CITY OF ATLANTA

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TO: ERP Steering Committee

FROM: Leslie Ward, City Auditor

DATE: April 8, 2008

SUBJECT: Ongoing Review of Oracle Implementation Phase 2: Review of Incompatible Duties across all Responsibilities within Oracle

We recommended in our November 2005 audit report, *Pre-Implementation Review of the ERP System*, that the system should prohibit employees from performing two or more of the following functions for a single transaction type:
- record keeping (creating and maintaining department records),
- asset custody (access to or control of physical assets),
- authorization (reviewing and approving transactions), and
- reconciliation (assurance that transactions are proper).

Separating these incompatible business functions is a control to ensure appropriate data entry and to prevent misuse of city resources.

In our January 2007 audit memo, *Ongoing Review of Oracle Implementation Phase 2: Review of the Finance, HRMS, and Purchasing Responsibility Matrices,* we reviewed responsibility matrices to assesses whether the duties within the Finance, HRMS, and Purchasing applications were properly segregated so that no one employee could perform incompatible functions. We concluded that the Finance and HRMS applications' responsibilities were properly segregated but noted several areas of concern regarding Purchasing application's responsibility matrices. We recommended the following:

- Limit access to the PSP Super User and PSP Manager Responsibilities
- Limit access to the General Ledger to only General Ledger users
- The Property Manager Super User and the Property Manager Administrator should not be able to simultaneously create vendors and authorize payments
- DIT should develop citywide polices and procedures for authorizing access to information resources

- Implementation of role based access control
- Prevention of users from updating their own salary records

The city implemented all of these recommendations.

Our objective in this most recent review was to examine the assignment of users to multiple responsibilities to determine whether the assignments allow users to perform incompatible duties. We performed our analysis using Computer Assisted Audit Techniques (CAATs), with particular focus on automating parts of the process so we can periodically monitor such assignments going forward. We examined each user assignment within matrices created by the various departments to identify occurrence of any of 117 conflicting functions (refer to Appendix 1). Essentially, we examined each of the 154 responsibilities identified by the various departments against itself and all other responsibilities for a total of 18,018 comparisons.

We found the following areas of concern that represent an occurrence of incompatible duties being assigned to six individual users:

1. Users could approve invoices and merge suppliers

Conflicting Functions	Conflicting Responsibilities	# of Users
Invoices Action **versus** **Suppliers**	COA AP Invoice Manager conflicts with COA AP Invoice Manager	1 user identified
		1 unique user identified

Allowing a single user to perform both of these functions poses a high risk to the city. A user can create or alter vendor invoices and alter supplier records through their ability to merge vendors. Users with access to these functions may direct inappropriate payment to vendors.

2. Users can change their journal authorization limit and enter journals

Conflicting Functions	Conflicting Responsibilities	# of Users
Journal Authorization Limits **versus** **Enter Journals**	COA GL Manager conflicts with COA GL System Administrator	4 users identified
	COA GL Journal Entry Analyst conflicts with COA GL System Administrator	4 users identified
		5 unique users identified

Granting these functions to a single user allows the user to bypass the journal limits they are authorized to perform. Journal entry limits should be set based on job function and expertise.

Where possible the city should set appropriate limits and limits the number of people with the ability to change them.

A list of our recommendations is attached, with responses from the project team. We appreciate the opportunity to provide feedback on Phase 2 of the Oracle ERP Implementation and thank the project team for its courtesy and cooperation. Please feel free to contact Gerald Schaefer at 404/330-6876 if you have questions or would like to discuss this further. You can reach me directly at 404/330-6804.

cc: Mayor Franklin
      City Council members
      Ray Zies, Controller
      Robert Carson, ERP Project Manager
      Delicia Nwadike, Finance Lead
      Germain Ekamby, DBA
      Ken Amakor, Chief Security Officer
      Terence Thomas, Diversified Technologies, LLC
      Greg Ellison, Banks, Finley, White, and Co.
      Stan Sawyer, Banks, Finley, White, and Co.
      Nish Patel, KPMG
      Audit Committee

Recommendations

1. The city should remove the "Supplier Merge" access from the COA AP Invoice Manager responsibility. Users with the ability to create or approve invoices should not have the ability to merge suppliers. It our understanding that this responsibility was not intended to have the supplier merge function but was set up incorrectly.

   Response – "Supplier Merge" access was removed from the COA AP Invoice Manager.

2. The city should remove users from one of the responsibilities – COA GL Manager, COA GL System Administrator, or GL Journal Entry Analyst that constitute the conflict. Alternatively the city can explore the option of removing one of the conflicting functions from one of the responsibilities. The ability to set journal authorization limits should be limited to a select few employees. Limits should also be set based on business requirements and require approval for changes.

   Response - The COA GL System Administrator responsibility was removed from the two users who also had access to the COA GL Manager responsibility. The removal of the COA GL System Administrator responsibility eliminated the conflict.

APPENDIX 1
Conflicting functions tested for assignment of users to incompatible duties

#	Function1	Function2
1	Invoice Actions	Enter Journals
2	Invoice Actions	Import Journals
3	Invoice Approvals	Enter Journals
4	Invoice Approvals	Import Journals
5	Invoice Approve	Enter Journals
6	Invoice Approve	Import Journals
7	Invoice Batches	Enter Journals
8	Invoice Batches	Import Journals
9	Invoices	Enter Journals
10	Invoices	Import Journals
11	Invoice Actions	Suppliers
12	Invoice Approvals	Suppliers
13	Invoice Approve	Suppliers
14	Invoice Batches	Suppliers
15	Invoices	Suppliers
16	Invoice Approve	Mass Depreciation Adjustments
17	Invoice Approvals	Payment Batches Confirm
18	Invoice Approvals	Payment Batches Confirm
19	Invoice Approvals	Payments
20	Invoice Approvals	Payments
21	Invoice Approvals	Purchase Orders
22	Invoice Batches	Purchase Orders
23	Invoices	Purchase Orders
24	Payment Batches	Banks
25	Payment Batches Confirm	Banks
26	Payments	Banks
27	Suppliers	Payment Batches
28	Suppliers	Payment Batches Confirm
29	Suppliers	Payments
30	Payables Options	Invoice Batches
31	Payables Options	Invoices
32	Banks:Enter Branches	Payment Actions
33	Banks:Enter Branches	Payment Batches Confirm
34	Banks:Payable Options	Payment Actions
35	Banks:Payable Options	Payment Batches Confirm
36	Invoice: Delete	Enter Journals
37	Invoice: Delete	Import Journals
38	Invoice: Enter	Enter Journals
39	Invoice: Enter	Import Journals
40	Invoice: Update	Enter Journals
41	Invoice: Update	Import Journals
42	Bills Receivable Remittance: Approve	Adjustment Screen
43	Bills Receivable Remittance: Approve	Adjustment: Approve
44	Bills Receivable Remittance: Approve	AR: Approve Adjustments
45	Bills Receivable Remittance: Approve	Create AutoAdjustments

#	Function1	Function2
46	Bills Receivable Remittance: Create	Adjustment Screen
47	Bills Receivable Remittance: Create	Adjustment: Approve
48	Bills Receivable Remittance: Create	AR: Approve Adjustments
49	Bills Receivable Remittance: Create	Create AutoAdjustments
50	Receipt	Adjustment Screen
51	Receipt	Adjustment: Approve
52	Receipt	AR: Approve Adjustments
53	Receipt	Create AutoAdjustments
54	Receipt Batches	Adjustment Screen
55	Receipt Batches	Adjustment: Approve
56	Receipt Batches	AR: Approve Adjustments
57	Receipt Batches	Create AutoAdjustments
58	Remittances	Adjustment Screen
59	Remittances	Adjustment: Approve
60	Remittances	AR: Approve Adjustments
61	Remittances	Create AutoAdjustments
62	Banks:Receivable Options	Receipt
63	Banks:Receivable Options	Remittances
64	Invoice: Delete	Bills Receivable Remittance: Approve
65	Invoice: Delete	Bills Receivable Remittance: Create
66	Invoice: Delete	Receipt
67	Invoice: Delete	Receipt Batches
68	Invoice: Delete	Remittances
69	Invoice: Enter	Bills Receivable Remittance: Approve
70	Invoice: Enter	Bills Receivable Remittance: Create
71	Invoice: Enter	Receipt
72	Invoice: Enter	Receipt Batches
73	Invoice: Enter	Remittances
74	Invoice: Update	Bills Receivable Remittance: Approve
75	Invoice: Update	Bills Receivable Remittance: Create
76	Invoice: Update	Receipt
77	Invoice: Update	Receipt Batches
78	Invoice: Update	Remittances
79	Invoice: Delete	Adjustment Screen
80	Invoice: Delete	Adjustment: Approve
81	Invoice: Delete	AR: Approve Adjustments
82	Invoice: Delete	Create AutoAdjustments
83	Invoice: Enter	Adjustment Screen
84	Invoice: Enter	Adjustment: Approve
85	Invoice: Enter	AR: Approve Adjustments
86	Invoice: Enter	Create AutoAdjustments
87	Invoice: Update	Adjustment Screen
88	Invoice: Update	Adjustment: Approve
89	Invoice: Update	AR: Approve Adjustments
90	Invoice: Update	Create AutoAdjustments
91	Invoice: Delete	Sales Orders
92	Invoice: Delete	Sales Orders : Enter
93	Invoice: Enter	Sales Orders
94	Invoice: Enter	Sales Orders : Enter

#	Function1	Function2
95	Invoice: Update	Sales Orders
96	Invoice: Update	Sales Orders : Enter
97	Receipts	Update Costs
98	Receipts	Enter Journals
99	Receipts	Import Journals
100	Journal Authorization Limits	Enter Journals
101	Journal Authorization Limits	Import Journals
102	Open and Close Periods	Enter Journals
103	Open and Close Periods	Import Journals
104	Purchase Orders	Approve Adjustments
105	Purchase Orders	Physical Inventories
106	Purchase Orders	Receipts
107	Suppliers	Purchase Orders
108	Sales Orders	Adjustment Screen
109	Sales Orders	Adjustment: Approve
110	Sales Orders : Enter	Adjustment Screen
111	Sales Orders : Enter	Adjustment: Approve
112	Sales Orders	Release Orders
113	Sales Orders	Release Sales Orders
114	Sales Orders : Enter	Release Orders
115	Sales Orders : Enter	Release Sales Orders
116	Sets of Books	Enter Journals
117	Sets of Books	Import Journals