

**Audit Committee**  
**Comité de la vérification**

Agenda 5  
Ordre du jour 5

**Wednesday, June 28, 2000 - 2:00 p.m.**  
**Le mercredi 28 juin 2000 - 14 h**

**Fuller Room, Terrace Level**  
**Bytown Pavilion, City Hall**

**Salle Fuller, Niveau Terrasse**  
**Pavillon Bytown, hôtel de ville**

**Confirmation of Minutes  
Ratification des procès-verbaux**

Minutes 4 (May 11, 2000)

Procès-verbal 4 (Le 11 mai 2000)

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### **Action Items Articles pour exécution**

1. **Post-Implementation Review of the Human Resources Management Information System (HRMIS)** **1**  
**Examen de suivi du Système d'information de la gestion des ressources humaines (SIGRH)**  
Ref.: ACS2000-AU-AUD-0007 **City Wide**

#### **Members' Reports - Enquiries Rapports des membres - demandes de renseignements**

Councillor/Conseiller Ron Kolbus, Chairperson/Président

Councillor/Conseiller Brian Mackey, Vice-Chairperson/Vice-président

Councillor/Conseiller Jim Bickford

Mayor/Maire Jim Watson

LZF

June 21, 2000

ACS2000-AU-AUD-0007  
(File: CMH1999-14)

Office of the City Auditor

Ward/Quartier  
City Wide

- Audit Committee / Comité de la vérification
- City Council / Conseil municipal

Action/Exécution

## **1. Post-Implementation Review of the Human Resources Management Information System (HRMIS)**

### **Examen de suivi du Système d'information de la gestion des ressources humaines (SIGRH)**

#### **Recommendation**

That the report entitled "Post-Implementation Review of the Human Resources Management Information System (HRMIS)," Document 2, be received, and the recommendations contained in Document 1 be approved.



June 21, 2000 (10:45a)

Peter O'Callaghan  
City Auditor

DL:dln

Contact: Dev Loyola-Nazareth - 244-5300 ext. 1-3876  
Steven Nimmo - 244-5300 ext. 1-3670

#### **Financial Comment**

N/A.



June 21, 2000 (2:17p)

for Mona Monkman  
City Treasurer

MM:cds

## **Executive Report**

### Reasons Behind Recommendation

#### **Introduction**

This report deals with a post-implementation review of the Human Resources Management Information System (HRMIS). The objective of the review was to ensure that the HRMIS is achieving the results for which it was developed.

Consequently, the review addressed the following aspects of the system's implementation that define its usefulness to the City:

- . Have the users' requirements been met?
- . Are the controls over the confidentiality, integrity, and availability of information adequate and efficient?
- . Is the processing of the payroll accurate and timely?

#### **Synopsis of Review Findings**

The City's need for improvements to its Human Resources information systems has been recognized for some time. Some partial improvements were made between 1986 and 1994. Finally, in 1994, City Council approved and funded a project to provide an integrated system. To implement this, in February 1995, the City selected the Human Resources (HR) module of the SAP R/3 enterprise resource planning system. This module comprises both payroll and Human Resources functions and the implementation plan was to deliver an integrated payroll and Human Resources information system, within an approved budget of \$1,889,000, by the second quarter of 1997.

#### **Users' Requirements**

SAP is a very demanding technology and the implementation proved difficult. There are numerous cases of other organizations encountering complications with their SAP developments. The City, like many organizations, did not meet the planned delivery date. To complicate matters, by December 1997, the existing payroll function had emerged as a high priority for Year 2000 corrective action. A decision was made to set aside the effort to implement the Human Resources function of SAP R/3 and implement only what was necessary to support the payroll requirements.

#### **Payroll Requirements**

The payroll portion of the project was completed in July 1999 and the payroll system as implemented meets the identified user requirements.

To deliver the payroll function, the full project budget of \$1,889,000 was spent. In addition, the City allocated 10 staff resources for an approximate total of 40 person years over the life of the project, which, along with the costs of funding, bring the project's full costs to approximately \$4.4 million. This investment in staff time was a conscious decision by management to reduce consulting costs and establish some in-house expertise with SAP.

The costs of operating the new payroll system are greater relative to the original mainframe payroll. In 1999, the total increase in annual operating costs was \$570,141 when compared to the mainframe. Given the higher costs of operating the payroll, we have recommended that management explore opportunities for improving the effectiveness of the SAP system. In particular, management should revisit the option of implementing within the SAP system the gross to net processing now outsourced to ADP. In addition, management should investigate ways to deploy the SAP technical support staff more efficiently.

#### Human Resources Requirements

The Human Resources Management requirements, which were the original reason for undertaking this project, remain for the most part outstanding. In September 1999, Management Committee, when reviewing a proposal to upgrade the software and implement the Human Resources functionality, decided not to proceed with this initiative due to municipal restructuring in 2000.

Our recommendations capture the following key "lessons learned" from the HRMIS project that have future value for the City. The City's IT planning process should take into account the City's capability both to develop and maintain complex state-of-the-art systems. The City's new system development project methodology, which represents a distinct advance, should utilize a business case for tracking and reporting the project's progress, for managing the project's risks, and for guiding decisions on the development. The business case should include the full costs of the development, including staff and funding costs, in addition to the external disbursements.

#### Controls Over the Confidentiality, Integrity, and Availability of Information

The Office of the City Auditor retained the services of consultants Ernst and Young to assess the controls over the confidentiality, integrity, and availability of information. The City is at the stage where the SAP R/3 system is stabilizing and control environment issues must be addressed. Ernst and Young's recommendations will assist the City of Ottawa in increasing control over business processes and maximizing the total return on the system investment.

Based on the work performed by Ernst and Young, and our own work, our conclusion is that, the controls over the confidentiality, integrity, and availability of personnel and payroll information are not adequate. A fundamental deficiency is the full, unrestricted access to SAP that has been granted to a number of people. With such access, the integrity of the system that produces the payroll may be compromised.

The City did not fully implement the automated security controls provided by the SAP system and, therefore, must rely on manual procedures to detect unauthorized payroll transactions and changes to master data. In our opinion, the manual procedures do not fully address all the exposures and, moreover, there is a lack of a segregation of duties that compromises the integrity of the manual audits and reviews performed. Not only are manual procedures more expensive but “best practices” demonstrate that automated controls are typically more reliable and efficient.

The City does not have a disaster recovery plan for its HRMIS although some of the components of such a plan are in place.

Ernst and Young’s recommendations address the urgent need for the City to restrict access to the SAP system, ensure that appropriate and adequate segregation of duties exists, formalize its current disaster recovery plan and replace manual procedures with automated controls that are both more efficient and reliable.

#### **Accuracy and Timeliness of the Processing**

The City’s payroll process works well overall, producing a payroll every week of the year. Over the course of a year, the system prepares more than 75,000 individual pays and transacts gross expenditures of approximately \$115,000,000. Although payroll is overall processed on a timely and accurate basis, our testing revealed one issue around the accuracy of the master file data and a few errors in individual pay accounts. While not material to the City, these errors were systemic in nature. We understand that management is taking steps to address them.

#### **Management Comment**

The Commissioner of Corporate Services and the City Treasurer have provided a joint response to this audit report. It is in two parts - a general response and responses to each of the detailed recommendations. Both parts are included in full in the audit report. The general response is also included below as part of this submission under “Input from the Departments of Finance and Corporate Services”. The comments on the detailed recommendations are repeated in the summary of recommendations (Document 1).

By and large, management accept the majority of the recommendations in the report. However, as the management response makes clear, they have reservations with the tone of the report and some of the assertions therein. Given the timing of the receipt of this response, we had no time to review it fully with management. Unusually, therefore, we are obliged to add the following notes on management’s response.

- . We can see no real evidence to sustain the comment that the City is 80% along the way to delivering a fully integrated HRMIS.

- Management comments on the status of controls tend to focus on the development period. However, both wage and salary payroll have been fully operational for over a year. The current control situation is not acceptable. Corrective action is now necessary. The fact that payroll testing found only a few small errors should not be taken to mean that known control weaknesses should not be addressed.

## Input from the Departments of Finance and Corporate Services

The following input by way of general comments on the report have been provided jointly by the Commissioner of Corporate Services and the City Treasurer.

“Management is disappointed with the tone of the audit report. While the overall conclusion is positive, there are many aspects of this report that require a more extensive management comment than would normally be the case. The auditor’s report set out three questions to be answered during the audit. Based on our review of the audit results, and based on our knowledge of the system/project, we believe the answers to those three questions are as follows:

- 1 Have the user’s requirements been met?

Although not fully met at this time, much of the effort to meet requirements has been implemented, significant additional capabilities are already in the system, and relatively little effort would be required to finalize the functionality originally scoped.

- 2 Are controls over the confidentiality, integrity, and availability of information adequate and efficient?

As we move from a development to a sustained mode of operation, access controls are being reviewed and adjusted. The control framework used during development was appropriate. The revised framework being implemented also provides appropriate controls.

- 3 Is the processing of the payroll accurate and timely?

The new HRMIS system produces an accurate and timely payroll. There are some exceptions which are typically detected and corrected by staff through the control processes that are in place.

Our general comments in support of these conclusions follow.

### **Cost of the project and what was delivered (User Requirements)**

The Auditor’s report implies that \$4 million was spent simply to obtain a payroll system. The report goes on to indicate that annual operating costs have increased by \$570,141 when

compared to the cost of the old payroll system. In looking at acquisition and support costs, the report fails to give appropriate recognition to the scope of the SAP system. The SAP system is not a payroll system, it is an enterprise wide business system with a payroll component. The expenditures for acquisition and support while significant, will become more cost effective as additional functionality is implemented.

The SAP project has delivered more than just a payroll system, contrary to suggestions in the Auditor's report. Configuring the initial data and the basic functionality currently in place represents 80% of the effort required to deliver a fully integrated HRMIS system, including both payroll and HR functionality. The remaining HR functionality referred to by the auditor is part of the software package originally acquired. The department fully intended to roll out this additional functionality in the year 2000 utilising primarily existing staff resources within the SAP Support Team. Municipal restructuring has deferred completion of this initiative at this time.

The internal SAP Support staff support more than just payroll and given the nature of the system being supported it is inappropriate to equate the SAP support costs to the costs involved in supporting the former mainframe based payroll system. The staffing of support resources is intended to support both existing and future expanded HR functionality. The staffing allows the corporation to manage risk previously experience resulting from a shortage of SAP expertise, to complete the payroll project (including automating controls) and to complete the roll out of additional HR functionality with no additional internal support requirements. In addition, these resources which have been developed will serve the organization well as a spring board for moving to the new City which has adopted the SAP system as the system of choice.

The comment that operating costs are increased due to the use of manual audit controls is an unsupported comment, given that no new staff resources were added to the complement performing these "manual" audit controls. We are doing more with the same resources.

### **Access controls/segregation of duties**

We agree with the audit conclusion that system access controls require attention. While we agree that the situation needs to be changed now that the system has stabilized, it is our opinion that the internal auditor's very negative statements in the executive summary could have been framed with some context. Furthermore, we believe that the issue of unrestricted access has unnecessarily resulted in broader conclusions on segregation of duty which may not be justified.

The internal auditor's statements in the executive summary do not fully reflect the justification for providing more general access during the period of transition and the auditor's report does not give proper credit to the fact that manual audit controls were in place to identify who had access to the system and what changes were being made. We believe that Ernst & Young's comments regarding priorities during system development should have been given more prominence in the summary report.

The Ernst and Young section of the report which deals with this issue makes the following statement “To meet the target implementation date, priorities have to be set aside and sacrifices made. Often, implementation security and controls is a lower priority than implementing the appropriate functionality. Systems such as SAP are designed to evolve over time to meld with the changes and the uniqueness of individual organizations. “Ernst and Young’s conclusion is that *“Overall, the SAP R/3 application (system) security controls are not adequate; therefore, the City must rely on the manual, people process controls to detect unauthorized transactions or changes to master data.”*”

During the system implementation and stability period, the more general use of unrestricted access was required to enable staff to “troubleshoot” changes to the system on an urgent basis so that the payroll could be delivered. Management recognizes that this is not a sustainable position and action has been to restrict wide-open access to one user in the future. Development and testing to remove access is almost complete and it is expected that the recommendation will have been implemented in a very short time frame.

It is management’s opinion that the control methodology used during implementation was justified at the time and that manual and automated controls were in place and operating effectively to detect unauthorized transactions. Reports were produced and reviewed by independent personnel that showed all changes made to master file data. Any changes that may have been made by those with unrestricted access were subject to our labour intensive audit procedures. This mitigated the risk presented by the unrestricted access to a limited number of people. On this basis, we are concerned with the auditors general conclusion that *“ the manual procedures do not fully address all the exposures and, moreover, there is a lack of segregation of duties that compromises the integrity of the manual audits and reviews performed.”*

Beyond the access issues, segregation of duty issues do exist, however other controls were in place to mitigate risks. The summary report should have provided the following links regarding the work undertaken by the auditors:

- a Ernst & Young’s engagement was to review system controls. Their comments indicated that while issues had been found, manual controls could significantly reduce the risk of these issues. The internal auditors were to test the controls.
- b The internal auditors then tested controls and the test results were positive.

### **Inefficiency of Manual Controls**

We agree that in some instances manual controls may not be as efficient or reliable as automated controls. However, during system development, it was management’s opinion that the use of extensive manual audits was required to allow staff to gain an in depth knowledge of the system. The use of automated controls while more efficient may be problematic if these controls are not implemented and tested properly. As noted in R15, the

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current “audit” process dramatically reduces the risk of inaccurate, invalid and incomplete information being processed and that therefore, changes to eliminate audit procedures should be carefully reviewed to ensure that compensating controls are in place prior to implementing the change. Management agrees with this comment and will exercise due care in any move to replace manual audits with automated controls.”

### **Disposition**

The Commissioner of Corporate Services to implement upon approval.

### **List of Supporting Documentation**

- Document 1     Audit Recommendations and Management Responses
  
- Document 2     Post-Implementation Review of the Human Resources Management Information System (HRMIS) (Distributed separately and on file with the City Clerk)

## Part II - Supporting Documentation

Document 1

### AUDIT RECOMMENDATIONS AND MANAGEMENT RESPONSES

Words in parentheses [ ] have been added to Ernst and Young's recommendations to help understanding when read outside the text of the report.

- R1 That the Commissioner of Corporate Services pursue the feasibility of implementing the gross to net processing now outsourced to ADP Payroll Technologies within the SAP system.**

*A formal assessment of the costs incurred versus the benefits received of implementing SAP to net is of dubious value in the present governance environment.*

*The ability to implement net payroll processing within SAP is dependent on upgrading from the current 3.1H release to the 4.6 release level of SAP. SAP has informed staff that the upgrade would require \$500,000 in consulting support alone, and the implementation of net payroll would be in addition to that.*

*In the meantime, the system as implemented, including use of the third party payroll service provider to produce the net payroll, is working relatively effectively and efficiently.*

- R2 That the Commissioner utilize the ISB SAP Project Team to improve the efficiency of the payroll process by providing more automated support to replace manual procedures.**

*Staff are undertaking to provide additional automated control processes and to optimize functions and processes within the full HRMIS (ie not limited to payroll) within the current environment and using existing resources.*

- R3 That the Commissioner of Corporate Services ensure that the City's standard project management process and system development life-cycle methodology include a thorough and realistic assessment of the City's capability both to develop and to maintain complex, state-of-the-art systems.**

*Agreed. The City's software project management process is part of the system development life-cycle methodology. (Refer to section 3.0 of the SDLC detailed framework). The methodology does call for the types of assessments proposed by this audit. Specifically:*

- . *Management reviews of the business case and feasibility study;*
- . *Ensuring that option analysis is business-driven;*
- . *Conducting cost/benefit analysis (including operating and maintenance costs);*
- . *Organizational impact analysis and training needs assessments; and*
- . *Risk assessment.*

*While we agree with the Auditor's recommendation as it pertains to future projects, it should be noted that the City's SDLC was only developed about two years after the SAP project was initiated so that the SAP risk assessment was not as formal and rigorous as it otherwise would have been. By the time the SDLC was in place, the struggle to implement SAP was focused on specific technical and logistical issues and Y2K deadlines as opposed to assessing the City's overall capability and capacity to handle a SAP implementation.*

- R4 That the Commissioner of Corporate Services ensure that the City's information system development life-cycle methodology incorporates the use of the business case for tracking and reporting on the project's progress in achieving its objectives, for managing the project's risks, and for guiding decisions on the development.**

*Agreed. The City SDLC does incorporate the development of a business case for a systems project as well as conducting a project risk assessment. The methodology will be reviewed and where necessary upgraded to allow for tracking and updating of the business case, as well as monitoring of the risks, at appropriate phases. The quality assurance sections will also be reviewed to ensure there is an oversight process in place for large-scale projects.*

- R5 To strengthen the City's information system development life-cycle methodology the Commissioner of Corporate Services should ensure that the methodology is revised to ensure that the costs specified in the business case include staff costs and the cost of funding the project. These costs should be considered in decisions on the type of technology to be acquired and whether to make or buy the system, as well as in the estimation of the system's total costs over its life-cycle.**

*Agreed. The methodology does specify that the cost of personnel should be included in the overall project costs. Please refer to page 26 of the SDLC detailed framework. IT staff costs were included in Y2K system projects.*

- R6 That the access for these users [with open access rights] be reviewed and restricted, where possible, and [Quality Assurance System] be "locked" down.**

*Agreed. During system implementation, the more general use of unrestricted access was required to enable staff to “troubleshoot” changes to the system on an urgent basis so that the payroll could be delivered. Management recognizes that this is not a sustainable position and action has been to restrict wide-open access to one user in the future. Development and testing to remove access is almost complete and it is expected that the recommendation will have been implemented in a very short time frame. QAS has been “locked” down in March of 2000.*

- R7 That the City eliminate development/configuration access in both the Production and Quality Assurance environments. Transactional access should also be modified to provide display only access in Production. In situations where support team members require write access (i.e., non-transportable configuration changes), appropriate compensating controls need to be identified and enforced.**

*Agreed. Development/configuration access in Production and QA has been eliminated. See R6 regarding transactional access.*

- R8 That consideration be given to adjusting the start-up parameters [for the SAP system], as identified in the detailed matrices provided to management.**

*Agreed. This recommendation was implemented in March of 2000, with the exception of minimum password length and autologoff. With respect to autologoff, reliance is placed on the network screen saver to protect information.*

- R9 That the City determine if compensating controls are sufficient to mitigate the inherent risks of a lack of segregation of duties. Should the compensating controls be inadequate, the relevant profiles should be adjusted. Additional security reports have been provided that will assist the City in identifying and reviewing the adequacy of segregation of duties.**

*The additional security reports provided were not useful in that they reported much broader access than is actually available to staff. As the reports are voluminous, staff are investigating methods to obtain a current result.*

*Internal controls exist to compensate for the apparent lack of control in the user security profiles. These controls include well defined roles and responsibilities segregating incompatible functions, transactional audits of data entered, and a reasonableness review of payroll results by staff who do not have ability to record Time and Pay related data.*

- R10 That the City reconsider executing the correction [documented by SAP in release note #0038705] and reassess the security concerns identified in this document [detailed security report provided to management].**

*Management has indicated its agreement to execute the fix after appropriate testing. The synchronization issue was discovered by management when viewing the audit results. Management has not “declined” to execute the suggested corrections.*

- R11 That the City discuss the access levels granted with the respective departments to determine if the users’ rights are inappropriate. If the access is deemed to be excessive, the users’ rights should be modified.**

*Security profiles were developed and access granted to meet users functional needs to do his/her job. Departmental access is limited to three functional areas - Fire Services Administration, ERS Administration and Operations Branch Administration, that directly support the HR/Payroll function and their access is restricted to their respective Organizational Units. All other users fall within Corporate Services, Human Resources Branch or Corporate Finance.*

- R12 That management build upon the steps already taken to formally document a disaster recovery plan for SAP and the City’s other critical systems.**

**The plan should include procedures for future processing and restoration of historical data. It should also enable recovery following a localized disaster. Procedures should also be developed that identify how processing is to occur on an interim basis and how full data center operations would be restored.**

*The Disaster Recovery Plan currently in place, including physical separation in two pavilions of back up servers, is considered to be appropriate to the level of risk. Backup and restore procedures are in place. Backups are performed on appropriate daily and weekly cycles. Restores have been fully tested.*

*The requirements of a more comprehensive Disaster Recovery Plan will be taken into consideration in the design of the new City of Ottawa infrastructure, including ensuring that the primary and backup servers are located remote from each other.*

- R13 That the training needs of the City employees in HR-related roles be reevaluated with a particular focus on understanding the impact of SAP on the business processes. In addition, data entry instructions need to be developed in more detail.**

***Note: It is our understanding that the City intends to address this concern by developing refresher training courses and updating the new manuals beginning in the month of April.***

*Agreed.*

- R14** That the existing policies and procedures be rewritten as required to reflect the change in business flows due to the implementation and stabilization of SAP. The objective of the revised documentation should be to cover both business and system tasks and should include a description of the interactions between the departments/ branches and the integration points in the system, as well as defining who is responsible for each process. Once complete, the policies and procedures should be communicated to the users.

*Note: It is our understanding that the City is intending to begin the process of updating existing policies and procedures within the next few months.*

*Agreed.*

- R15** That the City consider automating some of the manual controls and replacing detective-monitoring activities with preventative, technology-driven controls. Sample “audits” may also be utilized in place of full scale “audit” procedures.

**It should be noted that the current “audit” process dramatically reduces the risk of inaccurate, invalid and incomplete information being processed. Therefore, changes to eliminate audit procedures should be carefully reviewed to ensure that compensating controls are in place prior to implementing the change.**

*The description of the audit process does not accurately describe current and past practices. As a result, perceived inefficiencies may be overstated.*

*The City is already using automated tools for some of the data verification, and the system, as configured, already offers extensive preventative controls. However, these do not prevent human error in data entry and that is where the transactional audits (verifying data entered to source documents) have proven and continue to prove to be very useful. These audits are automated to some extent - control totals reports where appropriate for time entry, audit logs, but still rely on manual data verification.*

*Given the risks involved with a new and sensitive implementation, and a recognition of the security risks presented by the users who have SAP\_ALL, the extent of audits to date is considered to be appropriate and effective in detecting data entry errors.*

*The nature and extent of audits to be carried out in future will be reviewed by staff to eliminate any redundancy and to take advantage of any automated techniques as they are developed.*

*As the Auditor notes in the recommendation, changes to eliminate “manual” audit processes should be carefully reviewed to ensure compensating controls are in place prior to the change.*

- R16** That management consider implementing more of the HR-related functionality. Depending on the functionality and components selected for implementation, the City may see long-term improvements that more than offset the short-term costs of the software and process re-design.

*See general management response.*

- R17** That the roles and responsibilities for maintaining master data be reviewed. For each of the potential incompatibilities identified in the security reports we previously provided to the City, we recommend that compensating controls be identified to strengthen segregation of duties, or the profiles and/or their allocation to end-users be redesigned.

*Note: It is our understanding that the City has been working to clarify the roles and responsibilities associated with master data maintenance and that, where applicable, further security controls are being put in place at the subtype level (e.g., restrictions on garnishment orders in infotype 0014).*

*Roles and responsibilities for master file maintenance in both the areas of Benefits Administration and Fire Services administration are already under review by staff with a view to clarification of responsibilities and streamlining of processes. Ernst & Young identified some potential incompatibilities of access to data, making a distinction between Master file (HR) and transactional (Payroll). The incompatibilities were examined briefly but the current structure reflects the overall design of City processes. Staff will give fuller consideration to whether changes are required in the assignment of duties. See R10 regarding data issues.*

- R18** That SAP security be reviewed and appropriately configured to abide by the Freedom of Information and Protection of Privacy Act (FIPPA) and the Personal Health Information Act (PHIA). To meet this requirement, access to the following infotypes should be restricted:

**IT0002 - Personal Data, contains employee SIN**

**IT0006 - Address (the home address may be secured through the subtype)**

**IT0008 - Basic Pay**

**IT0009 - Bank Details**

**IT0014 - Recurring payments and deductions/payments**

**IT0015 - Additional payments**

**IT0021 - Family/Related Persons (e.g., same sex spouse)**

**IT0083 - Leave Compensation**

IT0221 - Manual Cheque  
 IT0224 - Canadian Taxation  
 IT2001 - Absences

Display and write access restrictions should also be implemented on wage types related to garnishments, tax, WSIB, pay advances, severance pay and leave of absences (maternity, paternity, etc.).

*Note: It is our understanding that the City has started to review and secure data that should be restricted in accordance with the FIPPA and PHIA.*

*The Personal Health Information Act is not yet legislation. The City is under the Municipal Freedom of Information and Protection to Privacy Act (MFIPPA) and the basic tenet is that people are given access to the extent they require to perform their job. Access is restricted to a core group of staff supporting HRMIS, and user access profiles have been designed to be compatible with user roles and responsibilities.*

**R19** That the appropriate clock times be programmed/added to the [OPMS wage payroll] file prior to the information being uploaded into SAP.

*Note: It is our understanding that this issue was independently addressed by the City in April and that the program change has been tested and is now in production.*

*This issue and necessary corrective action was identified by staff prior to the audit, and the correction was applied in April, 2000.*

**R20** That a report on the use of this infotype [used to enter wage data] be produced and reviewed monthly. We also recommend that the segregation of duties issue whereby time administrators have access to payroll-related infotypes, be assessed. As a further control to ensure that unauthorized access to this sensitive infotype is prevented, management should consider limiting the security access to payroll only.

*Agreed. A review of all transactions on this infotype will be performed on a biweekly basis in conjunction with the payroll audits. The access to this infotype is consistent with the system design (ie. Restricted to processing payroll inputs for the OPMS), and is not available to Payroll staff.*

**R21** That the City negotiate with the service provider [of the FAMIS] to produce a complete error report [for posting of the payroll files]. Alternatively, the transactional file could be modified to identify all transactional errors, regardless of their frequency and order of appearance.

*The deficiencies in interface error reporting were noted and addressed by staff during the implementation phase for the upgraded FAMIS system. Response from KPMG (the service provider) was that fixing this deficiency would require a significant modification to the base program that would not be covered by the existing contract. While the current process of manually identifying and correcting posting errors is more time consuming than it should be, it was determined that the additional expense was not warranted. Subsequently, it has been determined that the FAMIS system is not the financial system of choice for the amalgamated City of Ottawa.*

**R22 That the Commissioner of Corporate Services establish a deadline, by which time all individuals who are no longer active in the City will be classified correctly on the Master-file.**

*Agreed.*