

**CITY OF HAMILTON  
INTERNAL AUDIT REPORT 2014-01  
PUBLIC WORKS – FUEL USAGE**

#	OBSERVATIONS OF EXISTING SYSTEM	RECOMMENDATION FOR STRENGTHENING SYSTEM	MANAGEMENT ACTION PLAN
1.	<p><u>Procedures</u></p> <p>The Energy Initiatives Section has two formal procedures ("Ordering Fuel" and "Receiving Fuels at 330 Wentworth"). However, there are only informal notes that provide instructions regarding how fuel inventory should be purchased, tracked, measured, monitored and reconciled. There is no evidence of management approval or review.</p> <p>In addition, historical percentages of <math>\pm 15\%</math> are used to determine if variances between the quantities invoiced and those received are acceptable. Management has not set or validated an acceptable variance to account for factors such as temperature fluctuations.</p> <p>The Finance and Administration (F&amp;A) procedures for fuel inventory and usage have been recently updated but there is no evidence of management approval or review.</p> <p>When formal procedures are lacking, employees use personal understanding and experience to carry out processes which could result in incorrect, incomplete or inconsistent application. It would also be problematic and inefficient for a successor to commence his/her duties within a short period of time.</p>	<p>That formal fuel inventory management procedures (where they do not exist) be developed, approved by management and implemented. The procedures should be reviewed annually by management, updated as required, and bear evidence of such review (sign-off).</p> <p>That management set and document thresholds for acceptable variances. Any differences beyond these levels should be followed up by management with required corrections or explanations documented.</p> <p>That management approve F&amp;A procedures for fuel inventory and usage. The procedures should be reviewed annually by management and bear evidence of such review (sign-off).</p>	<p>Agreed. Where formal fuel inventory management procedures do not currently exist, they will be developed and approved by the Manager of Energy Initiatives. Target completion for this task is October 2014.</p> <p>Annual review, revisions and approval of procedures will be documented and approved by the Manager of Energy Initiatives.</p> <p>Agreed. Management will solicit industry experts to validate appropriate variance level and adjust the variance percentages accordingly. Standard Operating Procedure (SOP) will be revised to address variance issues if they arise. Target completion date is October 2014.</p> <p>Agreed. F&amp;A currently updates procedures on an annual basis. The procedure is approved and signed by the Business Administrator (BA) before being submitted for approval by the Finance Manager. Signed and approved copies are tracked and retained by the General Admin FAIL.</p>

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2.	<p><u>Monitoring Fuel Volumes</u></p> <p>The "Ordering Fuel" procedure requires manual fuel volume readings to be taken at six sites across the City (three sites at which readings are to be taken each weekday and three sites at which, at a minimum, weekly volume inspections are required). A review of records from December 2013 identified:</p> <ul style="list-style-type: none"> <li>• One site which requires readings at least once per week had two one week periods with no readings provided; and</li> <li>• All three sites requiring readings every weekday had instances where no readings were taken. Two of these sites did not provide readings for over fifteen weekdays during the month of December 2013.</li> </ul> <p>Staff informed Audit Services that the fuel inventory at two of the manual sites runs out on occasion.</p> <p>When manual fuel volume readings are not regularly recorded and monitored, the risk of running out of fuel at these sites is increased. The potential for service disruptions is increased if City staff are not able to fuel vehicles. In addition, the time taken to travel to another fuel site can decrease staff productivity.</p>	<p>That the frequency of manual fuel volume readings be tracked and followed up by the Energy Systems and Supply Coordinator, when not received.</p>	<p>Agreed. Site staff performing manual reads are to be directed by management to complete this task in a timely manner. An SOP is to be developed to address delinquent manual readings. Target completion date is October 2014.</p>

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3.	<p><u>Manual Sites</u></p> <p>Fuel is stored in tanks at six sites and is tracked manually. Fuel delivered to these sites is not verified by City staff. When reliance is placed on the supplier and volumes delivered are not verified, the risk of the City overpaying for fuel is increased.</p> <p>Access to fuel at two of the sites is unrestricted once the pump is turned on and the recording of usage transactions is manual. Audit Services observed the fuel pump turned on, the yard's gate open and no staff present at one site. When access to fuel is not restricted, the risk of misappropriation increases.</p> <p>Manual Fuel Tickets are completed to record fuel usage at these two sites. Tickets are forwarded monthly to the Energy Systems and Supply Coordinator and entered into WinFuel, the system used to track fuel usage. Tickets are not reconciled to the total fuel disbursed from the pump to ensure all usage is accounted for.</p> <p>When fuel usage is not adequately reconciled, the risk of inappropriate usage going undetected increases.</p>	<p>That management review the feasibility of combining / eliminating manual fuel sites and/or installing electronic monitoring equipment to track tank volumes and fuel usage and restrict access to fuel at the pumps.</p> <p>That the totalizer readings (running total of fuel disbursed from the pump) be recorded at the end of each month and forwarded to the Energy Systems and Supply Coordinator. Fuel usage from the pumps should be compared to the usage recorded in WinFuel from the manual input of fuel tickets.</p>	<p>Agreed. However, there has been little capital funding available for renewal of the City's various fuel sites. The plan to reconstruct fuel sites, consolidate and update dispensing equipment needs to be part of the capital approval process. This issue should be considered in conjunction with a larger Yard Review to ensure assets are renewed in priority with a long term view. Currently, there is no Council approved process to conduct a Yard and Fuel site review.</p> <p>Agreed. Site staff will be directed to provide month end readings. An SOP will be developed to calculate the monthly inventory and usages based on totalizer values to identify variances. The target completion date is October 2014.</p>

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4.	<p><u>Fuel Usage Reconciliations</u></p> <p>Fuel used from City pumps is recorded through WinFuel. Tank volumes are measured electronically (as the transaction occurs) daily at fifteen sites and manually at six sites.</p> <p>A Fuel Usage Report is prepared monthly to calculate fuel used by site from the City tanks. This usage is not compared to the usage recorded through WinFuel in order to verify that all usage is accounted for. The Financial Assistant compares the calculated usage to amounts charged to user groups. However, differences are not regularly reviewed by management. The monthly differences accumulate and are adjusted at year end. In 2013, \$303,000 of total fuel usage of \$18.18 million (1.7%) as calculated from the tanks had not been charged to the users.</p> <p>Manual fuel volume readings are not required at the end of the month to enable the reconciliation of usage to amounts on hand.</p> <p>When usage amounts are not reconciled to inventory volumes and differences have no management review, the risk of misappropriations or pump recording issues going undetected are increased.</p>	<p>That fuel usage reconciliations be prepared monthly to compare fuel used from the tanks to the actual usage recorded through WinFuel. Thresholds should be set for acceptable variances and any variances beyond this level should be followed up by management with required corrections or explanations to document any significant differences.</p> <p>That fuel volume readings be recorded on the last day of the month at manual sites and forwarded to the Energy Systems and Supply Coordinator for use in a formal reconciliation process.</p>	<p>Agreed. FA will prepare the fuel usage reconciliations monthly and submit to the BA for review/approval. The BA will forward a signed copy to the Manager of Energy Initiatives for review/approval. The Manager will sign and retain copy.</p> <p>Acceptable thresholds will be set by the Manager of Energy Initiatives. Variances will be investigated by the Fuel Inventory Clerk with the assistance of the FA and reported to the BA and the Manager of Energy.</p> <p>Agreed. See item #3. Site staff will be directed to provide month end readings.</p>

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5.	<p><u>Management Sign-Off</u></p> <p>There is no evidence of management review of the Fuel Usage Report, the average monthly fuel price calculations (the price charged to user groups for monthly usage) and the monthly balancing of WinFuel and Avantis transactions (to ensure all transactions have been appropriately transferred to Avantis to be used to allocate user charges and provide reports for monitoring fuel usage).</p> <p>Without evidence of managerial sign-off, there is no assurance that key inventory reconciliations and user charges have been reviewed for accuracy and completeness.</p>	<p>That the Fuel Usage Report, fuel price calculation and balancing of WinFuel and Avantis transactions be reviewed monthly by management and bear evidence of such review (sign-off). Discrepancies should be followed up by management with required corrections or explanations to document these differences.</p>	<p>Agreed. Effective quarter 3, 2014, management will review monthly reports and sign off will occur with Energy and Finance.</p>
6.	<p><u>Suncor Daily Prices</u></p> <p>The Energy Systems and Supply Coordinator verifies fuel prices per the Daily Price Notification received from the supplier to their website for accuracy. Prices on the Suncor Daily Price Notifications include discounts and delivery costs which are required to be added to the website price for comparison purposes. The 2013 prices could not be verified as the Energy Systems and Supply Coordinator had not been provided with updated discount and delivery costs.</p> <p>When daily prices are not compared, the City is at risk of paying incorrect fuel prices different than those under contract.</p>	<p>That the Pricing Summary be updated with the current discount and freight charges and the resulting expected prices be verified to the Suncor Daily Price Notification.</p>	<p>Agreed. Updated pricing and discounts will be provided and updated going forward.</p>

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7.	<p><u>Operator Access</u></p> <p>In order to access fuel at all but two manual sites, an operator number must be input to activate the pump. A review of the WinFuel Operator List by Division identified:</p> <ul style="list-style-type: none"> <li>• Eleven of 13 operator numbers selected had no usage activity from July 1 – December 31, 2013;</li> <li>• Six of the 11 operators noted above were no longer employed by the City;</li> <li>• Users are not tracked by their respective divisions (2,786 operators are listed as Division 1 – Operations); and</li> <li>• Multiple users are issued more than one operator number.</li> </ul> <p>Weekly Termination Reports are to be received and reviewed by the Energy Systems and Supply Coordinator to determine if any ex-employees had fuel access and should be removed from WinFuel. Audit Services noted the Weekly Termination Report was received and reviewed for only four weeks between July 1 and December 31, 2013.</p> <p>When fuel access is not monitored and past permissions are not removed from WinFuel in a timely manner, the risk of unauthorized users accessing and misappropriating fuel is increased.</p>	<p>That management consider the classification of all users by Division and send the appropriate divisional managers a listing, at least annually, to verify that operator access is appropriately granted for their staff.</p> <p>That inactive and duplicate operator numbers be removed from WinFuel.</p> <p>That the Energy Systems and Supply Coordinator ensure all Weekly Termination Reports are received and reviewed and that unnecessary operators are removed from WinFuel.</p>	<p>Agreed. Effective quarter 3, 2014, management will communicate a list of operators to manage active staff in order to reduce duplicates and remove inactive and terminated staff on an annual basis.</p> <p>Agreed. See above.</p> <p>Agreed. See above.</p>

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8.	<p><u>Miscellaneous Group Fuel Numbers</u></p> <p>Miscellaneous group fuel numbers may be used by operators to access fuel in place of the vehicle number. Odometer readings are not required when using these numbers to restrict usage. Such access is intended for miscellaneous fuelings (i.e. small equipment) and/or emergencies only. Usage transactions for miscellaneous group fuel numbers are not monitored.</p> <p>A review of three miscellaneous group fuel numbers in the test month of October 2013 identified:</p> <ul style="list-style-type: none"> <li>• One group with 118 transactions totaling 2,023 litres of unleaded gasoline; and</li> <li>• One group with 47 transactions totaling 657 litres of unleaded gasoline.</li> </ul> <p>Such observations indicated extensive use of miscellaneous group fuel numbers.</p> <p>In addition, it was observed that two miscellaneous group fuel numbers were posted on a bulletin board at one site, in view of all staff.</p> <p>When numerous operators are aware of miscellaneous group fuel numbers and know their usage is not monitored, it increases the risk of misappropriation or unauthorized use of these miscellaneous group fuel numbers going undetected.</p>	<p>That Energy Initiatives provide respective user groups a listing of all transactions recorded to the miscellaneous group fuel numbers each month for review.</p> <p>That miscellaneous group fuel numbers be made available only to necessary staff.</p>	<p>Agreed. The Office of Energy Initiatives will provide a list of monthly transactions recorded to group fuel numbers for user group approval starting in Q4, 2014.</p> <p>Agreed. Posting of group fuel numbers has already been stopped and this issue was resolved immediately.</p>

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9.	<p><u>Avantis Access</u></p> <p>Fuel usage transactions are transferred from WinFuel to Avantis daily. Costs are allocated to users and Fuel Usage Exception Reports are provided to user group to monitor fuel usage based on the Avantis records.</p> <p>Seven users in Avantis were identified as having access to fuel (WinFuel operator numbers) and also access to enter statistical readings and/or modify the rules in Avantis that would trigger an exception.</p> <p>When unnecessary users have access to enter and modify records in Avantis and are also granted physical access to fuel, the risk of misappropriation and manipulation of documentation is increased.</p>	<p>That the Avantis user listing be reviewed annually to ensure staff have appropriate levels of access to fuel records.</p> <p>That the security profile in Avantis for fuel users be modified to restrict their access in Avantis.</p>	<p>Agreed. Central Fleet will review the user list in Avantis annually. Central Fleet will remove anyone who has not accessed fuel details records and restrict future access by end of June 2014.</p> <p>Agreed. See above. Also, Central Fleet is working through IT to transition from Avantis to Hansen 8 which will significantly improve information and security. Full transfer completion is expected by April 2015.</p>



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10.	<p><u>System Bypass</u>            Limited staff and vendors have the ability to switch the fuel pumps to bypass mode under special circumstances (i.e. power outage, pump malfunction). While pumps are on bypass, transactions are not automatically recorded in WinFuel and do not require the user to input any information before fuelling (e.g. operator number, vehicle number or odometer reading). In such instances, transactions are to be manually recorded and forwarded to the Energy Systems and Supply Coordinator for entry into WinFuel.</p> <p>It is not verified that all bypass transactions have been received by the Energy Systems and Supply Coordinator. This increases the risk of unrecorded usage transactions, user groups not being accurately charged for usage and unexplained differences in fuel reconciliations.</p>	<p>That the Energy Systems and Supply Coordinator review the "Exception Report by Date" in WinFuel daily for transactions with the error message "system bypass was used" to ensure all transactions have been recorded in WinFuel.</p>	<p>Agreed. Regular reviews of transactions will occur to address this issue. The vendor will be consulted to address incidents of "system bypass". This process has already been initiated.</p>

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**ADDENDUM**

The following item was noted during the course of the audit. Although it does not present an internal control deficiency, it is indicated in this Addendum so management is aware of the issue, risk and/or inefficiency and can address it appropriately.

**Monitoring Fuel Usage**

1. User groups have designated staff responsible for monitoring fuel usage. Fleet Services emails Fuel Usage Exception Reports monthly to these staff. In addition, Fleet Services has provided a link to Business Intelligence Reports and a user guide and has offered a drop in training session to staff responsible for monitoring fuel in each user group.

Three user groups were contacted by Audit Services to discuss fuel monitoring processes. Responses varied, with some staff reviewing the Fuel Usage Exception Reports in detail and others performing a high level overview, looking for significant discrepancies and following up with staff or Fleet Services, as required. One user group indicated reliance is placed on Fleet Services to identify and resolve any major discrepancies. Staff responsible for monitoring fuel usage in two groups was unaware of and thus, not using the Business Intelligence Reports. In addition, it is common for staff responsible for reviewing fuel usage to change positions frequently.

When expectations for monitoring fuel usage are not clearly defined and available information is not utilized to its full potential, the efficiency and effectiveness of the fuel monitoring process is diminished.

***It is recommended:***

***That Fleet Services communicate the responsibilities of user groups and provide guidelines for monitoring fuel usage, at least annually.***

**Response:**

**Agreed. Central Fleet will add a responsibility statement to all fuel reports so the Supervisor is reminded monthly. Target completion date is estimated as the end of June 2014.**