



Wicomico County, Maryland

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Internal Auditor's Report

The County Council and County Executive of Wicomico County, Maryland:

Pursuant to Section 305(D) of the Wicomico County Code, the Office of the Internal Auditor (IA) has conducted a follow-up inquiry related to the ongoing, continuous audit of the Wicomico County Fuel Inventory System¹. A report is submitted herewith. The purpose of the audit was to determine the adequacy of procedures and controls along with the level of compliance with those procedures and controls for the process of accounting for fuel usage in Wicomico County through the established fuel inventory system.

IA conducted the audit with due professional care, and IA planned and performed the audit to obtain reasonable assurance about whether the current fuel inventory system practices are in compliance with applicable policies and procedures and whether those policies and procedures are adequate to obtain an acceptable level of control.

IA extends appreciation to Management and Staff in Administration and Public Works for their timely assistance, cooperation, and candid assessment of the Fuel Inventory System.

Respectfully submitted,

J. Stephen Roser, CPA

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¹ In addition to the formal auditing process, that includes the Annual Audit Plan, internal auditing selects some high-risk areas of county government for a continuous auditing program as defined by Robert Mainardi and others. Continuous auditing is one of many tools available to internal auditors. More information regarding continuous auditing is available upon request.

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Audit Report

Background

Wicomico County Fuel System Inventory Program

Wicomico County utilizes an automated diesel fuel and unleaded gasoline dispensing system manufactured by Syn-Tech Systems, Inc. called Fuelmaster Plus² to account for fuel use. The system consists of two parts. The first is an electronic pumping device. A second electronic device installed directly on vehicles and equipment is known as the AIM2³ unit. When functioning properly, the pumping device wirelessly reads the AIM2 unit for each vehicle, or piece of equipment, and provides computer tracking of fuel use and other information from the vehicle's electronic system. Reports generated from computerized tracking are then available to monitor fuel use, perform billing to various users, track fuel inventory, and provide accountability. Alternatively, the county may provide the user with a "prokey" device⁴. The Fuelmaster electronic pumping system reads the prokey and allows fueling. A prokey is assigned to a vehicle or piece of equipment, but is not physically attached to any particular vehicle or piece of equipment.

Audit Objective

The objectives of the audit were to:

1. Assure that internal controls are in place to prevent abuse
2. Assure adherence to controls
3. Assure that fuel is properly charged to users

Scope of the Audit

The audit period examined, on a test basis, was from June 1, 2017 to June 30, 2017. All Fuelmaster transactions for the period were reviewed. IA conducted observations, interviews, and inquiries with appropriate personnel, and reviewed month-end inventory records. Additionally, IA examined, on a test basis, various documents, and electronic system information pertaining to, but not limited to, the following:

- Various data reports from Fuelmaster Plus Program
- Inventory records
- Billing records

Other than the time period tested, the scope was open ended with concentration on internal control procedures, adherence to those procedures, and examination of the data available for the period.

General Statistics and Highlights

Data reveals that from the period June 1, 2017 to June 30, 2017 Wicomico County used 37,512 gallons of unleaded gasoline and diesel fuel at a cost of \$67,736. Fuel billing analysis for June showed zero variance. Management is in

² For more information on Fuelmaster Plus see <http://www.myfuelmaster.com/>

³ The AIM2 units are known locally as "fuel rings". The unit consists of several components one of which is a visible electronic ring installed over the vehicle's fuel intake port

⁴ A prokey device is a small plastic wand that fits on a key ring and is programmed by the administrator for a particular vehicle, piece of equipment, or storage can (e.g. "gas can for weed whackers"). It is read electronically by the pumping device and usage is applied in the database according to administrator setup

the process of reestablishing the use of an average inventory variance tool developed several years ago. IA plans to monitor the progress.

Extensive review through data mining comprised a major part of this audit. IA offers comments on many of the procedures in a subsequent section of this report. We performed the following tests and observations with satisfactory⁵ results:

- Odometer and hour readings
- Review of miscellaneous prokees
- Billing and usage
- Storage tanks (in and out)
- Top users
- Transactions with no ID
- Weekend transactions

IA performed the following test with adequate⁶ results:

- AIM2 unit functionality and usage compliance

Other inquiries:

- Average pricing
- Department usage
- Non-county usage

Conclusion

Based on the considerable information gathered in this process:

1. The administrative oversight procedures in place are at a satisfactory level of internal control for the stated purposes.
2. Compliance with the AIM2 systems usage is currently at an adequate level. Although AIM2 unit functionality, per users, remains a problem, management indicates (and statistics show) that compliance is improving.
3. The process of charging fuel to departments and users is at a satisfactory level of internal control.

Schedule of Findings and Recommendations/Management Response

The current review of the Fuel Inventory System for Wicomico County, once again, revealed the makings of a good system of internal control and accountability. Some questions remain regarding implementation and the ability of the Fuelmaster system to deliver functionally without the extensive use of Prokeys and an unreasonable amount of time and effort required to install and maintain the system in vehicles. AIM2 usage compliance increased

⁵ For the purposes of this audit, IA uses a three-tier grading system recommended by the International Professional Practices Framework (IPPF) as expressed by the IPPF Practice Guide issued March 2009. The three tiers are Inadequate System of Internal Control, Adequate System of Internal Control, and Satisfactory System of Internal Control. Satisfactory findings indicate that overall controls are satisfactory, although some enhancements may be recommended. It is the highest rating on the scale.

⁶ According to IPPF Practice Guide issued March 2009: "Adequate system of internal control means that findings are subject to reservations. A number of findings, some of which are significant, have been raised. Where action is in progress to address these findings and other issues known to management, these actions may be at too early a stage to allow a satisfactory audit opinion to be given."

significantly from previous testing and management believes that the system as implemented can continue to improve.

1. AIM2 Usage Compliance and Other Issues

We define noncompliance with the use of an AIM2 unit for the purposes of our ongoing evaluations as units that:

1. Are under direct control of county department management
2. Have the mechanical and physical ability to accept the units
3. Use the Prokee system in lieu of an Installed AIM2 unit

Noncompliance for June 2017 was 4.89%. By contrast, noncompliance for the February 2017 data sample we evaluated in March was 7.69%. IA provided a list of noncompliant units to management and we are confident that every effort is being made to address compliance.

The county still struggles with ongoing problems related to functionality. When working properly, this system provides a robust level of internal control. We recommend the county evaluate the costs associated to the benefits of our current system. Management indicates that user error in many cases explains some of the functionality problems. Additionally, management successfully employs other remedies to functionality problems such as relocating modules within vehicles. We can evaluate the costs related to maintenance of the existing system due to problems with functionality and compare those costs to the control benefits.

Management Response

The Sheriff's Office continues to experience the most issues with the AIM2 units. This is due to the amount of electronics their vehicles are equipped with. Most drivers have indicated they unhook the AIM system (under dash plug) due to limited space, then plug it back in when they need to fuel. The repetitive unhooking/hooks up creates issues for the AIM2 units.

2. Fuel Cans and Miscellaneous Prokees

Fuel system management added more prokees used for filling gas cans and other miscellaneous uses. The result was that miscellaneous and fuel can usage is now better defined within the database allowing for better control. Additionally, miscellaneous and fuel can usage for the test period was just over 3% of the total.

3. Non-County Usage

During the month of June 2017, outside agencies used 16% of the fuel dispensed in the county. For the purposes of this audit, we define outside agencies as entities that do not appear on the county government-wide financials plus two component units: the Board of Education and the Library. Average retail for unleaded gasoline in Maryland on June 3, according to Gas Monkey was around \$2.37 per gallon. The county's price on June 3 was \$1.99.

4. Missing Information

Missing information such as missing user numbers and missing odometer readings was minimal. We forwarded a list of transactions with missing information to management.

Management Response

Within that list, 16 vehicles belong to Roads, 6 to Solid Waste, and 3 to the Sheriff's Office.

Within Roads (16 total): 13 vehicles are equipped with analog odometer/hour meters due to their age. Analog equipment is unable to transmit data to AIM2 units; 2 vehicles had incorrect software setting which have since been fixed and; 1 is a piece of equipment (asphalt hot box) which is not equipped with an odometer nor hour meter.

Within Solid Waste (6 total): 2 vehicles are Caterpillars which are incompatible with the AIM2 units; 1 vehicle has an analog odometer; 1 is a piece of equipment with no odometer nor hour meter and; 2 vehicles are still being investigated for the issue.

5. Weekend Usage and Top Users

Testing for unusual usage such as excessive usage and weekend fuel transactions was within reasonable limits.

6. Storage Tanks Evaluation

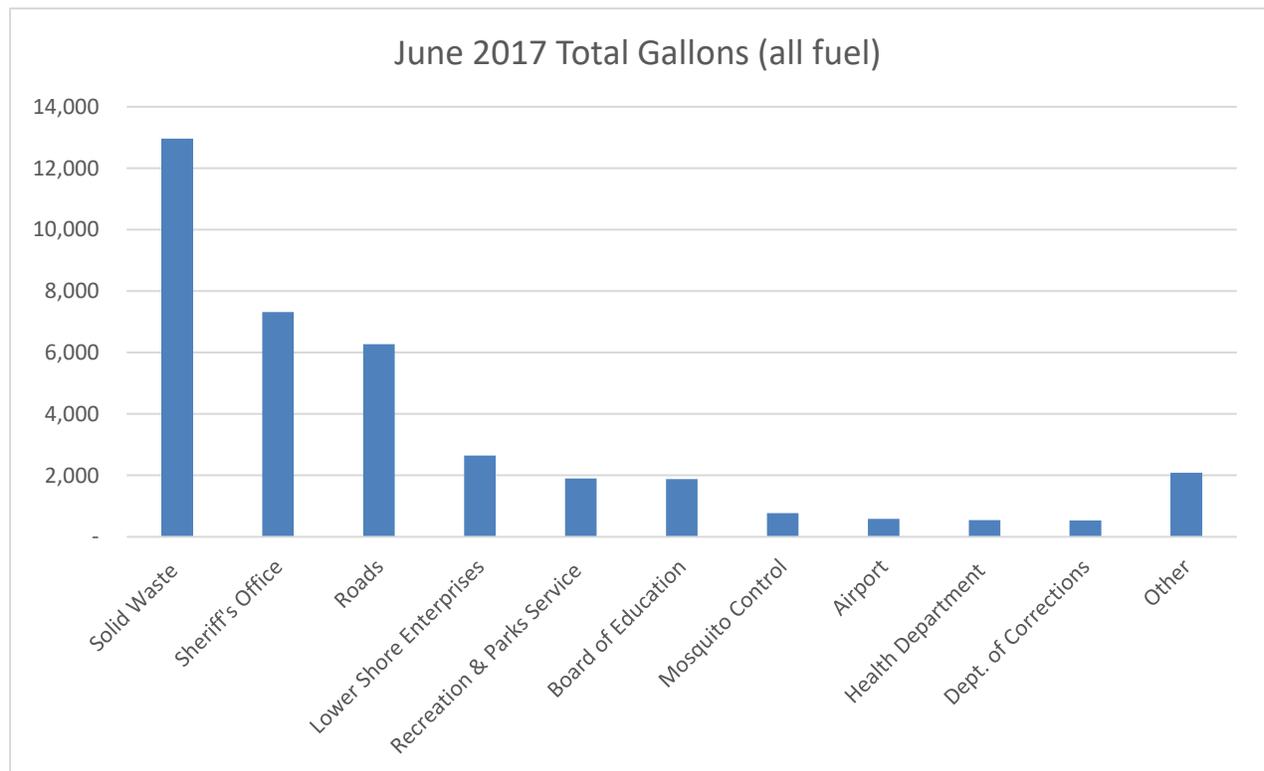
The county still uses two 500-gallon truck mounted tanks to transport fuel to equipment that cannot fuel at the Roads Division terminal. Analysis of fuel pumped into and out of the tanks was within reasonable limits. Management is evaluating diesel fuel delivery to the Airport in an effort to improve efficiency.

Management Response

The airport fuels equipment and vehicles out of its pod tank. The usage data must be downloaded via a dial up connection which causes frequent delays (sometimes days) due to the slow/unstable connections. It is recommended that the dial up connection be replaced with a high speed cable modem. Or conversely, the airport could be charged per delivery. They could then track their own usage.

7. Department Level Usage and Billing

We found defined department level usage to be typical when compared to other reviews and discovered no significant variance from established norms:



Auditor's Closing Remark

The Wicomico County Office of the Internal Auditor would like to thank management and staff from Roads Division for their timely cooperation and assistance during the audit.