

Audit Report

Baltimore County Fuel Operations



Office of the County Auditor
Baltimore County, Maryland
May 2013



**BALTIMORE COUNTY, MARYLAND
OFFICE OF THE COUNTY AUDITOR**

LAUREN M. SMELKINSON, CPA
COUNTY AUDITOR

ELIZABETH J. IRWIN
DEPUTY COUNTY AUDITOR

400 WASHINGTON AVENUE
TOWSON, MARYLAND 21204
410-887-3193
410-887-4621 (FAX)

May 29, 2013

Honorable Members of the County Council
Honorable Kevin Kamenetz, County Executive
Baltimore County, Maryland

We have audited the procedures and controls over Baltimore County's fuel operations managed by the Office of Budget and Finance, Vehicle Operations and Maintenance (VOM) Division, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks for the period July 1, 2009 through September 30, 2010. During the audit period, approximately 5 million gallons of fuel were dispensed at a cost of approximately \$11.8 million.

Our audit disclosed inadequate controls over fuel cards and unreliable fuel card records. Our audit also disclosed that the computerized fuel software system was not always effectively utilized to manage and control fuel usage. Our audit further disclosed the lack of adequate verification procedures to prevent duplicate fuel usage billing to user agencies; inadequate written policies and procedures for safeguarding fuel; and inadequate segregation of duties over fuel operations.

A response to our findings is included as Appendix A to this report.

We wish to express our appreciation to VOM, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks for the cooperation and assistance extended to us during our audit.

Our audit reports and responses thereto are available to the public and may be obtained on-line at "www.baltimorecountymd.gov/agencies/auditor" or by contacting the Office of the County Auditor, 400 Washington Avenue, Towson, Maryland 21204.

Respectfully submitted,

A handwritten signature in cursive script that reads "Lauren M. Smelkinson".

Lauren M. Smelkinson, CPA
County Auditor

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Background

The Office of Budget and Finance, Vehicle Operations and Maintenance (VOM) Division, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks¹ are collectively responsible for managing the County's fuel operations. In this regard, these agencies oversee the County's 39 fueling stations, which are used by certain County agencies, component units (i.e., Baltimore County Public Schools and the Baltimore County Public Library), and non-County entities (i.e., Baltimore County volunteer fire companies, the Baltimore County Revenue Authority, the Maryland Department of Human Resources (Social Services), Towson University, and trash haulers).

The County has 11 automated stations (i.e., fuel pumps activated with a fuel card) and 28 non-automated stations. As part of its daily responsibilities, VOM manages the automated stations, and due to the specialized nature of their operations, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks manage the non-automated stations (17 stations, 10 stations (9 Bureau of Highways and 1 Bureau of Solid Waste Management), and 1 station, respectively).

VOM issues two types of fuel cards: a "vehicle and equipment" fuel card is assigned to a specific vehicle or piece of equipment (e.g., tractor, chainsaw, etc.) and a "gas can" fuel card is assigned to a specific user agency/component unit/entity maintenance shop location for its small equipment (e.g., leaf blower, weed eater, etc.). As of August 11, 2010, VOM's records listed a total of 6,388 issued fuel cards (6,302 vehicle and equipment and 86 gas can fuel cards).

Automated Stations

A fuel card is required to activate a fuel pump at an automated station to dispense fuel. A user swipes a fuel card and enters additional information (i.e., vehicle odometer or equipment hour reading and police ID number for Police Department personnel) into the pump. A computerized fuel software system automatically tracks fuel inventory levels and usage of the automated pumps. During the audit period, approximately 4.3 million gallons of fuel costing approximately \$10 million were dispensed at the automated stations.

Non-Automated Stations

A fuel pump at a non-automated station is manually activated to dispense fuel after it has been unlocked or turned on. A user documents fuel usage on a fuel ticket or on a fuel transaction log, which records the fuel card number, odometer or hour reading,

¹ Subsequent to the audit period, responsibility for the Department of Recreation and Parks' non-automated station was transferred to the Office of Budget and Finance, Property Management Division.

gallons dispensed, and user's name. Each non-automated station performs a daily fuel inventory reconciliation to monitor fuel levels and usage of the non-automated pumps. During the audit period, approximately 716,000 gallons of fuel costing approximately \$1.8 million were dispensed at the non-automated stations.

VOM is responsible for billing the user agencies/component units/entities for fuel usage at all stations.

Findings and Recommendations

1. VOM lacked adequate controls over fuel cards and its fuel card records were unreliable.

VOM is responsible for maintaining custody of fuel cards and the related fuel card records. In this regard, VOM activates or deactivates fuel cards when notified by the responsible County agency, component unit, or non-County entity that a new card is required or if a card has been lost, is no longer required, etc. As of August 11, 2010, VOM's records listed a total of 6,388 issued fuel cards (6,302 vehicle and equipment and 86 gas can fuel cards).

However, our audit disclosed that VOM did not properly ensure accountability of fuel cards. Specifically, our audit disclosed that VOM did not require a standardized form for a user to request a fuel card or consistently maintain the approved written authorization requests for issued fuel cards. Specifically, we noted that of the 6,388 issued fuel cards, VOM had maintained only 10 of the approved written authorization requests to substantiate the fuel card request.

Our audit also disclosed that VOM's fuel card records were unreliable. Specifically, our review disclosed that the records identified fuel cards that appeared to be issued to equipment not requiring fuel (e.g., trailers, snow plows, drills, etc.), and VOM was unable to identify which items in its records had actually been issued fuel cards.

Our audit further disclosed that of the 6,388 issued fuel cards, 2,063 (2,061 vehicle and equipment and 2 gas can fuel cards), or 32%, had been inactive during the entire audit period.

Additionally, our review disclosed that VOM does not proactively monitor fuel usage by fuel card to detect potential instances of fuel usage above ordinary levels (e.g., miles per gallon, frequency of fill ups, etc.).

These conditions increase the risk that fuel could be stolen or misused without timely detection.

We recommend that VOM use a standardized form for each fuel card request and maintain the approved form, including the assigned fuel card number, in accordance with its records retention policy. We also recommend that VOM review its fuel card records to determine if inactive cards should be deactivated and to deactivate cards issued to equipment that does not require fuel. We further

recommend that VOM proactively monitor fuel usage, including reviewing monthly reports, to identify and resolve any questionable fuel usage activity.

2. The computerized fuel software system was not always effectively utilized to manage and control fuel usage.

A fuel card is required to activate a fuel pump at an automated station. VOM configures fuel cards to prevent the unauthorized and improper use of fuel, including requiring fuel card users to enter an odometer or hour reading and an active police ID number for Police Department personnel. If the odometer or hour reading is not within 1,000 miles or hours of the last reading or if the police ID entered is not active, then the fuel pump will display an error message and fuel will not be dispensed. VOM also configures fuel cards to restrict the type (gas or diesel) and the amount (based on tank capacity for vehicle and equipment fuel cards or a limit of 5 or 10 gallons for gas can fuel cards) of fuel to be dispensed.

However, our review of 290,211 vehicle and equipment fuel transactions, including 153,734 Police Department vehicle fuel transactions requiring an active police ID number, and 3,399 gas can fuel transactions, disclosed the following instances where fuel was dispensed despite the fuel card configuration settings:

- 18,328 vehicle and equipment transactions (6%) where the difference in odometer or hour readings between fill ups was greater than 1,000 miles or hours;
- 10,193 Police Department vehicle transactions (7%) where the police ID number was not an active ID number (853 transactions) or a special code was entered (9,340 transactions);
- 8,208 vehicle and equipment transactions (3%) where the user was not required to enter the odometer or hour reading; and
- 626 gas can transactions (18%) where the amount of fuel dispensed was greater than the 5- or 10-gallon limit.

Our audit also disclosed the ability to override fuel card configuration settings in order for fuel to be dispensed. The above findings include instances where VOM overrode controls (e.g., the user incorrectly entered an odometer or hour reading that was not within 1,000 miles or hours of the last reading or an inactive police ID number) and users overrode controls (e.g., use of a special code); however, evidence was not available to substantiate whether overrides were valid or if fuel card configurations had not been properly set.

Without proper configuration settings enabled in the computerized fuel software system and with the unsupported use of overrides, automated controls will not operate effectively to prevent the unauthorized or improper use of fuel.

We recommend that VOM review the configuration settings in the computerized fuel software system and implement monitoring controls to ensure that instances of automated control overrides are appropriate and documented.

3. The review of fuel usage data was not adequate and resulted in duplicate billings.

In order for VOM to properly bill the user agencies/component units/entities (“users”) for fuel at the County’s non-automated stations, VOM requires each fill up to be documented on a fuel ticket or a fuel transaction log, which includes the fuel card number, odometer or hour reading, gallons dispensed, and user’s name. The stations then compile and submit this fuel usage data weekly via a Fuel Transaction Station spreadsheet to VOM. However, our audit disclosed instances where VOM double billed users because the non-automated stations either lacked a requirement for (the Department of Public Works and the Department of Recreation and Parks) or performed an inadequate (the Fire Department) supervisory review of the Fuel Transaction Station spreadsheets prior to submission to VOM, and because VOM did not review the spreadsheets prior to billing the users. Specifically, our review disclosed 205 duplicate fuel transactions (submitted by the Fire Department (171 transactions), the Department of Public Works (31 transactions), and the Department of Recreation and Parks (3 transactions)), resulting in duplicate billings for fuel costing approximately \$10,000 to County (\$6,000) and component unit/non-County (\$4,000) users.

Without adequate review and verification of the fuel usage data, there was a lack of assurance that users were properly billed for their fuel usage.

We recommend that VOM and the County agencies managing the non-automated stations establish procedures to ensure the accuracy of fuel billings.

4. There were inadequate written policies and procedures for safeguarding fuel at the non-automated stations.

VOM delegates the responsibility of maintaining policies and procedures for safeguarding fuel to the three County agencies operating the non-automated fuel stations. Such policies and procedures are to include monitoring fuel inventory and restricting physical access of fuel to authorized users.

In this regard, our audit disclosed that the three agencies operating the non-automated stations have established procedures to perform reconciliations of their daily fuel tank readings with their fuel usage data (from fuel tickets or fuel transaction logs) and to investigate certain variances in the amount of fuel. However, our review of 50 fuel inventory reconciliations disclosed 19 reconciliations (Fire Department (9), Department of Public Works (9), and Department of Recreation and Parks (1)) that had variances (negative and positive) in fuel amounts, but no evidence that the variances were investigated as required. Negative fuel variances (i.e., those instances when fuel tank levels changed more than the corresponding fuel tickets or fuel transaction logs) totaled 169 gallons. We also found 2 variances greater than 50 gallons where a police report was not filed in accordance with the agency's procedure (the Department of Public Works, Bureau of Highways). Additionally, we found no policy or procedure requiring a supervisory review of the fuel inventory reconciliations.

Our review also disclosed that, although each of the three agencies had established policies and procedures for investigating fuel inventory variances, the policies and procedures were not documented and were not consistent among the agencies. In this regard, we noted that the Fire Department and the Department of Recreation and Parks investigated variances of one tenth of a gallon or more, while the Department of Public Works, Bureau of Highways and Bureau of Solid Waste Management investigated variances greater than 5 and 10 gallons, respectively. We also noted that only the Department of Public Works, Bureau of Highways had a procedure to file a police report for significant variances (i.e., 50 gallons or more).

Our audit further disclosed the following regarding the non-automated stations' policies and procedures for locking or turning off fuel pumps when not in use:

- The Department of Public Works, Bureau of Solid Waste Management only had written policies and procedures that restricted access to the fuel station after-hours (i.e., from 3:30 p.m. to 7:30 a.m.); and
- The Fire Department, the Department of Recreation and Parks, and the Department of Public Works, Bureau of Highways had policies and procedures; however, these policies and procedures were not documented. Additionally, our test of one fuel pump at each of five stations (1 of 17 Fire Department stations, 1 Department of Recreation and Parks' station, and 3 of 9 Department of Public Works, Bureau of Highways' stations) disclosed that the fuel pumps at the Fire Department's and the Department of Recreation and Parks' stations were not locked or turned off when not in use.

As a result, there was a lack of assurance that fuel at the non-automated stations was protected against the risk of loss, misuse, or theft.

We recommend that VOM oversee the process of establishing written policies and procedures to ensure that fuel at the non-automated stations is properly safeguarded. We further recommend that the written policies and procedures ensure that fuel variances are consistently investigated and documented, and that the physical access to fuel pumps is restricted when not in use.

5. Adequate segregation of duties was not established over fuel operations.

Effective internal control requires the segregation of incompatible duties to ensure that assets are protected against the risk of loss, misuse, or theft. An “incompatible” duty is one that would put a single individual in the position of being able to both commit a fraudulent act and then conceal it.

Our audit disclosed that one VOM employee was performing the following incompatible duties: ordering fuel from vendors for automated stations while approving the payments, and maintaining custody of (activating/deactivating) the fuel cards while performing management override of automated controls on automated fuel pumps.

We also found that, at the Department of Public Works’ and the Department of Recreation and Parks’ non-automated fuel stations, the same individual performing tank measurements compiled the fuel usage data (i.e., the Fuel Transaction Station spreadsheet) and reconciled the daily fuel inventory with no supervisory review.

These conditions result in an increased risk that fuel could be misappropriated without timely detection.

In order to segregate employee duties so that incompatible processes cannot be performed by one employee acting alone, we recommend that VOM and the County agencies managing the non-automated stations evaluate the responsibilities currently assigned to their employees to restrict an individual from having all or a combination of the following duties over a single transaction: initiation, custody, records maintenance, reconciliation, and authorization. We advised VOM, the Department of Public Works, and the Department of Recreation and Parks on accomplishing the necessary separation of duties using existing personnel.

Audit Scope, Objectives and Methodology

We have audited the procedures and controls over Baltimore County's fuel operations managed by the Office of Budget and Finance, Vehicle Operations and Maintenance (VOM) Division, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks for the period July 1, 2009 through September 30, 2010. The audit was conducted in accordance with generally accepted government auditing standards, except for the requirement of an external quality control review. 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.

In accordance with the Baltimore County Charter, Section 311, the objectives of our audit were to evaluate the adequacy of internal control practices and procedures over the County's fuel operations and to determine compliance with applicable policies and procedures. In planning and conducting our audit, we focused on fuel operations controlled and managed by VOM, the Fire Department, the Department of Public Works, and the Department of Recreation and Parks based on assessments of materiality and risk.

Our audit procedures included inquiries of appropriate personnel, inspections of documents and records, and observations of the County's fuel operations. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives. Data provided in this report for background or informational purposes were deemed reasonable but were not independently verified.

Management is responsible for establishing and maintaining effective internal control over fuel operations and for compliance with applicable policies and procedures. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable policies and procedures are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports on fiscal compliance are designed to assist the Baltimore County Council in exercising its legislative oversight function and to provide constructive recommendations

for improving County operations. As a result, our reports generally do not address activities we reviewed that may be functioning properly.

This report includes findings and recommendations relating to conditions that we consider to be significant deficiencies in the design or operation of internal control and administrative and operating practices and procedures that could adversely affect the County's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable policies and procedures. Other less significant findings that did not warrant inclusion in this report were communicated to the respective agencies.

APPENDIX A

Management's

Response



KEVIN KAMENETZ
County Executive

KEITH DORSEY, *Director*
Office of Budget and Finance

May 15, 2013

Ms. Lauren Smelkinson
County Auditor
Baltimore County Government
400 Washington Avenue
Towson, MD 21204

Dear Ms. Smelkinson:

Please find below the Office of Budget & Finance's written response to the March 2013 Audit Report of the Baltimore County Fuel Operations. The response is comprehensive reflecting our actions to rectify findings related to the Departments of Public Works, Fire, and Recreation & Parks, as well as Vehicle Operations & Maintenance.

1. The Office of Budget and Finance, Vehicle Operations and Maintenance Division (VOM) will perform an inventory certification with fuel users to get a complete accounting of the fuel cards outstanding. The Office of Budget and Finance will develop a set of standard policies and procedures to be followed by all responsible parties involved in the control and use of County fuel. A standardized form to be used when a fuel card is issued, replaced, or deactivated will be included with these policies and procedures. A log of fuel card transactions will be maintained by VOM personnel. An inactive card will be forwarded to VOM where it will be documented as to its deactivation and disposal. Fuel reports will be monitored by either VOM or each agency as needed for questionable fuel usage. The frequency of this monitoring will be dependent upon the expected benefit versus the cost associated in doing so.

Ms. Lauren Smelkinson

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2. The Auditors disclosed various instances where fuel was dispensed despite fuel card configuration setting restrictions which the number of transactions appears to be extracted from a series of computer data analysis. Without going through the details of confirming the number of transactions, the Office of Budget and Finance does recognize that configuration settings were bypassed. Also, while there is an inherent risk to misappropriate fuel associated with some of the override situations, we feel that they do not represent a significant risk. As noted in the discussion note process, a sizeable portion of the disclosed transactions were for diesel fuel which is billed by the gallon and not charged by the mile. Also, the use of the Police ID number is used for tracking purposes only.

As recommended, a two step process will be initiated: 1) The Office of Budget and Finance will assess the original system software setup for possible configuration settings changes. 2) VOM will implement a process whereby all overrides are logged which will include the date and time of the override, fuel card number, user name and the reason for the override. VOM will monitor the override log to ensure user compliance with standard procedures for fueling and to determine if specific restrictions are set appropriately for each fuel card.

3. As noted in response #1, the Office of Budget and Finance is in the process of developing standard written policies and procedures related to the use and control of County fuel at the non-automated stations. The policies and procedures will require supervisory review of the fuel reports before they are sent to VOM for billing and tracking purposes. Also, while an error rate of less than one tenth of one percent (205 duplicate billings out of 219,211 transactions reviewed) is an acceptable range, users will be reminded of their responsibility to provide accurate fuel readings

Ms. Lauren Smelkinson

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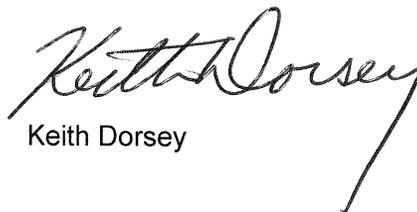
May 15, 2013

4. As noted in response #1, the Office of Budget and Finance is in the process of developing standard written policies and procedures related to the use and control of County fuel at the non-automated stations. The policies and procedures will include instructions on required documentation of fuel variances above specified amounts and on fuel pump access.

5. The Office of Budget and Finance, in conjunction with the other County agencies, will review various duties and available personnel to ensure that incompatible processes are properly segregated to the fullest extent possible. We recognize that full and complete segregation of duties is not considered cost effective due to staffing limitations. We consider other checks and balances to be in place where full and complete segregation of duties is not attainable (e.g. supervisory review and authorization).

As I have shared with you previously, this office will take a county-wide perspective in resolving legitimate matters of concern pertaining to Baltimore County Fuel Operations.

Sincerely,

A handwritten signature in black ink that reads "Keith Dorsey". The signature is written in a cursive style with a long, sweeping tail on the letter "y".

Keith Dorsey

cc: Fred Homan, Administrative Officer
Edward Adams, Director, Public Works
John Homan, Chief, Fire Department
Barry Williams, Director, Recreation & Parks

AUDIT TEAM

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