



# Richmond City Council

*The Voice of the People.*

*Richmond, Virginia*

## OFFICE OF THE CITY AUDITOR

REPORT # 2012-03

AUDIT

Of the

### **Richmond Retirement System Payroll and Actuary Systems Audit**

September 2011

## OFFICIAL GOVERNMENT REPORT

*Richmond City Council*

### **OFFICE OF THE CITY AUDITOR**

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*Committed to increasing government efficiency, effectiveness,  
and accountability on behalf of the Citizens of Richmond.*

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# Executive Summary

The City Auditor's Office has completed an audit of information technology general controls and application controls for the Payroll and Actuary Systems supporting the Richmond Retirement System (RRS). The audit was conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS) and Control Objectives for Information and related Technology (COBIT) guidelines.

Internal Controls need significant improvement. The City of Richmond is implementing a new Enterprise Resource Planning (ERP) system. This will replace the City's existing administrative, financial and human resources systems along with the Retirement systems. The new ERP system is expected to streamline and improve many of City's financial and business operations. The Retirement systems are part of phase one along with Human Resources and Payroll and are scheduled to go live in February 2012. Due to this change, it was not meaningful to evaluate and recommend changes to the controls in the existing

partially automated existing Retirement system. Therefore, the audit recommendations address the inclusion of proper functionalities in the new system.

Most of the issues noticed are expected to be resolved with the implementation of the ERP system. The purpose of documenting observations in this report is to assist the Retirement Director and DIT management to assure inclusion of proper controls relating to RRS in the proposed ERP system.

The City Auditor's Office appreciates the cooperation of the Richmond Retirement System and DIT staff. Written responses are included at the end of the report. Please contact me for questions and comments on this report.



Umesh Dalal, CPA, CIA, CIG  
City Auditor

<b>#</b>	<b><i>COMPREHENSIVE LIST OF RECOMMENDATIONS</i></b>	<b><i>PAGE</i></b>
1	Upon implementation, verify that the proposed ERP has the functionality to: a. Adjust the benefit payments for retirees in the Smooth-Out plan b. Perform adjustments to the benefits payment based on overpayments c. Process healthcare terminations for age 65 d. Calculate and process retiree benefits adjustments for Social Security Disability and Worker’s Compensation e. Interface with the Time and Attendance module	5
2	Perform and document a risk analysis to determine the business risks and impacts of unexpected disruptions. This should be done prior to developing a COOP plan.	7
3	Develop a COOP plan that includes the following 10 essential functions: • Order of Succession; • Delegation of Authority; • Alternate Facilities; • Interoperable Communications; • Vital Records, Systems and Equipment; • Human Capital Management; • Training, Testing and Exercises; • Devolution; and • Reconstitution.	7
4	Define the SOD rules and upon implementation, ensure that the proposed ERP system has appropriate SOD controls so that each person has only access to the application functions needed for their job duties.	8
5	Change password standards on the Mainframe to match the City password policy. Also, incorporate strong password requirement for in the ERP system implementation.	8
6	Upon implementation, verify that the proposed ERP system has the functionality to calculate retirement contributions based on the eligible gross pay.	9
7	Upon implementation, ensure that the proposed ERP system has the audit trail functionality to capture significant events, including: • Activities performed by users with special privileges • Changes to significant files or security configuration settings.	9
8	Require DIT to ensure the data flow and Retirement system interfaces are documented for the proposed ERP system.	10
9	Require DIT to ensure the proposed ERP system has adequate interface controls and reports related to data input and output record counts.	10
10	Require DIT to ensure the proposed ERP system interfaces with RBHA, RPS, and ICMA to have the ability to send, receive and process files.	10

- 11      Require DIT to develop formal procedures to cover the process and controls related to system interfaces, inputs, processing, and outputs that include:      11
- Interface controls - Designed to ensure accuracy, completeness and integrity of the data being transferred
  - Input controls - There are a number of different types of input controls including validations, edit checks, tolerance limits, and screen layout design
  - Processing controls - Include system calculation controls, exception reports, reconciliation/balancing controls etc.
  - Output controls – These include outbound interface controls, reports etc.

## **Summarized Report**

### ***Introduction***

The City Auditor's Office has completed an audit of information technology general controls and application controls for the Payroll and Actuary Systems supporting the Richmond Retirement System (RRS). This audit covers the 12-month period ended December 31, 2010. The audit was conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS) guidelines. Those standards require that the audit is planned and performed to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. Auditors believe that the evidence obtained provides a reasonable basis for their findings and conclusions based on the audit objectives. The auditor also used Control Objectives for Information and related Technology (COBIT) guidelines.

### ***Audit Objectives***

To determine whether adequate IT general controls for access to programs and data, program changes and computer operations have been established by management to:

- ❖ Restrict access to properly authorized individuals
- ❖ Ensure that changes to existing systems/applications are authorized, tested, approved, properly implemented, and documented
- ❖ Ensure that system/application processing is appropriately authorized and scheduled, and deviations from scheduled processing are identified and resolved
- ❖ Ensure that the controls over the systems and related manual processes provide reasonable assurance that:
  - The data entered is complete, accurate, and valid
  - All data is processed completely and accurately
  - System output is protected and distributed properly
- ❖ System functionality supports the essential functions of the business process and operates efficiently

## ***Background***

The RRS offers pension services for current and former vested employees, retirees and its participating employers. For general employees, RRS administers two retirement plans:

- Defined Contribution 401(a) Plan (DC Plan)
- Defined Benefit Plan (DB Plan)

## ***Defined Contribution Plan***

As of July 1, 2006, membership in the DC Plan is mandatory for all new general employees hired or rehired on or after July 1, 2006, except for employees in the senior executive group as defined by section 78-341 of the City Code. For DC plan members, the City makes contributions on behalf of the members based on years of service. The retirement benefit will depend on the investment choices made by the member and market conditions.

## ***Defined Benefit Plan***

Members make employee contributions to the DB plan retirement account. Upon retirement, they receive a monthly benefit, which is determined by using a formula based on age, years of service and average annual creditable compensation of a member during the member's 36 consecutive months of creditable service in which such compensation was at the greatest amount or during the entire period of the member's creditable service if less than 36 months.

For sworn police and firefighters, in addition to DB plan and DC plan, RRS administers a Deferred Retirement Option Program (DROP) available only to members who qualify for unreduced retirement benefits. The sworn police and firefighters enrolled in the DB plan are eligible to participate in DROP unless they elect to participate in the DC plan.

The City Code defines requirements for vesting in the retirement plans. Members become vested after completing the required creditable service or attainable retirement age. Once vested, benefits are not forfeited even if termination of employment occurs before eligibility for retirement. The City Code also includes requirements for retirement age at which the members

can begin drawing benefits at reduced amount and the age when they can draw benefits without reduction. The RRS is supported by two systems:

- 1) Retirement Actuary System (Actuary System) and
- 2) Retirement Payroll System (Payroll System).

The Actuary System is used to track and maintain membership data for the current and retired members in the retirement plans. It tracks all the components of the member's service, salary history, plan membership, and the contribution history for each member. The Payroll System is used to track and process payroll for retired employees.

## **Observations, Conclusions and Recommendations**

### **Overall Conclusion:**

*Internal Controls need significant improvement. Most of the issues noticed are expected to be resolved with implementation of ERP system. The purpose of documenting observations in this report is to assist Retirement Director and DIT management to assure inclusion of proper controls relating to RRS in the proposed ERP system.*

During the audit period, the auditor noted significant control deficiencies over the selected internal controls relevant to the Actuary and Payroll Systems supporting the RRS.

The City of Richmond is implementing a new Enterprise Resource Planning (ERP) system. This will replace City's existing administrative, financial and human resources systems along with the Retirement systems. The new ERP system is expected to streamline and improve many of City's financial and business operations. The Retirement systems are part of the phase 1 along with Human Resources and Payroll and are scheduled to go live in January 2012. Due to this change, it was not meaningful to evaluate and recommend changes to the controls in existing partially automated existing Retirement system. Therefore, the audit recommendations address inclusion of proper functionalities in the new system.

The Retirement Department provided the business requirements for the ERP system. As per Retirement management, the new ERP system may address most of the recommendations identified by this audit.

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The following table provides a summary of the findings identified during the audit. The findings are classified into three categories (high, medium, and low) based on financial and security risk exposure:

<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
<p><i>RRS lacks effective Actuary and Payroll Systems :</i></p> <p>The current Retirement systems (Actuary and Payroll) do not support some of the ongoing business functions, and RRS has to rely on manual procedures that reduces productivity and increase business risks.</p> <p>According to RRS, the Retirement systems (Actuary and Payroll) are antiquated and the Department has to work around the systems' limitations to support business operations. Some of the key processes that are not supported by the current Retirement systems are:</p> <ul style="list-style-type: none"><li>❖ The Payroll system does not have the capability for performing adjustments to the benefits payment based on overpayments as there are no deduction codes set up in the systems to process the overpayments.</li><li>❖ The Actuary system does not process healthcare terminations for age 65.</li><li>❖ The Payroll system does not have the capability to calculate and process retiree benefits</li></ul>	<p><b>Risk Level: High</b></p> <p>The antiquated systems do not support the business objectives and could run the increased risk of a system failure. Also, antiquated systems are harder to integrate with other City and third-party applications.</p>	<ol style="list-style-type: none"><li>1. Upon implementation, verify that the proposed ERP has the functionality to:<ol style="list-style-type: none"><li>a. Adjust the benefit payments for retirees in the Smooth-Out plan</li><li>b. Perform adjustments to the benefits payment based on overpayments</li><li>c. Process healthcare terminations for age 65</li><li>d. Calculate and process retiree benefits adjustments for Social Security Disability and Worker's Compensation</li><li>e. Interface with the Time and Attendance module</li></ol></li></ol>

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<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
<p>adjustments for Social Security Disability and Worker's Compensation.</p> <ul style="list-style-type: none"><li>❖ For DBP members, the estimates for active employees and pension payments for retirees are calculated using the third party calculator (Actuary BENCALC spreadsheet) by keying the data required from the Actuary system. The Actuary system does not have the ability to calculate retirement benefits using formulas and Actuary data. The Actuary system does not have the ability to interface with the Time and Attendance module.</li><li>❖ The Smooth-Out retirement option pays a higher benefit before age 65 and a lower amount after age 65 (in comparison to the basic benefit), taking into account eligibility for full social security benefits as early as age 65. Benefit will reduce at age 65 regardless of when you become eligible to receive full benefits from social security. The Retirement Payroll system does not adjust the benefit payments for retirees in the Smooth-Out plan when they reach age 65 and have to be manually adjusted in the Payroll system.</li></ul>		

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<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
<p><i>Lack of Continuity of Operations (COOP) plan for RRS:</i></p> <p>Management has not identified and documented</p> <ul style="list-style-type: none"><li>❖ The business risks and impacts of unexpected disruptions</li><li>❖ The COOP plan</li></ul>	<p><b>Risk Level: High</b></p> <p>The RRS will not be able to resume the business operations and IT services in case of unexpected disruptions.</p>	<ol style="list-style-type: none"><li>2. Perform and document a risk analysis to determine the business risks and impacts of unexpected disruptions. This should be done prior to developing a COOP plan.</li><li>3. Develop a COOP plan that includes the following essential functions:<ul style="list-style-type: none"><li>• Order of Succession;</li><li>• Delegation of Authority;</li><li>• Alternate Facilities;</li><li>• Interoperable Communications;</li><li>• Vital Records, Systems and Equipment;</li><li>• Human Capital Management;</li><li>• Training, Testing and Exercises;</li><li>• Devolution; and</li><li>• Reconstitution.</li></ul></li></ol>

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<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
<p><i>Segregation of duties(SOD) roles and responsibilities not identified and documented:</i></p> <p>Management has not created a segregation of duties policy and procedures to identify, remediate, and maintain a separation of incompatible business functions. For example, the payroll Accountant roles should be segregated from the Fiscal Administrator.</p>	<p><b>Risk Level: High</b></p> <p>Without SOD controls, there is an increased risk associated with a process being compromised either maliciously or through human error.</p>	<p>4. Define the SOD rules and upon implementation, ensure that the proposed ERP system has appropriate SOD controls so that each person has only access to the application functions needed for their job duties.</p>
<p><i>Mainframe passwords do not conform to the password policy</i></p> <p>Weak password settings were noted for the Mainframe supporting the Retirement applications. The password settings for minimum length, history, expiration, complexity, and account revocation do not meet the standards outlined in the City's password policy.</p>	<p><b>Risk Level: High</b></p> <p>Without strong passwords, there is a greater potential for:</p> <ul style="list-style-type: none"><li>a. Gaining unauthorized access to the system by guessing the passwords and masquerading as other users.</li><li>b. Gaining access to sensitive data and copying them for personal gain or use by another company.</li><li>c. Making unauthorized changes to the system software, modules, or applications.</li></ul>	<p>5. Change password standards on the Mainframe to match the City password policy. Also, work with DIT to incorporate strong password requirement for in the ERP system implementation.</p>

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<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
<p><i>Retirement contributions inaccurately calculated for terminated employees</i></p> <p>In some cases, the employee termination date is not reported in a timely manner to the Retirement Actuary system. The retirement contributions were proposed for these employees by the Actuary system. Also, the contributions incorrectly calculated by the Actuary system as they are not based on the eligible gross pay for that pay cycle.</p> <p>As per management, manual audit procedures are in place to catch erroneous or excess contributions (e.g. contributions made on vacation payouts, late notification of terminations, etc.) and are deducted from the retirement contributions.</p>	<p><b>Risk Level: High</b></p> <p>Due to manual procedures, there is a risk of not catching the erroneous or excessive retirement contributions which could lead to overpayment of retirement contributions.</p>	<p>6. Upon implementation, verify that the proposed ERP system has the functionality to calculate retirement contributions based on the eligible gross pay.</p>
<p><i>Lack of audit trail:</i></p> <p>Sensitive actions (changes to member details, payroll data, etc.) performed by individuals with powerful application access are not logged and monitored in the Retirement Actuary and Payroll Systems.</p>	<p><b>Risk Level: Medium</b></p> <p>Without tracking data deletions and monitoring audit control logs, there is a risk that:</p> <ul style="list-style-type: none"><li>• Unauthorized changes to system data are not tracked and the employee making data changes will not be determined.</li><li>• Security violations and other activities such as unsuccessful login attempts are not logged, tracked and addressed</li><li>• Users cannot be held accountable for their actions.</li></ul>	<p>7. Upon implementation, ensure that the proposed ERP system has the audit trail functionality to capture significant events, including:</p> <ul style="list-style-type: none"><li>• Activities performed by users with special privileges</li><li>• Changes to significant files or security configuration settings</li></ul>

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**Richmond Retirement System (RRS)**

**Payroll and Actuary Systems Audit**

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What did the auditors find?	What is the risk?	How to mitigate the risk?
<p><i>Lack of interface controls</i></p> <p>There is no comprehensive documentation explaining the current interfaces between Retirement systems (Actuary and Payroll) and other City applications. Also, there are no interface controls in place to ensure the accuracy and completeness of the data transferred with upstream and downstream systems.</p> <p>The Actuary and Payroll systems do not have interfaces to electronically receive files from RBHA, RPS and ICMA. The new hires/terminations and payroll information is manually keyed into the Actuary and Payroll systems. The participant file and contributions file are uploaded to the ICMA website.</p>	<p><b>Risk Level: Medium</b></p> <p>There is a risk that data transfer between Retirement systems (Actuary and Payroll) and other upstream and downstream systems could lead to incomplete or inaccurate data.</p> <p>Manually keying in the information instead of electronically transferring the data increases the risk of keying errors and manual processing can lead to operational inefficiencies and errors.</p>	<p>8. Require DIT to ensure the data flow and Retirement system interfaces are documented for the proposed ERP system.</p> <p>9. Require DIT to ensure the proposed ERP system has adequate interface controls and reports related to data input and output record counts.</p> <p>10. Require DIT to ensure the proposed ERP system interfaces with RBHA, RPS, and ICMA and has the ability to send, receive and process files.</p>
<p><i>Actuary system does not have the functionality to calculate retirement benefits</i></p> <p>The Retirement Actuary System does not have the capability of calculating retirement benefits and adjustments using different formulas and actuary tables for different scenarios (retirement plan, payout options, worker's compensation, social security disability).</p> <p>Currently, the pension benefit calculations are performed using an excel based program (BENCALC) from the third party Actuary</p>	<p><b>Risk Level: Medium</b></p> <p>Manual data input could lead to data entry mistakes including mistyping, entering information in the wrong field and adds to costs and inefficiencies.</p> <p>Note: This issue will be addressed in the upcoming Retirement Sustainability audit.</p>	<p>None.</p>

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<b>What did the auditors find?</b>	<b>What is the risk?</b>	<b>How to mitigate the risk?</b>
consultants. The data required to calculate the payments are maintained in the Actuary system for City employees and need to be manually entered to the BENCALC program.		
<i>Lack of system documentation</i>  There is no system documentation explaining the processes and controls related to system inputs, processing and outputs.	<b>Risk Level: Low</b>  Without system documentation of the existing system functionality and controls related to the inputs, processing and outputs, making changes to these areas would be risky and could lead to inappropriate and inefficient use of system resources.	11. Require DIT to develop formal procedures to cover the process and controls related to system interfaces, inputs, processing, and outputs that include: <ul style="list-style-type: none"><li>• Interface controls - Designed to ensure accuracy, completeness and integrity of the data being transferred</li><li>• Input controls - There are a number of different types of input controls including validations, edit checks, tolerance limits, and screen layout design</li><li>• Processing controls - Include system calculation controls, exception reports, reconciliation/balancing controls etc.</li><li>• Output controls – These include outbound interface controls, reports etc.</li></ul>

*Legend:*

**High Risk** – Represents major deficiency resulting in significant level of risk. Immediate management attention is required.

**Medium Risk** – Represents control weakness resulting in an unacceptable level of risk that if left uncorrected may deteriorate to a high risk condition.

**Low Risk** - Control weakness exists but the resulting exposure is not significant.

**MANAGEMENT RESPONSE FORM - DIT**

**Richmond Retirement System - APPENDIX A**

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#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
1	<p><i>Upon implementation, verify that the proposed ERP has the functionality to:</i></p> <p><i>a. Adjust the benefit payments for retirees in the Smooth-Out plan</i></p> <p><i>b. Perform adjustments to the benefits payment based on overpayments</i></p> <p><i>c. Process healthcare terminations for age 65</i></p> <p><i>d. Calculate and process retiree benefits adjustments for Social Security Disability and Worker's Compensation</i></p> <p><i>e. Interface with the Time and Attendance module</i></p>	Y	<p>The ERP will address the noted functionality as follows:</p> <p>(a) A data element will be set-up for all Smooth-Out payments that will be date tracked to expire on a predetermine criteria or an override date entered by the Retirement office.</p> <p>(b) The system allows for adjustments of overpayments to multiple prior period payments,</p> <p>(c) Healthcare payments will trigger a life changing event at age 65 to terminate the benefit.</p> <p>(d) The system will not calculate Social Security or Worker's Compensation benefits but will have a data element to date track the payments and to terminate the payments based upon predetermine criteria or an override date entered by the Retirement Office.</p> <p>(e) All Leave Without Pay (LWOP) will be tracked in the Time and Attendance module to accurately calculate Creditable Service.</p>
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
2	<p><i>Perform and document a risk analysis to determine the business risks and impacts of unexpected disruptions. This should be done prior to developing a COOP plan.</i></p>		
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
3	<p><i>Develop a COOP plan that includes the following 10 essential functions:</i></p> <ul style="list-style-type: none"> <li>• <i>Order of Succession;</i></li> <li>• <i>Delegation of Authority;</i></li> <li>• <i>Alternate Facilities;</i></li> <li>• <i>Interoperable Communications;</i></li> <li>• <i>Vital Records, Systems and Equipment;</i></li> <li>• <i>Human Capital Management;</i></li> <li>• <i>Training, Testing and Exercises;</i></li> <li>• <i>Devolution; and</i></li> <li>• <i>Reconstitution.</i></li> </ul>		
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
4	<i>4. Define the SOD rules and upon implementation, ensure that the proposed ERP system has appropriate SOD controls so that each person has only access to the application functions needed for their job duties.</i>	Y	Security for the ERP System is role based and will allow the business unit to define Separation of Duty (SOD) rules based upon business processes.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
5	<i>Change password standards on the Mainframe to match the City password policy. Also, incorporate strong password requirement for in the ERP system implementation.</i>	Y	The ERP Application is a hosted solution that allows for configuring the password to expire every preset number of days. The password can be upper and lower case letters, numbers and special characters. All passwords are a minimum of 8 characters with a maximum of 32.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
6	<i>Upon implementation, verify that the proposed ERP system has the functionality to calculate retirement contributions based on the eligible gross pay.</i>	Y	The ERP Application will calculate retirement contributions based upon pay elements that are defined as the bases for creditable compensation. This calculation will take place for both Defined Benefit and Define Contribution plans.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
7	<i>Upon implementation, ensure that the proposed ERP system has the audit trail functionality to capture significant events, including:</i> <ul style="list-style-type: none"> <li>• <i>Activities performed by users with special privileges</i></li> <li>• <i>Changes to significant files or security configuration settings.</i></li> </ul>	Y	The ERP application has the capability of capturing all changes to the system by date, time and the login id of the individual making the change.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
8	<i>Require DIT to ensure the data flow and Retirement system interfaces are documented for the proposed ERP system</i>	Y	All interfaces have been documented in draft form for conversion by the System Integrator (SIS). The interfaces include the Account Clearing House File(ACH), Positive Pay (Check File) files for Wells Fargo Bank and ICMA for 401A Contributions.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
9	<i>Require DIT to ensure the proposed ERP system has adequate interface controls and reports related to data input and output record counts</i>	Y	Interface requirements have been documented in draft form and given to the System Integrator, SIS. Analysis sessions, requirements validations, prototyping, fit gap analysis and testing, will allow the business unit to determine if adequate controls are in place.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
10	<i>Require DIT to ensure the proposed ERP system interfaces with RBHA, RPS, and ICMA to have the ability to send, receive and process files</i>	Y	This requirement to receive and send files to Richmond Behavioral Health Authority (RBHA) and Richmond Public Schools (RPS) has been documented and will be included in the initial implementation. ICMA was addressed in recommendation number 8.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
11	<p><b>Require DIT to develop formal procedures to cover the process and controls related to system interfaces, inputs, processing, and outputs that include:</b></p> <ul style="list-style-type: none"> <li>• <b>Interface controls - Designed to ensure accuracy, completeness and integrity of the data being transferred</b></li> <li>• <b>Input controls - There are a number of different types of input controls including validations, edit checks, tolerance limits, and screen layout design</b></li> <li>• <b>Processing controls - Include system calculation controls, exception reports, reconciliation/balancing controls etc.</b></li> <li>• <b>Output controls – These include outbound interface controls, reports etc.</b></li> </ul>	N	<p>Oracle will provide business users and technical documentation for each of the modules. SIS will provide documentation for all setups and configurations as it pertains to the City's implementation. DIT will be responsible for insuring that the application meets the requirements and all requested reporting is available before delivery for testing by the business unit. Any formal procedures related to data integrity, accuracy, completeness, reconciliation and balance controls will be done by the business unit. DIT will assist with any of the technical aspects if requested.</p>
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			1-Feb-12
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	System set-up and configuration currently in progress.		

**MANAGEMENT RESPONSE FORM - RRS**  
**Richmond Retirement System - Appendix B**

**Payroll and Actuary Systems Audit Report 2012-03**

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
1	<p><i>Upon implementation, verify that the proposed ERP has the functionality to:</i></p> <p><i>a. Adjust the benefit payments for retirees in the Smooth-Out plan</i></p> <p><i>b. Perform adjustments to the benefits payment based on overpayments</i></p> <p><i>c. Process healthcare terminations for age 65</i></p> <p><i>d. Calculate and process retiree benefits adjustments for Social Security Disability and Worker's Compensation</i></p> <p><i>e. Interface with the Time and Attendance module</i></p>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Issue identified by RRS staff in July 2009, and the Auditor was informed upfront of the issue during initial audit meetings. Despite the limitations of the current Payroll and Actuary systems, the RRS has compensating manual internal controls in place to ensure the accuracy of benefit payments and adjustments, collections of overpayments, and healthcare terminations. The accuracy of these payments and calculations have been verified by monthly payroll audits performed by the RRS's external actuary, which revealed zero errors. Internal controls over these processes are documented in the following Standard Operating Procedures: FU-22, FU-37, and FU-42. Items a) - e) are listed on the ERP System requirements document and received a response that Oracle will include these functionalities. The requirement numbers are as follows: a) - RT. 69; b) - RT. 48, RT. 57, RT. 59; c) - RT.70; d) - RT. 88; e) RT.2 - RT.30. Per Oracle SIS and DIT Project Leader, "the ERP System will have an element setup for the Social Security portion of the benefit that will expire on a predetermined termination date; the System will allow for adjustments of over payments in subsequent months; a life event would be triggered to terminate the benefit at the end of the month on which the participant turns age 65; an element will be setup to handle the tracking of the benefit adjustment with a termination date; and employee time will be tracked to ensure that creditable service is calculated correctly factoring in any lost time".		
2	<p><i>Perform and document a risk analysis to determine the business risks and impacts of unexpected disruptions. This should be done prior to developing a COOP plan.</i></p>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Draft produced 6/27/11; final version to be released on 9/16/11.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	The risk analysis is inclusive in the COOP plan. A draft was issued to the auditor for inclusion in the audit report on June 27, 2011. We expect to release a finalized version of the COOP plan on September 16, 2011.		
3	<p><i>Develop a COOP plan that includes the following 10 essential functions:</i></p> <ul style="list-style-type: none"> <li>• <i>Order of Succession;</i></li> <li>• <i>Delegation of Authority;</i></li> <li>• <i>Alternate Facilities;</i></li> <li>• <i>Interoperable Communications;</i></li> <li>• <i>Vital Records, Systems and Equipment;</i></li> <li>• <i>Human Capital Management;</i></li> <li>• <i>Training, Testing and Exercises;</i></li> <li>• <i>Devolution; and</i></li> <li>• <i>Reconstitution.</i></li> </ul>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Draft produced 6/27/11; final version to be released on 9/16/11.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	The nine essential functions listed above are included in the RRS's COOP plan. A draft was issued to the auditor for inclusion in the audit report on June 27, 2011. We expect to release a finalized version on September 16, 2011.		
4	<p><i>4. Define the SOD rules and upon implementation, ensure that the proposed ERP system has appropriate SOD controls so that each person has only access to the application functions needed for their job duties.</i></p>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Issue identified by RRS staff in July 2009, and the Auditor was informed upfront of the issue during initial audit meetings. The RRS made several attempts to set SOD rules on current Retirement Payroll and Actuary systems with DIT, however were limited by Mainframe System capabilities. The RRS has compensating manual internal controls in place to ensure the accuracy of benefit payments and adjustments. SOD controls will be established upon implementation of the ERP System. Per Oracle SIS and DIT Project Leader, "the ERP system is predicated on role based responsibility only allowing those assignments that work with the various aspects of the System to have access".		

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
5	<b>Change password standards on the Mainframe to match the City password policy. Also, incorporate strong password requirement for in the ERP system implementation.</b>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Per DIT Director, Annette Flowers, "I do not believe the password issue should be flagged as high. A misconfiguration was created when the mainframe was transitioned to the hosting provider causing the settings to differ from what existed prior to the transition. As a result, our password settings were set to the provider's standard settings as opposed to the settings in our policy. The mainframe password settings have been corrected to comply with City policy. The settings in question were only the frequency that passwords expire and the amount of password history. Policy dictates passwords should expire every 40 days and we were set to 60 days. Policy also dictates that 24 generations of password history should be maintained and we were set up for 10. All other settings for length, complexity, and lockout meet or exceed our policy".  This issue will be corrected with the implementation of the ERP System. Per Oracle SIS and DIT Project Leader, "the Oracle security features allow for strong password combinations based on profile setups".		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
6	<b>Upon implementation, verify that the proposed ERP system has the functionality to calculate retirement contributions based on the eligible gross pay.</b>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Issue identified by RRS staff in July 2009, and the Auditor was informed upfront of the issue during initial audit meetings. The RRS has compensating manual internal controls in place which ensure the accuracy of retirement contribution calculations. Internal controls over these processes are documented in the following Standard Operating Procedures: FU-4, FU-6, FU-11, FU-30, and FU-31. Item was listed on the ERP System requirements document and received a response that Oracle will include this functionality. The requirement number is as follows: RT.82. Per Oracle SIS and DIT Project Leader, "the ERP System will calculate contributions based upon the defined creditable compensation elements."		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
7	<b>Upon implementation, ensure that the proposed ERP system has the audit trail functionality to capture significant events, including:</b> <ul style="list-style-type: none"> <li>• Activities performed by users with special privileges</li> <li>• Changes to significant files or security configuration settings.</li> </ul>		
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Per Oracle SIS and DIT Project Leader, "the ERP System tracks last updated by date, time, and person."		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
8	<b>Require DIT to ensure the data flow and Retirement system interfaces are documented for the proposed ERP system</b>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
			Documented in ERP System Interface Documents. Per Oracle SIS and DIT Project Leader, "the interface for the retirement portion of the ERP has been identified and documented in the Interface Documents".
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
9	<b>Require DIT to ensure the proposed ERP system has adequate interface controls and reports related to data input and output record counts</b>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Per Oracle SIS and DIT Project Leader, "the controls for each interface have been documented in the Interface Documents to include record counts and total dollar received or transmitted".		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
10	<b>Require DIT to ensure the proposed ERP system interfaces with RBHA, RPS, and ICMA to have the ability to send, receive and process files</b>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION

FRS-01	<p>Issue identified by RRS staff in July 2009, and the Auditor was informed upfront of the issue during initial audit meetings. Compensating manual internal controls are in place to ensure the accuracy of contribution data and calculations as well as the RRS's Actuary data. Internal controls over these processes are documented in the following SOPs: FU-4, FU-5, FU-6, FU-11, FU-17, FU-18, FU-30, FU-31, and FU-34. Item was listed on the ERP System requirements document and received a response that Oracle will include this functionality. The requirement number is as follows: RT.31. Per Oracle SIS and DIT Project Leader, "the ERP System will have the ability to accept data from RBHA and the RPS in an Excel format that can be updated to the ERP databases". The current Retirement Payroll and Actuary systems do not have this capability.</p>		
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
11	<p><b>Require DIT to develop formal procedures to cover the process and controls related to system interfaces, inputs, processing, and outputs that include:</b></p> <ul style="list-style-type: none"> <li>• <b>Interface controls - Designed to ensure accuracy, completeness and integrity of the data being transferred</b></li> <li>• <b>Input controls - There are a number of different types of input controls including validations, edit checks, tolerance limits, and screen layout design</b></li> <li>• <b>Processing controls - Include system calculation controls, exception reports, reconciliation/balancing controls etc.</b></li> <li>• <b>Output controls – These include outbound interface controls, reports etc.</b></li> </ul>	Y	
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
			Implementation currently in progress. The Payroll and Benefits modules are in Phase 1 of the project with a scheduled go live date of January 17, 2012 and January 6, 2012, respectively.
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
	Per Oracle SIS and DIT Project Leader, "the ERP application is an integrated solution that uses industry best practices in managing data input and output. Business processes within the City need to be reviewed and sometimes modified to take advantage of the many benefits received within the application".		