



City of Houston



Monitoring Controls Review Advantage 2000 System

Conducted by: **Sylvia R. Garcia**
City Controller



OFFICE OF THE CITY CONTROLLER
CITY OF HOUSTON
TEXAS

SYLVIA R. GARCIA

December 4, 2000

The Honorable Lee P. Brown, Mayor
City of Houston, Texas

SUBJECT: Monitoring Controls Review – Advantage 2000 System
(Report No. 00-32)

Dear Mayor Brown:

In accordance with the City's contract with KPMG LLP (KPMG), KPMG has completed a review of the City of Houston's monitoring controls utilizing the reporting functionality of the Advantage 2000 system.

KPMG's review assisted both the City Controller and City Management with an understanding of the strengths in the City's current monitoring and detective controls. Their report, attached for your review, summarizes KPMG's understanding of the Advantage 2000 system's monitoring controls, identifies opportunities to strengthen monitoring controls and assesses the need for additional tools to supplement the existing system's edit checks/reports. Draft copies of the matters contained in the report were provided to Department officials. The views of the responsible Department officials as to action taken or being taken are appended to the report as Exhibit 1.

We appreciate the cooperation extended to the KPMG auditors by Department personnel during the course of the review.

Respectfully submitted,


Sylvia R. Garcia
City Controller

xc: City Council Members
Albert Haines, Chief Administrative Officer
Cheryl Dotson, Chief of Staff, Mayor's Office
Sara Culbreth, Acting Director, Finance and Administration Department



700 Louisiana
Houston, TX 77002

Telephone 713 319 2000
Fax 713 319 2041

November 15, 2000

Ms. Sylvia R. Garcia
City Controller
City of Houston
901 Bagby, 8th Floor
Houston, Texas 77002

Dear Ms. Garcia:

We have completed an Internal Audit over the City of Houston's (the City)'s monitoring controls utilizing the reporting functionality of the Advantage 2000 system and to assess the potential for utilizing technology generated reports to facilitate the Internal Audit Division's risk-based approach to deliver valued services for the City.

The information presented in this report regarding the capabilities of the City's current information technology and potential control enhancements enabled by leveraging the reporting and data analysis capability of the City's investment in technology resulted from a collaborative process of interviewing process owners, management and personnel from the City's Information Services Division of the Finance and Administration Department (ISD). In addition, information related to current and expected future operations and processes was obtained from interviews and schedules provided by ISD. This audit was limited to the procedures above, and accordingly we provide no assurance on the accuracy or completeness of this data.

As such for this internal audit, the information technology (IT) monitoring control mechanisms identified as "available but not currently used" or "not currently available", consider only the Advantage 2000 system and represent opportunities to enhance the City's monitoring controls over its transactions and to realize improved management reporting.

Our procedures were completed on March 28, 2000 and these procedures have not been updated since that date. KPMG is pleased to have assisted the City of Houston in its continuous improvement efforts and appreciate the assistance and cooperation of the City's management and personnel.

KPMG LLP



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PROJECT OVERVIEW

An effective system of internal control establishes an environment that serves to prevent/manage risk. However, the effectiveness of such control techniques can only truly be measured with a degree of monitoring or detective controls. Traditionally, monitoring controls consist of manual reconciliations, detail testing by auditing transactions, and reprocessing -- all of which are somewhat labor intensive and inefficient compared to current techniques using "intelligent" data analysis and exception reporting.

This internal audit serves to assist both the Controller and City Management with an understanding of the strengths in the City's current monitoring and detective controls as well as the following objectives:

- ⌘ Assesses the Advantage 2000 system's reports for effective control monitoring by linking key potential risks to monitoring indicators that could be tested electronically and investigated on an exception basis through normal processing.
- ⌘ Identifies opportunities to strengthen monitoring controls by enhancing the utilization of computer generated reports that facilitate the detection and on-going assessment of risks and controls.
- ⌘ Assesses the need for additional tools to supplement the existing system's edit checks/reports.

In order to meet the objectives, as stated above, KPMG performed the following procedures:

- ⌘ Assessed the reporting capability of the system through the use of edit checks and reports.

PROJECT OVERVIEW

- Evaluated the type of data analysis and exception reporting that could be generated to monitor certain risks and controls on a regular basis.
- Developed an understanding of the City's current reporting capabilities.
- Updated our understanding of the edit checks and reports currently being used and the effectiveness of these procedures to mitigate risks and ensure data integrity.
- Developed a matrix that links the reports (available and currently being used) to the controls or potential control monitoring that could be implemented.
- Outlined additional monitoring controls that should be considered and could be monitored electronically based on data resident in the system.

MONITORING CONTROLS ANALYSIS

FINANCIAL & BUDGETARY REPORTING

Business Objective	Control Indicator	IT Monitoring Control Mechanism	
Accurate, reliable financial and budget information	Budget variances	Budget vs. actual report by agency for each fund	
	Budget variances	Detail listing of revenues vs. budget	
	Extent of non-recurring month-end and period 13 and 14 adjustments	Monthly report tabulating a count and dollar volume of "JV" transactions that identifies training issues, need for interfaces or new standard entries, or risks of misstatement	
	Ledger transactions are coded accurately	Variance report to indicate differences from month-to-month or seasonalities	
	Accounting transactions are booked in the appropriate period		Expenditure by coding report
			Invoice date vs. accounting period
			Document date vs. accounting period
	Material adjustments to budget or actual transactions should not be processed by individuals with the ability to process payroll, invoices, billings or payments		Security access analysis to identify any users with full access to these functions
Only necessary accounts should be established and all should be periodically reconciled		Summary trial balances from the previous year and current year could be downloaded to Excel™ to identify accounts with no activity	

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
B50	✓			✓	✓	✓
A614, A203, A270, R001	✓			✓	✓	✓
Not Available (NA)			✓	✓		✓
A203, A270	✓			✓	✓	✓
B100, R001	✓			✓		
B100		✓		✓		✓
B100, R001		✓				
NA			✓	✓		✓
A614	✓			✓		

MONITORING CONTROLS ANALYSIS

FINANCIAL & BUDGETARY REPORTING

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Accurate, reliable financial and budget information	Only necessary accounts should be established and all should be periodically reconciled	Edit report identifying all balance sheet accounts with no adjustment type transaction for over one year
	The City's fiscal activities are periodically monitored	Summary trial balances are downloaded to prepare the Monthly Financial and Operations Report for Period Ending ("MOPS")

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓	✓		✓
A614, A203, B031, CF10	✓			✓	✓	✓

MONITORING CONTROLS ANALYSIS

HUMAN RESOURCES PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Personnel openings are efficiently filled	Time measured from a position opening through completion of the hire	Aging reports of open positions
	Usage of temporary personnel	Management reports number of temporary personnel by department and number of days each temporary has served the City
Equitable pay among employees - given market changes	Variance in actual pay per employee classification and step across the City	Report that computes the actual pay mean and total pay range by employee classification and step throughout the City
	Variance in pay rates per employee between pay periods	Comparison of pay rates used in computing payroll between pay periods to report employees with variances over 7% along with their department, classification and step
	Positions requiring adjustments to recruit new employees	Open/new position modification report for classification adjustments
Pay rate changes are authorized	Variances in pay rate between periods	Report identifying "unusual" pay rate variances between payroll periods

MONITORING CONTROLS ANALYSIS

HUMAN RESOURCES PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
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	Variance in pay rates per employee between pay periods	Comparison of pay rates used in computing payroll between pay periods to report employees with variances over 7% along with their department, classification and step
	Positions requiring adjustments to recruit new employees	Open/new position modification report for classification adjustments
Pay rate changes are authorized	Variances in pay rate between periods	Report identifying "unusual" pay rate variances between payroll periods

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA - Alternate system is utilized			✓	✓	✓	✓
NA			✓	✓	✓	✓
NA - Alternate system is utilized			✓	✓	✓	✓
NA			✓	✓		✓
NA			✓	✓		✓
NA			✓	✓	✓	✓

MONITORING CONTROLS ANALYSIS

HUMAN RESOURCES PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Pay rate changes are authorized	Personnel able to change pay rates/salaries should not be able to enter payroll data, process the payroll checks or process financial adjustments	Security access analysis to identify any users with full access to these three functions

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓	✓		✓

MONITORING CONTROLS ANALYSIS

INVESTMENT MANAGEMENT PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Revenue maximization	Monitoring of variances between actual and budgeted investment revenue at least monthly	Budget to actual monthly report compares actual investment revenue earned to budgeted revenue
	Reconciliation of cash and investments monthly	Cash and Investment Balances Report
		Bank Reconciliation Report
Accuracy of reported revenue and investments	Investment earnings are allocated based on cash and investment balances electronically and posted through a financial system interface	Reconciliation report of total investment earnings posted
	Computed rate of return on cash and investments by fund is comparable	Report that computes the investment earnings as a percentage of weighted average daily cash and investment balances during the month by fund

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
B50	✓			✓		✓
A203, A270, R001	✓			✓		✓
NA			✓	✓		✓
I400, INV001, INV002, INV 003	✓			✓		
NA			✓	✓		✓

MONITORING CONTROLS ANALYSIS

PAYROLL

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Payroll checks are accurate	Edit Reports to identify various input and processing errors	Gross to Net Process Error Report Error Listing by Type Detail Report/Susf Acct Type22 Timesheet Extract PGM Error Report
	Budget variances to identify potential overpayments	Budget to actual expenditure analysis
	Reasonableness of overtime/hours	Report listing personnel with "excessive" total or overtime hours or overtime
Pay rate changes are authorized	Variations in pay rate between periods	Report identifying "unusual" pay rate variances between payroll periods
	Personnel able to change pay rates/salaries should not be able to enter payroll data, process the payroll checks or process financial adjustments	Security access analysis to identify any users with full access to these three functions
Only current/active personnel receive paychecks	No pay subsequent to termination date or before start date	Exception report - generally exceptions should only represent final pay out of accumulated benefits

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
HAR210E	✓			✓	✓	✓
ERLTAACC	✓			✓	✓	✓
HRS001SHR	✓			✓	✓	✓
HMRD900	✓			✓	✓	✓
B50		✓			✓	✓
NA			✓	✓	✓	✓
NA			✓	✓	✓	✓
NA			✓	✓		✓
NA			✓	✓		✓

MONITORING CONTROLS ANALYSIS

PAYROLL

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Only current/active personnel receive paychecks	Data analysis to identify whether any paychecks were processed for personnel on leave	Match payroll register against HR database records and potentially the records to any third party administrator
Leave time accumulated / taken is consistent with established policies	Total leave taken does not exceed the earned and cumulated amount	Exception report identifying any occurrences
	Unused leave is accumulated and expired consistent with current policies	Exception report identifying any occurrences
Compliance with federal withholding and reporting requirements	Negative deductions are not allowable and therefore an error	Negative Deduction Amount Report
	Amounts computed for FICA and Medicare tax reconcile to the amounts withheld	FICA & Medicare vs. Tax Withheld Standard Deduction report
	Employees have appropriate identification numbers	Employees W2 Error Report
	The W-2 tape submitted to the Social Security Administration reconciles with the payroll file for the year	W-2 Mag Media Audit Report

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓		✓	✓
Sick Leave Alert Report	✓			✓		
HMB6003 MSP Aging Report	✓			✓		
HMB7150	✓			✓		✓
AHR970B HAR4100	✓ ✓			✓ ✓		
HARD12E	✓			✓		✓
HAR0120	✓			✓		✓

MONITORING CONTROLS ANALYSIS

PROCUREMENT PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Timely receipt of goods / services	Vendor performance indicators within the system	Vendor Performance Inquiry Report Vendor Delinquent Performance Report
	Purchased requisitions are converted to purchase orders with the desired timeframe	Aged Requisition by Buyer Inquiry
	Purchase orders (P.O.'s) that remain unmatched to vendor invoices or receiver reports for an extended period of time.	Aged outstanding P.O. report by department and commodity type
	Emergency purchase orders processed by commodity type	Monthly report that summarizes the number and dollar total of emergency purchase orders by commodity
Best value is realized through procurement process	Multiple contract and/or non-contract purchases from a single vendor - indicates potential for volume pricing	Report that illustrates frequency of vendor selection by purchaser
Compliance with applicable Federal regulations and contracts	Bids are not accepted from prohibited parties	Exception report that illustrates purchases from vendors included on the federally prohibited list and the list deemed by the City as non-responsible

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
VPE2		✓		✓	✓	✓
VPER		✓		✓	✓	✓
AGRX		✓		✓		✓
EPS - SOSRP	✓			✓	✓	✓
NA			✓	✓	✓	
NA			✓	✓		✓
NA			✓	✓	✓	✓

MONITORING CONTROLS ANALYSIS

PROCUREMENT PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Compliance with applicable Federal regulations and contracts	Lowest total cost is obtained	Exception report that illustrates purchase orders awarded on a non-competitive bid basis to assist in identifying informal bids that should include three bids
	Multiple non-contract purchases are less than \$15,000 annually by commodity	Vendor awarded detail report by agency & vendor type for non-contract purchase orders Under \$ "X" ("X" = \$15,000)
Procured goods and services are received by the City	Receiving reports should not be processed by the requisitioner or the individual processing the invoice	Security access analysis to identify any users with full access to these three functions
	Changing vendor information (name, address, etc.) is restricted from personnel with procurement requisition, purchase order processing and invoice processing	Security access analysis to identify any users with full access to these three functions
	Past due receiver reports (those with an invoice already processed) are identified for follow-up	Past due receiver report is generated monthly
	Terminated employees who have been issued P-cards do not continue to use them	Exception report illustrating similarities between the database of terminated employees and the active P-card database

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓	✓		
EPS716.2A	✓			✓		
NA			✓	✓		✓
NA			✓	✓		✓
VI01, Status Report	✓			✓		
NA			✓	✓		✓

MONITORING CONTROLS ANALYSIS

PROCUREMENT PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Procured goods and services are received by the City	P-cards are used to obtain goods and services from only authorized merchants	Report that illustrates approved vendors by Merchant Category Code Exception report that illustrates purchases to vendors that are either federally prohibited or deemed non-responsible

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓	✓	✓	✓
NA			✓	✓	✓	✓

MONITORING CONTROLS ANALYSIS

VENDOR DISBURSEMENTS PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Compliance with the Prompt Payment Act	Payments made within 30 - 35 days of the invoice date (provides 5 days for mailing)	<p>Advantage exception report where payment date exceeds 35 days from the invoice date</p> <p>Accounts payable aging report</p>
	Payments held in Suspense are cleared timely for payment	<p>Screen print of suspense file transactions being purged</p> <p>Reporting of the # of days transactions were in suspense</p>
Payment accuracy	Matching of the P.O., receiving report and the vendor invoice	Exception reports - segregating cash disbursements by disbursement type (A, V, or N). "V" or "N" disbursements are agreed to previously established list
	Edit check to mitigate the risk of duplicate payments	On-line warning that the invoice number already exists for that vendor during input
	Payee name and address match the invoice	Payment vouchers are audited for this. Individual doing the auditing "passes" the transaction within the system. An edit report of any transactions "passed" by an unauthorized individual (using a table for matching) could be generated

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
A658LPM, AFMA658	✓			✓	✓	✓
A671M	✓			✓	✓	✓
SUSF, DBUTIL	✓			✓		
SF05	✓			✓		✓
NA			✓	✓		
Online Edit	✓			✓	✓	
Online Edit	✓			✓		✓

MONITORING CONTROLS ANALYSIS

VENDOR DISBURSEMENTS PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Payment accuracy	Individuals processing payments should be restricted from processing requisitions, purchase orders or financial adjustments	Security access analysis to identify any users with full access to these three functions
Expenditures are authorized and supported	Documentation of approvals within prescribed limits	On-line approvals are not implemented for all departments - where implemented, approvals should be matched back to an authorization table and tested for compliance with prescribed authorization limits
	Detect potential misuse or sharing of authorization codes	Audit report - compare dates when on-line approvals were input to that individual's reported days off per the payroll system
Cost Efficiency	Available discounts are taken	Daily Activity Report
	Payments for multiple invoices to a single vendor are effectively combined	Voucher Payment Register
	Costs for electronic payments are withheld from the vendor's payment	Review of the EFT (electronic funds transfer) Pre-Note Report and apply debit memos listed against the voucher. The total of the debit memos could then be matched to the adjustments posted to the payables

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
NA			✓	✓		✓
NA			✓	✓		
NA			✓	✓	✓	✓
AFMA658		✓			✓	
AFMA657, A657E	✓			✓		
AFMEFPN		✓		✓		

MONITORING CONTROLS ANALYSIS

VENDOR DISBURSEMENTS PROCESS

Business Objective	Control Indicator	IT Monitoring Control Mechanism
Cost Efficiency	Payments do not have excessive late penalties	Report that identifies payments with penalties greater than 20% of the total expenditure
	Checks under \$5.00 are minimized	Review of the Voucher Payment Register Monthly report identifying such checks

Report /Screen Number	Available			Users & Potential Users		
	Being Used	Not Being Used	Not Currently	Process Owners	Dept. Personnel	Internal Audit
A657LPM		✓		✓	✓	✓
AFMA657	✓			✓		✓
NA			✓			✓

Views of Responsible Officials

EXHIBIT 1



SYLVIA R. GARCIA

OFFICE OF THE CITY CONTROLLER
CITY OF HOUSTON
TEXAS

November 29, 2000

Ms. Lisa Anderson, Partner
KPMG LLP
700 Louisiana
Houston, TX 77002

Re: Response to Monitoring Controls Review – Advantage 2000 System

Dear Ms. Anderson:

We have completed our review of the Monitoring Controls Review – Advantage 2000 System Report. The report identifies various opportunities for the City to enhance Advantage 2000's control mechanisms and improve management reporting. Many of the reports in the system are currently being used. Our plan is to further evaluate and implement other control mechanisms and system reports identified in the report.

Thank you for your assistance with this project. We appreciate your firm's cooperation and high degree of professionalism during the entire process.

Sincerely,


Sylvia R. Garcia
City Controller

Xc: Judy Gray Johnson
Steve Schoonover

901 BAGBY, 8TH FLOOR • P.O. BOX 1562 • HOUSTON, TEXAS 77251-1562
PHONE: 713-247-1440 • FAX: 713-247-3181
E-MAIL: ctrarg@ctr.ci.houston.tx.us

*Views of Responsible
Officials*

EXHIBIT 1



Lee P. Brown, Mayor

CITY OF HOUSTON

Post Office Box 1562 Houston, Texas 77251 713/247-2200

OFFICE OF THE MAYOR

October 31, 2000

Ms. Lisa Anderson
Partner
KPMG Consulting
700 Louisiana Avenue
Houston, Texas 77002

Re: Response to Advantage 2000 Audit


Dear Lisa:

We have reviewed KPMG's assessment of ways in which the City's investment in Advantage 2000 can be leveraged. As the study shows, many of the reports that are currently available in the system are in fact being used. Furthermore, many reports were found to be available through the system, but efforts must be increased to inform staff to that availability.

We will be meeting with the Controller's office and other departmental staff to familiarize them with reports available from the Advantage system, as well as reports that may be accessed through the use of the City's financial datamart.

Thank you for your assistance in updating us on the purpose of the audit.

Sincerely,


Cheryl L. Dotson
Chief of Staff

*Views of Responsible
Officials*