Office of Central Services
Fleet Management Division

Fuel Inventory System

November 2014
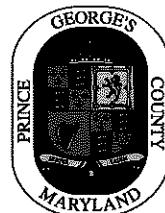
David H. Van Dyke
County Auditor

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Letter of Transmittal

The County Council and County Executive
of Prince George's County, Maryland

We have conducted a performance audit of the

OFFICE OF CENTRAL SERVICES'
FUEL INVENTORY SYSTEM

in accordance with the requirements of Article III, Section 313, of the Charter for Prince George's County, Maryland. Our Report is submitted herewith.

We have discussed the contents of this Report with appropriate personnel of the Office of Central Services, and wish to express our sincere gratitude to them for the cooperation and assistance extended to us during the course of this engagement.

David H. Van Dyke, CPA
County Auditor
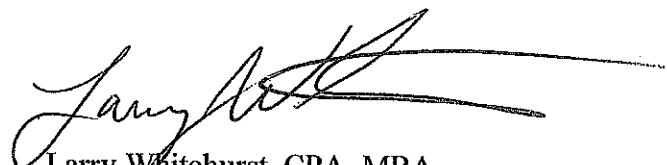
Larry Whitehurst, CPA, MBA
Audit Manager

Results In Brief

The Office of Central Services' Fleet Management Division (FMD) is responsible for the overall management of a fleet of more than 4,000 vehicles used by agencies of the County Government. The Division is staffed by 62 employees that operate two vehicle maintenance facilities. One of the many services provided by the FMD is the management of the County's 21 fuels sites, which dispense approximately 4.5 million gallons of fuel per year.

Given the vast nature of operations surrounding the management of fuel by the FMD, it is imperative that the internal controls related to accessing, receiving, monitoring, invoicing, and the reporting of fuel usage are operating effectively and efficiently. These internal controls should also provide reasonable assurance that the County's fuel is being utilized for intended purposes and in adherence with Federal and State laws. The lack of sufficient controls could expose the County to potential misappropriation by employees, fuel users, and fuel vendors.

The following major findings are addressed in our report:

- Several established internal control policies and procedures need to be enhanced to ensure that adequate documentation is maintained to support operations.

- Administrative user access policies and procedures need to be established, and user access controls need to be updated to ensure proper security over gaining access to the E.J. Ward Fuel System ("the fuel system").

- The version of the fuel system in place at the FMD has several inherit weaknesses that allow the security of user Personal Identification Numbers (PINs) and related fuel transactions to be compromised without detection.

- The FMD lacked documentation to support the addition and deletion of fuel users and vehicles to the fuel system. Alternative audit procedures revealed the untimely deletion of fuel users and vehicles from the fuel system. The failure to timely delete fuel users from the fuel system led to several instances of unauthorized usage.

- Pool deck and tank wagon logs were not maintained and submitted to the FMD by fuel sites as required by applicable policies and procedures.

- An evaluation of fuel transactions revealed several instances suggestive of improper entry of vehicle odometer readings by fuel users when accessing the fuel terminal **(Partial repeat finding from prior audit report dated July 2008).**

- An evaluation of fuel user profiles revealed users with more than one established Personal Identification Number (PIN) and usage apparent on both established PINs. A fuel usage evaluation revealed abnormal fuel usage by two fuel users **(Repeat finding from prior audit report dated July 2008).**

- The FMD failed to follow established monitoring procedures pertaining to the distribution of user usage reports to user agencies and the review of exception reports **(Repeat finding from prior audit report dated July 2008).**

- The FMD failed to maintain/provide adequate documentation to support compliance with Federal and State mandated fuel site testing requirements.

- The FMD failed to conduct monthly site inspections and provide adequate emergency coverage at all County fuel locations as required by both internal and State regulations.

- The FMD failed to provide documentation to support the correction and subsequent approval (by State officials) of an issue identified at a fuel site. Furthermore, there was no documentation presented to support that the issues were communicated to State officials in a timely manner as required.

- A visit to one particular fuel site revealed a camera that was out of service for a period of 5 months.

- The FMD does not conduct reconciliations of fuel usage that incorporate an independent verification (i.e., manual dip stick) of actual fuel levels **(Repeat finding from prior audit report dated July 2008).**

- The FMD lacks established policies and procedures addressing the completion of the State of Maryland Special Fuel User/Seller Tax Return. A review of a completed return revealed the lack of supervisory review, completion errors, and the untimely submission of the return, resulting in the assessment of penalties and interest.

Internal control activities are an important part of an agency's planning, implementation, reviewing, and monitoring functions. They are essential for effective and efficient operations and proper accountability of County resources. For this reason, several recommendations for improving internal controls are made throughout this report.

Background

The FMD utilizes various County Administrative Procedures to provide the framework and direction related to the usage and accountability over the fuel system. The following is a summary of each of these procedures:

- Administrative Procedure 604 - establishes standard procedures for the delivery, storage, and dispensing of petroleum products through the central County inventory.
- Administrative Procedure 622 - establishes standard procedures for the daily/monthly/annual fuel inventory process.
- Administrative Procedure 623 - establishes policies and procedures concerning authorized use of automated fuel system personal identification numbers used to access the automated fuel sites.

These procedures are supported by internal FMD practices listed below:

- Practice No. 701 - ensures that all underground fuel storage tanks and lines are tight.
- Practice No. 702 - ensures that all automated fueling sites Countywide are operational and in good working condition, 24 hours a day/7 days a week for usage by County, municipality, and County volunteer fire department fuel users.
- Practice No. 704 - ensures that all fuel using agencies are provided with monthly fuel reports.
- Practice No. 705 - provides guidance of how to properly utilize the County's fuel system when obtaining fuel from a County fuel site.

The FMD uses the fuel system (version 3.5) and the supporting Veeder Root automated system to administer all aspects of fuel usage by individuals. The fuel system is a web accessible system that is housed on an IT server administered by the County's Office of Information and Technology. The Veeder Root automated system is a supporting system used to monitor fuel inventory levels at each fuel site.

The administration of the fuel system is controlled by administrative users within the FMD. These users are given certain administrative rights within the fuel system to add/delete/modify information based upon their specific job duties. In order to receive access to fuel, a request must be made to the FMD from authorized personnel on behalf of a prospective fuel user. Once approved, prospective fuel users are assigned a one to five digit personal identification number (PIN) that can be used to access fuel.

Upon inspection, all County-owned vehicles and select equipment items are assigned a nine-digit vehicle identification number (VIN) by authorized administrative users in the FMD. Non-County vehicles are assigned VINs by the FMD through a formal request and approval process. Small equipment items (i.e., lawnmowers, blowers, etc.) and large items that can't feasibly access a fuel terminal, are fueled by portable fueling devices, such as a pool deck and/or tank wagons. These devices are assigned nine-digit VINs and their usage should be documented on usage logs that are maintained by user agencies.

To access fuel at a County fuel site, a fuel user has to enter their established PIN, the vehicle's VIN, a current odometer reading, and pump number into the fuel terminal. Odometer readings are not required for fueling items without odometers or when pool deck and tank wagons are being utilized. Public safety agencies, such as the Fire/EMS Department and Police Department, are assigned special vehicle VINs to allow for 24-hour, unlimited access to fuel during emergencies. When these VINs are utilized, the user is only required to enter the established emergency VIN and their PIN to access fuel.

The monitoring of fuel usage is required by both the FMD staff and user agencies through the review of various system derived reports. To ensure that adequate fuel levels are consistently maintained at each County fuel site, the FMD uses the Veeder Root automated system to monitor fuel tank levels. Fuel deliveries are made by fuel vendors when the fuel levels at fuel sites are approaching low levels.

User agencies with supporting user agreements are invoiced on a monthly basis for their fuel usage. This invoicing procedure is facilitated through a semi-automated process in which usage data from the fuel system is transmitted to the County's financial system. Other user agency fuel costs are allocated based upon agency assigned identification numbers.

The FMD also ensures that each fuel site is operating within Federal and State guidelines by scheduling required testing. In addition, each fuel site is assigned a designated underground storage operator that is available to respond to emergency situations.

Objective, Scope, & Methodology

The purpose of this audit was to: (1) assess the adequacy and design of established written and/or documented policies and procedures over the fuel inventory system; (2) determine if administrative access to the fuel inventory system and related transactions are effectively maintained through adequate IT computer access controls; (3) determine if existing controls are operating effectively and in accordance with applicable policies and procedures, ensuring the accuracy of records being maintained by fuel sites, and the FMD personnel; (4) determine if existing controls are in place to ensure that access to the fuel

inventory is effectively monitored by the FMD personnel and specific fuel user agencies; (5) determine if fuel inventory levels and related transactions are reconciled, invoiced according to contractual terms, and accurately represented for external reporting; and, (6) determine if fuel sites are in compliance with applicable State and County testing requirements.

To conduct this audit we reviewed applicable County Administrative Procedures, State regulations, and the FMD operating procedures. We interviewed staff members from the FMD and Office of Finance. We then obtained a download of fuel transactions from the fuel system for fiscal year 2012, and utilized these transactions in the selection of various audit samples. These samples were then compared to supporting documentation based upon testing attributes. We examined fuel site reconciliations and the allocation methods used to report fuel costs for reporting and invoicing purposes. We also reviewed IT access controls over the fuel system to ensure their adequacy. The FMD fuel site records were reviewed to ensure that fuel sites have adequate emergency coverage and received compliance testing, as required by State regulations.

Management's Responsibility for Internal Control

Internal control is a process, effected by people at every level of the organization, designed to provide reasonable assurance that the following objectives are being achieved[1]:

- Effectiveness and efficiency of operations;
- Reliability of financial reporting; and
- Compliance with applicable laws and regulations.

Management is responsible for establishing and maintaining an environment that sets a positive and supportive attitude towards internal control. When the importance of internal control is communicated to employees, particularly through management's own actions and beliefs, the process is more likely to function effectively.

A strong internal control environment is essential in minimizing operational risks and improving accountability which further helps an agency to achieve its mission.

We noted the following strengths in relation to the internal controls surrounding the fuel system that we reviewed within the FMD:

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[1] Internal Control – Integrated Framework published by the Committee of Sponsoring Organizations of the Treadway Commission, Copyright 1994

- The FMD has written policies and procedures in place for various aspects of administration of the fuel system.
- The FMD has IT administrative and user access controls in place to limit access to the fuel system.
- The FMD has policies and procedures in place to allow emergency personnel 24-hour unlimited access to fuel.
- The FMD has procedures in place to allow for conducting monthly reconciliations of fuel inventory and site inspections.
- The FMD ensures that all fuel sites are operating effectively by ensuring that compliance testing is conducted in accordance with established regulations.

We also observed internal control weaknesses surrounding the administration of the fuel system that require management's attention. The following sections detail the items noted during our review.

Internal Control Design

An evaluation of the FMD's current internal control structure revealed the following opportunities for improvement:

PIN Request/Issuance Process

The FMD's process of issuing personal identification numbers (PINs) to fuel users needs to be enhanced. Administrative Procedure 623 requires that written requests be submitted to the Petroleum Manager, which should include the employee's full name, department name, address, telephone number and last four digits of their social security number. FMD policies and procedures are silent on the specific way in which this information is to be captured and documented. Furthermore, there is no method of delivery prescribed for newly issued PINs in the established procedures.

Note: During audit testing it was noted that most of the documentation submitted for PIN requests were in the form of emails and/or fax documents, and lacked the proper information. The delivery of newly issued PINs was inconsistent, with some PINs being issued directly to fuel users, and others to fuel users through intermediaries (i.e., vehicle coordinators).

An overarching criterion, cause, and effect for this entire section are as follows:

The Government Accountability Office (GAO) Government Audit Standards (GAO -12-331G) Fieldwork Standards for Performance Audit section 6.16 states that:

"Auditors should obtain an understanding of internal control that is significant within the context of the audit objectives. For internal control that is significant

within the context of the audit objectives, auditors should assess whether internal control has been properly designed and implemented and should perform procedures designed to obtain sufficient, appropriate evidence to support their assessment about the effectiveness of those controls."

The Government Accountability Office (GAO) Government Audit Standards (GAO/AIMD -00-21.3.1) Standards for Internal Control in the Federal Government states that:

"These standards [internal control] provide a general framework. In implementing these standards, management is responsible for developing the detailed policies, procedures, and practices to fit their agency's operations and to ensure that they are built into and an integral part of operations."

The FMD was unfamiliar with the proper way in which to fully strengthen its internal controls to mitigate certain risks associated with the fuel system. As a result, the integrity of the fuel transactions could be compromised, which can lead to the misappropriation of fuel, cause erroneous transactions, incorrect billings, and inaccurate reporting.

We recommend the following based upon the condition identified:

1(a) FMD existing procedures should be modified to include the establishment of an official FMD created PIN request form to be used by all requesting agencies. The form should include all of the elements included in Administrative Procedure 623, along with the employee position title, and authorizing signatures, from both the FMD, and the requesting agency appropriate personnel. These documents should be retained in the FMD's files for documentation purposes. All FMD assigned PINs should be administered directly to the end user for security purposes. The FMD should also explore whether the current fuel system has the capability to limit PIN knowledge to only end users.

Non-County Vehicle Number Assignment Process

The FMD's process of assigning vehicle numbers to non-County vehicles that access the fuel system needs to be modified. Administrative Procedure 604 and FMD's Practice No. 705 state that each County vehicle, or municipally owned vehicle that utilizes a County fuel site, is issued a unique nine-digit vehicle number by the FMD, which is only to be used when fueling that particular vehicle. FMD policies and procedures are silent on the specific way in which this information is to be captured and documented.

Note: During audit testing it was noted that most of the documentation submitted for non-County vehicle number assignment requests were in the form of random emails and/or memoranda with varying information related to the requested vehicle.

We recommend the following based upon the condition identified:

1(b) FMD existing procedures should be modified to include the establishment of an official FMD created vehicle number request form that is to be used by all non-County agencies that are requesting the assignment of a vehicle number. This form should also be used by any agency that is requesting the assignment of a vehicle number for any vehicle that was not assigned a vehicle number during its initial purchase and inspection by the FMD. The form should require relevant information such as the vehicle's make, model, color, location, odometer reading, and VIN, along with the authorizing signatures from both the FMD and the requesting agency appropriate personnel. These documents should be retained in the FMD's files for documentation purposes.

Lack of Procedures for Vehicle Odometer Resets

FMD administrative users with the appropriate administrative role have the ability to reset a vehicle's odometer reading in the fuel system. A vehicle odometer reset allows the vehicle's odometer reading to be placed in the appropriate range within the fuel system to facilitate access to the fuel terminal. Most vehicles have a 450 mile range limit that cannot be exceeded during successive fueling attempts. Currently, FMD policies and procedures surrounding manual vehicle odometer resets are as follows:

Administrative Procedure 604 and FMD Practice No. 705 state that if a vehicle obtains fuel outside of the County (i.e., extraditions), "the driver needs to contact Fleet Management at (301) 808-1715 immediately upon their return and have their vehicle's current odometer manually "reset" in the fuel system to place it back within the appropriate range for fueling at the County's fuel sites."

Vehicle "resets" may also be needed as a result of the usage of emergency codes. The FMD administers these emergency codes to public safety agencies for unrestrictive access to fuel during nighttime and after work hours. When emergency codes are utilized, the vehicle's odometer reading is not required to be entered in order to access fuel, thus requiring that vehicle's odometer to be "reset" for future usage.

The FMD's current procedures fail to require these instances of vehicle odometer resets to be documented by FMD staff.

We recommend the following based upon the condition identified:

1(c) FMD procedures need to be updated to require the logging of instances where a vehicle's mileage had to be manually reset by FMD staff. The log should capture relevant information such as the date of, and reason for the

request, the requestor's full name and department, the VIN, and the new odometer reading. The log should be inclusive of instances where emergency code reset usage was used.

Lack of Procedures for Fuel Terminal "By-Pass" Mode Usage

According to the FMD, the fuel system has the ability to be placed in a "by-pass" mode by fuel administrators during fuel terminal repairs, calibrations, and inspections. When in this mode, fuel can be accessed without the input of regular required information such as personal identification number, vehicle number, and odometer reading. Also, when placed in this mode, all resulting fuel transactions will be void of any pertinent information except for the amount of fuel accessed and the date/time of the transaction. There were 265 instances in fiscal year 2012 where approximately 1,138 gallons of fuel was disbursed using the fuel system's "by pass" mode capabilities. There were an additional 385 instances in fiscal year 2012 where the fuel system was utilized in "by-pass mode" however, during these instances no fuel was disbursed.

Currently, the FMD does not have policies or procedures detailing the administration of this functionality.

We recommend the following based upon the condition identified:

1(d) The FMD should develop procedures to address "by-pass" usage. These procedures should, at a minimum, address the authorization, logging, and reconciliation of "by-pass" usage.

Fuel User Access Controls

The FMD has the following fuel user access controls in place:

- The FMD's Practice No. 702 states that fuel users are assigned a 1 to 5 digit PIN for accessing the fuel system. (Note: There were several identified instances where established user PINs were only 1 digit in length.)
- Administrative Procedure 623 states that pool PINs can be assigned under certain circumstances to requesting agencies. Pool PINs are a group of PINs given to an agency that can be utilized by more than one individual at different intervals. Monitoring the usage of these PINs is the responsibility of the requesting agency.
- The FMD stated that fuel users are given unlimited attempts to input the correct combination of required information to access fuel.

Allowing individual PINs to be established as small as one digit for multiple usage by several individuals undermines the intent of implementing such controls. Although the responsibility to monitor the usage of pool PINs is delegated to the requesting agency, the ability to conduct such a task is greatly limited, depending

on the number of individuals given access to these pool PINs. Additionally, allowing unlimited attempts to input the correct combination of required information to access the fuel system further weakens these controls. All of these current access controls pose a serious security risk to gaining access to the fuel system.

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) section AC-2.1 provides the following guidance for typical controls for protecting the confidentiality of passwords:

- ***"Individual users are uniquely identified rather than having users within a group share the same ID or password; generic user IDs and passwords should not be used.***
- *Passwords are not the same as user IDs.*
- *Password selection is controlled by the assigned user and not subject to disclosure.*
- *Passwords are changed periodically, about every 30 to 90 days. The more sensitive the data or the function, the more frequently passwords should be changed.*
- *Passwords are not displayed when they are entered.*
- *Passwords contain alphanumeric and special characters and do not use names or words that can be easily guessed or identified using a password-cracking mechanism.*
- ***A minimum character length, at least 8 characters, is set for passwords so that they cannot be easily guessed.***
- *Use of old passwords (for example, within six generations) is prohibited.*
- *Vendor-supplied passwords such as SYSTEM, DEFAULT, USER, DEMO, and TEST, are replaced immediately on implementation of a new system.*

To help ensure that passwords cannot be guessed, attempts to logon to the system with invalid passwords should be limited. Typically, potential users are allowed 3 to 7 attempts to log on. *This, in conjunction with the use of pass phrases or other complex passwords, reduces the risk that an unauthorized user could gain access to a system by using a computer to try thousands of words or names until they found a password that provided access.*

Another technique for reducing the risk of password disclosure is encrypting the password file. Encryption may be used to transform passwords into a form readable only by using the appropriate key, held only by authorized parties. Access to this file should be restricted to only a few people; encryption further reduces the risk..." [Emphasis added]

We recommend the following based upon the condition identified:

1(e) The FMD should protect the confidentiality of all users' PINs by implementing the following access controls as outlined in the GAO's FISCAM section AC-2.1:

- Setting a minimum PIN length of 8 digits;
- Issuing each individual user his/her own unique PIN; and
- Limiting the amount of attempts to enter correct fuel access information to between 3 to 7 attempts.

All implemented controls should be incorporated in FMD policies and procedures.

Lack of Supporting Documentation

Audit testing revealed the following instances where the FMD failed to provide documentation to support audit requests:

Fuel User Information

A judgmental random sample of 40 fuel users, that were given access to the fuel system in fiscal year 2012, was selected to verify that adequate documentation existed to support their granted access to the fuel system. The FMD was able to provide documentation supporting only 18% (7 of 40) of the fuel users from the requested sample.

A judgmental random sample of 40 fuel users, which were deleted from the fuel system during fiscal year 2012, was selected to verify that adequate documentation existed to support their timely deletion from the fuel system. The FMD was unable to provide documentation to support the deletion of any of the 40 fuel users from the requested sample.

Administrative Procedure 604 and FMD Practice 705 both state that, "the Petroleum Manager must be notified within forty-eight (48) hours of termination of employment of a County fuel system user…" and "Each County vehicle, or municipality vehicle that utilizes a County fuel site, is issued a unique nine-digit vehicle number, by the Fleet Management Division, which is only to be used when fueling that particular vehicle."

Administrative Procedure 623 states, "Upon termination of employment, the Petroleum Manager must be notified, in writing, by the employee's departmental vehicle coordinator within 24 hours." It also states that "Personal Identification Numbers (PINs) are issued to employees by way of a written request to the Petroleum Manager". The written request must include the employee's full name,

last four-digits of the employee's social security number, department name, address, and telephone number.

Furthermore, the FMD implemented a secondary control of reviewing the Office of Human Resources termination reports monthly to identify County fuel users that need their fuel access terminated.

An overarching criterion, cause, and effect for this entire section are as follows:

The Government Accountability Office (GAO) Standards for Internal Control in the Federal Government (GAO/AIMD-00-21.3.1) states that:

"Internal control and all transactions and other significant events need to be clearly documented, and the documentation should be readily available for examination. The documentation should appear in management directives, administrative policies, or operating manuals and may be in paper or electronic form. All documentation and records should be properly managed and maintained."

Discussions with the FMD suggested that the absence of documentation provided was due to the failure to retain pertinent records and the lack of organization and/or maintenance of records. The FMD also mentioned that staffing shortages and the vacancy of the Petroleum Manager position during this time frame contributed to the condition of fuel site records.

The lack of documentation to support information within the fuel system could bring into question whether documented policies and procedures are being followed. Furthermore, if there is a lack of documentation to support user and vehicle information, it could compromise the validity of transactions within the fuel system database. This potential misrepresentation could affect all activities that utilize this information, such as fuel invoices and financial reporting related to fuel activities.

Vehicle Information

A judgmental sample of 40 fueling items (i.e., vehicles, motor vehicle equipment items, etc.), that were added to the fuel system in fiscal year 2012, was selected to verify that adequate documentation existed to support the addition of these items to the fuel system. The FMD was able to provide documentation supporting the addition of 85% (34 of 40) of the requested sample.

A judgmental sample of 25 fueling items, that were deleted from the fuel system in fiscal year 2012, was selected to verify that adequate documentation existed to support the deletion of these items from the fuel system. The FMD was able to provide documentation supporting the deletion of only 36% (9 of 25) of the requested sample items. Alternative audit procedures were conducted on the

remaining 16 items where no documentation was provided. These procedures revealed the following information:

- Though undocumented, 15 of the 16 items appeared to be deleted for justifiable reasons;
- One of the 16 was a vehicle item that was deleted, not assigned to any agency, and did not have a make, model or VIN attached to it within the fuel system. Additionally, this vehicle received 8.9 gallons of fuel by an FMD employee on 10/7/2011. The FMD provided system screen shots indicating that the vehicle was issued a new VIN and reassigned to a different agency on 10/11/2011 within the vehicle maintenance system. The old VIN associated with the vehicle was later deleted from the fuel system on 8/8/2012. However, the FMD was unable to provide documentation to support the vehicle being taken out of service from one agency and the resulting reassignment or transfer of the vehicle to its current agency.

Administrative Procedure 604 and FMD Practice 705 both state that, "Each County vehicle, or municipality vehicle that utilizes a County fuel site, is issued a unique nine-digit vehicle number, by the Fleet Management Division, which is only to be used when fueling that particular vehicle."

Administrative Procedure 603 states, "When a vehicle is recommended for retirement/replacement, it must be processed through the Fleet Management Division. A listing of all major deficiencies and/or reasons for turn-in along with a completed Surplus Property Turn-In Report (PG Form 8) will be submitted with the vehicle to the Fleet Management Division."

Emergency Code Usage Documentation

Emergency codes are personal identification numbers (PINs) given to public safety agencies for unrestrictive access to fuel during nighttime and after work hours. When emergency codes are utilized, the vehicle's odometer reading is not required to be entered in order to access fuel, thus requiring that vehicle's odometer to be "reset" for future usage.

The FMD could not provide documentation (i.e., user/call log) to support that they were notified when emergency codes were used, or that these numbers were rotated periodically. The emergency codes were changed by the FMD when inquiries were made during audit fieldwork. However, it was unclear whether these emergency codes were rotated during past usage.

FMD Practice No.705 states that, "the Petroleum Manager **must** be notified when the emergency number is used and the numbers will be periodically rotated in order to ensure security."

We recommend the following based upon the conditions identified:

2(a) The FMD maintain documentation to support the addition and deletion of all information to/from the fuel system. The requirement should also include the maintenance of documentation to support that notifications were made to the FMD's Petroleum Manager for emergency code usage.

Pool Deck and Tank Wagon Logs

The FMD could not provide evidence of any pool deck or tank wagon logs utilized during fiscal year 2012. Pool deck and tank wagons are used as intermediary fuel depositories to facilitate fueling small and large equipment items such as lawn mowers or excavators. The pool deck and tank wagon logs should not only provide further detail about the fuel activities, but also the basis for a reconciliation of system usage to log usage.

Administrative Procedure 622, Procedure B, Number 3, Tank Wagon Usage, states, "All agencies utilizing tank wagons must submit logs each month that list the number of gallons pumped into the tank wagon per transaction, date of each transaction, site where each transaction occurred, and pump number of each transaction. Logs are to be submitted to the Petroleum Manager at the end of each month."

Administrative Procedure 604, Procedure Number 2, Actions required of operators of County vehicle/equipment, d., states, "Pool Deck numbers may be assigned to fuel off-road diesel tanks. Agencies responsible for these tanks are required to submit monthly usage logs to Fleet Management."

We recommend the following based upon the condition identified:

2(b) In accordance with its documented policies and procedures, the FMD should require the monthly submission of tank wagon and pool deck logs from user agencies. These logs should be reviewed and reconciled to usage within the fuel system. Any exceptions should be investigated.

Fuel Site Compliance Testing Documentation

Compliance testing was performed on all FMD fuel sites to ensure that required annual fuel site testing was conducted. The results of testing revealed that FMD files lacked documentation to positively confirm that certain required compliance testing was performed at various fuel sites. The FMD's files did not contain adequate documentation from a contractor or the Maryland Department of the Environment (MDE) detailing that a specific test was performed. FMD's files did contain instances where specific tests were performed, however, they were not identified, or no documentation was available to support the tests performed.

Furthermore, the FMD's master schedule lacked an identification of the required test and the frequency for each fuel site.

According to FMD policies and procedures, which mirrors MDE requirements, all fuel sites are required to have certain compliance tests performed. Depending on the fuel site and its installed components, different compliance testing is required to ensure that the site is operating adequately. The frequency of these required tests depends upon various factors, such as site/equipment installation dates, cycle dates, and type of equipment installed.

To comply with these requirements, the FMD contracts with third-party vendors to conduct required annual compliance testing at each fuel site. These vendors then invoice the FMD for testing services conducted at each fuel site. Once annual testing is completed by the third-party vendors, confirmation of these tests are sent by the vendors directly to the MDE to ensure compliance with their requirements. In some cases the MDE will send confirmation of a completed test to the FMD.

Failure to conduct the required testing at a fuel site could lead to the temporary closure and/or assessment of fines of a fuel site. However, since there were no known instances where a fuel site was closed or assessed a fine by MDE as a result of non-compliance, Audits and Investigations (A&I) considered FMD's failure to produce the appropriate fuel site testing documentation as a lack of organization of records. The assessment was further supported by the observations of compliance records made during audit fieldwork.

FMD Practice No.701 states, "It is the responsibility of the Petroleum Manager to maintain a master schedule of all fuel sites with the required tests and frequency. All tests shall be kept up-to-date in compliance with the law."

It also states, "Test results shall be maintained by the Petroleum Manager and shall be presented to the Third-Party Inspector as required by periodic MDE site inspections."

Failure to provide documentation to support the adherence to required fuel site testing requirements could lead to civil penalties, delivery bans, and other legal sanctions from the MDE in the event these tests were not performed.

Failure to have a detailed master schedule could lead to confusion with respect to the status of testing at each fuel site, resulting in a presumption of compliance or non-compliance with testing requirements.

We recommend the following based upon the conditions identified:

2(c) The FMD maintains documentation to support any compliance testing conducted at each fuel site. These files should be maintained in a logical manner that would facilitate the prompt retrieval of any needed documentation.

2(d) The FMD update its system for tracking and monitoring required fuel site compliance testing. The master schedule of compliance tests needs to be more detailed with respect to which tests were performed, when they were performed, the status of the test, and any supplemental test ordered by the MDE. The FMD should also require their third-party vendors to provide a detailed description of all tests performed on each invoice. These changes would allow for the supporting documents to be easily cross-referenced to the master schedule maintained by the FMD.

All required information should be readily available upon request, systemically filed within FMD's Office, and kept for at least a 5 year period from the time that the modification to the fuel system occurred. The FMD policies and procedures should be updated to reflect any changes made as a result of any recommendations implemented.

Fuel System Administration and Monitoring

The following instances are indications where the FMD responsibilities to provide administration and monitoring of the fuel system need to be improved.

During audit testing various queries of fiscal year 2012 fuel transactions were conducted, specifically looking for abnormalities. The results of these queries revealed the following:

Fuel User Personal Identification Numbers (PINs) Analysis

There were 81 user profiles with at least two identical names, but different employee numbers. Employee numbers are equivalent to employee Personal Identification Numbers (PINs) that are used by individual users to access fuel. Of these 81 user profiles, 42 contained first and last names of departments, rather than individual names. These 42 issued PINs are consistent with the FMD policy of administering pool PIN numbers to requesting agencies. Pool PINs are a group of PINs set up in the name of a requesting agency for usage by multiple users. This set up was the preferred method of usage by the various volunteer fire departments throughout the County.

The remaining 39 user profiles contained instances where two different PINs were assigned to the same individual, and eleven of the 39 had instances where both of the issued PINs had accessed fuel during fiscal year 2012. These occurrences would tend to indicate more than one user accessing fuel with these issued PINs.

There were also two user profiles, with two different assigned PINs, set up with the identical first and last name of a make and model of a car, instead of a first and last name of an individual.

There were two user profiles that contained fueling activity inconsistent with normal individual usage. The details of this usage are as follows:

- In one instance, the user activity was consistent with one individual having accessed the fuel terminal an average of 84 times daily (based upon 250 working days in a year), and fueling a 16 gallon vehicle 49,974 times. The volume of fuel utilized was consistent with the user's job title however, the number of times the fuel terminal was accessed seemed to be unreasonable for a single individual.
- In the other instance, the user activity was consistent with one individual having accessed the fuel terminal an average of two times daily, and fueling a 16 gallon vehicle 521 times. The volume of fuel utilized was consistent with the user's job title. Although it is possible for an individual to accomplish the task of fueling twice a day for the entire fiscal year, it would seem unlikely that this usage would be consistent for the entire fiscal year.

The two individual user's job duties would justify some abnormal usage. However, the usage identified would suggest that other individuals are utilizing these individuals' established PINs to access fuel. Although this usage may be intentional in an effort to assist these users, the establishment of individual PINs for each person would provide a better way to track and monitor each person's usage.

Administrative Procedure 604, Procedure Number 3, states that it is FMD's responsibility to add, remove, or modify any employee or vehicle information within the fuel system.

Overarching criteria for this entire section are as follows:

The Government Accountability Office's (GAO) publication on standards for internal controls (GAO/AIMD-00-21.3.1) states:

"Internal control should generally be designed to assure that ongoing monitoring occurs in the course of normal operations... It includes regular management and supervisory activities, comparisons, reconciliations, and other actions people take in performing their duties."

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) section AC-5 states:

"Audit and monitoring involves the regular collection, review, and analysis of auditable events for indications of inappropriate or unusual activity, and the appropriate investigation and reporting of such activity."

Discussions with the FMD and audit observations revealed the following causes related to the above conditions:

The FMD did not provide an explanation for the number of duplicate user PIN profiles identified within the fuel system. However, they did mention that there was a massive clean-up effort conducted as a result of the last audit, and that they corrected similar issues identified during that time.

With respect to the two individuals with usage exceeding normal operations, the FMD noted that the individual with the greatest usage is a supervisor that is responsible for fueling buses. This individual was given a fueling PIN that is used by her team of employees during the fueling process.

Fuel Transaction Analysis

The FMD has made improvements over the past few years to deter fuel users from inputting incorrect information when accessing fuel. One of the better improvements made to the fuel system, since the last audit, was the implementation of a strict validation input rule, which requires accurate and logical information to be entered by fuel users before fuel can be obtained. However, the implementation of this control did not totally eliminate instances where fuel users were able to access fuel by entering invalid information. There were situations where manual overrides and system input rules allowed the circumvention of strict validation input controls.

The following occurrences are situations where this control may have been eluded:

There were 1,098 instances in fiscal year 2012 where "0" was used by a fuel user as the input for the odometer reading. The total amount of fuel associated with this type of usage was approximately 22,533 gallons. Potentially, these instances were indicative of fuel users utilizing "0" as a default override instead of inputting the vehicle's actual odometer reading.

(**Note:** Legitimate instances where a mileage entry of "0" would be justified were not included in the analysis results. Examples of legitimate occurrences would be the usage of pool decks, tank wagons, and any equipment item lacking an odometer reading.)

There were 9,800 instances in fiscal year 2012 where the beginning and ending odometer readings were identical. Potentially, these were instances where the fuel user inputted the same odometer reading during subsequent fueling events

instead of the vehicle's actual mileage reading. The total amount of fuel associated with this type of usage was approximately 233,308 gallons.

(**Note:** Instances where "0" was used as the beginning and ending odometer reading, and where no fuel was received, were excluded from the query results. Also, equipment items that do not require an odometer reading were excluded from the query results.)

There were 1,369 instances in fiscal year 2012 where the ending odometer reading was less than the beginning odometer reading. These instances would suggest situations where vehicle odometer resets were being completed by FMD staff, since the fuel system does not allow these types of entries without a manual override by an administrative user with the appropriate authorization. The total amount of fuel associated with this type of usage was approximately 15,839 gallons. Vehicle odometer resets are completed by the FMD, upon request, when an odometer reading is inconsistent with a prior inputted odometer reading. To complete an odometer reset, FMD staff manually change the odometer reading of the vehicle within the fuel system to an appropriate reading consistent with the range specifications set up for that vehicle. Most vehicles have a maximum mileage range of 450 miles between each fuel usage.

FMD Practice No.705 states, "It is the responsibility of the Fleet Management Staff to maintain the integrity of the information within the fuel system database, including but not limited to: add/remove users when necessary, update vehicle information when appropriate, monitor vehicles' cost per mile usage, monitor vehicles and data to ensure system/fuel is being utilized appropriately."

Discussions with the FMD and audit observations revealed the following causes related to the above conditions:

The FMD agreed that the usage of "0" and the same mileage entry as an odometer entry was indicative of fuel users failing to enter the proper mileage for the vehicle being fueled. They did offer that the total number of these types of transactions represents a small percentage of the total fuel transactions for an entire year.

The FMD agreed that some instances were indications where individuals used the same mileage entry repeatedly to access fuel. However, the FMD offered explanations of instances where vehicles needed several attempts to completely fuel, or a fuel terminal may have "timed out", not allowing fuel to be accessed, thus requiring a subsequent attempt to fuel the vehicle.

The FMD concurred with A&I's assumption that the fuel transactions where the ending odometer reading was less than the prior reading would tend to suggest that these were instances where the odometer was reset by FMD staff. However,

the lack of a logging system and audit trail reporting of the fuel system, makes it impossible to provide positive confirmation to support this assumption.

Administration of Fuel User and Vehicle Information

A judgmental random sample of 40 fuel users, that were deleted during fiscal year 2012, was selected to verify that adequate documentation existed to support the timely deletion of these users from the fuel system. The FMD was unable to provide documentation to support the deletion of any of the 40 users selected.

However, A&I was able to conduct alternative audit procedures to determine the separation dates of the 40 fuel users. With the assistance of the Office of Human Resource Management (OHRM), A&I was able to identify 19 of the 40 fuel users' separation dates. A comparison of their separation dates to the date their information was deleted from the fuel system revealed the following:

- None of the 19 individual's fuel access was deleted in a timely fashion. The average time an individual's fuel access was deleted after their separation was 5 years and 1 month;
- Six of the 19 individuals had accessed the fuel system after their separation dates. This access was indicated by a comparison of the individuals' separation date to the "card last used" field within the fuel database. This activity would indicate that either the individuals' were accessing fuel after their separation date, or someone else was using their PIN information to access fuel. We were unable to determine the amount of fuel associated with usage for 5 of the individuals due to the archiving of relevant information associated with their usage. However, the PIN usage associated with one individual indicated that over 4,600 gallons of fuel was accessed during fiscal year 2012, even though this individual was administratively removed from their position in 2001. With the average cost of unleaded fuel purchased by the FMD in fiscal year 2012, at $3.25 per gallon, the cost associated with this potential unauthorized usage was $14,950.

Note: The remaining 21 individuals sampled were either still employed by the County, or were non-County employees, thus preventing the comparison of their separation dates to the date they were deleted from the fuel system.

A judgmental sample of 25 vehicles/equipment items that were deleted from the fuel system during fiscal year 2012 was selected to verify that adequate documentation existed to support the timely deletion of these items from the fuel system. The FMD was able to provide documentation supporting vehicle or equipment item deletions from the fuel system for 36% (9 of 25) of the sample items. Documentation received for the 9 sample items provided was in the form of Property Turn-in Reports issued to the Office of Central Services from the requesting County agency for the retirement of these vehicles. However, when comparing the date of inspection/disposition on the Property Turn-in Report to the

date of deletion within the fuel system, the documentation presented for these items revealed a lapse of between 9 months to almost 3 ½ years. This comparison would indicate that these items were not being deleted from the fuel system in a timely fashion.

Administrative Procedure 604 and FMD Practice 705 both state that, "the Petroleum Manager must be notified within forty-eight (48) hours of termination of employment of a County fuel system user **so that their fuel PIN can be removed from the automated fuel system and ensure fuel system security**. The Supply Manager must be notified within seven (7) days of the retirement or transfer of a vehicle from/within the automated fuel system **so that it can be removed from the system or transferred to the appropriate agency within the system."** [Emphasis added]

Administrative Procedure 623 states, "Upon termination of employment, the Petroleum Manager must be notified, in writing, by the employee's departmental vehicle coordinator within 24 hours. **Upon receipt of notification of termination, the Petroleum Manager will remove the PIN from the system."** [Emphasis added]

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) Section AC-3.1 states:

"Inactive accounts and accounts for terminated individuals should be disabled or removed in a timely manner. It is important to notify the security function immediately when an employee is terminated or, for some other reason, is no longer authorized access to information resources.

Notification may be provided by the human resources department or by others, but policies should exist that clearly assign responsibility for such notification. Terminated employees who continue to have access to critical or sensitive resources pose a major threat, as do individuals who may have left under acrimonious circumstances."

Discussions with the FMD and audit observations revealed the following causes related to the above conditions:

The FMD noted that the fuel system has the ability to enable and disable fuel access for individual fuel users and vehicles. Disabling a user's fuel access would prevent a user from accessing the fuel system however, their user profile would remain in the fuel system. It is current practice to disable an individual's access prior to deletion from the fuel system. Deletions are initiated after 3 years, and are usually completed through a global request to the software vendor from the FMD.

For our sample of 40 fuel users, we were unable to determine if these individuals' fuel access was disabled prior to them being deleted from the fuel system. However, based upon the fact that there were instances of usage after the separation date for 6 individuals, and the lack of documentation presented by the FMD, we cannot conclude that the FMD practiced the procedure of disabling users' fuel access. Furthermore, when contact was made to the vendor to inquire about any such global deletion requests made by the FMD, the vendor could not substantiate this notion.

Transaction Monitoring

The FMD could not provide documentation to support the distribution of PIN usage reports, monthly usage reports, and exception reports to user agencies to facilitate the review of usage by these agencies. Furthermore, there was no evidence of the review of system created exception reports by the FMD to isolate potential abnormal usage within the fuel system.

FMD Practice No.702 states, "It is the responsibility of the Logistics Manager and staff to ensure all sites are operational and in good working condition." Procedure Number 7 states that a part of this responsibility is to "Maintain an active personnel and vehicle inventory in the automated fueling system database."

Administrative Procedure 622 states, "County agencies that obtain petroleum products from County fuel sites will be responsible for reviewing monthly fuel usage and exception reports for accuracy and reporting any discrepancies to the Fleet Management Division."

Administrative Procedure 623, Procedure Number 4 states, "The Fleet Management Division will periodically send PIN usage reports to using agencies. The using agencies shall review these reports and reconcile problems or questions with Fleet Management."

The FMD did not perform consistent reviews of the fuel system and its related information. This lack of oversight could lead to information within the fuel system being inaccurate.

The lack of valid fuel database information (i.e., user, vehicle), and the lack of effective monitoring of this information (i.e., timely updates), would tend to question the integrity of the activity surrounding the resulting fuel transactions. The failure to effectively monitor the fuel system could promote the misappropriation of fuel by unauthorized fuel users, which could then lead to a misrepresentation of actual fuel costs. This misrepresentation could affect billings and reporting related to fuel activities. As a result, we recommend the following based upon each condition identified:

3(a) The FMD should update their current policies and procedures to include:

- Periodic **documented** reviews (monthly, quarterly) of fuel transactions and user/vehicle information conducted by the FMD staff focusing on abnormalities, such as duplicate information, higher than normal fuel usage, and abnormal mileage entries. All issues should be investigated and addressed with appropriate action.
- Required distribution and confirmed review of exception reports by fuel user agencies.
- The documented deletion (not disabling) of individual fuel users upon their separation from employment, and vehicles upon being taken out of service. To supplement the timely deletion of individuals upon their separation from employment the FMD should coordinate with OHRM to incorporate into their process, the identification and notification to the FMD of separating employees with fuel access. This procedure would provide another supporting control to ensure that separating employees with fuel access are deleted from the fuel system in a timely fashion.

3(b) The FMD should update fuel system access controls surrounding the input of mileage entries by fuel users. The controls should be established to ensure that mileage entries are consistent with the actual mileage of the vehicle being fueled. This task can be completed by modifying fuel system access controls to only accept mileage entries that are consistent with fuel consumption usage. Current procedures can remain intact to address situations when emergency access is necessary.

Another alternative would be to move to a non-intervention fueling system. This system would not require any data entry of information from a fuel user. A computer module would be mounted inside the vehicle and would communicate relevant information automatically to the fuel terminal during a fueling event.

Fuel Site Concerns

The following fuel site concerns were identified, potentially limiting their ability to be in good working order:

Lack of Fuel Site Inspections and Bi-monthly Manual Dip Stick Comparisons

The FMD did not provide any of the requested monthly fuel site inspection reports for any fuel sites for the requested months of July and December 2012. Furthermore, there was no evidence to support the bi-monthly comparison of manual dip readings to system generated reports. The FMD procured a contractor to conduct the monthly fuel site inspections. These inspections commenced in October 2013 as evidenced by a copy of two fuel site reports submitted to A&I. During the period when these inspections did not occur, the County was not in

compliance with MDE requirements and thus could be subject to civil penalties, delivery bans, and other legal sanctions.

Administrative Procedure 622 states, "At least bi-monthly, the Petroleum Manager will compare manual dip readings to TLS [Tank Level Sensor] readings to verify fuel tank sensors are properly synchronized."

The FMD mentioned that staffing shortages and the vacancy of the Petroleum Manager position during this time frame contributed to the lack of effective coverage of certified underground storage tank (UST) operators, and the failure to conduct monthly fuel site inspections.

We recommend the following based upon the condition identified:

4(a) With respect to monthly site inspections, the FMD should either require the internal staff of certified operators to conduct documented monthly site inspections, or continue to procure an outside company to conduct these monthly inspections. These inspections should include the comparison of bi-monthly manual dip readings to system generated reports, in accordance with stated policies and procedures, to ensure the reliability of system generated fuel tank levels.

Fuel Site Understaffing Potential

The County's fuel sites have the potential to be understaffed, based upon State requirements, in the event of multiple emergencies at different fuel sites. State regulations require that certified trained underground storage tank (UST) (A/B/C) operators are available to respond to emergencies at fuel sites. According to State regulations, only class A/B operators are certified to be responsible for one or more underground storage tank (UST) systems, and class C operators are trained and certified at a specific (UST) site. Currently, FMD has 13 individuals that are certified trained underground storage tank (UST) operators; three (3) individuals are certified as A/B operators; one (1) individual is certified as an A/B/C operator; and nine (9) are certified as C operators. FMD records indicate that all of the class C operators were certified and responsible for one specific location (D'Arcy Road). Given that the County has 21 UST fuel sites and only 4 individuals that have the ability to provide emergency response to multiple fuel sites at any given time, there is the potential for inadequate coverage in the case of multiple emergencies at different fuel sites locations.

Code of Maryland Regulations (COMAR) section 26.10.16 requires owners of underground storage facilities (UST) to designate and identify, by written list, individuals to serve as Class A, B and C operators(s) for each facility by August 8, 2012. Furthermore, it requires that these operators inspect these facilities for a suspected or confirmed release, unusual operating conditions, emergencies, and equipment failures once every 30 days, or at a frequency approved by the MDE.

These inspections must be documented in writing and made available upon request. The FMD's documented Administrative Procedures and Practices mimic COMAR regulations.

The lack of effective coverage of UST operators could leave the County's fuel sites vulnerable in the event of multiple emergencies at several different fuel sites. The failure to conduct monthly fuel site inspections could also reduce the chance of detecting issues in their infancy, thus preventing widespread damage and cost. Furthermore, the County could potentially be subject to civil penalties, delivery bans, and other legal sanctions by the MDE for failing to provide adequate coverage to each fuel site, and not conducting required monthly fuel site inspections.

We recommend the following based upon the condition identified:

4(b) To address the coverage issues, the FMD should strategically train the existing pool of Class C operators at other fuel sites to ensure that adequate coverage in the case of multiple emergencies is obtained.

Silver Hill Fuel Site Reconciliation Concerns

The FMD staff revealed that during a July 2009 fuel reconciliation review of the Silver Hill fuel site, a statistical anomaly was identified. The anomaly revealed that beginning fuel inventory levels at the start of each day were consistently below the State mandated allowance, when compared to calculated beginning inventory levels. Calculated beginning inventory levels are determined by taking the prior day's ending fuel inventory levels and making the appropriate upward or downward adjustments based upon fuel received from deliveries and fuel dispensed to fuel users. Both the beginning and calculated inventory levels are received from a system generated Veeder Root Report. The reconciliation anomaly could be an indication that the fuel site might be experiencing a fuel leakage problem.

In an effort to address the problem, the FMD sought the assistance of three (3) different contractors. The first two (2) contractors suggested various remedies that were implemented by the FMD, but this did not correct the issue. The third contractor suggested a re-programming of the Veeder Root system to account for a slight 1 ½ inch slant in the fuel tank due to settlement that had occurred over time. This suggestion was implemented in October 2012 and subsequent reconciliations through May 2013 indicated the problem still existed. However, recent reconciliations from September and October 2013 reveal that the problem is within an acceptable allowance.

According to the FMD, during the entire process, the Maryland Department of the Environment (MDE) was informed of the issue and the attempted fixes. The only request received from the MDE during the process was for additional tank

tightness and underground tests to be performed to ensure that there were no leakage issues. These tests were conducted with the results detailing no issues. The FMD provided email documentation to support that a representative from the MDE was initially made aware of the problem in October of 2011, and subsequently in February and June of 2013. However, the FMD could not provide documentation to support that the MDE was informed of the issue when the FMD became aware of the issue in July of 2009. Currently, the FMD awaits further direction from the MDE, as requested in email correspondence sent in February and June of 2013.

COMAR section 26.10.08.01 states that if a fuel storage system fails a test for tightness or there exists evidence of a discharge, MDE must be notified within 2 hours of being identified by the owner. According to COMAR, two consecutive inconclusive tests are considered a failure and shall be reported as required.

COMAR also requires that prescribed steps must be followed to address situations where evidence of a discharge has occurred. Some of the steps prescribed include the immediate fixing of the identified problem and subsequent testing to confirm that the remedy has fixed the problem. MDE must also be kept informed during the entire process and any documentation to support actions taken must be made available upon request.

The FMD either failed to communicate or failed to maintain documentation to support the communication between them and the MDE pertaining to the issues surrounding the Silver Hill fuel site.

Without the proper communication with the MDE, the potential fix to the issues at the Silver Hill fuel site could be deemed unacceptable and thus require subsequent procedures by the MDE. Furthermore, the County could be subject to civil penalties, delivery ban, and other legal sanctions by the MDE for non-compliance with protocol procedures.

We recommend the following based upon the condition identified:

4(c) The FMD should adhere to the MDE protocol in the event of a reportable condition involving the fuel sites. This adherence should include the retention of documentation to support the correspondence between the FMD and the MDE.

D'Arcy Road Fuel Site Camera Concerns

During a visit to the D'Arcy Road fuel site, A&I became aware of a non-operational camera at the site. According to the FMD, the site's camera has been non-operational since Hurricane Sandy due to damage sustained to an IT server supporting the camera. The IT server allows the camera to store 10 days of recorded activity. The camera and related server were placed back into service on April 2, 2013, after over 5 months of inoperability.

A&I contacted a representative from the Office of Information Technology (OIT) to gather more details surrounding the repair of the server that supports the camera. The information received from an OIT representative revealed the following:

- The server malfunctioned around the time Hurricane Sandy hit the U.S. on October 29, 2012;
- Depending on the type of server failure, the OIT may receive an internal alert which would start the process of repair. In other situations, the OIT has to be notified of the server failure to start the repair process. It was unclear in this situation what the appropriate protocol would have been;
- It was unclear whether the FMD initially alerted the OIT of the server malfunction or it was assumed that this information was known by the OIT; and
- An alert was sent from the FMD to the OIT on April 2, 2013, concerning the server, it was repaired, and the camera was operational by the end of the day. It was unclear whether FMD ever notified the OIT prior to April 2, 2013, of the server/camera issue.

The FMD failed to follow up with the necessary personnel within the OIT on the status of repairs to the server supporting the cameras at the D'Arcy Road fuel site.

Failure to follow up on the status of equipment supporting the operation of cameras at a fuel site could lead to cameras being out of service for an extended period of time. While out of service, video surveillance would be unavailable to support a potential investigation at the fuel site.

We recommend the following based upon the condition identified:

4(d) In the event of any malfunction at the fuel sites, the FMD take the necessary steps to expedite the repairing of the malfunction. These steps would include adequate reporting and follow-up until the issue has been corrected.

Lack of Documented Policies and Procedures for Establishing Administrative Access to the Fuel System

The FMD lacks documented procedures for obtaining administrative access to the fuel system. Currently, gaining administrative access to the fuel system is controlled by the FMD's Logistics Manager without any subsequent supervisory approval. This access is given to administrative users within the FMD based upon the Logistics Manager's personal knowledge of each administrative user's job function. The fuel system allows the customization of various administrative roles. Utilizing this functionality, the Logistics Manager established customized fuel system administrative access user roles with the following capabilities:

- System Administrator - Full access to record, modify, or delete any fuel system database information;
- Customer Service – Full access to fuel system database information related to vehicles in order to add, modify, disable, or delete, with related read only access to fuel user information, fuel sites, and tank information; and
- Database Management – Full access to fuel system database information related to fuel sites and fuel terminals in order to add, modify, disable, or delete. Add, modify, disable, or delete capability related to vehicle information or fuel access user information; no access to fuel system administrative user access role permissions.

The fuel system has the capability for selective individual user role augmentation beyond the above defined user access roles defined by the Logistics Manager. As a result, A&I could not determine if any individual administrative user access roles had been selectively augmented to provide, modify, edit, or delete permissions outside of those that have been assigned through the defined roles established by the Logistics Manager.

Note: Original fuel transaction information cannot be modified or deleted within the fuel system. Modification and deletion of information is only in relation to fuel access user and vehicle profiles within the fuel system.

The FMD provided a current administrative user listing consisting of one (1) user with a view only role, three (3) users with System Administrator roles, two (2) users with Database Management roles, and fourteen (14) users with Customer Service roles. However, when this listing was compared to a system generated listing, the results revealed a discrepancy of 18 administrative users, of which 17 were legitimate differences. One (1) user role was in the name of a former FMD employee that appeared to be currently active within the fuel system.

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) section AC-3 states:

"Access rights, also known as permissions, allow the user to look, read, or write to a certain file or directory....Maintaining access rights, permissions, and privileges is one of the most important aspects of administering system security."

Section AC-3.1. further states:

"In order to adequately control user accounts, an entity should institute policies and procedures for authorizing logical access to information resources and document such authorizations. These policies and procedures should cover user access needed for routine operations, emergency access, and the sharing and disposition of data with individuals or groups outside the entity. Further, logical access controls should enforce segregation of duties.

The computer resource owner should identify the specific user or class of users authorized to obtain direct access to each resource for which they are responsible. Access should be limited to individuals with a valid business purpose (least privilege). Unnecessary accounts (default, guest accounts) should be removed, disabled, or otherwise secured. This process can be simplified by developing standard profiles, which describe access needs for groups of users with similar duties, such as accounts payable clerks."

Note: Refer to this section for further guidance with respect to an effective information system internal control structure.

FMD personnel do not have a complete understanding of the internal controls necessary for information system security, and the associated risks that may result when the highest level of security is not fully maintained. The lack of established documented procedures pertaining to gaining administrative access to the fuel system could potentially compromise the integrity of fuel data, and jeopardize the accuracy of reports. Also, the lack of established procedures could lead to an inconsistent application of undocumented policies and procedures. The establishment of multiple administrative users with system administrator and database management roles, coupled with the lack of compensating controls, hinders the segregation of duties internal control.

5(a) We recommend that the FMD develop documented internal policies and procedures for the granting of user administrative access to the E.J. Ward Fuel System. These policies and procedures should be established based upon a thorough evaluation of the duties and responsibilities of prospective administrative users within the FMD. The FMD also should consider the following factors in the establishment of these policies and procedures:

- Obtaining supervisory approval for access and the assignment of a user role;
- Limiting the number of employees who are assigned to user roles based on the employee's job function;
- The assignment of the highest level of administrative access to a limited number of individuals;
- Segregating the duties of established administrative roles; and
- Setting time frames for the timely addition and elimination of user administrative access.

Fuel System Control Limitations

Audit Trail Capabilities

Currently, the FMD is utilizing version 3.5 of the fuel system to manage fuel operations. However, this version of the fuel system software does not have the inherent capability to produce audit trail reports. Furthermore, the FMD does not

require that changes to the fuel system by administrative users be captured in a logging system. Having the ability to produce audit trail reports within the fuel system, or requiring a logging of modification events would facilitate the review and/or investigation of data modifications made to the fuel system by administrative users. Administrative users are FMD employees who have access to the fuel system and may view, modify, or prepare reports on fuel system records or transactions.

Fuel User PINs Viewed in the Fuel System by Administrative Users

The current version of the fuel system being utilized by the FMD also allows the personal identification number (PIN) of those with fuel dispensing access (fuel users) to be visible to fuel system administrative users; compromising the security of each fuel user's PIN. The FMD currently uses the PIN as the fuel access user's password for fuel dispensing.

According to the National Institutes of Standards and Technology Special Publication 800-12, An Introduction to Computer Security: The NIST Handbook, audit trails "provide a means to help accomplish several security-related objectives, including individual accountability, reconstruction of events, intrusion detection, and problem analysis."

The ability to produce supporting documentation as an audit trail is essential in fraud detection and prevention. Strict adherence to the creation of an audit trail provides information supporting the legitimacy of transactions. The audit trail should include information to establish an event along with whom and/or what caused the event. An event record should detail when the event occurred, the user identification associated with the event, the command used to initiate the event, and the result. A date and time would further assist in determining if the user was an authorized or unauthorized user. Modifications to events should have supporting documentation to provide a clear indication of the purpose and authorization for the modification.

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) section AC-5.2, Incidents are effectively identified and logged, states:

"Entity policies and procedures should establish criteria for the identification of significant system events that should be logged. Based on such criteria, the entity should identify significant system events. At a minimum, all such significant events, including access to and modification of sensitive or critical system resources, should be logged. Also, logging should include appropriate information to facilitate monitoring of access to business process applications and related actions taken by application users. To be effective:

- identification and logging of auditable events should be based on considerations of costs, benefits, and risk;
- this feature should be activated to log critical activity, maintain critical audit trails, and report unauthorized or unusual activity;
- access to audit logs should be adequately controlled; and,
- managers should review logs for unusual or suspicious activity and take appropriate action.

Access control software should be used to maintain an audit trail of security access, containing appropriate information for effective review to determine how, when, and by whom, specific actions were taken."

The Government Accountability Office (GAO) Federal Information System Controls Audit Manual (FISCAM) (GAO-09-232G) section AC-2.1 provides the following guidance for typical controls for protecting the confidentiality of passwords:

- *"Individual users are uniquely identified rather than having users within a group share the same ID or password; generic user IDs and passwords should not be used.*
- *Passwords are not the same as user IDs.*
- ***Password selection is controlled by the assigned user and not subject to disclosure.***
- *Passwords are changed periodically, about every 30 to 90 days. The more sensitive the data or the function, the more frequently passwords should be changed.*
- *Passwords are not displayed when they are entered.*
- *Passwords contain alphanumeric and special characters and do not use names or words that can be easily guessed or identified using a password-cracking mechanism.*
- *A minimum character length, at least 8 characters, is set for passwords so that they cannot be easily guessed.*
- *Use of old passwords (for example, within six generations) is prohibited.*
- *Vendor-supplied passwords such as SYSTEM, DEFAULT, USER, DEMO, and TEST, are replaced immediately on implementation of a new system."*
  [Emphasis added]

The fuel system software version 3.5 has inherent limitations that constrain the security of fuel system information. These limitations within the system do not allow for the production of audit trail reports or the obstruction of visibility of fuel user PINs. The PIN and password are being used synonymously for each fuel access user.

The lack of audit trail reporting, as well as the visibility of fuel user PINs to administrative users of the fuel system, can lead to an environment where the fuel system could potentially be compromised by an administrative user. When the

fuel system is compromised, fuel could be stolen, wasted, abused, or misappropriated, leading to fuel transactions that are erroneous. This may potentially cause inaccuracies in invoicing, billing, and reporting. Furthermore, the lack of audit trail reporting hinders the prevention and detection of unauthorized usage of the fuel system. The fuel system software set up compromises the integrity of the PIN, which is used as the fuel access user's password.

6(a) We recommend that the ability to change or modify database information be given to a limited number of individuals within the FMD. This ability should be limited to an employee with advanced knowledge of the fuel system.

6(b) We also recommend that the FMD develop a logging system for all changes made to fuel transactions. This system should capture the following information: the date of the change, who made the change, what information was changed, the reason for the change, the employee and vehicle involved in the change, and supervisory review/approval for the change. This information can be in the form of a handwritten log or a system prepared report.

6(c) The FMD should explore the current capabilities of the version of fuel system software being utilized to ascertain whether the ability to view user PINs can be modified. If this capability cannot be changed, then compensating controls such as limiting administrative access to the fuel system, and supervisory review of fuel usage should be implemented.

6(d) The FMD should also explore the implementation of an updated version of the current fuel system software or another fuel system application that has the enhanced capabilities of securing the visibility of user passwords, and allowing for audit trail reporting.

Lack of Consistent Ending Fuel Inventory Practices

A review of fuel ending inventory records revealed that the FMD did not consistently report ending fuel inventory levels. In some instances, the FMD utilized actual manual dipstick readings to report ending inventory levels for fuel sites, and in other instances ending inventory levels were reported utilizing the fuel system reporting capabilities. The FMD used manual dipstick readings to report ending inventory levels for 2 of the 20 (10%) unleaded fuel tanks; while the remaining 18 unleaded fuel tanks and all 21 diesel fuel tanks were reported using the fuel systems reporting capabilities.

The FMD also did not accurately report ending fuel inventory levels for all fuel sites. Ending inventory levels for unleaded and diesel fuel sites were inaccurately reported for 6 of the 20 tanks (30%) and for 2 out of 21 tanks (10%) respectively. Although inaccurately reported by the FMD, the individual errors in ending fuel reporting were not material to the overall ending fuel inventory.

Additionally, the date stated on the ending inventory recording forms indicated that the fuel level readings were not conducted on the last day of the fiscal year as required by Administrative Procedures. Furthermore, the Petroleum Products Physical Inventory Instructions, referred to in Administrative Procedure 622, which set the guidelines for conducting ending inventory practices, are non-existent.

The FMD is responsible for calculating and communicating the overall value of ending fuel inventory levels of all County fuel sites to the Office of Finance at fiscal year-end. On the last day of the fiscal year, the Logistics Manager, or the assigned FMD personnel, will visit each fuel site and record the pump meter reading (system generated) and the manual dipstick reading of all fuel tanks to substantiate the ending fuel tank level in gallons. The system generated and manual fuel tank readings are both captured on the appropriate FMD form and signed, as verified, by the FMD personnel performing the readings. The FMD practice is to use the system generated fuel tank level reading to identify the level of fuel in each tank at the time of the reading. Once identified, the overall ending inventory value is calculated by summarizing the fuel tank levels for each fuel site, and applying that value to the calculated yearly average fuel price. This calculated amount is then reported to the Office of Finance and is used as a component of the ending inventory value reported on the County's Comprehensive Annual Financial Report.

Administrative Procedure 622 requires that on the last working day of each fiscal year FMD staff must perform an annual physical fuel inventory process according to the Petroleum Products Physical Inventory Instructions.

Sound business practices require consistency in reporting procedures to maintain the comparability of financial statements.

There is a lack of documented procedures for the calculation of fuel ending inventory values for reporting to the Office of Finance. The Logistics Manager is not using consistent practices when performing calculations to arrive at the ending inventory value. Additionally, the annual physical fuel inventory process lacks supervisory review by the Fleet Administrator.

Waste, theft, abuse, or misappropriation of County resources may occur when there is a lack of documented procedures requiring adherence to efficient internal controls. Inaccurate reporting of ending inventory values may produce financial statements that are not comparable from year to year.

7(a) We recommend that the FMD develop documented Petroleum Products Physical Inventory Instructions policies and procedures that address the end of year inventory gathering and reporting process, as referred to in Administrative Procedure 622. These policies and procedures should establish which reporting technique (system generated pump meter readings vs. manual dipstick reading)

will be utilized when reporting ending fuel inventory levels. The Logistics Manager must use care when summarizing, calculating, and reporting tank level readings and ending inventory values to the Office of Finance. Amounts and figures in reports produced by the FMD should be reviewed by an FMD supervisory employee to ensure accuracy before submission.

Inventory Reconciliation and Verification of On-Hand Fuel

Monthly Fuel Inventory Reconciliation

The FMD does not perform a complete month-end reconciliation of fuel inventory levels at each fuel site. On a daily basis, the Fleet Manager relies upon a report developed exclusively from the Veeder Root automated system to complete a daily reconciliation of each fuel tank's inventory levels. At the end of each month, these daily reconciliations are summarized into a Monthly Inventory Record for each fuel tank at each fuel site. At no point are independent sources such as fuel delivery tickets (bill of ladings) or manual dip stick readings utilized to verify and reconcile system calculated fuel inventory levels.

Note: Currently, the FMD staff conduct manual dip readings only once a year, at fiscal year-end, even though their policies and procedure require that bi-monthly manual dip readings be conducted.

Lack of Vendor Invoice Verification

The FMD does not appear to verify vendor invoice information for accuracy before payment is issued. When fuel is delivered to a fuel site, the vendor conducts a manual dip reading before and after dropping the fuel load. Each tractor trailer or tank wagon that delivers fuel is equipped with a meter that determines the amount of fuel that is dispensed from the truck into the fuel tank. A delivery ticket (i.e., bill of lading) is produced by the truck's meter system and left at the fuel site for each delivery. The delivery ticket reports the time, date, location of delivery, and the amount of fuel delivered. These delivery tickets are then sent to the FMD by fuel site personnel. A vendor invoice is later sent to the FMD.

A judgmental random sample of 5 fuel site locations was selected for the month of June 2012 to verify that fuel delivery tickets (i.e., bill of ladings) were reviewed by the FMD staff, and compared to Veeder Root report measurement records to support vendor invoice accuracy. The FMD was unable to provide fuel delivery tickets to support 13 out of 36 deliveries (36%). Additionally, there was no evidence to support that the FMD staff is comparing fuel delivery tickets to Veeder Root generated reports, or invoice pricing (per gallon) to contractual pricing before processing payments for vendor invoices. The FMD lacks documented policies and procedures that govern the invoice review and approval

process. The FMD's current vendor invoicing process consists only of recording invoice information, such as vendor name, invoice number, and amount, into the fuel system.

Administrative Procedure 622 states the following:

- "The Fleet Management Division is responsible for …conducting fuel inventory and reconciliations between fuel tank dip readings and automated fuel system TLS (Tank Level Sensor) readings…"
- "Logistics Manager shall run a Fuel Reconciliation report and review to ensure that the information calculated by the automated fuel system compared to actual fuel delivery receipts and invoices is within 2% of actual fuel delivered."
- Monthly Reconciliation of Fuel Billing and Usage will include a reconciliation of TLS (Tank Level Sensor) Reports with fuel delivery invoices for each fuel site.

Administrative Procedure 604 requires that the FMD process receiving reports for all valid deliveries and reconcile deliveries with on-hand inventories.

FMD Practice No. 702 requires the Administrative Aide to match invoices to recorded deliveries to ensure invoices are properly reconciled with electronic delivery receipts.

Adequate internal control procedures require the use of independent supporting documentation when preparing reconciliation reports.

Conversations with the FMD staff suggest that they are reliant upon the electronic accuracy of the fuel and Veeder Root systems. The number of fueling stations within the County, coupled with the distance between fueling stations and the lack of adequate staff, has led the FMD to rely upon reports produced by Veeder Root and the fuel system to substantiate fueling site ending inventory balances. The FMD staff feels that any fuel inventory discrepancies will be mathematically ascertained from the system generated daily fuel inventory calculation report.

Using this practice, the Fleet Administrator failed to verify that invoices were properly matched to fuel delivery ticket information before payment approval was provided for an invoice.

Additionally, the FMD lacks documented procedures that hold personnel accountable for forwarding fuel delivery tickets received at the fueling sites to the FMD.

The lack of supporting documentation to substantiate fuel invoices could lead to excess billing and the expending of County resources unnecessarily. Failure to adhere to County policies and procedures requiring reconciliation of fuel

inventory balances and verification of vendor invoices could result in the theft, waste, abuse, or misappropriation of fuel. Waste, theft, abuse, or misappropriation of County resources may occur when there is a lack of documented procedures requiring adherence to efficient internal controls.

We recommend the following based upon each condition identified:

8(a) A County employee should be designated to collect, maintain and/or forward all delivery tickets for their designated fuel site to the FMD. The FMD should ensure, through accountability, that all delivery tickets are forwarded to their office for maintenance.

8(b) The FMD should incorporate the usage of an independent source of verification of fuel tank levels when preparing monthly reconciliations of fuel on-hand. Manual fuel tank readings conducted by FMD staff or by fuel vendors, by way of delivery tickets, should be used to support system generated tank level readings during the completion of monthly reconciliations.

8(c) Prior to payment of vendor invoices, the amount of fuel received and the price per gallon stated on the fuel invoice should be compared to independent sources (i.e., delivery tickets, manual dip readings, system generated reports, and contract pricing amounts) to ensure vendor invoice accuracy.

Untimely and Inaccurate Fuel User/Seller Tax Returns

A review of State of Maryland Special Fuel User/Seller Tax Returns (the "Return"), completed by the FMD in fiscal year 2012, revealed three delinquent returns that resulted in the assessment of penalty and interest payments totaling $6,077.43. Based upon a comparison of the required deadline and the date of the check issued for payment, the delinquency of these returns was between 1-4 days. In addition, due to a spreadsheet error, the fuel inventory levels reported on all of the fiscal year 2012 returns contained reporting inaccuracies. However, these reporting inaccuracies were for informational purposes and did not affect the calculation of the tax amount. The return is a calculation of State tax based upon the number of gallons of fuel attributed to road usage of vehicles.

On a monthly basis the FMD completes and forwards returns to the Office of Finance for payment preparation. Once payment has been prepared, the FMD is responsible for ensuring that the return is mailed to the State before the stated deadline. A review of the returns completed during the audit period revealed a lack of comparison of reported inventory levels to independent sources, and a lack of supervisory review. Currently, the FMD does not have detailed documented policies and procedures governing the completion of the State of Maryland Special Fuel User/Seller Tax Return.

Administrative Procedure 622 requires the Petroleum Manager to complete the monthly road tax calculations for the County's on-road fuel tax, and to forward the payment to the Comptroller of Maryland.

Adequate internal controls require the efficient and effective utilization of assets and resources.

Discussions with the FMD suggest that the length of the process caused the Fuel User/Seller Tax Return to not be completed in a timely manner. Furthermore, the lack of documented policies and procedures governing the completion of these returns also contributed to their untimely and inaccurate completion.

The untimely completion and submission of State required forms and returns can result in the assessment of penalties and interest fees to the County. These fees would divert funds that would otherwise be utilized to serve other areas of need.

9(a) We recommend that the FMD develop detailed documented processes and procedures to govern the completion of the State of Maryland Special Fuel User/Seller Tax Return. The procedures should require that returns are reviewed by a supervisor and completed in a timely manner to ensure that the information is submitted and processed by the Office of Finance before the stated deadline. Furthermore, these procedures should require that reported fuel inventory levels be verified against an independent source, such as manual dip, or system generated fuel inventory levels.

Auditor's Comments on the Office of Central Services May 6, 2014 Response to the Audit Findings

We have received the responses to our audit of the Office of Central Services Fleet Management Division's Fuel Inventory System and wish to thank everyone involved for their efforts. However, we take exception with a number of the responses and our comments are as follows:

Audit Finding #1- Internal Control Design issues relating to the following processes:

> ➢ PIN request/issuance;
> ➢ Non-County number assignment;
> ➢ Vehicle Odometer Resets;
> ➢ "By-Pass" Mode Usage;
> ➢ Fuel User Access Control.

OCS Response: "Auditors noted that there were no standardized forms for entering requests for user PINs or for non-County owned vehicles. FMD concurs that there was no standardized application form for requesting PINs. However, there is file documentation for every PIN assignment in the form of an e-mail, memo or note to file."

Audits and Investigations' Comment: The overall arching theme of this finding is the design of current internal controls in place not the application of existing controls in place. During the testing of controls we found that FMD staff was only able to provide documentation to support that requests were made to establish PIN access for 7 of 40 current fuel users. Furthermore, for the 7 fuel users where documentation was provided, the information provided lacked consistency in format, information supplied, and the method of PIN delivery to the fuel users.

OCS Response: "Auditors noted that there is no procedure in place for documenting routine odometer resets. Fleet concurs, but as a practical matter, the administrative burden to log these outweighs the benefit. Odometers are not set back to allow the drawing of more fuel. They are occasionally adjusted slightly (5 out of 1,000) because a user (primarily Fire Apparatus operator) transposes the last two digits. For example, someone could transpose a number ending with 27 with 72. While this is well within range, the next shift operator might try to fill up and find that the actual mileage ends in 71. That operator would need a reset to get fuel. This occurs because Fire Policy requires refueling after each response. Otherwise, odometers are only set forward to recognize that the user purchased fuel on their own outside the system. This is a routine task that is necessary when vehicles are set on "Strictly Validate" the odometer to the vehicle and mileage verification."

Audits and Investigations' Comment: Determining whether to implement or forego implementation of an internal control is a management decision. However, we believe that there are various factors and information that must be taken into account when making this important decision. A key piece of information that would be needed in this situation would be a true representation of the number of times vehicle odometer resets have occurred, which was unknown during the audit because this information was not captured. Without this information it would be impossible to fully assess whether to allocate administrative resources to collect relevant reset information. During the audit we were unable to definitively identify the number of times vehicle odometer resets had occurred, but we were able to identify 1,369 instances that were indicative of an ending odometer reading being less than the beginning odometer reading. Based upon this number of instances it wouldn't seem to be too much of an administrative burden to log these events given their frequency.

The implication that vehicle odometer resets are only completed in instances where fuel users may have transposed a number is speculative without documentation to support this notion. FMD representatives are ignoring the possibility that there could be instances where these vehicle odometer resets are completed to mask fuel misappropriations.

OCS Response: "The auditors also noted that there is no established procedure or documentation for when terminals are in the "bypass" mode for repairs, testing or calibration, and that the fuel user PIN system does not meet any recognized criteria as a secure PIN or password. We disagree. PINs are automatically created by the software. They were developed according to ISO 9564. ISO 9564 is an international standard for personal identification number (PIN) management, and lengths from 4 to 6 are perfectly standard except for perhaps the financial industry. We did discover a few older PINs that were shorter than 4 digits. We have removed them from the system."

Audits and Investigations' Comment: During audit fieldwork, the FMD was unable to provide any documented policies or procedures covering the administration of when terminals are placed in the "bypass" mode for repairs, testing or calibration. With respect to the establishment of fuel user PINs by the fuel system, we recommended the establishment of fuel user PINs consistent with 8 characters as recommended by the Governmental Accountability Office's Federal Information System Control Audit Manual (FISCAM). Again this was merely a recommendation not an indictment against the way in which the fuel system creates PINs for prospective fuel users. Our concern is with the length of some of the PINs that were in usage and the current procedure that allows for the establishment of PINs that are inconsistent with industry standards. FMD Practice No. 702 states that fuel users are assigned a 1 to 5 digit PIN for accessing the fuel system. During the audit we found several instances where PINs were established consistent with 1 and 2 digits in length. While determining the adequate length for PINs is somewhat discretional, having PINs with as few as 1

or 2 digits and a documented procedure that allows for such application isn't acceptable under any standard.

OCS Response: Recommendations: "(a) PIN request / issuance process – We Agree. A standardized form and filing system has been implemented for the issuance of fuel PINs.
(b) Non-County vehicle number assignment process – We Agree. A standard form will be developed and implemented."

Audits and Investigations' Comment: We are pleased that FMD concurs with our audit finding. We hope that the modifications made by the FMD have addressed these particular concerns.

OCS Response: "(c) Lack of procedures for vehicle odometer resets – As a practical matter, vehicle odometer resets are routinely required to allow fuel transactions for a variety of reasons. These resets can occur at any time on any day and from any location in order to ensure that County staffs on duty have the ability to refuel. It is not be practical to attempt to maintain a central logbook to document these resets, with no functional or financial benefit. In the future, updates of the fuel management system will allow positive, non-intervention control of fuel dispensing using wireless technology. Ultimately, odometer validation as fuel security will be phased out in favor of an on-board device which authorizes fuel."

Audits and Investigations' Comment: As mentioned in an earlier response, the decision whether to implement an internal control is a management decision. But to make such a decision without having adequate information (i.e., the number of times vehicle odometer resets are occurring, when they are occurring, who is performing these resets, and documented reasons for these occurrences) is not recommended, especially when there is the potential for resources to be misappropriated due to a lack of implementation of the control in question. Hopefully, with the future implementation of an on-board device in each vehicle, this will alleviate the need for the establishment of such a control. However, until this device can be implemented in all County vehicles, we will continue to recommend that these instances are logged, monitored, and investigated, on an as needed basis.

OCS Response: "(d) Lack of Procedures for "Bypass Mode"- While we agree that there is not a written procedure for documenting instances of "bypass mode, Fleet does currently review all bypass transactions for each month when the monthly reports are compiled. It would not be practical to try to log the events as they occur since they are initiated by on site repair contractors and are short in duration. We will, however, include a requirement in our software upgrade a feature that generates alerts and / or reports that will notify the Petroleum Manager whenever a pump has been placed in bypass mode."

Audits and Investigations' Comment: As mentioned in an earlier response, FMD was unable to provide documented procedures covering the administration of when fuel terminals are placed in "By-Pass Mode". Hopefully, in the future, FMD can establish <u>documented</u> procedures covering all aspects of the administration of this functionality.

OCS Response: "*(e) Fuel user access controls* – We acknowledge this finding but do not concur with the recommendation concerning access to the fuel pump. First, employing a number greater than four has a negative impact on remembrance and usability. Second, our plan is to phase out PINs altogether and use an integrated solution concurrent with the new ERP System that uses the employee identification and ETS time card."

Audits and Investigations' Comment: The recommendations mentioned in the report involve setting a minimum PIN length of 8 digits, issuing each user his/her own unique PIN, and limiting the amount of attempts to enter correct fuel access information to between 3 to 7 attempts. These specific recommendations are commonplace and are consistent with industry standards. While we recommend the establishment of PINs at a length of 8 digits, we understand that having PINs that are at least greater than three digits could be realistic given that these are only numeric in nature. With that being said, to have a written procedure in place that allows for the establishment of working PINs that are less than three digits and to actually have working PINs that meet this criterion poses a potential security risk. PINs are established to promote a secure environment, not necessarily to facilitate remembrance and usability.

<u>Audit Finding # 2 – Lack of Supporting Documentation relating to the following areas:</u>

> ➤ Fuel user additions and deletions
> ➤ Vehicle additions and deletions
> ➤ Pool deck and tank wagon logs
> ➤ Emergency code usage documentation
> ➤ Fuel site compliance documentation

OCS Response: "Fleet concurs that it does not have an ideal system that documents additions of employees to the system. However, we believe that there is adequate documentation justifying deletions from the system that was not credited due to an inaccurate interpretation of the system. The prior audit recommended that a procedure be set up where OHRM provides Fleet with a monthly termination list to ensure employee access to fuel is terminated as needed since they noted that end user agencies were not adequately informing Fleet about terminations. Fleet and OHRM instituted a monthly separation report that has been utilized for the past five years. However, Fleet was required to manually purge the system by removing users who may have been terminated without Fleet's knowledge prior to the implementation of this new process. All agencies

have updated their employee list with the exception of the Police Department. Additionally, when access is no longer authorized, Fleet *disables* the PIN, thus denying access. However, the employee file may still be needed for analysis, trends and reporting purposes so disabled PINs are not immediately removed. They may be present in the system for three years. The database query that was run by the auditor only noted the date of the ultimate deletion while not recognizing that there is no material relationship between the date of a deletion and the date of employee termination assuming the employee PIN was actually disabled at the proper time. There is no indication as to whether any employee reported as terminated to Fleet was not *disabled* in a timely fashion."

Audits and Investigations' Comment: As mentioned in the audit finding a sample of 40 fuel users was selected to ensure that adequate documentation was present to support the timely deletion of these individuals from the fuel system. FMD representatives were unable to provide **any** documentation to support the deletion of any of the 40 employees from the fuel system. This lack of documentation included the absence of any of the OHRM reports utilized by the FMD during the audit period to identify fuel users that were separated from employment, requiring their access to the fuel system to be disabled. As a result, we conducted alternative procedures to try to identify the separation dates of these 40 individual fuel users. With the help of OHRM, we were only able to identify the separation dates for 19 of the 40 fuel users. The separation dates of these 19 individuals were compared to the (1) date their PINs were last utilized and the (2) date their PIN access was deleted as captured by the fuel system. According to the FMD, it is their policy to disable an individual's access to the fuel system upon their separation from employment. Furthermore, the FMD claims that there is no indication as to whether an employee that separated from employment was not disabled from accessing the fuel system in a timely fashion. However, our alternative audit procedures revealed that there were 6 individuals whose PINs were used to access fuel stations after their separation dates. This finding provides evidence that FMD's practice of disabling fuel user access to the fuel system was not followed in at least 6 instances. Additionally, FMD representatives claim that an individual's access to the fuel system is deleted within three years of their separation date. Our audit finding revealed that all of the 19 fuel users, whose separation date was identified, had their fuel access deleted an average of more than 5 years after their separation date.

OCS Response: "Fleet believes that adequate records were provided justifying the addition and deletion of vehicles from the Fleet. The Inventory Manager maintains he produced the requested records for all County-owned vehicles and documentation of some type for all non-County owned vehicles. Fleet does acknowledge and agree that some agencies have not provided the tank wagon logs as required and we have already followed through with those agencies and have taken appropriate action. Specifically, the Landfill submits their logs for the refueling tanker that refuels equipment on a regular basis. The Department of Public Works and Transportation is generally slack in submitting logs for their

tank wagons used to fuel mowing and construction equipment stationed out in the field. We have followed through with this Agency, and they have committed to better compliance in the past. DPW&T has consistently insisted they need these pieces of equipment to support their highway maintenance operations and have stated that they will be responsible for and pay for all fuel used by the tanker. However, Fleet dropped these tanks from the off road accounting numbers since we do not have the backup documentation to justify tax exemption."

Audits and Investigations' Comment: As mentioned in the audit finding a sample of 25 vehicles was selected to ensure that adequate documentation was present to support the timely deletion of these vehicles from the fuel system. FMD representatives were only able to provide documentation to support the deletion of 9 of the 25 vehicles from the fuel system. For the remaining 16 vehicles explanations were given to substantiate some of the deletions, but no adequate documentation was ever provided to support the deletions. There is a distinct difference between adequate and "some type" of documentation. Adequate documentation, in these instances, would consist of vehicle turn-in reports and any other written documentation to support the deletion of these vehicles.

OCS Response: "Fleet does not concur with the finding regarding the use of emergency codes. While codes have been issued to all public safety agencies, only the Fire Department uses theirs and Fleet provided the auditor with e-mail records documenting all reported uses of the bypass code."

Audits and Investigations' Comment: The emergency code finding is centered on the requirement that the FMD, specifically the Petroleum Manager, must be notified when an emergency number is used and the periodic rotation of these numbers. As stated in the finding, the FMD could not provide documentation to support that either a notification was made to the FMD by a specific user or that these numbers have been rotated on a periodic basis. The information provided by the FMD was a report of the usage of these emergency codes after the fact, not documentation detailing that the FMD was notified by the user prior to utilization of the emergency numbers. Furthermore, there was no evidence presented supporting the periodic rotation of these numbers. The emergency codes were only recently changed after an inquiry was made during the audit.

OCS Response: "Fleet concurs that the filing of compliance tests was incomplete, but we maintain ALL tests were completed on time and all discrepancies were addressed to the satisfaction of MDE. We regret that MDE did not talk to the Auditors."

Audits and Investigations' Comment: From an audit standpoint we look to obtain positive confirmation that a task or requirement has been completed. Absent of this positive confirmation, we can't positively concur that these compliance tests were completed. However, based upon the lack of evidence to

support non-compliance and reliance placed on MDE enforcement procedures, we considered FMD's failure to produce the required documentation as a lack of organization of records.

OCS Response: "Recommendations: (a) Maintain documentation to support the addition and deletion of information to/from the system – this is currently being done. We maintain that we do maintain a centralized file of all user additions and deletions as previously recommended. Fleet currently maintains centralized files and has records for the addition and deletion of vehicles from the system. We will implement the suggestion to add a standardized form for non-County agencies to use.

(b) Require monthly submission of tank logs – We agree. Fleet concurs that it does not have a complete record of tank logs from user agencies as required. This is a recordkeeping issue between FMD and the using Agency. This is not a fuel loss issue, as the user Agency acknowledges using the fuel. There are around fifty "pooldeck" numbers which dispense small quantities (5 gallons or less, generally) of fuel for use in lawnmowers, portable pumps, weed-eaters, etc. this is an idealized suggestion, as it will take more resources and cost to track and file account for each of these numerous small transactions than the volume of the fuel used. The tank wagons are fewer in number (five for Public Works plus one for the Landfill). These are used to transfer fuel from the pumps to off road landfill or mowing or construction equipment which cannot be brought to a fuel island to refuel. These tank wagon numbers are provided to the user agencies for their operational needs and they assume responsibility for the fuel once it has been dispensed into their vessel by their appointed staff. The administrative procedure does require the user agencies to submit copies of their logs to Fleet. But, ultimately, user agencies must be responsible for tracking that fuel internally and ensuring proper control through its eventual consumption."

Audits and Investigations' Comment: The notion that there is not the possibility of fuel loss due to misappropriation is not realistic, if there is no log or record detailing usage. The ultimate responsibility to monitor the fuel usage relating to these tank wagons and pool decks remains at the specific user agency. However, as the administrative procedure indicates, the FMD has a responsibility to retrieve fuel logs from user agencies to ensure accountability of fuel usage. Also please refer to prior Audits and Investigations' comments relating to this subject matter.

OCS Response: "(c) Maintain compliance test documentation – We agree. The new Petroleum Manager recently hired is thoroughly documenting and maintaining files on all tests and remedial actions completed.
(d) Update system for tracking testing compliance – We agree. The new Petroleum Manager has implemented an updated centralized tracking system for scheduled fuel site tests and inspections."

Audits and Investigations' Comment: We are pleased that FMD concurs with our audit finding. We hope that the modifications made by the FMD have addressed these particular concerns.

Audit Finding # 3 – Fuel System Administration and Monitoring

The FMD responsibilities to provide administration and monitoring of the fuel system with respect to the following areas needs to be improved:

- ➢ Fuel User PINs and related analysis;
- ➢ Analysis of fuel transactions;
- ➢ Administration of Fuel User and Vehicle Information;
- ➢ Monitoring of fuel transactions.

OCS Response: "The auditor concluded that there were transactions that they analyzed from the database which suggested potential abnormal fuel usage and the failure of operators to properly enter their vehicle mileage. The auditor noted that Fleet was not using transaction reports or exception reports to detect these potential abnormal transactions to identify and investigate. Fleet acknowledges a number of transactions where operators were able to get fuel without properly entering mileage.

While these are observations, they are not problems. As explained below: Every vehicle operator that uses a fuel pump—County or Commercial—has experienced using their credit card and activating the pump, only to have it cut off prematurely. Then, having to start the transaction all over again. County pumps are no different. If they disengage, the user must start the transaction again. This accounts for the majority of the zero fuel, zero mileage change, and back to back transactions."

Audits and Investigations' Comment: As mentioned in the finding, instances where no fuel was received during a fueling transaction were excluded from the finding results. The gist of the finding is that there are no controls in place at the FMD to determine whether these instances are indicative of legitimate fueling practices or possible misappropriation of fuel. Without having the proper controls in place to identify and investigate fuel transaction abnormalities it would be speculative to conclude that all of these occurrences are indicative of normal fueling practices.

OCS Response: "Secondly, some equipment does not have an odometer. So, the operator puts in the number "zero". The auditor failed to indicate that the operator also had to put in a PIN and an asset number. So although there was no mileage, the operator was identified by the other two identifiers, and the fuel was properly billed to the using Agency. Therefore, those transactions were, in fact, determined to be accurate upon review."

Audits and Investigations' Comment: As mentioned in the finding, instances indicative of legitimate uses of "zero" as an input for an odometer reading were excluded from the finding results. We did not mention that an operator has to input a PIN and asset number when attempting to fuel because the finding is only referencing the input of the odometer reading. Again, as mention earlier, the gist of the finding is that there are no controls in place at the FMD to ensure that these instances are indicative of legitimate fueling practices or possible misappropriation of fuel.

OCS Response: "The user profiles which were indicated as having "excessive" fuel usage are known to Fleet. These are crew leaders in the Department of Public Works, whose job is to refuel the transit bus fleet each day. This crew operation is under direct supervision and all fueling transactions are recorded on camera."

Audits and Investigations' Comment: There were two user profiles identified in the audit finding as having fuel usage that was excessive in nature. Only one of the two profiles was linked to an employee in the Department of Public Works, the other profile was linked to an employee in the Police Department. As mentioned in the finding, the usage for both of these profiles could be justified based upon the related job duties and responsibilities for these positions. However, further analysis would suggest that these profiles may have been utilized by several individuals due to the frequency and consistency associated with the usage.

OCS Response: "There are instances, in the field, when a fire truck or ambulance pulls to a station and cannot get fuel. They guess at the odometer reading. The next day, another driver may refuel, and using the actual reading, requests an odometer reset, which could be lower than the night before. This is an anomaly that occurs in the "real world" of public safety. We disagree with the criticality of this finding."

Audits and Investigations' Comment: The point of having policies and procedures in place is to promote uniformity and consistency in operations. We understand that in many instances public safety vehicles need unimpeded access to fuel due to the nature of their operations. However, without any monitoring controls in place it is impossible to assume that all of these instances are indicative of vehicle odometer resets for public safety vehicles. In fact, our audit results identified instances indicative of vehicle odometer resets occurring for non-public safety vehicles.

OCS Response: "Fleet concurs that effective dissemination of exceptions reports would be a valuable tool in identifying anomalies to be investigated. However, the current Fuel Management System does not have that capability."

Audits and Investigations' Comment: The current system has exception reporting capabilities that need to be investigated further. Furthermore, the capability to provide such exception reporting should be a major emphasis in the decision making process with the anticipated purchase of an updated system. Until this purchase is made, techniques such as downloading fuel transactions in a database to facilitate an analysis of transactions can be utilized by FMD personnel to develop exception reports.

OCS Response: "Again the auditor noted a time lag between "deletion" of a user from the system and their employment separation date. This is not a finding; it is a business process and is not an accurate measure due to the difference between "disabling" an ID and "deleting" it. There could be an instance in which an old PIN was used after separation due to the acknowledged fact that PINs of old employees prior to 2008 could have been known by another employee, and has not yet been purged. This is a labor intensive process and is partially dependent upon using Agencies providing updated user information. Every Agency has been requested to update their employment rosters."

Audits and Investigations' Comment: During the audit an employee's separation date was compared to the date they were deleted and not the date they were disabled in the fuel system because there wasn't any way of identifying the date an employee was disabled from the fuel system. From our understanding, disabling a user would prevent the usage of that individual's PIN within the fuel system. So to mention that an individual's PIN can be utilized after their separation date when their PIN is supposed to be disabled would suggest that FMD's current policies and procedures aren't being followed. Although it is the primary responsibility of every agency to alert the FMD of situations where an employee's fuel access needs to be eliminated, the FMD has secondary controls in place to identify and disable PINs associated with employees that have separated from employment with the County. If practiced, these procedures should provide some assurance that these employees or anyone that may have access to their PIN will not have the ability to access fuel upon their separation from employment with the County. However, as identified in the audit report, there was evidence that this procedure was not being followed.

OCS Response: "(a) Document periodic reviews of transaction reports, distribute reports, and document deletion of vehicles and employees – We agree. As part of a system upgrade funded in FY'14, we intend to develop user exception reports which can be scheduled to run routine reports and automatically e-mail them to designated departmental contacts. This will also produce an audit trail. Moreover, a "business rule" feature will allow us to set down parameters for fuel usage by department or vehicle type that will generate e-mail alerts when those parameters are breached. With this upgrade, just authorized, this could include items contemplated like afterhours fueling, and multiple fuelings. We will adopt this as part of a system upgrade.

(b) Update controls surrounding input of mileage entries –Given the capability of the current system, we believe that the settings to validate odometers are as strong as they can be given the current technology. While exceptions reporting would more quickly identify the rare instance where odometer validation is being defeated by the input of erroneous data, the solution is budgetary. We cannot comply with this recommendation due to budgetary limitations. We are aware that ultimately, the best solution is a "non –intervention" fueling system where automated control terminals, mileage sensors, data acquisition hardware, and WiFi, provides the most up to date and secure option. That is a longer term direction we will pursue."

Audits and Investigations' Comment: As mentioned earlier, determining whether to implement or forego implementation of an internal control recommendation is a management decision. We as auditors only try to provide recommendations that will strengthen internal controls that we identify as being weak. Hopefully with the anticipated system upgrades, controls can be strengthened around identifying instances where controls may have been circumvented so that further investigation techniques can be utilized.

Audit Finding # 4 – Fuel Site Concerns

The following fuel site concerns were identified, potentially limiting their ability to be in good working order:

> Lack of Fuel Site Inspections and Bi-monthly manual dip stick comparisons;
> Fuel Site understaffing potential;
> Silver Hill Fuel Site Reconciliation Concerns;
> D'Arcy Road Fuel Site Camera Concerns.

OCS Response: "Fleet concurs that the bi-monthly dipstick reconciliations were not conducted. This was due to staffing reductions, and a lack of staff needed to travel the County to perform them. Given the lack of resources, computerized daily reconciliations were used to track accountability and these reconciliations successfully detected on-site issues including bad pulsers, pumps out of calibration, etc. The updated COMAR requirement that we perform monthly inspections lagged initially, due to inadequate staffing. However, we are now up, running and in compliance using contractors with no issues. The contractors validate the tank level sensor reading with monthly dipstick checks and are recording this information on inspection sheets being maintained at Fleet. Note that Fleet is only required to maintain at least one Class A / B Fuel site operator by law. We, in fact, now have four trained operators on staff. We initially trained and oriented additional Fleet personnel as Class C operators but have since determined that this is not a practical application of County resources and we have since contracted for the monthly inspections. Moreover, we believes that the chance of multiple fuel site emergencies occurring simultaneously that would

require more than four respondents at any given time is so remote a contingency that does not need to be planned for."

Audits and Investigations' Comment: We are pleased to see that the FMD is making progress in addressing the issues brought to light during this audit. We trust that these processes are supported by adequate documentation to support their implementation.

OCS Response: "The auditor made a point that one of our sites, Silver Hill, had a reconciliation issue which spanned a couple of years. This is in fact true. This was not an audit finding. It was told to the auditor as a point of demonstration to indicate the exhaustive research we undertake to insure compliance. This issue was properly reported MDE in keeping with MDE protocol. Fleet and the MDE inspectors remained in contact over this site and, ultimately, solved the issue through the efforts of a contractor. The auditor noted that Fleet had not obtained any documentation from MDE that the site was returned to compliance but the fact is MDE never placed the site out of service and therefore no notice was required since it was never taken out of service. If a site had experienced a significant operational compliance failure that was not being adequately addressed, MDE would have "red-tagged" the site and banned product deliveries. The site would then have to resolve all required compliance issues before the ban was lifted and the site was restored to operation. This never occurred at Silver Hill or at any County site. In the conversation, it was pointed out that the cause of the reconciliation issue was a slight tank (earth) settling, that took three different contractors to identify and resolve."

Audits and Investigations' Comment: Any information received during the audit, whether received voluntary or involuntary through audit techniques, can be developed into an audit finding. The audit finding referenced centers around the retention of correspondence documentation between the FMD and MDE concerning reportable conditions involving the County's fuel sites. Another issue brought to light in this particular finding was the timing of when MDE was initially made aware of the issue at the Silver Hill fuel site and the follow-up direction that was to be received from MDE regarding their acceptance of the remedies sought by the FMD. Although according to the FMD, this site did not have any "significant compliance issues" that may have required MDE to "red-tag" the site and any fuel deliveries. The retention of correspondence is essential to documenting that proper protocol was adhered to during the process. Furthermore, if this issue had elevated to a significant issue FMD would then have the adequate documentation to show that proper protocol was adhered to throughout the process.

OCS Response: "Additionally, the auditor noted that the D'Arcy Road security cameras were off line due to a fire in the server system at the time of the hurricane that caused server failures and required the reconfiguration of a number of servers

and a remapping of the camera locations. We agree, and all parties worked to bring this camera back on line. This was not a fuel management issue."

Audits and Investigations' Comment: In our finding we did not identify the reason for the length of time it took to bring the cameras at this particular site back on-line because it could not be determined. We simply highlighted that it took longer than normal (5 months) to fix an issue that seems as if it could have been fixed sooner, based upon the time it took to fix the issue once it was identified during the audit. However, we do believe that the FMD could have been more diligent in following through with the Office of Information Technology in rectifying this issue.

OCS Response: Recommendations: "(a) Expand Class C operators to cover all sites – We disagree. Fleet does not concur that this needs to be done as we have outsourced the monthly inspections and they are being completed in a timely fashion. The four certified A/B operators that we have can provide sufficient coverage for any foreseeable emergencies. In the event that additional resources are needed, we will use contractors."

Audits and Investigations' Comment: Our recommendation was given based upon the initial plan by the FMD to conduct monthly fuel site inspections utilizing existing FMD staff. The rationale behind this recommendation was that instead of having nine (9) Class C operators certified to respond to only one fuel site, that it would be more prudent to strategically train them to be able to respond to different sites in case of multiple emergencies. If the FMD plans to address this issue utilizing contracted resources then that is their decision. However, we still feel that having the existing Class C operators certified to respond to different fuel sites would serve as a good contingency plan.

OCS Response: "(b) Ensure and document monthly inspections – We agree. This is already being accomplished by a contractor who forwards the reports to fleet which are then centrally filed. The inspection includes a dipstick reading to validate the tank level sensors.

(c) Adhere to MDE protocol regarding reportable events to include retention of documents – We agree. Fleet already follows MDE protocol for the conduct of testing and retention of test results.

(d) Expedite repair of any malfunction at fuel sites – We agree. This is already our process. Fleet uses a variety of internal support agencies as well as contractors to perform repairs on fuel storage and delivery equipment. Malfunctions are reported as soon as they are detected and follow up ensures that problems are corrected in an effective, cost-efficient and timely process."

Audits and Investigations' Comment: We are pleased to see that the FMD is making progress in addressing the issues brought to light during this audit. We

trust that these processes are supported by adequate documentation to support their implementation.

Finding # 5 – Lack of Documented Policies and Procedures for establishing Administrative Access to the fuel system

The FMD lacks documented procedures for obtaining administrative access to the fuel system. Currently, gaining administrative access to the fuel system is controlled by the FMD's Logistics Manager without any subsequent supervisory approval. This access is given to administrative users within the FMD based upon the Logistics Manager's personal knowledge of each administrative user's job function.

OCS Response: "The auditor noted that Fleet lacked documentation of procedures regarding the granting of access to the fuel system for various levels of system administration. Fleet concurs. We have historically assigned access based on individual job assignments and customer service needs. It has been done on an ad-hoc basis to ensure we could meet all contingencies for customer service to include after- hours emergencies.
Recommendations: (a) Develop internal policies and procedures for granting administrative access – We agree. Fleet concurs that procedures could be developed outlining permission levels and establishing a process for setting up users. This will be implemented as the software upgrade is completed."

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. We look forward to the timely implementation of the necessary policies and procedures to address this particular concern.

Finding # 6 – Fuel System Control Limitations

The following concerns were identified with respect to the current version of the fuel system that is being utilized by the FMD:

➤ Lack of Audit Trail capabilities;
➤ Fuel System Administrators have access to fuel User's PINs.

OCS Response: "The auditor noted that (as previously stipulated) that the current software—*Ward 3.5* lacks an internal audit trail. Fleet concurs that this is a fact. It was also noted that fuel users PINs do not meet established standards for passwords or PINs and Fleet also concurs that the current security level provided with the keypad data entry for individual users could be enhanced by a system upgrade. However, this is a recommendation against the capability of the existing software."

Audits and Investigations' Comment: As stated in recommendation 6(d), we feel that the FMD should explore the feasibility of implementing an updated

version of the current system or possibly a new system that has the capability of securing user passwords and producing audit trail reports.

OCS Response: "The audit pointed out that of the 18 system users; one was a former FMD employee that appeared to still be currently active. We agree that while this employee—the previous Fuel Manager of 30 years—was still in the system, he had been deleted from the County Network. The only way to get into the fuel system is through the network. Also note that this employee actually retired during the audit."

Audits and Investigations' Comment: The fuel system is a web-accessible system. As a result, the system can be accessed by anyone with internet access, not County network access as implied. Once accessed, a user would then have to enter his/her user name and password to gain entry to the system. Also, the employee in question actually separated from employment with the County on 10/14/2011, which was prior to the commencement of this audit.

OCS Response: Recommendations: "(a) Database access should be granted to limited number of staff –. Given the design of the current product, we cannot limit the access to one person. As we roll out a software upgrade, we will include more robust exception reporting, capability and more narrowly define queries and ability to establish business rules. Our objective will be to provide the analytical tools needed to identify potential problems without accessing the database itself."

Audits and Investigations' Comment: As stated in our recommendation, we didn't suggest that access to the system should be limited to one individual. However, we do feel that the ability to change or modify database information should be greatly limited to a select few, especially with the current system's inability to produce an audit trail report to identify who makes these changes. Hopefully, with the impending system upgrade and structural internal control changes the risks associated with this issue can be controlled and/or reduced to an acceptable level.

OCS Response: "(b) Develop logging system for changes made to transaction data – We agree. When we install the upgrade version of our system, we have already defined this as one of the features. We have been assured by the manufacturer that internal audit features of *Ward 4* will track any changes in transaction data."

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. We look forward to the timely implementation of a fuel system upgrade that will address this particular concern.

OCS Response: "(c) Explore capabilities of system to mask user PINs-. We agree that the PIN system is not the ideal for ensuring a high level of security but this was the method that was chosen when the product was purchased over ten years

ago. The manufacturer has no intention of making any modifications to our *Ward 3.5version of the software. We believe that* fuel system security and integrity will be best served by moving towards non-intervention fueling systems and proximity card user identification. This will eliminate PIN usage altogether."

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. The issue of having fuel user PINs accessible to administrative fuel users is a fundamental fuel system flaw that needs immediate attention until the fuel system can be fully upgraded to a non-intervention system. The immediate action could take the form of limiting administrative access to the fuel system along with supervisory review of fuel usage and administrative user access.

OCS Response: "(d) Explore updating or replacing system – We agree. This is a project already in the works. A software upgrade is currently under contract with installation pending server set up. Hardware upgrades are planned over next two fiscal years."

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. We look forward to the timely implementation of a fuel system upgrade that will address this particular concern.

Finding # 7 – Lack of Consistent Ending Fuel Inventory Practices

A review of fuel ending inventory records revealed that the FMD did not consistently report ending fuel inventory levels. In some instances, the FMD utilized actual manual dipstick readings to report ending inventory levels for fuel sites, and in other instances ending inventory levels were reported utilizing the fuel system reporting capabilities. The FMD also did not accurately report ending fuel inventory levels for all fuel sites. Additionally, the date stated on the ending inventory recording forms indicated that the fuel level readings were not conducted on the last day of the fiscal year as required by Administrative Procedures. Furthermore, the Petroleum Products Physical Inventory Instructions, referred to in Administrative Procedure 622, which set the guidelines for conducting ending inventory practices, are non-existent.

OCS Response: "The auditor noted that year end fuel inventory procedures were not consistently followed for fiscal year 2012, indicating that the inventory was not conducted on the last day of the year. The FY 2012 yearend inventory was conducted on Friday June 29[th,] "the last working day" of the year, not the last calendar day. The actual last day was a Saturday. The Petroleum Manager had just retired, and Logistics Manager was struck by another car while driving to work on Monday July 2nd 2012 requiring several months of convalescence. Therefore, she was unable to complete the yearend inventory. Other staff not previously trained   Because of this, backup electronic readings had to be substituted for tank dips. Additionally, the auditor noted that the inventory was

not conducted on the last day of the fiscal year as mandated by the administrative procedure; however, the procedure requires that the inventory be conducted on the last *working day* of the year, which was the 29th. Additionally, it was indicated that written guidelines for conducting the inventory were non-existent. Written guidelines were provided to all staff and a copy those instructions were made available to the auditor on July 29, 2013 as requested.

The record should reflect that this was an anomaly caused by the concurrent retirement of the petroleum manager and an unfortunate traffic accident of the Unit Manager."

Audits and Investigations' Comment: Administrative procedure 622 does state that the year-end fuel inventory is to be conducted on the "last working day of the year" and it is obvious the FMD considers working days as Monday through Friday. However, the term working day can be interpreted to incorporate days in which the fuel terminals are operational and individuals that are "working" have access to these terminals. Furthermore, from an accuracy standpoint it would be prudent to conduct the year end fuel inventory on the last day of the fiscal year since fuel can be accessed 24 hours a day seven days a week.

With respect to the inconsistency of utilizing manual dip stick reading versus electronic readings to report fuel levels at each fuel site, there seems to be a lack of resource allocation in light of the unavailability of key staff members. We feel that with proper planning that other staff members could have been utilized to conduct the manual dip readings for all the fuel sites on the last day of the fiscal year.

Finally, the written guidelines for conducting year-end fuel inventory were provided to us on July 29, 2013, upon request. However these guidelines, according to FMD personnel, were not formal and had not been incorporated into a FMD policy or procedure. Furthermore, it was unclear as to when these guidelines were drafted and if they were distributed to the FMD staff.

OCS Response: Recommendations: "(a) Develop documented ending inventory instructions for annual inventory – While Fleet acknowledges that the fuel inventory procedure should be updated, it does exist. Moreover, we believe that yearend inventory is an accounting function and that Finance should provide the guidelines for how they wish the inventory to be conducted and for calculating the value. For example, Finance should be the organization that determines the methodology for determining the proper valuation of the inventory on hand in the ground. We do agree that better instructions for the gathering of the data need to be developed to ensure consistent and accurate data is provided to Finance but it should be Finance that determines exactly what they require for this financial activity.

However, as a result of the loss of the Petroleum Manager in March 2012, and the traffic accident of the Manager in July 2012, we had already expanded the numbers of trained staff who are familiar with the inventory process."

Audits and Investigations' Comment: As stated earlier, we were not provided with detailed fuel inventory procedures as referred to in Administrative Procedure 622. We feel the task of valuing ending fuel inventory should be a joint effort of the FMD and the Office of Finance. The task of identifying fuel levels at each fuel site on the last day of the fiscal year should be the job of the FMD. Determining the value of fuel for each fuel site, and ultimately for the County as a whole, should be a product of the total number of gallons of fuel multiplied by the price of a gallon of fuel at that time. All of this information is available to the FMD and thus should be reported to the Office of Finance for reporting purposes.

We are pleased that FMD has taken the proper steps to address any future situations where key personnel would be unavailable to conduct year-end fuel inventory at each site. However, we feel that these steps should have been proactive not reactive in nature.

Finding # 8 – Lack of inventory reconciliation and verification of on-hand fuel

The FMD does not perform a complete month-end reconciliation of fuel inventory levels at each fuel site. On a daily basis, the Fleet Manager relies upon a report developed exclusively from the VederRoot automated system to complete a daily reconciliation of each fuel tank's inventory levels. Furthermore, the FMD does not appear to verify vendor invoice information for accuracy before payment is issued.

OCS Response: "Auditors noted that the daily reconciliation performed relied *exclusively* on input from the VederRoot automated system and, thus, was not an independent reconciliation. However, we must point out that the daily reconciliation compares the mathematical calculation over a twenty-four hour period of recorded fuel transactions provided by the fuel pump, electronic pulser and EJ Ward system versus the measured in tank level of the VederRoot system. These are two completely separate inputs, and is time tested to be accurate. It is agreed that an additional independent monthly dipstick check would provide a "third" verification and validation of the tank level sensors and we will incorporate this as part of our Class C monthly inspection."

Audits and Investigations' Comment: According to Administrative Procedure 622, FMD responsibilities include reconciliations between actual fuel tank dip readings and automated reports generated by the fuel system. This procedure was developed by the FMD to serve as an operation guideline when completing month-end fuel reconciliations at each fuel site. If the FMD feels as though these procedures are no longer needed then efforts should be made to modify the existing procedures. However, we feel that incorporation of manual dip stick comparisons in the reconciliation process would provide a necessary check to ensure the system driven reports are accurate.

OCS Response: "The auditors noted that invoices were not being reconciled with the VederRoot fuel delivery records <u>and</u> the bills of lading prior to authorization of payment. Bills of lading are dropped at the various fuel pumps. There are more than 20 sites established throughout the County. It is not practicable nor possible without a huge staff expansion to meet every fuel delivery. However, we maintain the reconciliation of the VederRoot record with the invoice is sufficient to ensure accurate billing and that further investigation of the details included on the bill of lading is needed only in exceptions where there appears to be a discrepancy. We do and will continue to leverage technology where it makes sense in lieu of staff and it has proven to be a success. We have successfully resolved all billing issues following this procedure. It should be noted that there have been no instances of payments being authorized for fuel that was not received or for incorrect charges being made."

Audits and Investigations' Comment: According to various Administrative Procedures, FMD responsibilities include a reconciliation of fuel invoices to delivery receipts (i.e., bills of lading) to ensure the accuracy of fuel deliveries. Because of the various fuel sites, the method of delivery of the bills of lading, and the limit number of staff, the FMD feels as though it isn't feasible to conduct this procedure. If that is the case, the FMD should make efforts to modify its existing procedures. However, we feel that the incorporation of a comparison of fuel invoices to actual fuel delivery receipts is a good practice that should be followed even if it's on a periodic basis. The FMD should look into alternative methods of delivery of these bills of lading to facilitate this comparison.

OCS Response: Recommendations: "(a) Designate staff member to collect and maintain all delivery tickets –. While an ideal situation might include collecting all bills of lading, attempting to staff up to meet 120± deliveries each month is neither practical nor necessary to retrieve bills of lading when we have the ability to accurately verifying fuel quantities and pricing of deliveries with the electronic records. We do recover the bills of lading from sites as Fleet staff are on site for other reasons. On the rare occasions that we need to consult the bills of lading where we do not have a physical copy, we are able to obtain duplicate copies from the vendor who is required to maintain them by law."

Audits and Investigations' Comment: Please refer to the prior Audits and Investigations' comment related to this subject matter.

OCS Response: "(b) Incorporate independent source of verification of fuel tank levels – We agree and contend that the current process employed through a monthly VederRoot / dipstick reconciliation being performed by a contractor while completing the class C monthly inspection meets this requirement."

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. We look forward to the timely implementation of an

independent source of verification for fuel site tank levels that will address this particular concern.

OCS Response: "(c) Verify delivery quantities on invoices prior to payment – We agree. This is currently being done through comparing the invoices and verifying deliveries VederRoot generated tank receipts and fuel contract pricing. Bills of lading are consulted in the event of a conflict between the VederRoot and the invoice."

Audits and Investigations' Comment: Please refer to the prior Audits and Investigations' comment related to this subject matter.

Finding # 9 – Untimely and inaccurate fuel user / seller tax returns

A review of State of Maryland Special Fuel User/Seller Tax Returns (the "Return"), completed by the FMD in fiscal year 2012, revealed three delinquent returns that resulted in the assessment of penalty and interest payments. In addition, due to a spreadsheet error, the fuel inventory levels reported on all of the fiscal year 2012 returns contained reporting inaccuracies. However, these reporting inaccuracies were for informational purposes and did not affect the · calculation of the tax amount.

OCS Response: "Auditors noted that on three separate occasions the tax returns were delinquent and fines and penalties were assessed. This is correct. However, the audit does not indicate that business process that caused this issue has already been modified, and a new procedure was implemented at the beginning of FY'13—over one year ago. For explanation, the previous process used in FY'12 required that compilation of the returns could not be completed until the month's fuel deliveries and transactions were processed through a "crosswalk" computer application and the manual input processes by data clerks. "Y" reports were generated and sent to Fleet for review, corrections were made and posted and final reports were distributed. This process was not usually completed until after the twentieth of each month. This left the balance of the month for Fleet to prepare all of the tax schedules, research and correct any problems, prepare the return and check request for Finance, and hand carry a package to the Finance Office. Finance in turn, had to process the return, get the request into a scheduled check run and return the check (usually picked up in person) to Fleet so it could be postmarked by the last working day of the month. Failure to meet the deadline for submission of the return resulted in fines and penalties accruing to the Fleet Management Division *regardless of the actual cause of the delay that created the delinquency*. The delays could have occurred in the OIT keypunch process, or in data review process or in Finance. Nonetheless, this entire process has been updated and streamlined by the elimination of the "crosswalk "process at the outset of FY2013."

Audits and Investigations' Comment: We are pleased that FMD concurs with our audit finding. We hope that the modifications made by the FMD have addressed this particular concern.

OCS Response: "Fleet concurs that there was an error in the on hand inventory in the return but that discrepancy has long sense been identified and corrected."

Audits and Investigations' Comment: We are pleased that FMD concurs with our audit finding. We hope that the FMD has made the necessary adjustments to correct the reporting error. However, it must be noted that this error was identified and apparently corrected as a result of our audit finding.

OCS Response: "Fleet disagrees that there was a lack of supervisory review as most of the returns were prepared by either the Logistics Manager or the Fleet Division Manager himself, and all were signed off on by the manager that prepared the report."

Audits and Investigations' Comment: Having the returns signed off by the preparer of the returns does not constitute supervisory review. These returns would have to be reviewed by someone other than the preparer that is a level above the preparer's position.

OCS Response: Recommendations: "(a) Develop detailed processes and procedures to ensure timely submission of fuel tax returns – We agree that the FY'12 process needed to be updated. We implemented multiple improvements to the process since FY'12 that has led to a more timely completion of the return through the elimination of the "crosswalk" but that does not necessarily ensure that the check arrives at the Comptroller on time. Fleet Management maintains that the preparation and filing of Special Fuel Use Tax reports *should not be the responsibility of Fleet.* This is an accounting function that should be within the realm of Finance. We are aware of no other municipal fleet in the region that we consulted that has responsibility for preparing tax returns with the exception of Montgomery County who has a CPA assigned to the fleet staff whose job is to perform this task and other financial functions. In every other case, the fleet provides the data to Finance who processes and files the return. Currently, Finance does complete the special fuel use returns for off road unleaded fuel. This is the exact same process that Fleet employs for diesel fuel with two notable exceptions; the unleaded is not tax-deferred so there is not a looming deadline with attendant fines and penalties and the off-road unleaded usage is only a fraction of the diesel usage. Our position is that it should not be our responsibility to track and report tax exempt fuel on behalf of other agencies, especially when all liability (i.e. fines and penalties) fall within Fleet *regardless of the cause.*"

Audits and Investigations' Comment: We are pleased that FMD concurs with our recommendation. However, determining the duties and level of input that each office must maintain in the preparation of these tax returns is a management decision.

PRINCE GEORGE'S COUNTY GOVERNMENT
Office of Central Services

Rushern L. Baker, III
County Executive

Roland L. Jones
Acting Director

Floyd E. Holt
Deputy Director

MEMORANDUM

TO: David H. Van Dyke
County Auditor

FROM: Roland L. Jones, Acting Director
Office of Central Services

DATE: May 6, 2014

RE: Response to Notification of Findings and Recommendations—Fuel Inventory System

The Office of Central Services (OCS) has reviewed the findings, conclusions and recommendations of the Fleet Management Division Fuel Inventory System Audit dated December 2013. We are in general agreement with many of these findings; however, there are several that require clarifications or explanations. For example, **Finding One** indicates that the PIN system does not meet recognized criteria as a secure PIN or password. The PIN is only one-third of the validation process. **Finding Two** indicates that there is a lack of documentation justifying deletions from the system. While not ideal, we have a system, and will work to improve the process. **Finding Four** indicates that we need to expand Class C operators to cover all sites. We do not have staff to cover all 20 sites; we have four trained operators who can adequately cover five sites each. **Finding Seven** indicates that there are no documented ending inventory instructions for annual inventory. We believed all along that this is an Accounting function, not a Fleet function. We have now successfully resolved this issue with the Department of Finance. **Finding Eight** suggests that we designate a staff member to collect and maintain all delivery tickets. This is not possible with the staff available to visit 20 sites with over 120 deliveries per month, particularly when we can verify using two automated systems. Nevertheless, we support the overall audit result. Every effort will be made or is being made to either implement the recommendations or otherwise put in place corrective actions to insure appropriate results.

We are pleased to provide the following information and enclosed response, on behalf of the Office of Central Services, Fleet Management Division ("FMD") to the draft findings and recommendations. The attachment provides a detailed, point-by-point response to each of the proposed findings in the draft report. We appreciate the issues the Audit Staff have identified, which will assist us in making improvements in specific fuel management practices.

"One Mission – One Team"

Response to Notification of Findings and Recommendations—Fuel Inventory System
Page 2 of 2
May 6, 2014

Additionally, significant regulatory changes occurred during the course of the audit resulting primarily from new regulations, technology updates and the realignment of the billing process. The audit also cites a need to revisit administrative and fleet procedures related to fuel inventories and accountability and to update processes already being implemented or planned. During this audit period, FMD oversaw in excess of one million individual fuel transactions, 6,500 fuel deliveries, over $60,000,000 worth of fuel billed to agencies and end users, and completed over $350,000 worth of fuel site repairs and upgrades and over one hundred MDE compliance inspections, with all fuel accounted for within the 98.9% to 99.9% accountability range, well within the acknowledged industry 2% standard and volumetric variances, based on temperature changes, pumps out of calibration, and mechanical failures.

The report identified nine Notifications of Findings and Recommendations (NFRs). Attached is our discussion and response to each.

Attachment(s)

cc: Floyd E. Holt, Deputy Director, Office of Central Services
        Rick Hilmer, Fleet Administrator, Office of Central Services

FEH:eab

OFFICE OF CENTRAL SERVICES MANAGEMENT RESPONSE AND ACTION PLAN
Fuel Inventory System Audit
April 2014

Finding # 1 – Internal Control Design

Auditors noted that there were no standardized forms for entering requests for user PINs or for non-County owned vehicles. FMD concurs that there was no standardized application form for requesting PINs. However, there is file documentation for every PIN assignment in the form of an e-mail, memo or note to file.

Auditors noted that there is no procedure in place for documenting routine odometer resets. Fleet concurs, but as a practical matter, the administrative burden to log these outweighs the benefit. Odometers are not set back to allow the drawing of more fuel. They are occasionally adjusted slightly (5 out of 1,000) because a user (primarily Fire Apparatus operator) transposes the last two digits. For example, someone could transpose a number ending with 27 with 72. While this is well within range, the next shift operator might try to fill up and find that the actual mileage ends in 71. That operator would need a reset to get fuel. This occurs because Fire Policy requires refueling after each response. Otherwise, odometers are only set forward to recognize that the user purchased fuel on their own outside the system. This is a routine task that is necessary when vehicles are set on "Strictly Validate" the odometer to the vehicle and mileage verification.

The auditors also noted that there is no established procedure or documentation for when terminals are in the "bypass" mode for repairs, testing or calibration, and that the fuel user PIN system does not meet any recognized criteria as a secure PIN or password. We disagree. PINs are automatically created by the software. They were developed according to ISO 9564. ISO 9564 is an international standard for personal identification number (PIN) management, and lengths from 4 to 6 are perfectly standard except for perhaps the financial industry. We did discover a few older PINs that were shorter than 4 digits. We have removed them from the system.

Recommendations:

(a) PIN request / issuance process – We Agree. A standardized form and filing system has been implemented for the issuance of fuel PINs.

(b) Non-County vehicle number assignment process – We Agree. A standard form will be developed and implemented.

(c) Lack of procedures for vehicle resets –. As a practical matter, vehicle odometer resets are routinely required to allow fuel transactions for a variety of reasons. These resets can occur at any time on any day and from any location in order to ensure that County staffs on duty have the ability to refuel. It is not be practical to attempt to maintain a central logbook to document these resets, with no functional or financial benefit. In the future, updates of the fuel management system will allow positive, non-

intervention control of fuel dispensing using wireless technology. Ultimately, odometer validation as fuel security will be phased out in favor of an on-board device which authorizes fuel.

(d) Lack of Procedures for "Bypass Mode"— While we agree that there is not a written procedure for documenting instances of "bypass mode, Fleet does currently review all bypass transactions for each month when the monthly reports are compiled. It would not be practical to try to log the events as they occur since they are initiated by on site repair contractors and are short in duration. We will, however, include a requirement in our software upgrade a feature that generates alerts and / or reports that will notify the Petroleum Manager whenever a pump has been placed in bypass mode.

(e) Fuel user access controls – We acknowledge this finding but do not concur with the recommendation concerning access to the fuel pump. First, employing a number greater than four has a negative impact on remembrance and usability. Second, our plan is to phase out PINs altogether and use an integrated solution concurrent with the new ERP System that uses the employee identification and ETS time card.

Finding # 2 – Lack of Supporting Documentation

Auditors noted what they considered to be a lack of supporting documentation for the following requests:

- Fuel user additions and deletions
- Vehicle additions and deletions
- Pool deck and tank wagon logs
- Emergency code usage documentation
- Fuel site compliance documentation

Fleet concurs that it does not have a perfect system that documents additions of employees to the system. However, we believe that there is adequate documentation justifying deletions from the system that was not credited due to an inaccurate interpretation of the system. The prior audit recommended that a procedure be set up where OHRM provides Fleet with a monthly termination list to ensure employee access to fuel is terminated as needed since they noted that end user agencies were not adequately informing Fleet about terminations. Fleet and OHRM instituted a monthly separation report that has been utilized for the past five years. However, Fleet was required to manually purge the system by removing users who may have been terminated without Fleet's knowledge prior to the implementation of this new process. All agencies have updated their employee list with the exception of the Police Department. Additionally, when access is no longer authorized, Fleet *disables* the PIN, thus denying access. However, the employee file may still be needed for analysis, trends and reporting purposes so disabled PINs are not immediately removed. They may be present in the system for three years. The database query that was run by the auditor only noted the date of the ultimate deletion while not recognizing that there is no material relationship between the date of a deletion and the date of employee termination assuming the employee PIN was actually disabled at the proper time. There is no indication as to whether any employee reported as terminated to Fleet was not *disabled* in a timely fashion. Fleet believes that adequate records were provided justifying the addition and deletion of vehicles from the Fleet. The Inventory Manager maintains he produced the requested records for all

County-owned vehicles and documentation of some type for all non-County owned vehicles. Fleet does acknowledge and agree that some agencies have not provided the tank wagon logs as required and we have already followed through with those agencies and have taken appropriate action. Specifically, the Landfill submits their logs for the refueling tanker that refuels equipment on a regular basis. The Department of Public Works and Transportation is generally slack in submitting logs for their tank wagons used to fuel mowing and construction equipment stationed out in the field. We have followed through with this Agency, and they have committed to better compliance in the past. DPW&T has consistently insisted they need these pieces of equipment to support their highway maintenance operations and have stated that they will be responsible for and pay for all fuel used by the tanker. However, Fleet dropped these tanks from the off road accounting numbers since we do not have the backup documentation to justify tax exemption. Fleet does not concur with the finding regarding the use of emergency codes. While codes have been issued to all public safety agencies, only the Fire Department uses theirs and Fleet provided the auditor with e-mail records documenting all reported uses of the bypass code. Fleet concurs that the filing of compliance tests was incomplete, but we maintain ALL tests were completed on time and all discrepancies were addressed to the satisfaction of MDE. We regret that MDE did not talk to the Auditors.

Recommendations:

(a) Maintain documentation to support the addition and deletion of information to/from the system – this is currently being done. We maintain that we do maintain a centralized file of all user additions and deletions as previously recommended. Fleet currently maintains centralized files and has records for the addition and deletion of vehicles from the system. We will implement the suggestion to add a standardized form for non-County agencies to use.

(b) Require monthly submission of tank logs – We agree. Fleet concurs that it does not have a complete record of tank logs from user agencies as required. This is a recordkeeping issue between FMD and the using Agency. This is not a fuel loss issue, as the user Agency acknowledges using the fuel. There are around fifty "pooldeck" numbers which dispense small quantities (5 gallons or less, generally) of fuel for use in lawnmowers, portable pumps, weed-eaters, etc. this is an idealized suggestion, as it will take more resources and cost to track and file account for each of these numerous small transactions than the volume of the fuel used. The tank wagons are fewer in number (five for Public Works plus one for the Landfill). These are used to transfer fuel from the pumps to off road landfill or mowing or construction equipment which cannot be brought to a fuel island to refuel. These tank wagon numbers are provided to the user agencies for their operational needs and they assume responsibility for the fuel once it has been dispensed into their vessel by their appointed staff. The administrative procedure does require the user agencies to submit copies of their logs to Fleet. But, ultimately, user agencies must be responsible for tracking that fuel internally and ensuring proper control through its eventual consumption.

(c) Maintain compliance test documentation – We agree. The new Petroleum Manager recently hired is thoroughly documenting and maintaining files on all tests and remedial actions completed.

(d) Update system for tracking testing compliance – We agree. The new Petroleum Manager has implemented an updated centralized tracking system for scheduled fuel site tests and inspections.

Finding # 3 – Fuel System Administration and Monitoring

The auditor concluded that there were transactions that they analyzed from the database which suggested potential abnormal fuel usage and the failure of operators to properly enter their vehicle mileage. The auditor noted that Fleet was not using transaction reports or exception reports to detect these potential abnormal transactions to identify and investigate. Fleet acknowledges a number of transactions where operators were able to get fuel without properly entering mileage.

While these are observations, they are not problems. As explained below:

- Every vehicle operator that uses a fuel pump—County or Commercial—has experienced using their credit card and activating the pump, only to have it cut off prematurely. Then, having to start the transaction all over again. County pumps are no different. If they disengage, the user must start the transaction again. This accounts for the majority of the zero fuel, zero mileage change, and back to back transactions.
- Secondly, some equipment does not have an odometer. So, the operator puts in the number "zero". The auditor failed to indicate that the operator also had to put in a PIN and an asset number. So although there was no mileage, the operator was identified by the other two identifiers, and the fuel was properly billed to the using Agency. Therefore, those transactions were, in fact, determined to be accurate upon review.
- The user profiles which were indicated as having "excessive" fuel usage are known to Fleet. These are crew leaders in the Department of Public Works, whose job is to refuel the transit bus fleet each day. This crew operation is under direct supervision and all fueling transactions are recorded on camera.
- There are instances, in the field, when a fire truck or ambulance pulls to a station and cannot get fuel. They guess at the odometer reading. The next day, another driver may refuel, and using the actual reading, requests an odometer reset, which could be lower than the night before. This is an anomaly that occurs in the "real world" of public safety. We disagree with the criticality of this finding.
- Fleet concurs that effective dissemination of exceptions reports would be a valuable tool in identifying anomalies to be investigated. However, the current Fuel Management System does not have that capability.
- Again the auditor noted a time lag between "deletion" of a user from the system and their employment separation date. This is not a finding; it is a business process and is not an accurate measure due to the difference between "disabling" an ID and "deleting" it. There could be an instance in which an old PIN was used after separation due to the acknowledged fact that PINs of old employees prior to 2008 could have been known by another employee, and has not yet been purged. This is a labor intensive process and is partially dependent upon using Agencies providing updated user information. Every Agency has been requested to update their employment rosters.

(a) Document periodic reviews of transaction reports, distribute reports, and document deletion of vehicles and employees – We agree. As part of a system upgrade funded in FY'14, we intend to develop user exception reports which can be scheduled to run routine reports and automatically e-mail them to designated departmental contacts. This will also produce an audit trail. Moreover, a "business rule" feature will allow us to set down parameters for fuel usage by department or vehicle type that will generate e-mail alerts when those parameters are breached. With this upgrade, just authorized, this could include items contemplated like afterhours fueling, and multiple fuelings. We will adopt this as part of a system upgrade.

(b) Update controls surrounding input of mileage entries –Given the capability of the current system, we believe that the settings to validate odometers are as strong as they can be given the current technology. While exceptions reporting would more quickly identify the rare instance where odometer validation is being defeated by the input of erroneous data, the solution is budgetary. We cannot comply with this recommendation due to budgetary limitations. We are aware that ultimately, the best solution is a "non –intervention" fueling system where automated control terminals, mileage sensors, data acquisition hardware, and WiFi, provides the most up to date and secure option. That is a longer term direction we will pursue.

Finding # 4 – Fuel Site Concerns

Fleet concurs that the bi-monthly dipstick reconciliations were not conducted. This was due to staffing reductions, and a lack of staff needed to travel the County to perform them. Given the lack of resources, computerized daily reconciliations were used to track accountability and these reconciliations successfully detected on-site issues including bad pulsers, pumps out of calibration, etc. The updated COMAR requirement that we perform monthly inspections lagged initially, due to inadequate staffing. However, we are now up, running and in compliance using contractors with no issues. The contractors validate the tank level sensor reading with monthly dipstick checks and are recording this information on inspection sheets being maintained at Fleet. Note that Fleet is only required to maintain at least one Class A / B Fuel site operator by law. We, in fact, now have four trained operators on staff. We initially trained and oriented additional Fleet personnel as Class C operators but have since determined that this is not a practical application of County resources and we have since contracted for the monthly inspections. Moreover, we believes that the chance of multiple fuel site emergencies occurring simultaneously that would require more than four respondents at any given time is so remote a contingency that does not need to be planned for.

The auditor made a point that one of our sites, Silver Hill, had a reconciliation issue which spanned a couple of years. This is in fact true. This was not an audit finding. It was told to the auditor as a point of demonstration to indicate the exhaustive research we undertake to insure compliance. This issue was properly reported MDE in keeping with MDE protocol. Fleet and the MDE inspectors remained in contact over this site and, ultimately, solved the issue through the efforts of a contractor. The auditor noted that Fleet had not obtained any documentation from MDE that the site was returned to compliance but the fact is MDE never placed the site out of service and therefore no notice was required since it was never taken out of service. If a site had experienced a significant operational

compliance failure that was not being adequately addressed, MDE would have "red-tagged" the site and banned product deliveries. The site would then have to resolve all required compliance issues before the ban was lifted and the site was restored to operation. This never occurred at Silver Hill or at any County site. In the conversation, it was pointed out that the cause of the reconciliation issue was a slight tank (earth) settling, that took three different contractors to identify and resolve.

Additionally, the auditor noted that the D'Arcy Road security cameras were off line due to a fire in the server system at the time of the hurricane that caused server failures and required the reconfiguration of a number of servers and a remapping of the camera locations. We agree, and all parties worked to bring this camera back on line. This was not a fuel management issue.

Recommendations:

(a) Expand Class C operators to cover all sites – We disagree. Fleet does not concur that this needs to be done as we have outsourced the monthly inspections and they are being completed in a timely fashion. The four certified A/B operators that we have can provide sufficient coverage for any foreseeable emergencies. In the event that additional resources are needed, we will use contractors.

(b) Ensure and document monthly inspections – We agree. This is already being accomplished by a contractor who forwards the reports to fleet which are then centrally filed. The inspection includes a dipstick reading to validate the tank level sensors.

(c) Adhere to MDE protocol regarding reportable events to include retention of documents – We agree. Fleet already follows MDE protocol for the conduct of testing and retention of test results.

(d) Expedite repair of any malfunction at fuel sites – We agree. This is already our process. Fleet uses a variety of internal support agencies as well as contractors to perform repairs on fuel storage and delivery equipment. Malfunctions are reported as soon as they are detected and follow up ensures that problems are corrected in an effective, cost-efficient and timely process.

Finding # 5 – Lack of documentation of procedures surrounding administrative access to the fuel system

The auditor noted that Fleet lacked documentation of procedures regarding the granting of access to the fuel system for various levels of system administration. Fleet concurs. We have historically assigned access based on individual job assignments and customer service needs. It has been done on an ad-hoc basis to ensure we could meet all contingencies for customer service to include after hours emergencies.

Recommendations:

(a) Develop internal policies and procedures for granting administrative access – We agree. Fleet concurs that procedures could be developed outlining permission levels and establishing a process for setting up users. This will be implemented as the software upgrade is completed.

Finding # 6 – Ward system control limitations

The auditor noted that (as previously stipulated) that the current software—*Ward 3.5* lacks an internal audit trail. Fleet concurs that this is a fact. It was also noted that fuel users PINs do not meet established standards for passwords or PINs and Fleet also concurs that the current security level provided with the keypad data entry for individual users could be enhanced by a system upgrade. However, this is a recommendation against the capability of the existing software.

The audit pointed out that of the 18 system users; one was a former FMD employee that appeared to still be currently active. We agree that while this employee—the previous Fuel Manager of 30 years—was still in the system, he had been deleted from the County Network. The only way to get into the fuel system is through the network. Also note that this employee actually retired during the audit.

Recommendations:

(a) Database access be granted to limited number of staff –. Given the design of the current product, we cannot limit the access to one person. As we roll out a software upgrade, we will include more robust exception reporting, capability and more narrowly define queries and ability to establish business rules. Our objective will be provide the analytical tools needed to identify potential problems without accessing the database itself.

(b) Develop logging system for changes made to transaction data – We agree. When we install the upgrade version of our system, we have already defined this as one of the features. We have been assured by the manufacturer that internal audit features of *Ward 4* will track any changes in transaction data.

(c) Explore capabilities of system to mask user PINs-. We agree that the PIN system is not the ideal for ensuring a high level of security but this was the method that was chosen when the product was purchased over ten years ago. The manufacturer has no intention of making any modifications to our *Ward 3.5version of the software. We believe that* fuel system security and integrity will be best served by moving towards non-intervention fueling systems and proximity card user identification. This will eliminate PIN usage altogether.

(d) Explore updating or replacing system – We agree. This is a project already in the works. A software upgrade is currently under contract with installation pending server set up. Hardware upgrades are planned over next two fiscal years.

Finding # 7 – Lack of consistent fuel ending inventory practices

The auditor noted that year end fuel inventory procedures were not consistently followed for fiscal year 2012, indicating that the inventory was not conducted on the last day of the year. The FY 2012 yearend inventory was conducted on Friday June 29[th,] "the last working day" of the year, not the last calendar day. The actual last day was a Saturday. The Petroleum Manager had just retired, and Logistics Manager was struck by another car while driving to work on Monday July 2nd 2012 requiring several months of convalescence. Therefore, she was unable to complete the yearend inventory. Other staff

not previously trained   Because of this, backup electronic readings had to be substituted for tank dips. Additionally, the auditor noted that the inventory was not conducted on the last day of the fiscal year as mandated by the administrative procedure; however, the procedure requires that the inventory be conducted on the last *working day* of the year, which was the 29th. Additionally, it was indicated that written guidelines for conducting the inventory were non-existent. Written guidelines were provided to all staff and a copy those instructions were made available to the auditor on July 29, 2013 as requested.

The record should reflect that this was an anomaly caused by the concurrent retirement of the petroleum manager and an unfortunate traffic accident of the Unit Manager.

Recommendations:

(a) Develop documented ending inventory instructions for annual inventory – While Fleet acknowledges that the fuel inventory procedure should be updated, it does exist. Moreover, we believe that yearend inventory is an accounting function and that Finance should provide the guidelines for how they wish the inventory to be conducted and for calculating the value. For example, Finance should be the organization that determines the methodology for determining the proper valuation of the inventory on hand in the ground. We do agree that better instructions for the gathering of the data need to be developed to ensure consistent and accurate data is provided to Finance but it should be Finance that determines exactly what they require for this financial activity.

However, as a result of the loss of the Petroleum Manager in March 2012, and the traffic accident of the Manager in July 2012, we had already expanded the numbers of trained staff who are familiar with the inventory process.

Finding # 8 – Lack of inventory reconciliation and verification of on-hand fuel

Auditors noted that the daily reconciliation performed relied *exclusively* on input from the VederRoot automated system and, thus, was not an independent reconciliation. However, we must point out that the daily reconciliation compares the mathematical calculation over a twenty-four hour period of recorded fuel transactions provided by the fuel pump, electronic pulser and EJ Ward system versus the measured in tank level of the VederRoot system. These are two completely separate inputs, and is time tested to be accurate. It is agreed that an additional independent monthly dipstick check would provide a "third" verification and validation of the tank level sensors and we will incorporate this as part of our Class C monthly inspection. The auditors noted that invoices were not being reconciled with the VederRoot fuel delivery records <u>and</u> the bills of lading prior to authorization of payment. Bills of Laden are dropped at the various fuel pumps. There are more than 20 sites established throughout the County. It is not practicable nor possible without a huge staff expansion to meet every fuel delivery. However, we maintain the reconciliation of the VederRoot record with the invoice is sufficient to ensure accurate billing and that further investigation of the details included on the bill of lading is needed only in exceptions where there appears to be a discrepancy. We do and will continue to leverage technology where it makes sense in lieu of staff and it has proven to be a success. We have successfully resolved all billing issues following this procedure. It should be noted that there have been no instances of payments being authorized for fuel that was not received or for incorrect charges being made.

Recommendations:

(a) Designate staff member to collect and maintain all delivery tickets –. While an ideal situation might include collecting all bills of lading, attempting to staff up to meet 120± deliveries each month is neither practical nor necessary to retrieve bills of lading when we have the ability to accurately verifying fuel quantities and pricing of deliveries with the electronic records. We do recover the bills of lading from sites as Fleet staff are on site for other reasons. On the rare occasions that we need to consult the bills of lading where we do not have a physical copy, we are able to obtain duplicate copies from the vendor who is required to maintain them by law.

(b) Incorporate independent source of verification of fuel tank levels – We agree and contend that the current process employed through a monthly VederRoot / dipstick reconciliation being performed by a contractor while completing the class C monthly inspection meets this requirement.

(c) Verify delivery quantities on invoices prior to payment – We agree. This is currently being done through comparing the invoices and verifying deliveries VederRoot generated tank receipts and fuel contract pricing. Bills of lading are consulted in the event of a conflict between the VederRoot and the invoice.

Finding # 9 – Untimely and inaccurate fuel user / seller tax returns

Auditors noted that on three separate occasions the tax returns were delinquent and fines and penalties were assessed. This is correct. However, the audit does not indicate that business process that caused this issue has already been modified, and a new procedure was implemented at the beginning of FY'13—over one year ago. For explanation, the previous process used in FY'12 required that compilation of the returns could not be completed until the month's fuel deliveries and transactions were processed through a "crosswalk" computer application and the manual input processes by data clerks. "Y" reports were generated and sent to Fleet for review, corrections were made and posted and final reports were distributed. This process was not usually completed until after the twentieth of each month. This left the balance of the month for Fleet to prepare all of the tax schedules, research and correct any problems, prepare the return and check request for Finance, and hand carry a package to the Finance Office. Finance in turn, had to process the return, get the request into a scheduled check run and return the check (usually picked up in person) to Fleet so it could be postmarked by the last working day of the month. Failure to meet the deadline for submission of the return resulted in fines and penalties accruing to the Fleet Management Division *regardless of the actual cause of the delay that created the delinquency*. The delays could have occurred in the OIT keypunch process, or in data review process or in Finance. Nonetheless, this entire process has been updated and streamlined by the elimination of the "crosswalk "process at the outset of FY2013. Fleet concurs that there was an error in the on hand inventory in the return but that discrepancy has long sense been identified and corrected. Fleet disagrees that there was a lack of supervisory review as most of the returns were prepared by either the Logistics Manager or the Fleet Division Manager himself, and all were signed off on by the manager that prepared the report.

Recommendations:

(a) Develop detailed processes and procedures to ensure timely submission of fuel tax returns – We agree that the FY'12 process needed to be updated. We implemented multiple improvements to the process since FY'12 that has led to a more timely completion of the return through the elimination of the "crosswalk" but that does not necessarily ensure that the check arrives at the Comptroller on time. Fleet Management maintains that the preparation and filing of Special Fuel Use Tax reports *should not be the responsibility of Fleet.* This is an accounting function that should be within the realm of Finance. We are aware of no other municipal fleet in the region that we consulted that has responsibility for preparing tax returns with the exception of Montgomery County who has a CPA assigned to the fleet staff whose job is to perform this task and other financial functions. In every other case, the fleet provides the data to Finance who processes and files the return. Currently, Finance does complete the special fuel use returns for off road unleaded fuel. This is the exact same process that Fleet employs for diesel fuel with two notable exceptions; the unleaded is not tax-deferred so there is not a looming deadline with attendant fines and penalties and the off-road unleaded usage is only a fraction of the diesel usage. Our position is that it should not be our responsibility to track and report tax exempt fuel on behalf of other agencies, especially when all liability (i.e. fines and penalties) fall within Fleet *regardless of the cause.*