December 20, 2018

Mr. Antonio Adams, Director
General Services Division
City of Memphis
125 N. Main Street, Suite 568
Memphis, TN 38103

Dear Director Adams:

We have completed our special investigation pertaining to the theft of fuel on two separate occasions by City employees for personal usage.   One of the incidents was witnessed by a Fleet Management employee and the other incident was witnessed by MPD.   Both incidents were handled administratively through their divisions and the individuals involved were terminated. The primary objective of this investigation was to evaluate the internal controls over the safeguarding of City fuel. Our secondary objective was to identify significant weaknesses in internal controls that may present opportunities for fraud, waste, abuse or misuse to occur if not properly managed. The scope of our special investigation was limited to on-site visits of fuel locations under the City's jurisdiction and fuel transactional activity for FY2018.

To accomplish our objectives, we interviewed pertinent personnel to obtain an understanding of the purchasing, monitoring, distributing, and billing of fuel. We also reviewed relevant policies and procedures to identify any internal control weaknesses. In addition, we conducted select transactional testing of fuel expenditures. We also solicited assistance from the Office of Performance Management (OPM) to help utilize raw data information from the M5 system for FY2018 to provide fuel monitoring reports.

CONCLUSION

We concluded that internal controls for fuel needs improvement. Although there are practices in place for ordering fuel, there is lack of a written comprehensive policy that details oversight, monitoring, and purchasing guidance for fuel. The monitoring activity for key fobs (electronic key) and manual fuel tanks needs to be enhanced to include detection of fuel discrepancies, fuel efficiency, and usage.

BACKGROUND

According to industry standards, the two largest items of fleet expense are depreciations (fixed) and fuel (variable). A substantial risk with fuel usage is the potential for fraud and abuse. Good management practices include controls that reduce the risk of potential fraud or abuse.

The Office of Fleet Management is responsible for issuing and ordering fuel to be delivered to surrounding City of Memphis sites and parts of Shelby County (approximately 113 locations). Of the 113 locations, there are approximately 15 locations that are automated and operate using a key fob. The remaining locations are manually operated or generators only. Additionally, responsibilities include maintaining proper fuel quantities for bulk tanks, generators, and vehicles. Fuel is ordered from Petroleum Traders based on the need of the location and the tank capacity.

The Office of Fleet Management is also responsible for the cost-effective procurement of the City of Memphis' vehicle fleet, and for the repair and preventive maintenance of the City's light and heavy vehicles and equipment. The service center had a FY2018 operating budget of $23,872,507.

Moreover, Fleet Management is responsible for ensuring compliance with State and Federal regulations regarding storage and spillage of fuel. Fleet Management utilizes the FleetFocus M5 Software System by AssetWorks to manage fuel operations. Fleet Management employees originate the setup, issuance and tracking of key fobs through the software system.

Additionally, any City employee may obtain fuel at the locations either by using a key to unlock the manual fuel tank, by a key fob, or manually switching on the fuel tank from inside the building. When obtaining fuel manually from the fuel tank, the City employee has to obtain/retrieve the key to unlock the fuel tank and obtain gas. Once a key fob has been swiped, the pump requires the user to enter their current odometer reading into the fuel pump keypad. After the mileage has been entered, the user is able to dispense fuel and the fuel activity is recorded in the M5 system as a product issue. The fuel transaction is then allocated to the various divisions based upon the fuel transaction logged in the M5 system for their assigned vehicles. The division is then responsible for payment through interoffice funding for their respective fuel usage.

SUMMARY OF INVESTIGATION

On-Site Fuel Visits

We performed on-site visits for twenty (20) fuel locations. We judgmentally selected the fuel locations to determine if the fuel was properly safeguarded. We also observed employees obtaining fuel and verified that the fuel tanks were working properly. All locations contained unleaded fuel and 14 contained diesel fuel. We observed the following:

- 10 of the 20 were manual (used padlocks) and had to be unlocked with a key
- 8 of the 20 were operated by key fobs (automated)
- 2 of 20 were operated by manually turning on a switch inside the facility

In addition, we visited five (5) golf courses and found that the fuel for all golf courses was adequately secured by locks on fences. We also visited eleven (11) sites after business hours to determine if fuel was adequately safeguarded and found that the fuel was adequately secured by fences and/or key fobs. We noted no exceptions with the on-site visits. We also noted that access to City fueling facilities by the public is properly safeguarded to prevent unauthorized usage by the public. However, City employees who have knowledge of fuel facilities have the ability to obtain fuel for non-City related purposes (i.e. personal usage).

Inadequate Policies and Procedures

Although Fleet Management has a Fuel Policy, we noted opportunities to strengthen the policy that require management's attention to enhance overall internal controls and operations. The policy only addresses obtaining fuel using a key fob. The policy is silent on other ways to obtain fuel (manual fuel sites), ordering and monitoring fuel, and stolen key fobs, etc. Through interviews with management, we learned many procedures are understood but unwritten regarding fuel. Operating policies and procedures are necessary to ensure that management directives are distributed to, and understood by, applicable personnel and to provide the basis to determine accountability, measure results, and enforce compliance. In addition, procedures are the specific methods used to express policies in action in day-to-day operations.

M5 System

The M5 system is able to capture pertinent information for the automated fuel locations (i.e. location, vehicle number, tank capacity, etc.); however, the manual locations do not have a way of adequately tracking fuel usage. Currently, Fleet Management personnel are not utilizing the pertinent information maintained in the M5 system for monitoring purposes. Moreover, several manual locations do not maintain a log of the fuel disbursements. Fleet management should utilize the pertinent information from the M5 system to adequately monitor fuel for the automated fuel locations. Fleet Management should also explore the possibility of utilizing exception reports using the M5 system.

Although fuel consumption information is available within the M5 system for each vehicle that is assigned a key fob, there is no specific process in place to monitor or review for unusual trends and patterns. We found no evidence that this information is being utilized to determine reasonable usage or unusual patterns. Also, we found that there are system parameters to restrict the quantity of fuel per transaction based on the tank capacity; however, there are no system parameters for the number of transactions per day. According to Fleet Management personnel, there is not a limit on transactions per day because of the fuel needs of MPD. Furthermore, without monitoring critical components such as unusual fuel usage and fuel transactions, the likelihood of fraud, waste, and abuse is imminent.

Ordering and Monitoring of Fuel

The fuel is measured by fuel gauges, by dipping measuring sticks in the tanks, and by Veeder-Root. The various locations send a fuel request via email detailing the fuel readings and the amount and type of fuel (unleaded/diesel) that needs to be ordered. Veeder-Root gives the tank capacity and the Fleet Management fuel specialist determines the amount of fuel to be ordered based on the reading. In conjunction with the emails and the Veeder-Root readings, the Fleet Management fuel specialist uses a daily fuel report that lists the locations that store fuel, tank capacity, and current level of fuel. The Fleet Management fuel specialist reviews the amount of fuel based on information from the various locations and tank capacity to determine how much fuel will be ordered.

A formal process should be implemented and documented to include monitoring for consumption and discrepancies, analyzing fuel usage and mileage. Without a formal process, it is difficult to detect excessive fuel usage and prevent pilferage. Monitoring should be concentrated on data gathering capability to show equipment usage and efficiency, and ability to monitor who obtains fuel, when, where, and amount. Also, Fleet Management should explore the possibility of obtaining monitoring reports from the M5 system to monitor fuel efficiency.

We solicited assistance from the Office of Performance Management (OPM) to help utilize raw data information from the M5 system and from Fleet management personnel to provide fuel monitoring reports. OPM provided sample reports that could detail the monthly fuel usage, number of fillings, vehicles, average number of filling per vehicle, fuel usage by vehicle and usage by day of week.

Contract Pricing

The City has a contract with Petroleum Traders for the purchase of fuel. The contract pricing states that the pricing for fuel will be based on the market pricing index of Oil Price Information Service (OPIS). Although the Fuel Supervisor states he reviews invoices on a random basis monthly and compares to OPIS report, we found no evidence that the fuel pricing is being verified to OPIS. We also could not verify the daily OPIS market pricing index for FY2018 to ensure the amount listed on the invoices were accurate. The fluctuating OPIS market daily prices were not archived for our office to verify the pricing on the invoices. Pricing of the fuel needs to be monitored and documented to verify the accuracy of vendor billing. By doing so, Fleet Management ensures that contract pricing is being honored by the vendor and ensure that the City is not being overcharged for its fuel purchases.

Compliance with State Laws

We reviewed the last Compliance Inspection report issued by the Tennessee Department of Environment and Conservation that was conducted on January 19, 2016. The inspection is completed every three years to comply with the requirements of the U.S. Environmental Protection Agency (EPA) for Tennessee's EPA-authorized petroleum underground storage tank program. No

violations of the Tennessee Petroleum Underground Storage Tank regulations related to the items reviewed during the inspection were discovered. Therefore, there were no corrective actions that required follow-up.

RECOMMENDATIONS

- A Citywide policy needs to be developed for all divisions to follow that encompasses an effective and efficient way to monitor, track, and audit fuel. The policy should address the process for tracking usage of fuel by vehicle and operator and excessive consumption. In addition, divisions should have an internal process to identify and investigate instances of unusually high or low fuel consumption and, where necessary, take corrective actions. By making divisions more accountable for who fueled a vehicle, when, and the quantity obtained will help detect and deter inappropriate use. In addition, the written comprehensive policy should include, but not limited to the following:

  o procedures that outline all the ways that fuel can be obtained. Currently, the policy only addresses obtaining fuel using a key fob.
  o key fob failures
  o loss or stolen key fob
  o ordering and monitoring of fuel,
    ➢ identifying personnel responsible for ordering and monitoring, guidelines for ordering fuel
    ➢ method in place to monitor and track fuel to ensure fuel is not being used for personal use.
  o identifying questionable transactions and to whom to report such transactions
  o instructions for handling fuel spilling and accidents
  o fuel usage (acceptable vs non-acceptable)
  o listing of fuel locations
  o operating procedures

- Fleet management should implement controls to monitor manual fuel locations. Controls include but not limited to maintaining a fuel log with pertinent details of fuel usage and a written policy and procedure for manual fuel usage.

- OPM offered to assist Fleet Management with various monitoring reports and to discuss possible options for utilizing pertinent reports from the M5 system to monitor fuel efficiency. Fleet Management should confer with OPM to further discuss which reports would be the most beneficial.

- Fleet Management should document the periodic review of fuel invoices to verify the accuracy of vendor billing, which includes comparing invoices to the OPIS report.

Your written response to the draft appears in full text in Appendix I of this report. We will evaluate the adequacy of your corrective actions during our corrective action monitoring. For informational purposes, we have provided a sample of reports that can be used to monitor fuel usage. The graphs and diagrams detailed in Appendix II provide an illustration of fuel usage for FY2018.

Investigations performed by the City Auditor's Office are considered non-audit projects and therefore does not constitute an audit under Government Auditing Standards. However, the work was performed in accordance with the general standards. We appreciate the patience and cooperation we received from you and the staff and management of Fuel Management and OPM. If we can be of further assistance, please advise.

Sincerely,

Catrina McCollum, CFE, CICA, CMFO
Audit Manager

APPROVED:

Debbie Banks, CFE, CICA, CMFO
City Auditor

c: Jim Strickland, Mayor, City of Memphis
        Doug McGowen, Chief Operating Officer
        Shirley Ford, Chief Financial Officer
        Alexandria Smith, Chief Human Resources Officer
        Chandell Carr, Deputy Chief Operating Officer
        Gregory Woods, Deputy Director, General Services Division
        Candi Burton, Interim Comptroller, Finance Division
        Bridgette Wilder, Senior Manager, Office of Equity, Diversity & Inclusion
        Eric Hunter, Administrator, General Services Division
        Craig Hodge, Performance Strategist, Office of Performance Management

APPENDIX I – RESPONSE FROM DIRECTOR OF GENERAL SERVICES

INTER-OFFICE MEMORANDUM

TO: Debbie Banks, Internal Auditor
           Catrina McCollum, Deputy Internal Auditor

FROM: Antonio M. Adams, Director *AMA*

DATE: December 7, 2018

SUBJECT: Response to the Fuel Audit Findings

Please accept this memo as the official response to the Fuel Audit findings. General Services reserves the right to amend its response, as facts or matters changes regarding findings.

General Services agrees with the findings in the audit. However, we would like to provide further explanation of the Fuel procedures. Our concern is that there may be a false perception of fuel usage being unmonitored or possibly stolen. This is definitely not the case.

The audit recommends changes to the current fueling system protocol. In response, General Service suggests the use of an in-car device that will unlock fuel systems and allow fueling based on that particular vehicle. As you are aware many of our fueling sites are controlled by the use of fobs. At the onset, fobs were the most cost efficient method to control gas usage and they best serve the diverse drivership of our vehicles. With the exception of assigned take-home cars, each vehicle and piece of equipment can be driven by any licensed employee. As such, the fob was assigned to the vehicle or equipment. We rely on the divisions to monitor the assignment of personnel to vehicles and the times that vehicles should be in use. In the event a fueling station is in use outside of normal operation hours, we notify the division or the division notifies General Services. We are able to track the fob, amount of fuel pumped, and the vehicle associated with the fob. To identify the user, we have to rely on physical eyewitnesses or cameras at the fueling sites. We acknowledge this does not provide the best control measures for fuel consumption. Therefore, General Services will seek to implement an in-car device.

In addition to the installation of in-car devices, General Services will draft, Administration will approve and strictly enforce a vehicle usage and fuel consumption policy. General Services agrees, we caution that stronger internal controls will require the cooperation of the divisions. Major components of this policy will require divisions to keep better records of driver and vehicle/ equipment assignments. Next, all vehicles and equipment (exceptions should be made with the small turf or agricultural equipment) will have the enabling device attached. Moreover, the General Services and divisions will have to rely on the employee active directory to confirm approved vehicles users. General Services will hire a technology specialist to maintain the electronic fueling system. General Services will rely on the Information Systems division test the reliability and integrity of the data in the electronic system. Finally, General Services will seek better control measures for fuel when there is a disruption in the automated system and the fueling islands are on-manual override.

APPENDIX II – GRAPHS AND DIAGRAMS

The following information was created by OPM based upon raw data from the M5 system and information from Fleet Management personnel. The graphs and diagrams illustrate fuel usage for FY2018. This data is for informational purposes only.

2.1M

Total Gallons of Fuel Used
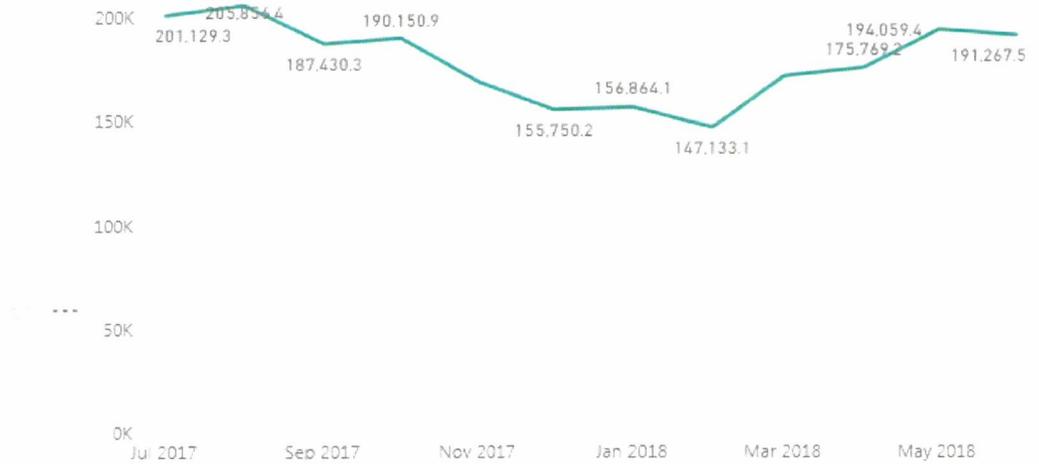
2675

Number of Vehicles Serviced
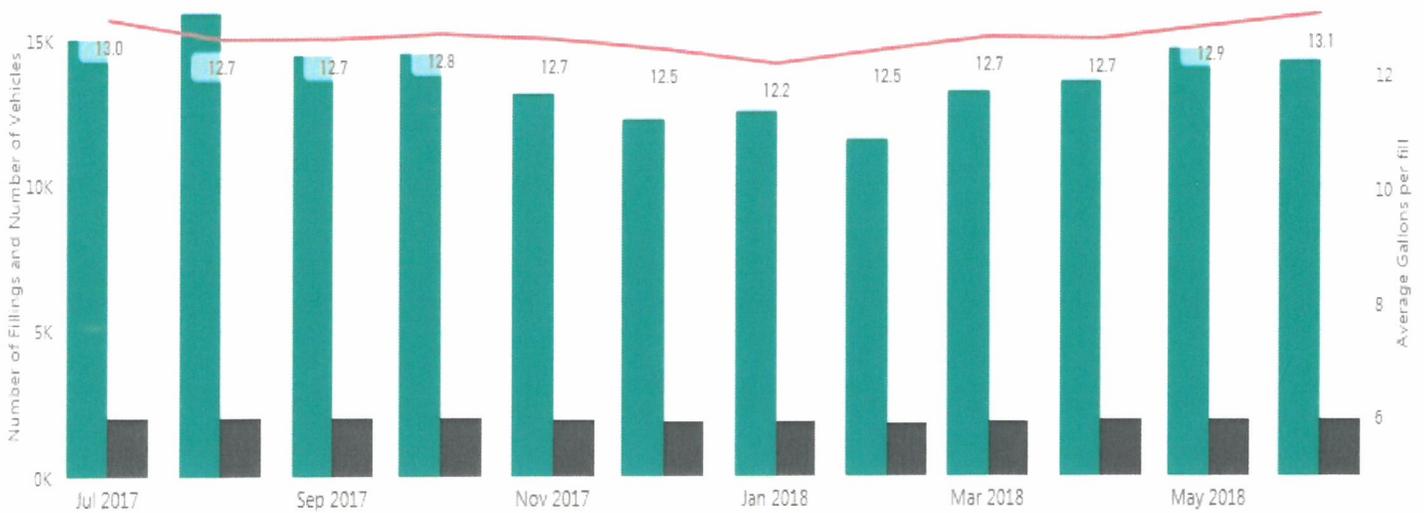
12.72

Average Gallons per fill up

167.25K

Number of Fillings

Monthly Fuel Usage (in Gallons)

Number of Fillings, Vehicles and Average Gallons per Fill

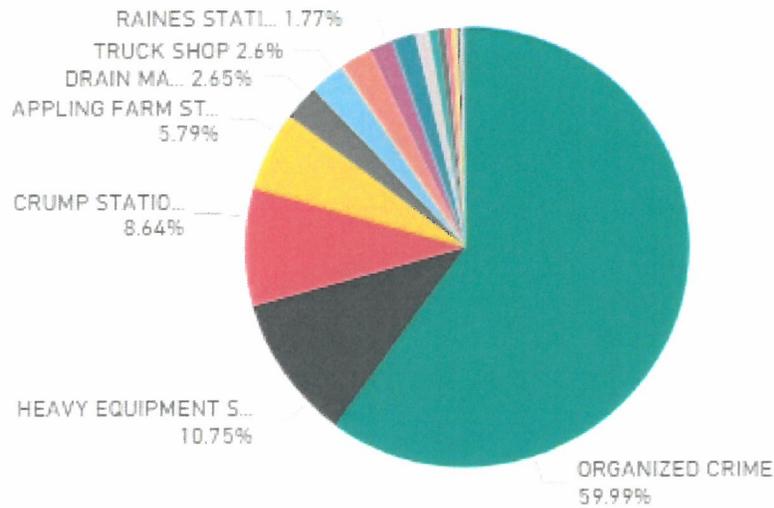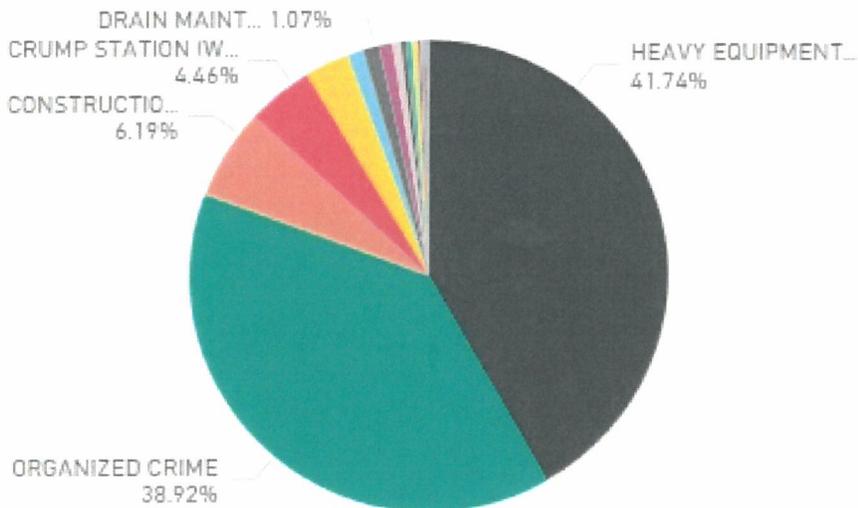● Number of Fillings ● Number of Vehicles ● Average Gallons per fill

APPENDIX II – GRAPHS AND DIAGRAMS

Number of Fillings by Department

RAINES STATI... 1.77%
TRUCK SHOP 2.6%
DRAIN MA... 2.65%
APPLING FARM ST...
5.79%

CRUMP STATIO...
8.64%

HEAVY EQUIPMENT S...
10.75%

ORGANIZED CRIME
59.99%

Total Quantity by Department

DRAIN MAINT... 1.07%
CRUMP STATION IW...
4.46%
CONSTRUCTIO...
6.19%

HEAVY EQUIPMENT...
41.74%

ORGANIZED CRIME
38.92%

Total Quantity, Average Gallons per Fill & Number of Fillings

● Total Quantity ● Average Gallons per fill ● Number of Fillings