

# **Project Progress Report #3**

**As of August 31, 2003**



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City Auditor

## **“Customer Information System Project Post-Implementation Phase”**

**Report #0405**

**December 9, 2003**

### **Executive Summary**

The City's Utility Customer Information System (CIS) went live in October 2002. This is the third and final report on the CIS Project. This report focuses on the project activities since the prior report (#0209, January 2002) including the remaining implementation activities and the post-implementation activities.

The purpose of this report is to:

- Communicate project status and accomplishments as of August 31, 2003.
- Provide assurance as to CIS compliance with City policies and procedures and contract requirements.
- Provide an independent assessment of risk management and project controls.
- Communicate the status of previously identified issues.

#### **Status and Accomplishments of the CIS Project.** As of August 31, 2003:

- The implementation of the CIS is completed. Overall, the system adequately performs the functions necessary to bill and collect payments for utility services, track and monitor customers' requests for services, and provide information to management. Sixty-three percent (63%) of the CIS users responding to a recent CIS User Survey indicated that the system performs as they expected it would. In addition, management from Utility Services and Office of the Treasurer-Clerk indicate that overall the system meets their business needs.
- Expenditures to date total approximately \$6 million and are within the revised budget. The original project budget of \$4.2 million (established in 1996) was increased by \$2,010,454 for a total revised budget of \$6.2 million.
- The system was implemented in October 2002, 13 months after the original projected go live date of September 2001.

### **Compliance with City Policies and Procedures and Assessment of Risk Management and Project Controls.**

Based on our review, we can provide assurances that project staff substantially complied with City policies and procedures and contract requirements. For management's review and consideration in future projects, we have identified in Table 1 areas for improvement related to compliance with City policies and procedures, contract terms, and other good business practices needed to manage major information technology projects, including:

- Limiting the responsibility for authorizing, approving, and managing the project budget and expenditures to one person.
- Implementing procedures and controls to ensure that all transactions are properly authorized, executed, classified, and recorded in a timely manner.
- Ensuring that change management procedures and controls are in place so changes made to the application have been properly authorized, tested, and approved.
- Ensuring that test documentation includes adequate detailed information so retesting can be performed as needed.
- Organizing system documentation so it is current and available when needed.
- Ensuring that future projects include a post-implementation review to evaluate whether the system achieved its goals and objectives.

#### **Status of Previously Identified Issues**

Table 2 in this report provides the status of previously identified issues. While the project team was able to resolve many issues throughout the life of the project, some issues continue to remain outstanding that can impact the continued functioning of the CIS. These include:

- Ensuring that there are adequate resources available with PeopleSoft skills to maintain the three major PeopleSoft applications (Human Resources, Financials, and CIS).

- Ensuring that there are adequate automated change control procedures put in place to ensure that only authorized, tested, and approved changes are made in the systems.
- Conducting additional training for system users.
- Defining standardized Growth Management business rules and designing additional interfaces between the City's Permit Tracking System (PETS) and CIS in order to reduce the amount of duplicate data entry in the two systems.

In addition to this report, we will be providing management with an additional assistance and guidance report on "Information Technology Projects: Best Practices" designed to provide recommendations based on industry resources as well as lessons learned throughout the CIS project and the summary results of the CIS user survey.

### **Scope, Objectives, and Methodology**

The Office of the City Auditor has been providing assurance and consulting services to assist management throughout the implementation of the Customer Information System (CIS) Project. Two prior reports were provided during the implementation phase (Report #0116, February 2001, and Report #0209, January 2002).

Our objectives for this report are to:

- Communicate the project status and accomplishments as of August 31, 2003.
- Determine compliance with City policies and procedures and contract requirements since the last audit report.
- Provide an independent assessment of risk management and project controls.
- Communicate the status of previously identified issues.

This report focuses on the project activities since the prior report (January 2002) including the remaining implementation activities and the post-implementation activities.

To achieve our objectives, we participated in an advisory capacity on the project team and executive steering committee; reviewed key documentation, including project charter, project management plan, monthly status reports, technical and user guides, vendor contracts and test documentation; and conducted interviews with project team, consultants, key business staff, and executive steering committee members. During

the project, we provided informal communications regarding identified issues so that they could be addressed in a timely manner.

In addition, we conducted a CIS User Survey in August 2003 to obtain feedback from users to assist us in evaluating the system at go live and after users had been using the system for ten months. We also asked users to identify related significant benefits provided and/or problems caused by the new CIS system.

These audit procedures were conducted in accordance with Generally Accepted Government Auditing Standards and Standards for the Professional Practice of Internal Auditing, as appropriate.

### **Background**

#### **Project Life Cycle**

Every information technology (IT) project follows similar life cycle phases, such as:

Planning Phase – defining business problems, potential solutions, project scope, system interfaces, systems and software requirements, and resource needs. Other activities include identifying risks, costs and benefits associated with each solution, developing a project plan, and obtaining funding.

Acquisition Phase – developing a request for proposal and evaluation criteria, evaluating proposals, selecting a vendor, and negotiating the contract.

Implementation Phase – managing the vendor contract and project staff, installing software, defining business rules and processes, converting data, planning and performing testing, preparing technical and user documentation, and putting the system into production.

Post-Implementation Evaluation Phase – evaluating to determine if the system meets the users' needs and requirements.

The new CIS system went live in October 2002, and the project is completing the post-implementation phase.

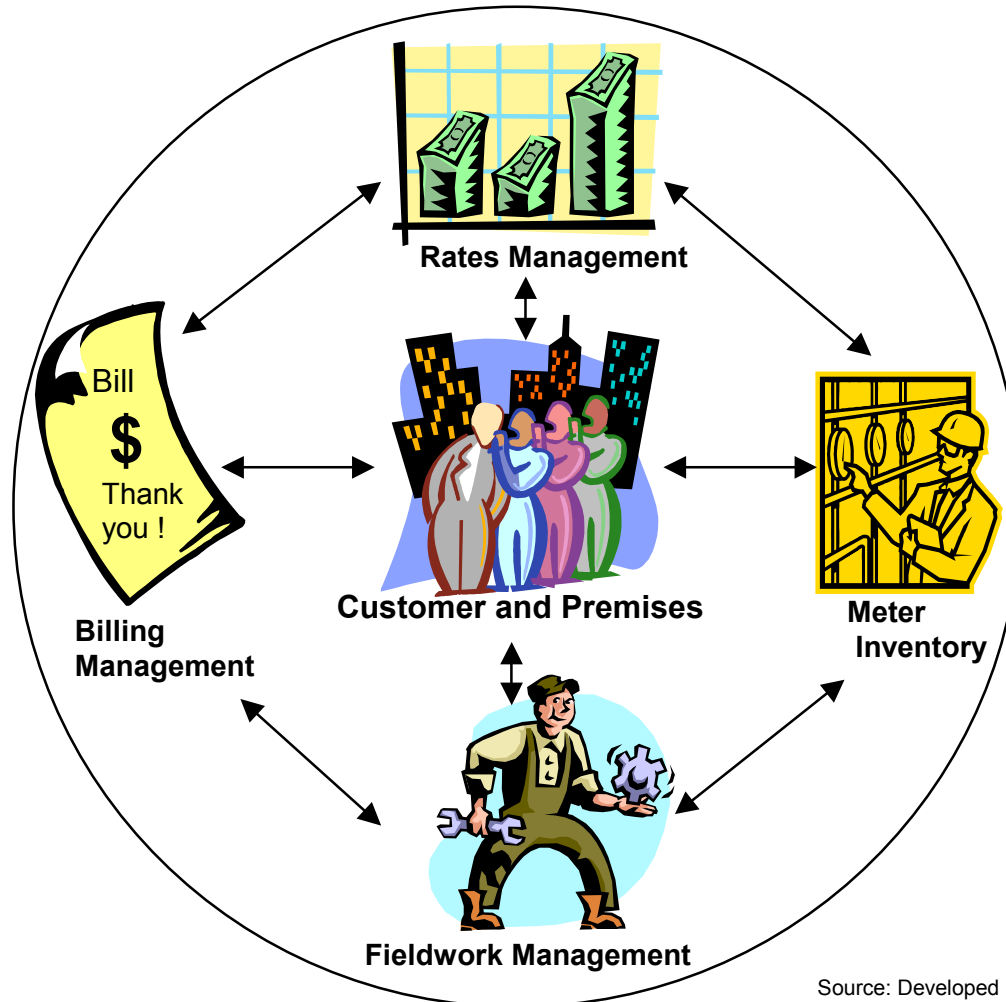
#### **Utility Services Managed in CIS**

The City provides utility services for approximately 95,000 customers: 78,000 residential and 17,000 non-residential. The CIS is a comprehensive software application that handles the City's electric, water, sewer, gas, solid waste, stormwater billing, fire services billing, and customer service functions, such as: location; account and service set-up; turn-ons; turn-offs; transfers; customer

maintenance; and other related functions. In addition, the CIS tracks energy efficiency loans

provided to customers. Figure 1 identifies the data management components within the CIS.

**Figure 1  
Customer Information Systems Components**



Source: Developed by Audit Staff

The customer and/or premises are the focal points in the system. Each system component performs specific business functions that are related either to a customer or premises receiving services. Explaining the process of starting electric service for a new customer can show how the CIS is utilized.

The prospective customer contacts Customer Service (via phone, Internet, or in person) to request a specific utility service (i.e., electric) be started. The customer provides appropriate personal information to establish an account (residential or non-residential) at a specific address (city or non-city). Next, a fieldwork service order is created to install an electric meter at the premises and an initial meter reading is recorded. At the end of each billing period, additional meter readings are recorded, consumption is determined, payment due is calculated, a bill is sent to the customer, and

payment received from the customer is recorded. This same scenario is followed when providing any other metered utility service such as water and gas. In addition, non-metered services are also billed through the CIS system, including solid waste, stormwater, and fire services. Billing for solid waste is based on number and type of services provided, while stormwater and fire services are monthly fees. All service charges are aggregated to create one monthly bill for all the utility services provided.

**CIS Project Description**

The City’s prior mainframe CIS was purchased in FY 1988 and implemented during 1989. The City recognized the need to replace its CIS and began the process in 1996 by initiating a joint project to replace both the CIS and Financial Management Systems. A CIS vendor was selected with the contract contingent upon the completion of a

successful implementation in another city. The vendor did not complete the implementation resulting in the City terminating the contract. Subsequently, the CIS and Financials systems were separated into two separate projects, with the CIS project funding set at \$4.2 million.

In addition to the original funding of \$4.2 million, there were two increases, \$1,374,789 (October 2001) and \$635,665 (March 2002), resulting in a total budget of \$6,214,954. These additional funds were transferred from the Technology Integration Project. The project budget and expenditures as of August 31, 2003, are shown in Exhibit 2 on the next page.

In 1999, the City reinstated the project, issued an RFP, and evaluated vendor proposals. The City identified a project manager and a ten-person project team to design and set up the CIS system. An executive steering committee was also established to provide oversight over the project.

Exhibit 1 below provides an outline of the significant project milestones during the life of the CIS project.

**Exhibit 1**

Month/Year	Significant Project Milestones
June 1999	Project initiated, RFP published.
Winter 2000	Vendors chosen.
Mar 2000	City Commission authorizes the City to sign contracts for software (PeopleSoft USA, Inc., and Group1) and implementation partner (SPL Worldgroup, Inc.). Implementation activities begin. Original go live date is September 2001.
Feb 2001	Go live date is revised to November 2001.
Apr 2001	ISS project manager was reassigned and replaced by the functional business lead.
Oct 2001	The project team expanded to 14 members to include staff from Growth Management and Treasurer-Clerk. The majority of the project team was dedicated 100% to the project and provided a work location.

Oct 2001	City Commission approved additional funding of \$1,374,789 (transferred from the Technology Integration Project). Utility Services Manager was assigned to be the project sponsor and directed to work closely with project and communicate project status regularly to the City Manager. Go live date revised to March 2002.
Dec 2001	Functional Project Manager was reassigned and the project sponsor becomes the interim project manager.
Jan 2002	New ISS Project Manager is assigned and will complete the project implementation.
Feb 2002	Go live date is revised to October 2002.
Mar 2002	City Commission approved additional funding of \$635,665 (transferred from the Technology Integration Project).
Aug 2002	User training started.
Sept 2002	An Independent Verification and Validation review was completed by vendor and Office of the City Auditor. Critical issues needing immediate resolution were communicated to the project manager and executive steering committee.
Oct 2002	CIS system went live on October 15, 2002.
Jan 2003	During post-implementation a new ISS Project Manager is assigned.
Aug 2003	Utility Accounting manager is designated as the CIS Business Owner. Project end-date extended to December 30, 2003.
Nov 2003	Utility Services put together a business systems team to provide technical assistance to users, conduct on-going testing for system upgrades and fixes, and conduct user training as needed.

**Exhibit 2  
CIS Project Budget and Expenditures**

Category		Expenditures as of 8/31/03
Personnel Costs (Overtime)		\$ 185,226
Temporary Wages (to backfill employees)		\$ 155,620
Training & Travel		\$ 52,664
Public Information		\$ 14,359
Software		\$ 1,532,190
Hardware		\$ 280,566
Consultants:		
SPL Worldgroup (Implementation Partner providing Project Management)	\$ 2,731,461	
Exacta, Inc. (providing assistance, in project management, testing, training, and risk analysis)	\$ 634,977	
Other Consultants (providing various assistance with interfacing systems)	\$ 464,301	
Total Consultants		\$ 3,830,739
Miscellaneous		\$ 11,872
<b>Total Expenditures</b>		<b>\$ 6,063,236</b>
<b>Total Budget</b>		<b>\$ 6,214,954</b>
<b>% of Budget Expended</b>		<b>98%</b>

As shown above, the majority of the project costs lie in acquiring consultants to assist in the implementation activities. Of the approximate \$3.8 million spent on consultants, \$2.7 million was paid to SPL Worldgroup, Inc., (SPL) the prime contractor for the installation and acceptance of the PeopleSoft CIS system.

SPL's contract with the City was to implement the CIS system. Exhibit 3 shows how the activities defined in their contract compare to the City's project life cycle phases described earlier.

**Exhibit 3**

IT Project Phases	SPL Worldgroup Phases
Planning	(not applicable)
Acquisition	(not applicable)
Implementation	I. Discovery II. Functional Gap Analysis & Modification Definition III. Process Analysis IV. Implementation V. Acceptance
Post-Implementation Evaluation	VI. Follow-up (Change order eliminated these activities and substituted other services)

In summary, some key items to note regarding the CIS project in the above exhibits include:

- The CIS is a comprehensive utility customer service and billing system that is used to initiate, track, and bill for metered and non-metered services provided in Utility Services.
- The CIS project is in the post-implementation phase and will be closing December 30, 2003.
- The project funding was increased by over \$2 million and went into production 13 months after the original projected completion date.
- Approximately 63% of the total project costs were used to acquire consultants to assist with the implementation efforts.
- There have been four different project managers during the life of the CIS project.
- Project team members were dedicated to work on the project 100% in October 2001 (18 months after implementation efforts began).

**CIS User Survey Results**

During August 2003, the Office of the City Auditor distributed a user survey to all 234 users of the CIS system. As of this report, there were 97 respondents (41% return rate). The survey responses provided some insight as to how the users feel about the features and availability of the CIS system, including the following:

- 76% of the respondents use the CIS system on a daily basis.
- At go live, only 18% considered their proficiency in the new CIS system as good or excellent. Ten months after go live, 64% considered their proficiency in the new CIS system as good or excellent.
- The majority of respondents felt that the system did help them provide improved services in the following areas: customer service, field activities, field orders, meter reading, and utility billing.
- Most assistance is being provided by expert users within business units.
- While a large majority (81%) of the respondents felt the training provided helped them use the new system effectively and efficiently, 83% felt they would benefit from additional training.
- The majority of respondents felt that, in general:  
⇒ the CIS information is correct, complete, contains enough information to understand

- the transactions, and has made it easier for them to make decisions;
- ⇒ the CIS system is easy to use, available when needed; and
- ⇒ the queries and reports provide information to help them do their jobs.
- Of those respondents that expressed an opinion:
  - ⇒ initially, only 37% felt that the new system was able to do what they expected. After ten months, this increased to 64%;
  - ⇒ users are almost equally divided as to whether the new system has improved or worsened external customer service; and
  - ⇒ presently, 53% of the users are satisfied with the new system.

The respondents also provided feedback as to the special benefits and problems associated with the new system. The most common benefits are the enhanced search capabilities and additional information available to the users. The most common problems are the increased complexity of the system, increased time it takes to navigate through the system, and the additional work

caused by erroneous data entered since go live. Summary survey results were provided to management for their information.

### Project Progress and Accomplishments to Date

Since our last audit report on the CIS project (January 2002), the CIS system has completed the implementation phase and is now in the post-implementation phase.

As described in the project life cycle section earlier in this report, there are common activities conducted during the implementation and post-implementation phases of an IT project. Some of these activities are required by City administrative policies and procedures or by the consultant contract, while others are considered to be “good business practices.”

Table 1 below provides a listing of the implementation and post-implementation components that were identified for this project, the status, and auditor comments (if applicable). The components are separated as to the source of the requirement.

**Table 1**

Implementation Components	Status/Comments
<b>Administrative Policies &amp; Procedures (APP) #630, “Internal Control Guidelines”</b>	
There is direct activity management – including clear communication regarding team members’ roles and responsibilities, staff accountability, approving work at critical points.	✓ During this phase, the ISS project manager actively managed employees’ activities and tasks according to the project management plan. This area was greatly improved from previous reports.
Management compares actual performance (i.e., expenditures, funding) to budgets and forecasts, and tracks major initiatives to measure the extent to which targets are being reached.	○ This area can be improved upon in future projects. During this phase of the project, there were expenditures being approved by both the Utility project sponsor and the ISS project manager. <u>Audit Comment:</u> Having more than one person responsible for authorizing and managing expenditures increases the risk that inappropriate expenditures are applied to the project or that procurement processes are not properly followed.
Transaction and events relating to processing deliverables and contract payments are properly executed, classified, and recorded in a timely manner.	○ This area can be improved upon in future projects. While testing 24 financial transactions between October 1, 2001, and July 31, 2003, and conducting other audit procedures, we noted the following types of non-compliance within the identified departments: <u>Information Systems Services</u> ⇒ There was no evidence to indicate that time worked was verified by the ISS project manager for both vendors and City employees.

	<p>⇒ Invoices were not properly date-stamped when received so that the prompt payment requirements could be measured.</p> <p>⇒ There was an invoice where retainage was not properly applied per the contract.</p> <p><u>Utility Billing and Customer Service</u></p> <p>⇒ An invoice was improperly split and applied to multiple purchase orders.</p> <p>⇒ Check requests were used to procure services without competitive bidding and then were not properly approved.</p> <p>⇒ Timesheets were not always properly completed, i.e., missing period ending date or employee ID.</p> <p>⇒ Work for one consultant commenced prior to an authorized contract being completed.</p> <p><u>Audit Comment:</u> The results of our testing indicated that there were not adequate controls to ensure that transactions were properly executed, classified, and recorded in a timely manner.</p>
<p>On-going monitoring should be performed to ensure that employees, in carrying out their regular activities, obtain evidence as to whether the system of internal control is continuing to function.</p>	<p>○ This area can be improved upon in future projects. While there were many improvements in this area related to monitoring employee activities, management could have monitored financial transactions more closely to ensure that transactions complied with City policies and procedures.</p>
<p><b>APP #802, "IT Acquisition Policy"</b></p>	
<p>Management oversight:</p> <p>⇒ An executive steering committee is utilized to provide project oversight.</p> <p>⇒ The project manager reports regularly to the executive steering committee regarding the project status and advises the committee regarding critical business decisions that need to be made.</p>	<p>√ The executive steering committee met to receive updates on the project status, but continuous oversight during the last phase of this project was provided by the City Manager in regular meetings held with the ISS project manager and the Utility project sponsor.</p> <p>√ ISS and vendor project managers provided regular project status reports to the executive steering committee and City Manager.</p>
<p>Project Management Plan (PMP):</p> <p>⇒ A PMP is utilized to manage the project.</p> <p>⇒ The PMP is continually updated as necessary.</p>	<p>√ During the last phase of the project, a detailed PMP was developed, utilized, and updated as needed by the ISS project manager as a tool to manage project tasks, activities, and timelines.</p>
<p>Quarterly reports are submitted to the ISS steering committee (also enables the ISS steering committee to "review progress of projects") per responsibilities stated in APP #402.</p>	<p>√ While the ISS steering committee did not actively monitor this project, there was an executive steering committee receiving reports on a regular basis (more frequently than quarterly).</p>

<p>Project documentation adequately addresses:</p> <ul style="list-style-type: none"> <li>⇒ System modifications (what is to be modified, detailed design and cost approved by executive owner)</li> <li>⇒ Data conversion (conversion plan, methodology, and controls)</li> <li>⇒ Testing (testing plan, methodology, problem resolution process, acceptance criteria, and review/approval)</li> <li>⇒ Installation of the software to all appropriate locations (i.e., server, users' computers, etc.)</li> <li>⇒ User procedures (instructions for how users are to perform business functions using the software)</li> <li>⇒ System documentation (technical manual of how the system is set up, including, but not limited to, tables, records, fields, data definitions, forms, queries, reports)</li> <li>⇒ Training (training strategy, plan with goals and objectives, content, schedule, etc.)</li> <li>⇒ "Go Live" – move software into production (plan, methodology, controls, contingency plan)</li> <li>⇒ Security (security plan, including defined security roles, classes, and groups)</li> </ul>	<ul style="list-style-type: none"> <li>√ Modification designs and costs were approved in the prior period. The project team provided final approval after each modification, testing was successfully completed, and documentation was obtained.</li> <li>√ Completed in prior period.</li> <li>○ This is an area that can be improved upon in future projects. There were testing plans, detailed test scripts, issue logs, and monitoring schedules. However, the documentation did not include actual scripts showing review and approvals, or a detailed test schedule that defines the sequence of events that should be tested.</li> <li>√ ISS developed server configuration planning and took steps to ensure that the CIS could be installed remotely to necessary computers.</li> <li>√ User procedures are documented in the PeopleSoft on-line manual called "PeopleBooks." This manual was customized to include the City's modifications to the CIS system.</li> <li>√ The vendors provided system documentation. <u>Audit Comment:</u> The system documentation is currently located in various places and can be difficult to find. We recommend that all CIS system documentation be centralized and organized in order for ISS staff to find and utilize as necessary.</li> <li>√ A training plan was developed to train all CIS users. Content was developed by project team members assigned to training.</li> <li>√ The ISS project manager developed a technical cutover plan, and the Utility project sponsor developed the functional business cutover plan.</li> <li>√ The CIS security administrator worked with the Financials and Human Resource Management System security administrator to develop a strategy for designing and implementing user security.</li> </ul>
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**Information Systems Services Policy #250.010, "Change Management"**

<p>The purpose of this policy is to:</p> <ol style="list-style-type: none"> <li>1) Provide for a consistently applied change management process to plan, coordinate, implement, and measure changes to hardware and software environments.</li> <li>2) Ensure that changes are made with minimum disruption, support the efficient and prompt handling of all authorized changes.</li> <li>3) Ensure that all changes are consistent with business and technical plans and strategies.</li> </ol>	<ul style="list-style-type: none"> <li>○ This area can be improved upon within the current CIS system. Since the system was implemented, changes to the CIS system are being made within ISS and the designated owner department. ISS follows a manual change process that has an inherent risk that all changes may not be properly recorded. In addition, there is a lack of segregation of duties in the user department in that the same person designs, develops and tests the change and then makes the change in the production environment.</li> </ul>
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	<p>Management has indicated that the following changes are being made: 1) ISS has purchased a change management software that will help automate, control, and monitor all changes made to the system by ISS. Implementation is scheduled to begin in January 2004. 2) A CIS functional team is being developed that will be responsible for testing all changes made to the CIS system, either by ISS or the owner department.</p> <p><u>Audit Comment:</u> This remains a risk until adequate controls are put into place to ensure that only authorized, properly tested, and approved changes are made to the CIS system.</p>
<p><b>Information Systems Services Policy #600.010, "Development Process"</b></p>	
<p>Conduct a post-implementation review – The "Development Process" policy indicated that this task should be completed during the post-implementation phase.</p>	<p>√ For the CIS Project, the Office of the City Auditor performed selected post-implementation review procedures to provide assurances to management on project performance. Typically, management would conduct a post-implementation review and then the auditor would comment on the adequacy of management's review.</p> <p>Management has reviewed the scope and results of this report and determined that a post-implementation review by them is not needed at this time. Management has indicated that future information technology projects will incorporate procedures performed by us, as applicable, into their post-implementation reviews. For future information technology projects, it is our intent to review and comment on the adequacy of the post-implementation review conducted by management.</p>
<p><b>Contract with SPL Worldgroup, Inc.</b></p>	
<p><b>Project Management</b> – SPL is providing professional project management services to coordinate activities and responsibilities under the contract, which includes attending planning and reporting meetings and coordinating and overseeing the City's responsibilities.</p>	<p>√ All contract activities were completed in this period.</p>
<p><b>Phase I – Discovery (Project Scope)</b> – reviewing the City business practices and procedures to provide a basis for SPL to analyze system functionality.</p>	<p>√ Completed during prior period.</p>
<p><b>Phase II – Functional Gap Analysis and Modification Definition</b> – identify the gaps between what the City has requested in a system and what is available in the PeopleSoft CIS software.</p>	<p>√ Completed during prior period.</p>
<p><b>Phase III – Process Analysis</b> – technical environment is established and software is installed, and project team begins examining functional capabilities based on specific business processes.</p>	<p>√ Completed during prior period.</p>

<p><b>Phase IV – Implementation</b> (including system modifications to the CIS package) – system is prepared for testing and acceptance in order to bring the products into live operation, based on strategies agreed upon during the process analysis phase. Activities included: documenting interface and report designs; developing a conversion design document; developing acceptance test plans and quality assurance processes; finalizing software set up; developing cutover and contingency plan and providing implementation support.</p>	<p>√ All contract activities were completed in this period.</p>
<p><b>Phase V – Acceptance</b> – application and system testing is conducted in a controlled, orderly manner to verify that the new system will operate as required and software application is moved into the production environment. Activities included: finalizing software cutover (move into production) plan; providing cutover support; conducting interface testing; providing training materials and “Train the Trainer” training sessions.</p>	<p>√ All contract activities were completed in this period.</p>
<p><b>Phase VI – Follow-up</b> – assessing the overall operation of the new applications and identifying opportunities for improvement. Activities would include: facilitating focus group review sessions with application user groups; assistance in writing follow-up report; and conducting follow-up training refresher workshops.</p>	<p>√ Project Change Order 101 approved the elimination of these follow-up activities and provided for additional on-site support during go live. Just prior to go live, SPL and the Office of the City Auditor completed an Independent Verification and Validation review where critical issues needing immediate resolution were communicated to the project manager and executive steering committee. Therefore, management did not feel the need to have SPL conduct a follow-up review. Instead, project management preferred to acquire additional on-site go live support to address some of the critical issues identified in the Independent Verification and Validation review.</p>

Table Legend:           ⇒   Sub component

- √   Completed Satisfactorily
- Area that can be improved in future projects

In summary, we can provide assurances, with the exceptions noted above in Table 1, that the CIS project complied with applicable City policies and procedures, contract requirements, and contract deliverables. For management’s review and consideration, we have identified areas where further improvements can be made in future information technology projects. These include:

- Limiting the responsibility for authorizing, approving, and managing the project budget and expenditures to one person to decrease the risk that inappropriate expenditures are applied to the project or that procurement processes are not properly followed.

- Implementing procedures and controls to ensure that all transactions are properly authorized, executed, classified, and recorded in a timely manner.
- Ensuring that change management procedures and controls are in place so changes made to the application have been properly authorized, tested, and approved.
- Ensuring that test documentation includes adequate detailed information so retesting can be performed as needed.
- Organizing system documentation so it is current and available when needed.
- Ensuring that future projects include a post-implementation review to evaluate whether the system achieved its goals and objectives.

**Status of Significant Issues Identified During Prior Audits**

Identifying and resolving significant issues is a normal activity during every project. Typically, if the project team is unable to resolve an issue, they are to educate the executive steering committee regarding the issue, recommend alternative solutions, and seek their guidance.

Throughout this project, many issues were

identified by the project team that could have negatively impacted the project's success. The team was able to resolve many of these issues, but there were some significant issues that remained outstanding. Table 2 below provides the outstanding significant issues from the prior project progress audit reports and their current status. Each significant issue identified is listed in the left column, and the right column provides management's actions, the current status, and auditor comments (if applicable).

Table 2

Significant Issues Identified During the Project Life Cycle	Final Project Outcome (as of August 31, 2003)
<b>Outstanding Decisions</b>	
<p><b>There was a conflict in that the standard billing/payment cycle in the new CIS system is based upon a 20-day billing/payment cycle, and the City's business process was based on a 1-month billing/payment cycle with a 10-day cutoff period. The delayed decision regarding whether to accept the software's 20-day cycle, modify the system to force either the previous 1-month, 10-day cutoff cycle, or modify the system to fit an alternative number of days could have further delayed the system go live date. [January 2002]</b> This decision determined the length of the customer billing cycle and, therefore, the impact on Customer Service offices, as well as the system configuration and related business processes.</p>	<p>√ CIS went into live operation on October 15, 2002, using a modified 35-day billing window consisting of a 20-day billing cycle with a 15-day cutoff period. Subsequently, the decision was made to eliminate the past-due notice generated by the system at day 20 to avoid customer confusion.</p>
<p><b>The format for the utility bill needed to be finalized so that it met the business needs of the affected business areas, including utility accounting and revenue collections. [January 2002]</b></p>	<p>√ While a bill format was finalized before go live to meet the City's internal business needs, public response regarding the bill content encouraged Utility Services to revise the bill after the CIS system was implemented. During December 2002, an alternative bill format was designed. The customer can now choose between the current and previous bill presentation.</p>
<b>Staffing Resources</b>	
<p><b>There was a risk that this project would be delayed due to the lack of project management and functional business resources. [February 2001 and January 2002]</b> During the life of the project, there were issues related to project management and the lack of dedicated functional resources. In October 2001, management took measures to dedicate functional resources to the project. This included staff from Utility Services, Office of the Treasurer-Clerk, and Growth Management. In January 2002, the fourth ISS project manager took over the project and continued with the project through go live in October 2002.</p>	<p>√ The project was delayed 13 months. Originally scheduled for completion in September 2001, it went into production on October 15, 2002. <u>Audit Comment:</u> The lack of adequate functional resources remains a risk after the go live. The implemented system receives regular fixes and updates that must be tested prior to moving into production. In addition, user departments need assistance with report creation and need additional training. There is a need for functional experts to be assigned to provide these services for the continued maintenance of the new CIS system. Prior to issuance of this report, a team was developed to provide these services.</p>

<p><b>ISS did not have the needed PeopleSoft skills to be able to support the new applications being implemented in the City. [February 2001 and January 2002]</b> The lack of staff skilled in this area also caused project delays in other system implementation projects. This was a recognized need, and ISS was to take efforts to train or hire staff to acquire the needed PeopleSoft skills in the City.</p>	<p><b>P</b> This has been partially resolved. There are three major PeopleSoft systems that require programmers skilled in PeopleSoft programming, and there are not adequate resources on staff with these skills and the business knowledge to adequately maintain the CIS system. Meanwhile, ISS has obtained a maintenance contract with the vendor to provide the assistance that the City needs. Additionally, ISS is attempting to improve skills by acquiring vendor training in required areas to bring staff to an internal support level. As funding permits, additional staff will be cross-trained in internal application support.</p>
<p><b>Plans had not been made to meet Customer Service staffing needs so that the customer service representatives (CSR) were able to receive the much-needed training on the new CIS. [January 2002]</b> Management identified funding and developed a staffing strategy that included hiring time-limited positions to serve customers while providing adequate dedicated training to the CSRs.</p>	<p>√ Training on key aspects of the new CIS was provided to CSRs and other critical staff to enable the system to go live on October 15, 2002. To meet that deadline, training had to be compressed and some of the hands-on lab time was eliminated from the original training plan. <u>Audit Comment:</u> Of those responding to a recent customer survey, 83% expressed a desire to obtain additional training on the CIS system.</p>
<p><b>A single on-site consultant limited the capability to provide adequate technical resources to support the implementation efforts of Project Team members. [January 2002]</b> The consultant project manager was the only technical resource provided during a crucial period during the implementation, and he was not able to provide the needed level of technical assistance to identify and correct application problems in a timely manner.</p>	<p>√ Management worked closely with the vendor to obtain additional needed technical resources on-site to assist in the implementation efforts at a reduced cost to the project.</p>
<p><b>There was a human capital risk, in that there was not a City backup project management resource learning the CIS during the implementation to manage the CIS application, and the current project manager is approaching retirement. [January 2002]</b> The business project manager retired from the City in October 2002, and there was a gap from October 2002 through July 2003 when there was not a business manager designated to be responsible for the CIS operations.</p>	<p>√ In August 2003, management decided that the Utility Accounting Administrator position is the appropriate position in the City to assume these responsibilities. The current interim administrator is fulfilling this role. <u>Audit Comment:</u> While there is now an owner and an assigned project manager, this will remain a risk until there is adequate staff supporting the system that have knowledge in both the system and business processes.</p>
<p><b>Software Management</b></p>	
<p><b>The City did not have an automated process to manage the changes made to the application software during the implementation or afterward. [February 2001 and January 2002]</b> The manual process currently performed increases the risk that a change can be made without being documented. It is very difficult to manage changes when multiple programmers have access to and make changes to software. Undocumented changes can cause future problems when software versions and updates mistakenly over-write the wrong version of software. This issue is relevant to all client/server applications, including the PeopleSoft CIS, Human Resources, and Financials applications. ISS identified funding and was to conduct research to develop a solution.</p>	<p>○ This remains an outstanding issue and continues to impact all system projects during implementation and systems in production. ISS has purchased change management software called "STAT," and, once implemented, this software will provide an automated change management solution for changes made in ISS. Implementation is scheduled to begin in January 2004. Procedures should also be put in place for changes that occur in the functional business units. <u>Audit Comment:</u> This control remains a risk in client server environments where changes are made to software in ISS and in business units.</p>

<p><b>There were not adequate controls in place to protect the application configuration within the “production” environment during development. [January 2002]</b> A manual change process was supposed to be followed, but there was no security in place to prevent anyone from making any change to the tables. Therefore, there was an increased risk that the project could be delayed due to disruption caused by unapproved table changes.</p>	<p>√ In November 2001, security was implemented to protect the production environment, staff was required to follow a manual change process, and only authorized users are able to move changes into production.</p>
<p><b>System Functionality</b></p>	
<p><b>There could have been duplication in system functionality and implementation efforts among concurrent system implementation projects, including CIS, Financials, and Technology Integration (outage, mobile workforce management, and call center applications). [February 2001 and January 2002]</b> There are several cases where the system being considered contains functionality that currently exists in another City system. There has been some improvement in this area, in that ISS project managers exhibited awareness of potential functionality duplication within City applications and attempted to coordinate their efforts with business areas to avoid duplication.</p>	<p>√ While this remains a constant challenge due to the number of complex information technology systems operating in the City, ISS continues to make efforts to minimize this risk. Examples include: project managers attending each others’ project meetings where potential overlaps could occur; selection of an existing system module to fulfill the business needs in another department (PeopleSoft Financials Projects Module as a work management system for Utility Services); and plans to design and implement an "integration hub" that will be used to share data among multiple systems rather than storing the same data separately in each system.</p>
<p><b>Actual telephone time with customer calls will increase with the new CIS. [February 2001 and January 2002]</b> While the Utility Services strategy was to improve customer service and increase customer service representative productivity, there was a risk that the level of customer service could decline due to the customer service representatives not being able to respond to customer requests in a timely manner. Efforts were made to develop summary screens to assist representatives in answering commonly asked questions, and management re-evaluated the issue after go live to determine what other measures to take.</p>	<p>√ Customer wait time on the phones increased significantly at go live. To address this issue, a temporary call center was created in January 2003, consisting of 12 full-time and temporary employees for a period of three months after go live. As of October 31, 2003, the average call time wait times and call abandon rates were within ranges that are consistent with those prior to the CIS go live in October 2002.</p>
<p><b>Efforts need to be made to eliminate the duplicate data entry that is currently occurring in the Growth Management Permitting System (PETS) and in CIS. [February 2001 and January 2002]</b> In the prior CIS system, customer and premises data entered into PETS during the permitting process was re-keyed into the CIS. This increased the workload for staff by entering the same data into two systems and increased the risk of having different data in the two systems. A PETS interface was created to transfer some data from the PETS system into the new CIS system.</p>	<p>○ The interface between PETS and CIS was only partially completed. The data for single home residential accounts is being transmitted between PETS and CIS electronically. However, for all other premises created in PETS, staff must enter customer information in the PETS system and then the CIS system. For this issue to be resolved, it will require Growth Management to provide ISS with standardized business rules necessary to build an effective interface and eliminate unnecessary duplicate data entry in the two systems. Growth Management is currently working to define these business rules and then will be responsible for testing the interface once developed by ISS. The goal for the interface is to transfer as much information as possible in order to reduce, if not eliminate, unnecessary duplicate data entry.</p>



## Conclusion

The CIS project went live in October 2002 and, overall, the system adequately performs as intended. For this project, CIS staff substantially complied with City policies and procedures and contract requirements. Through the CIS User Survey results, CIS users indicate that they are satisfied with the system. Management from Utility Services and the Office of the Treasurer-Clerk indicate that the system generally meets their business needs.

During the implementation of this system, areas for improvement in project management were identified. We have summarized these issues and some other issues that can impact the continued functioning of the CIS for management to consider during future projects.

We will be providing management with an assistance and guidance report on "Information Technology Projects: Best Practices" designed to provide recommendations based on business industry resources as well as lessons learned throughout the CIS project and the summary results of the CIS user survey.

We would like to thank the CIS executive steering committee, project manager, consultants, project team, and utility services management for their cooperation and assistance during the development of this final project progress report.

## Appointed Official's Response

### City Manager Response:

I want to thank and congratulate the Utility Functional staff, and the Information System Technical staff for their diligent efforts in completing this monumental implementation.

I appreciate the internal auditing staff for their participation as an advisor throughout this process. Their efforts certainly provided guidance for this successful conversion.

Copies of this progress report #0405 (project #0203) may be obtained via request by telephone (850 / 891-8397), by FAX (850 / 891-0912), by mail or in person (City Auditor, 300 S. Adams Street, Mail Box A-22, Tallahassee, FL 32301-1731), or by e-mail ([auditors@talgov.com](mailto:auditors@talgov.com)).

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