned to Employees	7,239	30,459
Master Key Fueling	Master Card assigned to fuel site	56,018	1,000,112
Pump in Bypass	Bypass mode	132,213	877,015
Keypad Entry Fueling	Override button used at LAPD sites	242,110	1,866,303
Vehicle Key Fueling	Fuel Cards assigned to vehicles	393,982	6,735,160
VIT Fueling	VIT and Canceiver	1,289,790	19,132,070
Total		**2,121,352**	**29,641,119**

Source: GSD's Fuel Database (EJ Ward System)

Table 3 shows a breakdown of the various types of fuel cards assigned for the departments we reviewed and all other City departments/offices, as of January 2011:

Table 3: City Fuel Cards

Department	Fuel Cards	Can Cards	Master Cards	Voyager Cards
GSD	1,535	22	44	6
LAHD	11	0	0	0
LACC	66	3	1	0
LAFD	1,419	8	71	9
LAPD	184	0	22	18
RAP	2,341	194	12	39
Others	*6,339*	*123*	*38*	*76*
Total	**11,895**	**350**	**188**	**148**

Sources: GSD Letter "Fuel Cards Inventory" and LAPD Records

During our audit, GSD began collecting fuel cards for many vehicles that are VIT equipped. For example, as of September 2011, RAP had reduced their fuel cards from 2,341 to 1,617.

The City's Automated Fuel Management System

The City has contracted with EJ Ward, Inc. since 1999 to implement and maintain the City's fuel management system, which allows for the centralized monitoring of fuel levels at City fuel sites, as well as monitoring vehicle fuel usage by transaction.

The EJ Ward system provides authorization and storing of all City fueling transactions. The EJ Ward System interfaces with unleaded, diesel, CNG, and LNG dispensing devices. Each fuel transaction dispensed from pumps at City fuel sites is recorded in a database which is managed by the Department of General Services (GSD).

The original contract, executed in 1999 but extended through June 2003, had a maximum amount of $6.6 million. A subsequent contract was awarded to EJ Ward in 2003 to provide hardware and software modifications and to maintain the City's fuel automation system. That contract totals $5.5 million, and covers the period from October 1, 2003 to September 30, 2012.

Over the last three fiscal years, the City has paid EJ Ward approximately $1.5 million for repairs and maintenance of the System, as noted below.

Table 4: City Payments to EJ Ward

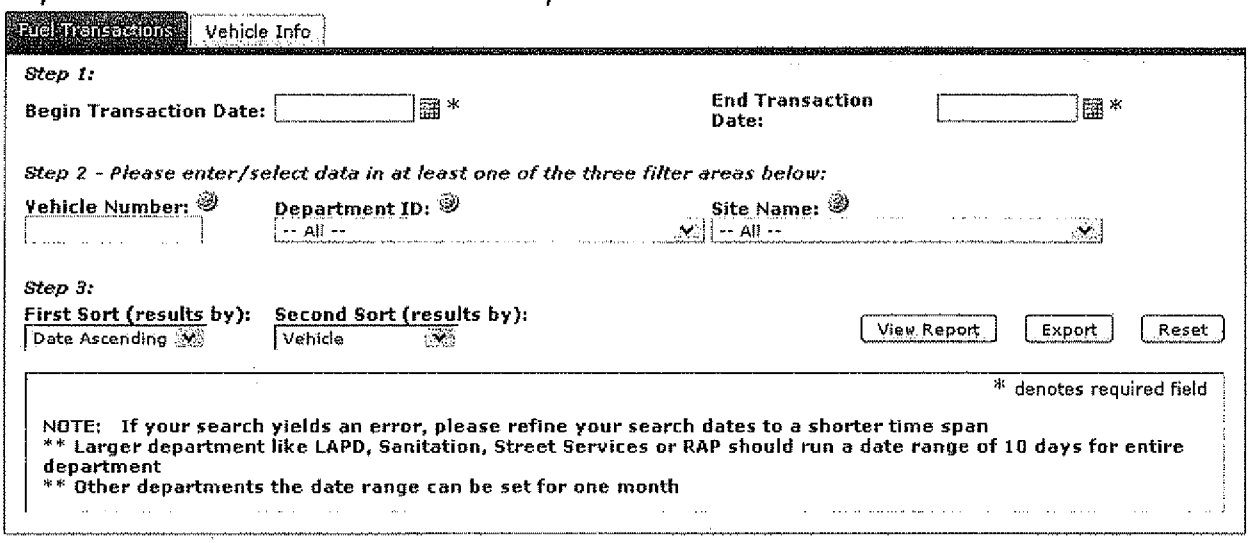
EJ Ward Payments		
FY2008-09	$	463,732
FY2009-10	$	549,721
FY2010-11	$	449,810
Total	**$**	**1,463,263**

Source: City's Financial Management System

Fuel Usage Management and Monitoring

Using information from the database of City fuel transactions recorded through the EJ Ward System, GSD provides the Fuel Automation Report Center on its intranet site, allowing departments to run customizable reports of fuel transactions and vehicle information. These reports can show which cards are associated with a vehicle or piece of equipment, and the date the card was last used. They also list transactions by department and vehicle, along with odometer readings and gallons dispensed. There are a limited number of records that can be viewed for any given report; at a given time, large departments may only be able to view transactions for about a ten day period. The exhibit below shows the query screen and a sample report:

Report Screen for Fuel Automation Report Center:



Sample Report:

Report: Transaction by Department (Aug 01, 11 - Aug 05, 11)

DEPT	VEH ID	AUTH	DATE	TIME	SITE	PUMP	FUEL	QTY	UNITS	COST	ODO START	ODO END	MILES	EMPLOYEE
HPP	16511	VIT Fueling	08/01/2011	11:50 AM	G-065 CITY HALL EAST	1	Unleaded	6.0	gallons	0.00	17089	17242	153	
HPP	02721	VIT Fueling	08/03/2011	11:58 AM	G-065 CITY HALL EAST	2	Unleaded	3.3	gallons	0.00	26022	26127	105	
HPP	16289	VIT Fueling	08/05/2011	10:43 AM	G-054 RAYMER STREET YEAR GSD	4	Unleaded	13.8	gallons	0.00	37801	37789	188	
HPP	02722	Vehicle Key Fueling	08/05/2011	10:59 AM	G-065 CITY HALL EAST	2	Unleaded	8.0	gallons	0.00	28949	29099	169	

GSD puts the onus on the management of individual departments to track fuel and card use by using the Fuel Automation Report Center. As part of their management oversight responsibilities, departments are expected to take the initiative to download fuel transaction data, look for anomalies, and identify unusual patterns of use.

For Voyager card transactions, GSD receives monthly statements from US Bank Voyager Fleet Systems noting detailed transactions incurred by cardholders at all non-proprietary departments, except Police and Fire. Los Angeles Police Department (LAPD) and Los Angeles Fire Department (LAFD) also receive monthly statements, as these two departments are responsible for administering their own Voyager card programs. In addition, these two departments receive daily file exports of transactions from US Bank.

Finally, LAPD also uses its own system, the Fleet Management System (FMS) to help manage fueling transactions. The System imports transaction data from the EJ Ward database. FMS is used primarily by the Department for vehicle maintenance, but it also creates reports for the Department regarding fuel transactions, odometer error entries, duplicate records, invalid fuel types, and incorrect vehicle identifications. LAPD uses these reports to monitor fuel transactions for compliance with City and departmental policies.

Objective, Scope and Methodology

The objective of this audit was to evaluate controls over the City's fuel use (excluding proprietary departments). Specific objectives were to:

- Ensure adequate controls are in place over the various types of fuel cards;
- Determine if fuel use is monitored by GSD and user departments;
- Evaluate whether the existing reporting systems for fuel use and card systems are sufficient for adequate monitoring; and
- Determine if departments conduct regular physical inventories of cards, and reconcile their records to GSD's records.

Our audit covered fuel transactions that occurred during the period from January 1, 2009 through March 15, 2011. We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS). 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.

Fieldwork was conducted between May 2011 and September 2011, although additional analysis was conducted through February 2012. In conducting our audit, we:

- interviewed management and staff of selected departments;
- reviewed applicable policies and procedures to obtain an understanding of the key processes;
- analyzed fueling records during the audit period and then selected samples of records for further review;
- reviewed logs of fuel transactions, card use and vehicle use; and
- reviewed key documents such as fuel records, fuel purchases, card inventories, monthly statements, financial records, and contracts.

Our audit findings were based on fieldwork conducted at five Council-controlled departments: Los Angeles Police Department (LAPD), Los Angeles Fire Department (LAFD), Recreation and Parks (RAP), Los Angeles Housing Department (LAHD) and Los Angeles Convention Center (LACC). We did not review fuel use or related controls at the City's three proprietary departments, as they each independently procure and manage their own fuel use.

In selecting the five departments for our review, we analyzed data from the City's fuel transaction database containing 2.1 million fueling transactions made between January 2009 and March 2011 at City fuel pumps, and from other databases containing purchases made from commercial gas stations. The five departments were selected for review because they showed an increasing number of high risk fueling transactions, such as those made without using a fuel card (bypass transactions), duplicate transactions, and weekend/after-hour transactions. We also reviewed processes at the Department of General Services (GSD) due to its centralized role in ordering fuel from vendors, issuing fuel cards, maintaining the Fuel Automation Report Center, receiving statements of Voyager transactions, and working with vendors to resolve problems with fuel pumps.

The remainder of this report details our findings, comments and recommendations.

AUDIT FINDINGS AND RECOMMENDATIONS

SECTION I. FUEL USE MONITORING

Each City department should regularly review their department's fuel transactions to determine if employees are complying with departmental/City policy and to identify potentially inappropriate transactions. These reviews could also identify potential problems with the City's fuel system that require management's attention. Regular reviews of fuel transactions would also provide City management with assurance that vehicles are only being used for legitimate City business and that fuel costs are minimized.

This Section of the report discusses the lack of fuel use monitoring by departments. Inadequate monitoring is compounded by what GSD describes as erroneous data from the System supporting the City's Fuel Automation Report Center. Section III of this report discusses System reliability issues.

Finding #1: With the exception of LAPD, departments do not utilize the data available through the Fuel Automation Report Center to monitor fuel use for potential problems or abuse. Thus, inappropriate fueling transactions could occur without being detected and fuel costs may not be minimized.

City Fuel Pumps

GSD developed a Fuel Automation Report Center (FARC) which contains transactional data related to all fuel dispensed from City pumps. Departments are expected to access the FARC on a regular basis to review their fuel transactions for potential problems or abuse.

Our audit found that with the exception of LAPD (which monitors transactions through its own Vehicle Management System), departments do not review their fueling transactions on a regular basis. Although some departments may occasionally review transactions related to a specific issue/problem that has arisen, the departments do not perform systematic reviews of the data. LACC was not even aware of the existence of the FARC. Except for LAPD, none of the other four departments we reviewed had implemented procedures for monitoring their fuel transactions using the reporting mechanisms available through the Fuel Automation Report Center.

Based on our reviews of the fuel database and existing departmental processes, each department should, at a minimum, be monitoring the following types of transactions:

Bypass Transactions

Bypass transactions can only occur when a locked panel is removed and an electronic switch is deactivated from a fuel control terminal. Fuel site supervisors and maintenance personnel have keys for their assigned pumps. While in bypass mode the pump will still dispense fuel, but the controls typically in place when using a fuel card or VIT, i.e., recording vehicle data related to the specific transaction, are non-existent. The fuel transactions during bypass mode are recorded in a memory buffer at the pump, which are later downloaded to the EJ Ward database. The result is that a bypass transaction is recorded only as fuel dispensed from the System. Pumps are only supposed to be put in bypass mode during maintenance or when the pump will not function using fuel cards or VIT. Only departments that are considered the owners of the site have keys that will allow the pump to be put in bypass mode.

Bypass transactions are considered high-risk because a card is not needed to fuel a vehicle, and the System does not record a vehicle number or department, making the transaction untraceable. For the period of January 1, 2009 through March 15, 2011, the database showed 132,000 bypass transactions Citywide, which accounted for 877,000 gallons of fuel dispensed at a cost of approximately $1.2 million. Approximately 55% of the fuel dispensed through bypass transactions occurred at Sanitation yards and involved LNG, which is used for heavy trucks. Departments in our sample with fuel sites[1] where we noted bypass transactions included the following:

Table 5 – Bypass Transactions

Dept.	# Trans	Qty. in gallons
LACC	140	755
LAFD	8,358	123,105
LAPD	1,113	4,465
RAP	2,058	22,634
Total	***11,669***	***150,959***

None of the departments we reviewed monitor their bypass transactions, nor do they maintain any type of log to indicate why the pumps were put into bypass or to show which vehicles (along with the driver's name) received the fuel.[2] LAPD has paper forms available to record transactions when pumps are in bypass mode, but these were not used during the audit period. None of the departments were aware of the amount of bypass transactions occurring at their locations. Irrespective of the fuel site location or fuel type, bypass transactions should be minimized to the extent possible and supplementary logs used to provide a secondary control to ensure that all fuel dispensed while in bypass mode can be traced to a City vehicle, and is for authorized City purposes only.

[1] LAHD has no fuel sites.
[2] RAP did establish bypass logs for two of its 12 fuel sites, but the logs have not been maintained since 2009.

Each department stated that they rarely place pumps in the bypass mode (LAPD and LACC stated that they have never placed pumps in bypass mode) and surmised that it must have been GSD or contract staff who placed the pumps in this mode. Because of the lack of monitoring by these departments, no records were maintained to show when pumps have been placed this mode. Without a sufficient audit trail, it is not possible to determine who placed the pumps in bypass, or confirm the validity or appropriate authorized use of the fuel that was dispensed while in that mode.

We also noted that none of the departments periodically inspect pumps to determine if the pump has accidentally been left in bypass. For example, GSD could put a pump in bypass but neglect to restore the pump to its normal state. This could result in bypass transactions being recorded inaccurately or unnecessarily.

Keypad Entry Transactions

At LAPD fuel sites, a City employee can override the requirement to use a fuel card or the VIT system to obtain fuel. Vehicle fueling can be authorized by pressing the override button at the pump, and inputting a vehicle number and odometer reading into the keypad.

LAPD requested this feature to use in emergency situations when a VIT, fuel card, or master card does not work, so that emergency vehicles are not delayed for refueling. Although the user must enter an odometer reading, the System accepts any number, including one that results in a negative odometer reading (discussed below).

Citywide, 1.9 million gallons of fuel, with an estimated cost of $3.9 million was dispensed via the keypad entry mode during the period from January 1, 2009 through March 15, 2011. LAPD accounted for approximately 84% of the quantity dispensed.

Since the keypad entry mode should only be used when another method does not work, we would expect the number of these entries to be minimal, especially for non-emergency vehicles. However, approximately 220,000 gallons of fuel, with an estimated cost of $450,000, was dispensed via keypad entries for departments other than LAPD and LAFD. We also noted that about 21% of LAPD's transactions (based on gallons dispensed) are keypad entry transactions. This is an indication that users at both LAPD and other departments may not have followed established procedures, e.g., using the keypad only when another method failed.

LAPD has requested that GSD and EJ Ward work with them to add a requirement for users to enter their employee/badge number when using the keypad override function. This system enhancement will help minimize unauthorized fueling by providing for additional accountability. However, we believe that this override feature should be restricted to sworn personnel for fueling emergency vehicles only, and requiring valid employee badge/numbers. In all other instances, users should be prohibited from using the keypad override function.

Master Card Transactions

At each City fuel site, the fuel site supervisors maintain a master card that is typically used when a vehicle's fuel card or VIT is malfunctioning, or the vehicle/equipment needing fuel is without a fuel card because it is missing or has not been assigned. Because master cards are not tied to specific vehicles, there is a risk that an incorrect vehicle number will be entered into the System (either intentionally or by mistake). Since the master cards are used only as an alternative fueling method, we would expect the number of these transactions to be minimal. However, there were 56,000 master card transactions during the period from January 1, 2009 through March 15, 2011, representing over one million gallons of fuel dispensed with a cost of over $2 million. LAFD and RAP comprised almost 50% of master card transactions.

None of the five departments monitor master card transactions, nor do they maintain logs to record the employee who fueled the vehicle, the vehicle that was fueled, dates and times of transactions, and the reason why a master card had to be used (an exception is that, as discussed below, RAP had logs for some locations).

We selected samples of master card transactions and asked each department to explain why the master card had been used. Since the departments do not maintain logs, they were unable to provide explanations for individual transactions. Rather, they stated that the master card must have been used due to non working/missing VITs and/or fuel cards. However, based on our inquiries, LAPD did discover that errors were made for 264 transactions. LAPD explained that instead of entering the correct vehicle ID number, the user entered a three digit number as the vehicle ID, and this caused the transactions to be incorrectly identified as LAPD vehicle transactions when they were for vehicles of other departments. Periodic reviews of master card transactions could have detected this type of error before our inquiry.

RAP does maintain logs of master card transactions for six of its 12 fuel sites. However, our testwork for one site, the Central Service Yard, found that 46% of master card transactions occurring at this site had not been recorded in the log. RAP stated that other departments must have used their department's master card at the Central Service Yard site. However, it was our understanding that master cards are only supposed to be used at a specified fuel site, indicating that employees had violated established procedures. To prevent this from happening, GSD should explore the feasibility of programming the EJ Ward System so that master cards can only be used at sites where they are assigned.

Negative Odometer Readings and High Mileage Transactions

Each time an employee uses a fuel card, s/he is required to enter the odometer reading from the vehicle. In the case of VIT, the odometer readings are captured automatically. Accurate odometer readings help maintain the integrity of the System's database and assist departments in managing their fuel use.

A negative odometer transaction occurs when an employee enters an odometer reading that precedes the odometer reading related to the last fill-up. Negative odometer readings can also occur on VIT transactions if the VIT did not record an accurate reading or if an inaccurate reading was recorded on the previous fueling transaction.

A high mileage transaction is one in which the odometer reading for a particular transaction is significantly higher (e.g., 2,000 miles) than the odometer reading for the previous fueling transaction.[3]

Our review of the fuel database identified over 94,000 transactions with negative odometer readings, and 55,000 transactions with mileage greater than 2,000 miles since the last transaction. The following table shows the number of questionable transactions related to vehicles assigned to each of the five departments we reviewed.

Table 6

	Negative Miles		>2,000 Miles	
Dept.	**# of trans**	**Fuel Qty**	**# of trans**	**Fuel Qty**
LAHD	36	504	15	180
LACC	17	141	13	91
LAFD	10,332	158,080	5,100	80,789
LAPD	54,608	461,751	34,444	306,313
RAP	3,510	49,665	1,679	26,009
Total	*68,503*	*670,141*	*41,251*	*413,383*

GSD stated that a large percentage of these were caused by user input errors, so the fueling was not prevented by the System. However, such illogical transactions should, at a minimum, trigger an alert that requires the user to take positive action to override the alert. Since departments generally do not regularly monitor their fueling transactions, they were unaware of these questionable transactions, or potential system problems.

LAPD is aware of the volume of its negative mile transactions because the Department's Fleet Management System records the negative mileage transactions as "zero-advancement" transactions, which must be reviewed by Departmental staff. However, the Department could improve its review over these transactions to determine why so many are occurring.

Negative odometer reading and high mileage transactions are discussed further in the System reliability section of the audit report.

[3] For purposes of our audit, we used a 2,000 mile threshold. However, it should be noted that according to GSD, the System prevents an employee from entering an odometer reading that is more than 500 miles greater than the last recorded transaction.

After Hour and Weekend Transactions

Inappropriate fueling transactions have a higher probability of occurring on weekends or after-hours (e.g., between 8:00 p.m. and 5:00 a.m.) when the activity is less likely to be detected. Citywide, 23% of fueling transactions, with an estimated fuel cost of $4.9 million per year, took place on weekends or after-hours, with LAPD and LAFD comprising 61% of these transactions.

In some departments, especially those with 24/7 operations like LAPD and LAFD, weekend and after-hour transactions occur regularly and are not considered high-risk. Nevertheless, City departments should review these transactions, at least on a sample basis, to identify any potential problems. For example, LAHD had two after-hour transactions that could not be initially explained; however, after our inquiries, GSD stated they were due to system errors. Systematic reviews of these transactions would have identified these earlier so that further inquiry relative to the appropriateness of the transaction or identification of a potential system error, and corrective action, could be taken. System errors are discussed in more detail in the *System Reliability* section of the report.

High Volume Transactions

High volume transactions include those where the database showed that a large quantity of fuel (e.g., more than 200 gallons) was dispensed in one transaction. A review of these transactions could reveal problems with the System (see Section III-*System Reliability*) or potential misuse.

Policies and Procedures

Our audit found a lack of formalized policies and procedures for controlling and monitoring fuel use. Because of their familiarity with the City's Automated Fuel Management System and their role as liaison between departments and the fuel system vendor, we believe that GSD should issue general guidelines to assist departments in controlling and monitoring fuel use. The guidelines should be posted on GSD's website for easy access, and they should be well advertised so that key individuals and departments are aware of their existence and contents. In developing the guidelines, GSD should solicit input from other departments. This could be accomplished through regular meetings with departmental representatives of fuel/fleet managers.

Recommendations

1. **GSD should convene regular meetings with departmental representatives of fuel/fleet managers to work towards cooperative solutions to better manage the City's fuel use (i.e., a "Fuel Task Force"). This could include developing general guidelines for controlling and monitoring fuel use, and assisting departments in using automated tools that are available, such as developing exception reports. Such**

guidelines and other information that could support departments in these efforts should be made available on GSD's website.

2. **The Mayor should direct Departmental management to establish policies and procedures for controlling and monitoring their fuel use, based on the GSD-issued specific guidelines.**

3. **LAPD and GSD should work with the fuel system vendor to restrict the use of the keypad function to emergency vehicles and by requiring employee/badge numbers to be entered when fueling these vehicles.**

4. **The Mayor should direct management of user departments to implement adequate monitoring procedures over fuel use. This should include monitoring the following high-risk transactions:**
   - **h) Bypass**
   - **i) Keypad Entry (for LAPD)**
   - **j) Master Card**
   - **k) Negative Odometer**
   - **l) High Mileage**
   - **m) After Hour and Weekend**
   - **n) High Volume**

5. **The Mayor should direct management of user departments with responsibility over fuel sites to ensure that each fuel site maintain logs to record fuel dispensed using the bypass mode and master cards. These logs should be reconciled, at least on a sample basis, to data from the Fuel Automation Report Center, and departmental managers should review these logs to identify any potential problems.**

6. **The Mayor should direct management of user departments with responsibility over fuel sites to establish procedures prohibiting the use of master cards at sites other than their assigned sites.**

7. **GSD should explore the feasibility of programming the EJ Ward System so that master cards can only be used at sites they are assigned to.**

8. **GSD, in coordination with user departments, should determine why a high number of negative odometer and high mileage transactions are occurring.**

Commercial Gas Stations

Employees at some departments are assigned Voyager cards to fuel vehicles at commercial gas stations when using a City fueling site is not practical. Voyager sends

monthly statements of transactions to GSD, LAFD and LAPD for review and payment. GSD receives statements pertaining to Voyager card transactions initiated by staff at all City departments/offices that have cards[4], other than LAFD and LAPD. GSD processes include reviewing the statements to identify any instances of non-gasoline purchases and to identify instances where high octane fuel was purchased, contrary to the City's policy requiring less expensive gasoline. However, GSD does not review the statements to identify potential abuse, such as fueling personal vehicles, unauthorized use of City vehicles, or other non-compliance. GSD stated that departments would be in a better position to perform this type of review, since they are more familiar with their department's operations. GSD stated that it would begin providing departments with monthly statements so that they can perform this type of monitoring.

Although our audit did not disclose problems related to purchasing non-gasoline items or high octane gasoline, we did identify instances where RAP employees made purchases from commercial gas stations when a City fuel site was nearby, a violation of City policy. Specifically, we selected seven commercial stations close to City fuel sites that had 221 Voyager card transactions. For 34 transactions, we noted that the fueling transactions took place at a commercial station when a City site was close by. RAP stated that the driver may not have known this because the department is unaware of any maps showing the location of all City sites, or any listings showing the hours of their operation. Though fuel site information was available on GSD's website, RAP stated that internal procedures could be enhanced to include maps or listings of City fuel sites in every City vehicle.

LAPD and LAFD review purchasing activity noted on Voyager statements on a regular basis. Although the amount of monitoring is reasonable given staffing limitations, it could be enhanced. For example, while LAFD looks for transactions noting unauthorized items such as high octane fuel, they do not analyze fuel purchases for large amounts or sudden increases in fuel volume purchased by specific individuals or divisions to determine reasonableness.

We also noted that Voyager cards used by LAPD will accept incorrect vehicle IDs entered at the pumps. The transaction record shows the incorrect ID, presenting an additional risk for Voyager card misuse since the Department would not be able to determine who obtained the fuel or for which vehicle.

[4] These include the City Attorney; CD3; CD5; CD7; CD8; CD11; CD13; CD15; DOT; Emergency Management Department; GSD Fleet: DPW- Sanitation; DPW-Street Lighting; DPW-Street Services; and Recreation & Parks.

Recommendations

9. **GSD should provide City departments with Voyager statements or electronic files of Voyager Card transactions for their review, along with the directive and suggested guidelines for departmental management to monitor purchase transactions to ensure appropriate use.**

10. **GSD should remind City departments that utilize Voyager cards of the City's policy regarding refueling at City sites, and how to locate maps and hours of operation of the City fuel sites. Suggestions for how best to strengthen internal departmental procedures regarding this issue is an example of an item to be discussed at regular Fuel Task Force meetings, referred to in Recommendation #1.**

SECTION II. FUEL CARD CONTROLS

As previously described, employees can obtain fuel using four types of fuel cards: regular fuel cards, master cards, Voyager cards, and can cards. To minimize the risk of inappropriate fuel transactions, departments should conduct regular physical inventories of its fuel cards and should reconcile these inventories to GSD's records. Both the physical inventory and the reconciliation should be documented. Also, fuel cards should be kept in secure locations with access restricted to authorized users.

Finding #2: Departments do not conduct regular and documented physical inventories of fuel cards, which increases the risk of inappropriate fuel transactions.

None of the five sampled departments have policies and procedures requiring that regular physical inventories of fuel cards be performed. Although departments may have completed some inventories, they were not completed department-wide, were not completed for all types of cards, and/or were not reconciled with GSD's records. For example, LAFD stated that fire stations are responsible for conducting periodic inventories of fuel cards, but there is not a department-wide physical inventory conducted which includes a reconciliation to GSD records. RAP stated that it had completed a reconciliation of its fuel card inventory to GSD's records, but the documentation was not retained.

In January 2011, GSD provided the Office of the Controller with a report showing the number of fuel cards assigned to each department. We discovered significant differences between the counts reported by GSD and the number of cards reported to us by user departments.

Following are examples where regular physical inventories of fuel cards and reconciliations to GSD records would have identified problems, such as discrepancies in the number of cards between departments' records and GSD's records. It should be noted that, unless specifically requested, GSD does not provide departments with a listing of card numbers shown in their records. None of the five departments we visited has requested such a listing.

LACC

GSD's records show that LACC has 47 cards compared to the 33 on LACC's inventory list. Since LACC does not reconcile its fuel card inventory with GSD's records, it could not explain the reason for the discrepancy. LACC surmised that the difference in card counts may have resulted from GSD not updating its records to reflect equipment and vehicles turned over to GSD and from salvaged items. However, without a reconciliation between GSD and departmental records, the underlying reason for the discrepancy cannot be determined.

We conducted a physical count of the department's fuel cards, using its reported card inventory. Six (18%) of the 33 cards on the inventory list could not be found, and according to GSD, the cards had not been reported as lost. LACC also had three fuel cards in its physical possession that were not included on its inventory listing.

With respect to the six missing cards, GSD's records show that three are assigned to GSD and three are assigned to LACC. We found that all six cards were used by GSD security staff who are physically located at LACC. Therefore, all six cards should be assigned to GSD. When asked to explain why three of the six cards are assigned to LACC, GSD stated that fuel cards are assigned to the department that requests the cards. In this situation, GSD stated that LACC must have requested three of the cards.

If LACC had conducted periodic inventories, it would have identified the large discrepancy between GSD's list and its own, as well as worked to resolve the problems noted above.

LAFD and LAPD

LAPD's records show that it has 184 fuel cards and 384 Voyager cards, but GSD records show 0 and 18, respectively. LAFD stated that it has 686 Voyager cards, but GSD's records show nine cards.

Based on our inquires, LAFD and LAPD contacted GSD in attempt to determine reasons for the variances. GSD subsequently explained that its counts only included Voyager cards for helicopters, since GSD administers these cards. GSD stated that it does not administer the Voyager program for cards used to fuel LAPD and LAFD vehicles. Regarding the 184 fuel cards, LAPD believes that the difference may be attributed to different definitions of the various types of cards. Again, a reconciliation between departmental lists and GSD's records would have identified these discrepancies.

Recommendations

11. **The Mayor should direct departments to conduct regular department-wide physical inventories of fuel cards and to reconcile the inventories to GSD's records. Both the physical inventory and reconciliation should be documented.**

12. **LACC management should request GSD to transfer all cards used by security staff physically located at LACC to GSD's fuel card inventory.**

13. **In future fuel card reports, GSD management should annotate the reports to indicate that LAFD and LAPD administer their own Voyager programs and that the reported figures on GSD's report only include cards used for helicopters.**

Finding #3: Master cards at RAP and LAFD should be better secured.

Use of master cards to dispense fuel creates a high-risk transaction, because unlike regular fuel cards, the card is not linked to a specific vehicle. Therefore, anyone with access to the card could use it to dispense fuel for any vehicle. Because of the inherent risk with master cards, departments should take extra precautions to maintain these cards in secure locations.

As part of our audit, we visited two RAP locations and three LAFD locations that have fuel pumps. At both of the RAP locations, the master card was not secured under lock and key. A similar observation was made at the three LAFD locations. Although the LAFD locations where the master cards are maintained are limited to sworn departmental personnel, the cards should be kept under lock and key to minimize misuse.

Recommendation

14. **RAP and LAFD management should ensure that master cards are maintained in secure locations, with access restricted to only authorized individuals.**

SECTION III. SYSTEM RELIABILITY

Automated systems should be designed to prevent/detect erroneous data from processing. Inaccurate data could result in management making incorrect decisions based on the faulty data. Inaccurate data can also erode the confidence of users who rely on the data, and can be time consuming and costly to correct data errors.

Finding #4: The City's system for reporting its fuel transactions continues to produce errors.

Using our automated audit software, we reviewed the database of fuel transactions for the period from January 1, 2009 through March 15, 2011 to identify potential errors. Our review disclosed the following system deficiencies and problems:

- **Duplicate transactions** – We noted approximately 1,400 duplicate records in the database. These are records in which the transaction date, vehicle ID number, fuel site, fuel pump number, and quantity dispensed are identical.

  GSD indicated that the majority of the duplicate transactions are a result of malfunctions at the fueling terminals at certain sites. The terminals at these locations do not appear to keep track of records already downloaded to the System's server, so the same transactions are sometimes downloaded again. GSD indicated they have identified this problem in the past and are trying to diagnose the source of what is apparently a hardware problem. GSD also indicated that some duplicate transactions may have resulted from VITs being programmed with the same generic number.

- **Non-existent vehicle numbers** – We identified 127 transactions with nonexistent vehicle numbers, such as 0000,"", and +. GSD stated that these errors occurred as a result of power spikes at the fueling terminals, which resulted in the corruption of data in the vehicle ID field.

- **Negative mile transactions and unreasonable odometer transactions** – As previously discussed in Finding #1, we identified over 94,000 transactions with negative odometer readings and 55,000 transactions with mileage greater than 2,000 miles since the last transaction.

  Ideally, the System should prevent these types of transactions from occurring. If this is not feasible, the System should produce exception reports so departments can determine the reasons for these transactions. Finding #1 addresses these issues.

  However, we also noted that certain System edits that were purported to be in place were apparently not working. For example, GSD stated that when using a

regular fuel card (i.e., one that is not a master card), the System would prevent fuel from being dispensed if the user entered a negative odometer reading or entered one that was significantly higher than the odometer reading for the previous transaction. However, we identified over 15,000 transactions where the System edit apparently did not work.

- **Other anomalies** – We noted a small number of transactions in the database for which GSD stated that a fueling transaction did not occur. For example, according to the database, one RAP vehicle received 1,709 gallons of fuel on one day (through a total of three transactions). GSD stated that these transactions were errors caused by power spikes. In other instances, we noted certain transactions occurring after hours, which GSD again stated were actually errors caused by power spikes.

  We are particularly concerned with these types of anomalies because computer systems, when inadequately implemented, may duplicate or fail to record transactions, but they do not typically "create" transactions.

GSD stated that as each phase of the System has been rolled out, there have been deficiencies and opportunities for enhancement, which continue to be addressed through maintenance and upgrades. They acknowledged that issues with electronic data transmission, which cause irregular transactions, are a continuing problem with the aging system which is now 11 years old.

GSD believes the actual system error rate is low given the high number of transactions processed, and stated that many of the anomalies cited by the audit were actually caused by users overriding the System through keypad entry and other means, which were not standard to the original programming. However, in order to be effective, a system should process all transactions accurately and produce management reports of any irregular or questionable transactions.

The usefulness of any automated data management system is reliant on the accuracy of the data it contains. In order to provide department management with the necessary means to monitor and control the fuel dispensed through the City's pumps, the data provided by the fuel automation system must be accurate. GSD, in coordination with departments who are the primary users of City fuel, should assess the costs and benefits of upgrading or replacing the System to minimize continuing system problems.

Most of the problems cited above have been continuing issues. GSD management needs to develop solutions to resolve these problems. This could include penalizing the vendor for inaccurate data caused by the System, exploring the feasibility of replacing the current system, and ensuring that proper tests are conducted prior to purchasing/implementing a system.

Recommendation

15. **GSD management should develop solutions to resolve continuing system problems, which could include penalizing the vendor for inaccurate data that was accepted and processed by the System, exploring the feasibility of replacing the current system, and ensuring that proper tests are conducted prior to purchasing/implementing a system.**

Finding #5: Transaction limits, which were designed to minimize inappropriate fueling transactions, are not fully functioning in the EJ Ward system.

In addition to inaccurate data being recorded in the fueling database, we also found that the System lacks adequate controls to prevent unauthorized transactions. For example, with the exception of LAFD and LAFD, there is supposed to be a two- "swipe" limit per day for each vehicle. However, we noted numerous instances where the limit had been exceeded.

GSD indicated that due to hardware and terminal communication limitations, the transmission of data from the fueling terminals (referred to as polling) is sometimes not frequent enough to allow complete adherence to a fuel card's two-swipe limit. If a fueling terminal has not been polled to obtain the most updated information, there could be instances where more than two swipes could occur. GSD recently began replacing communication devices at each fueling terminal for faster communication to increase the number of pollings and to address this problem.

Recommendation

16. **GSD management should regularly monitor fuel transactions to identify instances where pre-established transaction limits do not appear to be functioning correctly.**

Finding #6: Not all fueling transactions are recorded in the database.

In addition to fuel pumps, the City has several fuel tankers with the capacity to hold up to 5,000 gallons of unleaded or diesel fuel. Generally, these tankers are portable and are used to provide fuel for vehicles and equipment located at remote sites, where it is not practical to fill the vehicle/equipment from a City pump. Fuel received from the distributor to these tankers are referred to as tanker to tanker distributions.

According to GSD's records, about 400,000 gallons of fuel are dispensed from these tankers annually. The fuel pumped from these tanks to City vehicles or equipment is not recorded in the EJ Ward system. Therefore, the System does not reflect all fueling transactions that take place. This makes it difficult to determine which vehicles received the fuel, especially since the department may not keep a detailed log showing fueling

transactions. Also, some of the system edits may not function properly. For example, as previously discussed, the System is programmed to prevent fuel from being dispensed if a vehicle's odometer reading entered for a particular transaction is significantly higher than the previous fill-up. If a specific vehicle is being fueled from a tanker on a frequent basis, the System could erroneously "reject" a transaction when a user attempts to subsequently obtain fuel from a regular fuel pump, since s/he would enter an odometer reading that is significantly higher than the last odometer reading recorded in the System.

Of the five departments we reviewed, RAP has a 1,000 gallon mobile tanker assigned to their Central Service Yard, and maintains a log noting amounts dispensed. However, the logs are not reviewed to determine whether they are being completed properly or that the fuel is being using for authorized City purposes.

LACC utilizes a mobile 80 gallon diesel fuel tank to replenish two above ground tanks. Although these diesel tanks are secured under lock and key behind a gate and have restricted access, the Department does not complete logs to record or account for fuel usage. LACC stated that it has now begun to maintain such usage logs.

Recommendation

17. **The Mayor should direct departments with tankers and above ground tanks to maintain logs to record fuel dispensed. Information recorded should include the date, quantity dispensed, and the vehicle ID or equipment number. Management at departments should periodically review the logs to determine whether they are being completed properly and that the fuel is being used for appropriate City purposes.**

SECTION IV. VEHICLE USE MONITORING

Finding #7: Departments have not established adequate policies and procedures for checking-out vehicles and for maintaining trip logs.

To the extent possible, departments should have policies and procedures in place that require users to obtain formal approval to use a City vehicle. In addition, where practical, vehicle logs should be maintained showing dates and time of use, the individual using the vehicle, odometer readings, destination, and where the vehicle was fueled. Management should periodically review the logs to ensure that trips are for City authorized purposes.

We recognize that requiring formal vehicle check-outs and the maintenance of trip logs may not be practical in all cases, such as for vehicles used for emergencies (e.g., police and fire vehicles) and those that normally do not leave the facility (e.g., maintenance trucks assigned to specific facilities). However, in other instances, such as pool vehicles used by administrative staff, formal check-out procedures and vehicle logs are reasonable.

We reviewed whether four departments had established policies and vehicles for checking-out vehicles and maintaining trip logs. While LAHD, LACC, and LAFD had formal procedures and/or trip logs; however, the procedures were not operating as intended. At LAHD we performed testwork to determine whether authorizations were on file for four of the department's pool vehicles. We found that the department had authorizations on file for only one vehicle, and authorizations to use that vehicle were not consistently obtained. In addition, we selected a sample of 29 fueling transactions that occurred for five of the department's 11 vehicles. We found that 45% (13) of these trips had not been logged. In other words, there were 13 instances where the vehicle received fuel, but the vehicle log did not show that the vehicle was used on those particular days. Lastly, we found that no one at the department periodically reviewed the vehicle logs.

LACC maintains logs, but they often contained missing data (e.g., expected return time, time checked-out, or the destination) and they were not organized or maintained in a manner that would facilitate management's review. For example, instead of separate logs for each vehicle, the same log is used for all vehicles, and odometer readings are not recorded. Therefore, it is not possible to determine if the log is being filled out for each use or whether trips are considered appropriate.

LAFD also maintained logs; however, employees were not required to obtain formal authorization to use the vehicles and there are no formal procedures for management to review the logs on a periodic basis to ensure the logs have been completed properly and to monitor vehicle usage.

Recommendations

18. **The Mayor should direct departments who have pool vehicles to establish formal policies and procedures related to checking-out the vehicles and maintaining trip logs. These policies and procedures should also address the types of vehicles covered by the policies/procedures.**

19. **The Mayor should direct departmental management to regularly monitor for compliance with the department's vehicle check-out and trip log maintenance procedures.**

Respectfully submitted,

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February 29, 2012

APPENDIX A

OFFICE OF THE CONTROLLER
AUDIT OF CONTROLS OVER THE CITY'S FUEL USE

Ranking of Recommendations

Finding Number	Description of Finding	Ranking Code	Recommendations
	Section I. Fuel Use Monitoring		
1.	With the exception of LAPD, departments do not utilize the data available through the Fuel Automation Report Center to monitor fuel use for potential problems or abuse. Thus, inappropriate fueling transactions could occur without being detected and fuel costs may not be minimized.	U	1. GSD should convene regular meetings with departmental representatives of fuel/fleet managers to work towards cooperative solutions to better manage the City's fuel use (i.e., a "Fuel Task Force"). This could include developing general guidelines for controlling and monitoring fuel use, and assisting departments in using automated tools that are available, such as developing exception reports. Such guidelines and other information that could support departments in these efforts should be made available on GSD's website.
		U	2. The Mayor should direct Departmental management to establish policies and procedures for controlling and monitoring their fuel use, based on GSD-developed guidelines.
		U	3. LAPD and GSD should work with the fuel system vendor to restrict the use of the keypad function to emergency vehicles and by requiring employee/badge numbers to be entered when fueling these vehicles.
		U	4. The Mayor should direct management of user departments to implement adequate monitoring procedures over fuel use. This should include monitoring the following high-risk transactions: a) Bypass b) Keypad Entry (for LAPD) c) Master Card d) Negative Odometer e) High Mileage f) After Hour and Weekend g) High Volume
		N	5. The Mayor should direct management of user departments with responsibility over fuel sites to ensure that each fuel site maintain logs to record fuel dispensed using the

Finding Number	Description of Finding	Ranking Code	Recommendations
			bypass mode and master cards. These logs should be reconciled, at least on a sample basis, to data from the Fuel Automation Report Center, and departmental managers should review these logs to identify any potential problems.
		N	6. The Mayor should direct management of user departments with responsibility over fuel sites to establish procedures prohibiting the use of master cards at sites other than their assigned sites.
		N	7. GSD should explore the feasibility of programming the EJ Ward System so that master cards can only be used at sites they are assigned to.
		N	8. GSD, in coordination with user departments, should determine why a high number of negative odometer and high mileage transactions are occurring.
		N	9. GSD should provide City departments with Voyager statements or electronic files of Voyager Card transactions for their review, along with the directive and suggested guidelines for departmental management to monitor purchase transactions to ensure appropriate use.
		N	10. GSD should remind City departments that utilize Voyager cards of the City's policy regarding refueling at City sites, and how to locate maps and hours of operation of the City fuel sites. Suggestions for how best to strengthen internal departmental procedures regarding this issue is an example of an item to be discussed at regular Fuel Task Force meetings, referred to in Recommendation #1.

	Section II. Fuel Card Controls		
2	Departments do not conduct regular and documented physical inventories of fuel cards, which increases the risk of inappropriate fuel transactions.	N	11. The Mayor should direct departments to conduct regular department-wide physical inventories of fuel cards and to reconcile the inventories to GSD's records. Both the physical inventory and reconciliation should be documented.
		N	12. LACC management should request GSD to transfer all cards used by security staff physically located at LACC to GSD's fuel card inventory.
		N	13. In future fuel card reports, GSD management should annotate the reports to indicate that LAFD and LAPD administer their own Voyager programs and that the reported figures on GSD's report only include cards used for helicopters.
3	Master cards at RAP and LAFD should be better secured.	U	14. RAP and LAFD management should ensure that master cards are maintained in secure locations, with access restricted to only authorized individuals.
	Section III. System Reliability		
4	The City's system for reporting its fuel transactions continues to produce errors.	N	15. GSD management should develop solutions to resolve continuing system problems, which could include penalizing the vendor for inaccurate data that was accepted and processed by the System, exploring the feasibility of replacing the current system, and ensuring that proper tests are conducted prior to purchasing/implementing a system.
5	Transaction limits, which were designed to minimize inappropriate fueling transactions, are not fully functioning in the EJ Ward system.	N	16. GSD management should regularly monitor fuel transactions to identify instances where pre-established transaction limits do not appear to be functioning correctly.
6	Not all fueling transactions are recorded in the database.	N	17. The Mayor should direct departments with tankers and above ground tanks to maintain logs to record fuel dispensed. Information recorded should include the date, quantity dispensed, and the vehicle ID or equipment number. Management at departments should periodically review the logs to determine whether they are being completed properly and that the fuel is being used for appropriate City purposes.

	Section IV. Vehicle Use Monitoring		
7	Departments have not established adequate policies and procedures for checking-out vehicles and for maintaining trip logs.	N	18. The Mayor should direct departments who have pool vehicles to establish formal policies and procedures related to checking-out vehicles and maintaining trip logs. These policies and procedures should address the types of vehicles covered by the policies/procedures.
		N	19. The Mayor should direct departmental management to regularly monitor for compliance with the department's vehicle check-out and trip log maintenance procedures.

Description of Recommendation Ranking Codes

U- Urgent-The recommendation pertains to a serious or materially significant audit finding or control weakness. Due to the seriousness or significance of the matter, immediate management attention and appropriate corrective action is warranted.

N- Necessary- The recommendation pertains to a moderately significant or potentially serious audit finding or control weakness. Reasonably prompt corrective action should be taken by management to address the matter. The recommendation should be implemented within six months.

D- Desirable- The recommendation pertains to an audit finding or control weakness of relatively minor significance or concern. The timing of any corrective action is left to management's discretion.

N/A- Not Applicable