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June 27, 2012

Peter Corroon, Mayor
Salt Lake County
2001 South State Street N3300
PO Box 144575
Salt Lake City, UT 84114-4575

Re: Solid Waste Management Embezzlement Investigation

Dear Mayor Corroon:

The Salt Lake County Auditor's Office recently completed an investigation consisting of a formal analysis regarding the compliance with certain internal controls of Solid Waste Management (SWM) Point-of-Sale (POS) transactions for the period of January 2, 2010 to June 9, 2012. The Auditor conducted the investigation based on evidence that two or more SWM scale house operators were stealing SWM revenue through a duplicate receipt scheme. The evidence indicated that these operators were reprinting receipts for cash transactions, issuing the reprinted receipts to new customers, and then misappropriating customer payments for personal use. Our investigation was limited to analysis of transactions recorded in the POS system involving cash payments and reprinted receipts and interviews with SWM's Fiscal Manager. This report does not address any other data analysis or investigative techniques.

The data analyzed were adequate and the analyses performed were appropriate to meet the objectives stated above. There is a risk that additional misuse or theft of County assets is not identified in this report because they may have occurred with respect to assets or transactions not selected for review. Additionally, the Auditor does not release information that would tend to compromise an ongoing investigation.

Data Analysis

SWM's POS system creates a back up file of each day's transactions, including the number of times the receipt for each transaction was printed. We analyzed the number and dollar value of cash transactions with reprinted receipts by operator, and over time, for the period examined. Based on that analysis, and on evidence provided by the SWM Fiscal Manager, we found that:

- **The evidence reviewed supports the allegations of embezzlement made against certain scale house operators.**

Facts supporting a finding of embezzlement include the following:

- The volume of cash transactions with reprinted receipts increased dramatically over the prior two-and-a-half years.

- During the period, the number and value of cash transactions with reprinted receipts increased at a significantly greater rate than cash revenue.
- A legitimate business need to reprint receipts is rare and could not reasonably account for the high volume of reprinted transactions.

The data demonstrated an increased volume of reprinted transactions over the period, with the accused operators having the highest number of reprinted transactions. See Figure 1 below. More detailed analysis and graphs by operator are included as Appendices A and B.

Analysis of Reprinted Transactions by Year				
	TOTALS			
YEAR	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into POS	Total $ Entered Into POS
2010	555	$ 12,228	120,545	$1,779,826
2011	3,604	$ 58,293	124,943	$1,861,492
2012*	5,652	$ 78,359	49,346	$ 807,639
Totals	9,811	$148,880	294,834	$4,448,957

*2012 through June 9th

Figure 1. *The number and value of transactions with reprinted receipts has increased dramatically over past two and one-half years.*

It is important to note that an increase in transactions with reprinted receipts occurred for all of the current operators. During the period examined, each operator had the ability to reprint receipts associated with transactions entered by other operators that day; however, SWM's POS system did not record who reprinted the receipt, but only who recorded the original transaction.

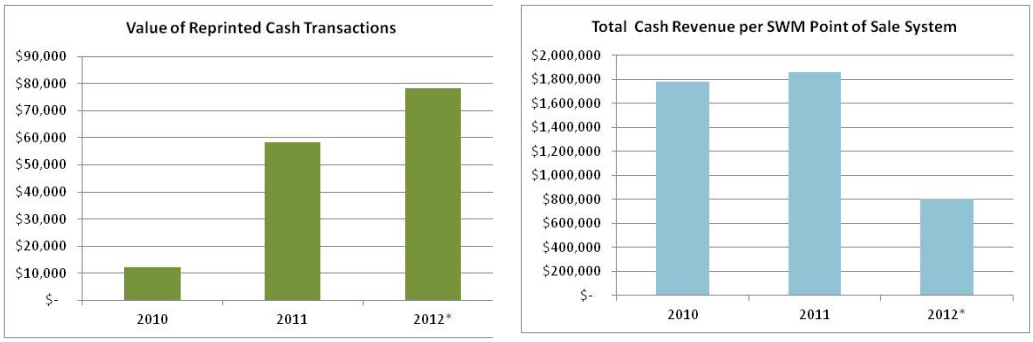
In order to identify which operators were reprinting receipts, the ability to reprint receipts was removed from all operators *except* those suspected in the embezzlement. This change was made on June 9th at approximately 11:00 a.m. Despite this action, receipts for *all* operators continued to be reprinted. This indicates that the operators suspected of conducting the scheme were reprinting cash receipts for transactions that were originally entered by other operators. A report documenting this pattern is attached as Appendix C.

A legitimate business need to reprint receipts is rare and could not reasonably account for the high volume of transactions with reprinted receipts observed during the period. Nor can they account for the observed trend of the increasing number of reprinted transactions. According to SWM's Fiscal Manager there are valid reasons for reprinting transactions, including:

- The customer requests a duplicate copy. This situation may occur where the driver is working as a subcontractor and needs a copy in order to bill the contractor.
- The operator suspects they made a mistake and reprints a receipt for research purposes.

These situations should be rare, and should not have increased over time. In fact, SWM's Fiscal Manager reported that between June 9, 2012, when most operator's ability to print receipts was disabled, and June 26, 2012, only one operator whose ability to reprint receipts had been disabled approached him with the need to reprint a receipt. This demonstrates that the legitimate need for reprinted receipts is low. The trend cannot be explained by a legitimate business need to print receipts.

Nor can the trend cannot be explained by increased cash receipts at the Landfill. In fact, our analysis demonstrates an inverse relationship between the value of reprints and cash transaction revenue. See Figure 2, below.



*2012 through June 9th

Figure 2. *The value of cash transactions entered into Wasteworks has not increased at the same rate as the value of cash transactions with reprinted receipts. An inverse relationship exists for 2011 and 2012.*

RECOMMENDATION:
We recommend that SWM disable all operators' ability to reprint receipts.

ACTION TAKEN:
The Salt Lake City Police Department and the Salt Lake County District Attorney have been notified of the embezzlement.

We appreciate SWM management for their cooperation in this matter, including answering our questions, providing information, and allowing us access to records during our investigation. This investigation is limited to the scope stated above. Additional fraud, waste, or abuse may have occurred that is outside the scope of the investigation reported in this letter.

Very Truly Yours,

Gregory P. Hawkins
Salt Lake County Auditor

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By Brenda K. Nelson, ISA, CISA, MBA
Senior Deputy Auditor

Reprinted and Original Cash Transactions, Solid Waste Management, January 2, 2010 to June 9, 2012

Source: Daily POS Software Waste Works Backup Files , copied by Larry Hansen on 6/11/12. Analyzed using Audit Command Language Software (ACL)

Filters: Account numbers 120 and 100 (cash accounts), transaction was not voided (PH5="A"), total charged was not equal to 0.00

	Operator 1				Operator 2				Operator 3			
Month/ Year	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks
Jan-10	0	$ -	202	$ 3,786	0	$ -	0	$ -	4	$ 80	1,132	$ 16,681
Feb-10	6	$ 176	973	$ 16,334	0	$ -	0	$ -	2	$ 15	1,211	$ 17,794
Mar-10	8	$ 204	2,152	$ 32,204	0	$ -	0	$ -	3	$ 94	1,979	$ 31,257
Apr-10	4	$ 40	2,622	$ 41,945	0	$ -	97	$ 1,838	2	$ 40	2,325	$ 32,357
May-10	15	$ 242	1,743	$ 26,732	13	$ 198	2,557	$ 38,485	9	$ 135	2,313	$ 32,616
Jun-10	13	$ 240	2,627	$ 40,285	23	$ 561	2,877	$ 42,736	3	$ 80	2,376	$ 37,412
Jul-10	4	$ 468	1,733	$ 26,817	5	$ 70	2,252	$ 31,928	5	$ 75	2,212	$ 31,867
Aug-10	3	$ 129	1,753	$ 28,743	3	$ 84	2,391	$ 34,505	2	$ 40	1,713	$ 24,975
Sep-10	4	$ 126	1,216	$ 18,674	4	$ 73	1,522	$ 23,518	2	$ 38	1,673	$ 24,307
Oct-10	6	$ 65	1,249	$ 19,942	6	$ 58	1,748	$ 24,119	8	$ 436	2,037	$ 27,671
Nov-10	6	$ 133	1,012	$ 16,625	42	$ 720	1,510	$ 20,343	16	$ 175	1,860	$ 24,682
Dec-10	1	$ 10	1,251	$ 24,949	24	$ 305	291	$ 5,088	8	$ 120	983	$ 17,914
Jan-11	3	$ 82	804	$ 13,756	40	$ 470	365	$ 4,605	53	$ 590	941	$ 17,336
Feb-11	2	$ 105	954	$ 15,670	47	$ 530	283	$ 3,319	28	$ 380	816	$ 12,061
Mar-11	6	$ 131	1,951	$ 30,499	0	$ -	0	$ -	9	$ 139	2,593	$ 37,978
Apr-11	1	$ 5	1,373	$ 20,027	144	$ 1,915	985	$ 12,362	27	$ 609	1,925	$ 28,161
May-11	5	$ 150	1,929	$ 29,903	30	$ 490	196	$ 2,414	38	$ 529	2,319	$ 33,390
Jun-11	9	$ 303	2,049	$ 33,872	72	$ 923	259	$ 3,356	7	$ 225	2,519	$ 37,876
Jul-11	9	$ 115	1,755	$ 26,815	282	$ 3,720	1,204	$ 14,484	57	$ 680	2,190	$ 30,797
Aug-11	8	$ 324	1,718	$ 27,348	98	$ 1,420	378	$ 4,644	14	$ 170	1,481	$ 21,080
Sep-11	3	$ 2,312	1,360	$ 22,959	61	$ 945	332	$ 4,598	11	$ 857	1,813	$ 26,361
Oct-11	5	$ 75	1,407	$ 22,186	201	$ 2,451	898	$ 10,559	107	$ 1,360	1,564	$ 23,234
Nov-11	3	$ 30	1,343	$ 21,627	83	$ 950	380	$ 4,285	36	$ 480	1,674	$ 23,660
Dec-11	24	$ 545	1,088	$ 20,179	118	$ 1,555	422	$ 6,633	126	$ 1,600	1,289	$ 21,571
Jan-12	59	$ 855	947	$ 19,851	117	$ 1,550	195	$ 2,836	23	$ 380	713	$ 13,205
Feb-12	16	$ 195	539	$ 9,651	257	$ 3,230	409	$ 5,801	78	$ 989	1,245	$ 20,325

Reprinted and Original Cash Transactions, Solid Waste Management, January 2, 2010 to June 9, 2012

Source: Daily POS Software Waste Works Backup Files , copied by Larry Hansen on 6/11/12. Analyzed using Audit Command Language Software (ACL)

Filters: Account numbers 120 and 100 (cash accounts), transaction was not voided (PH5="A"), total charged was not equal to 0.00

	Operator 1				Operator 2				Operator 3			
Month/ Year	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks
Mar-12	50	$ 610	1,594	$ 27,262	306	$ 3,590	877	$ 12,190	259	$ 3,126	2,112	$ 34,509
Apr-12	126	$ 1,529	1,765	$ 28,549	248	$ 3,265	663	$ 9,711	38	$ 455	501	$ 6,897
May-12	64	$ 1,549	2,063	$ 33,792	402	$ 5,396	995	$ 14,785	109	$ 2,282	2,256	$ 35,340
Jun-12	5	$ 45	477	$ 7,935	151	$ 2,095	389	$ 5,560	38	$ 697	771	$ 10,967
Totals	468	$ 10,793	43,649	$ 708,917	2,777	$ 36,564	24,475	$ 344,702	1,122	$ 16,876	50,536	$ 754,281

*Operators Julie, Dfontana, Jaime, Daniel, Coralee removed due to low volume

Totals by Year

	Operator 1				Operator 2				Operator 3			
YEAR	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW
2010	70	$ 1,833	18,533	$ 297,036	120	$ 2,069	15,245	$ 222,560	64	$ 1,328	21,814	$ 319,533
2011	78	$ 4,177	17,731	$ 284,841	1,176	$ 15,369	5,702	$ 71,259	513	$ 7,619	21,124	$ 313,505
2012	320	$ 4,783	7,385	$ 127,040	1,481	$ 19,126	3,528	$ 50,883	545	$ 7,929	7,598	$ 121,243
Totals	468	$ 10,793	43,649	$ 708,917	2,777	$ 36,564	24,475	$ 344,702	1,122	$ 16,876	50,536	$ 754,281

*Operators Julie, Dfontana, Jaime, Daniel, Coralee removed due to low volume

Reprinted and Original Cash Transactions, Solid Waste Management, January 2, 2010 to June 9, 2012

	Operator 4				Operator 5				Operator 6			
Month/ Year	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks
Jan-10	0	$ -	1,031	$ 17,041	6	$ 163	1,385	$ 20,995	2	$ 23	1,364	$ 20,256
Feb-10	1	$ 30	1,074	$ 16,408	2	$ 60	1,387	$ 20,939	1	$ 29	1,794	$ 28,056
Mar-10	2	$ 174	2,155	$ 31,370	4	$ 115	2,456	$ 35,085	2	$ 156	1,522	$ 22,401
Apr-10	6	$ 70	2,405	$ 34,867	12	$ 280	2,492	$ 34,366	4	$ 80	2,509	$ 36,423
May-10	10	$ 155	2,848	$ 41,668	24	$ 679	2,343	$ 34,204	16	$ 230	1,900	$ 28,099
Jun-10	13	$ 166	2,045	$ 28,416	11	$ 295	2,302	$ 32,456	4	$ 42	1,691	$ 25,232
Jul-10	0	$ -	2,612	$ 35,497	9	$ 223	1,945	$ 26,967	6	$ 62	1,594	$ 23,611
Aug-10	1	$ 10	1,830	$ 25,866	15	$ 635	2,033	$ 28,072	1	$ 18	1,181	$ 17,664
Sep-10	3	$ 74	1,947	$ 27,675	11	$ 243	2,332	$ 32,354	6	$ 184	1,878	$ 27,235
Oct-10	7	$ 127	1,963	$ 26,261	15	$ 1,192	1,937	$ 27,356	7	$ 93	1,373	$ 22,555
Nov-10	10	$ 135	1,158	$ 15,007	24	$ 375	1,943	$ 25,670	9	$ 115	1,367	$ 19,138
Dec-10	11	$ 110	635	$ 9,114	45	$ 645	1,274	$ 20,967	1	$ 10	1,172	$ 20,298
Jan-11	7	$ 110	398	$ 5,924	45	$ 709	1,245	$ 19,097	1	$ 5	1,084	$ 18,330
Feb-11	6	$ 80	636	$ 9,192	45	$ 787	1,266	$ 19,241	1	$ 10	1,378	$ 23,737
Mar-11	11	$ 135	2,087	$ 26,346	4	$ 70	2,036	$ 27,049	1	$ 30	1,885	$ 28,335
Apr-11	73	$ 930	2,253	$ 30,766	76	$ 1,051	2,470	$ 32,958	1	$ 143	2,042	$ 31,560
May-11	9	$ 195	3,023	$ 42,936	29	$ 625	2,720	$ 41,744	2	$ 35	1,627	$ 25,445
Jun-11	35	$ 472	2,868	$ 39,101	62	$ 942	2,937	$ 42,158	9	$ 224	2,208	$ 34,443
Jul-11	71	$ 1,117	2,260	$ 30,554	67	$ 897	1,786	$ 24,066	3	$ 30	1,453	$ 22,861
Aug-11	28	$ 380	2,188	$ 30,432	45	$ 752	1,740	$ 24,666	5	$ 65	2,068	$ 32,113
Sep-11	66	$ 755	2,065	$ 28,667	46	$ 685	1,872	$ 30,055	2	$ 493	1,676	$ 28,867
Oct-11	68	$ 841	1,663	$ 21,574	166	$ 1,945	1,858	$ 28,287	4	$ 76	1,606	$ 25,924
Nov-11	132	$ 1,685	1,905	$ 27,046	41	$ 620	1,630	$ 23,638	13	$ 520	1,859	$ 32,842
Dec-11	108	$ 6,207	1,113	$ 21,833	145	$ 1,965	1,523	$ 25,853	23	$ 330	1,291	$ 23,226
Jan-12	176	$ 2,246	987	$ 17,519	121	$ 1,732	1,159	$ 19,398	57	$ 990	1,187	$ 24,704
Feb-12	222	$ 2,685	1,018	$ 20,787	170	$ 2,181	1,041	$ 18,017	24	$ 275	1,030	$ 18,705

	Operator 4				Operator 5				Operator 6			
Month/ Year	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks	Re-printed transactions	Value of Reprinted Transactions	Total Tickets Entered Into WasteWorks	Total $ Entered Into WasteWorks
Mar-12	279	$ 3,708	1,680	$ 26,122	284	$ 3,520	1,606	$ 24,317	76	$ 990	1,607	$ 29,055
Apr-12	305	$ 4,084	2,054	$ 34,161	309	$ 4,815	2,607	$ 40,724	163	$ 2,175	2,116	$ 33,635
May-12	253	$ 3,866	1,857	$ 31,318	78	$ 1,085	2,086	$ 33,138	87	$ 1,810	2,387	$ 39,517
Jun-12	152	$ 2,465	714	$ 10,220	51	$ 820	707	$ 9,847	2	$ 40	529	$ 8,577
Totals	2,065	$ 33,012	52,472	$ 763,688	1,962	$ 30,106	56,118	$ 823,684	533	$ 9,283	48,378	$ 772,844

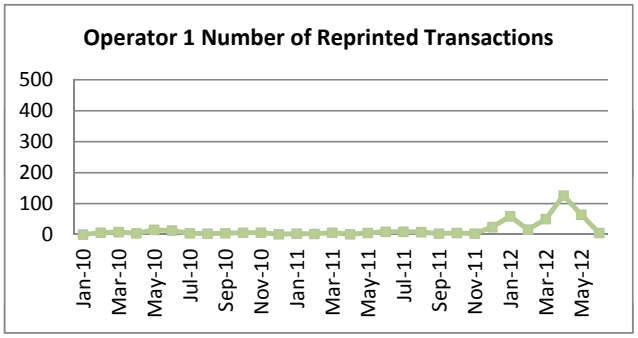
*Operators Julie, Dfontana, Jaime, Daniel, Coralee removed due to low volume

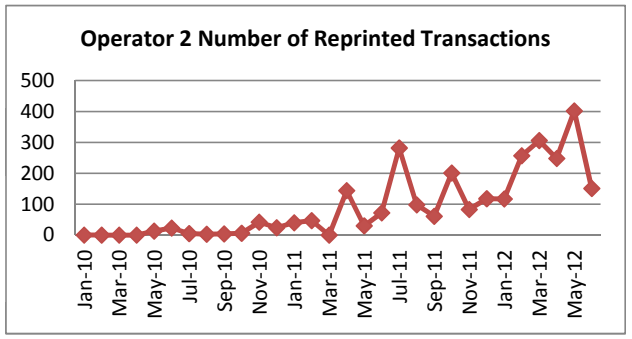
Totals by Year

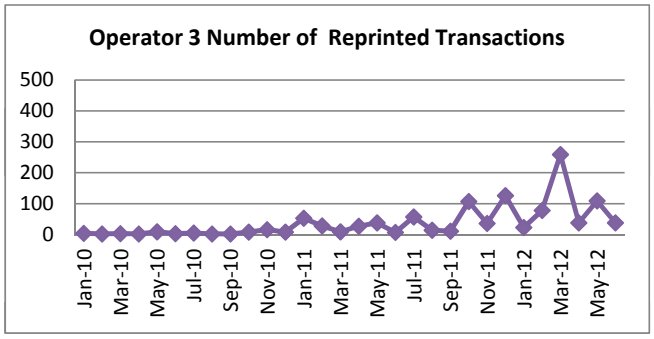
	Operator 4				Operator 5				Operator 6			
YEAR	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW	Re-printed transactions	Value of Reprinted Transactions	Total Transactions Entered Into WW	Total $ Entered Into WW
2010	64	$ 1,051	21,703	$ 309,190	178	$ 4,905	23,829	$ 339,431	59	$ 1,042	19,345	$ 290,968
2011	614	$ 12,907	22,459	$ 314,371	771	$ 11,048	23,083	$ 338,812	65	$ 1,961	20,177	$ 327,683
2012	1,387	$ 19,054	8,310	$ 140,127	1,013	$ 14,153	9,206	$ 145,441	409	$ 6,280	8,856	$ 154,193
Totals	2,065	$ 33,012	52,472	$ 763,688	1,962	$ 30,106	56,118	$ 823,684	533	$ 9,283	48,378	$ 772,844

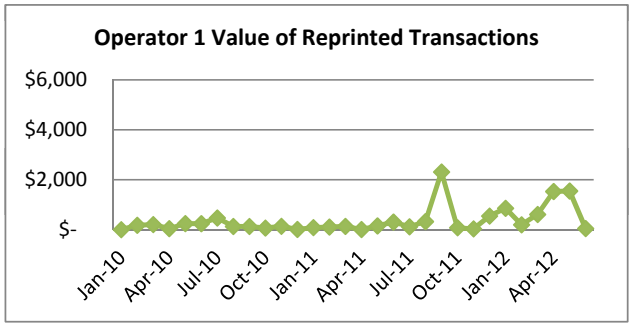
*Operators Julie, Dfontana, Jaime, Daniel, Coralee removed due to low volume

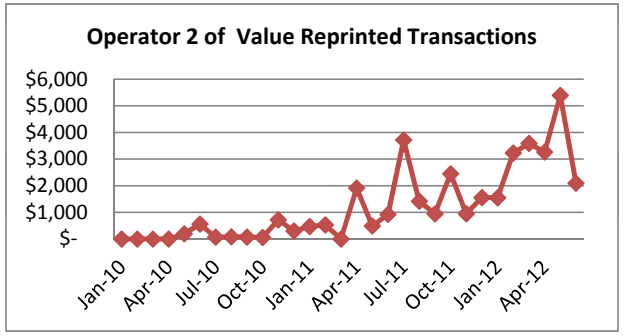
Reprinted Cash Transactions from SWM Point of Sale (POS) System for the Period of January 2, 2010 to June 9, 2012

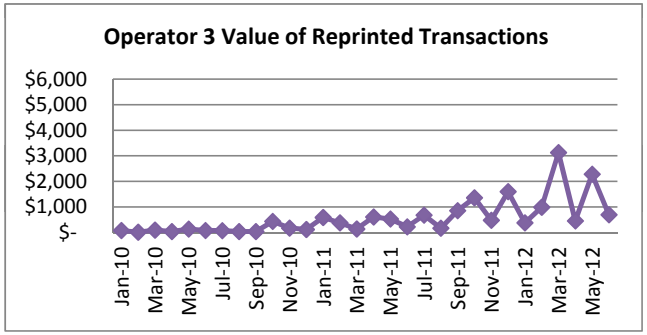


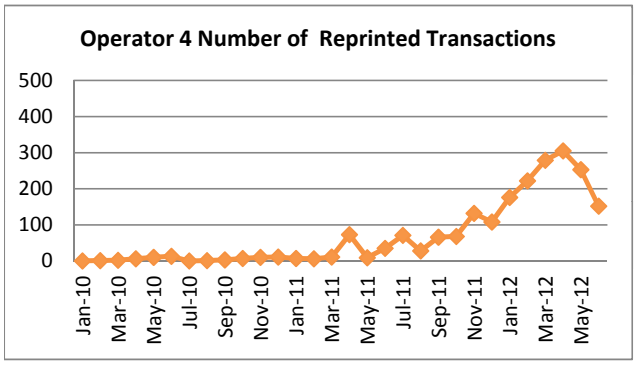


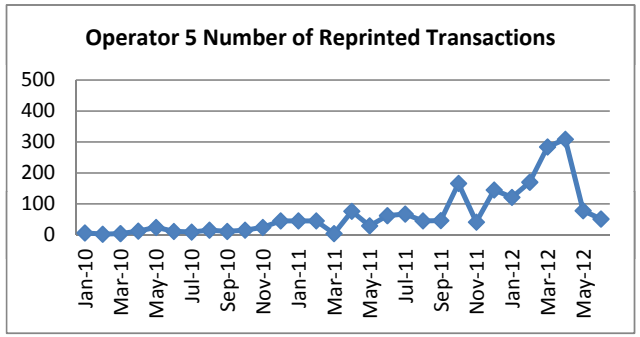


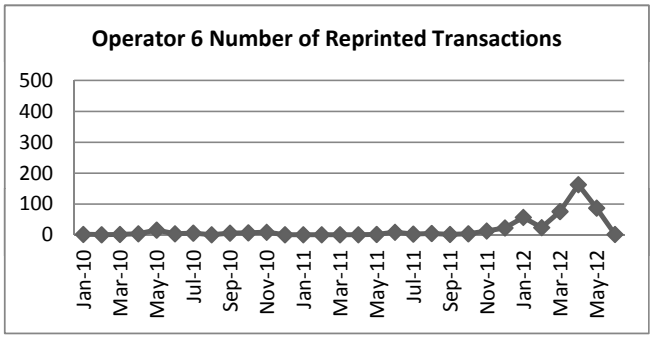


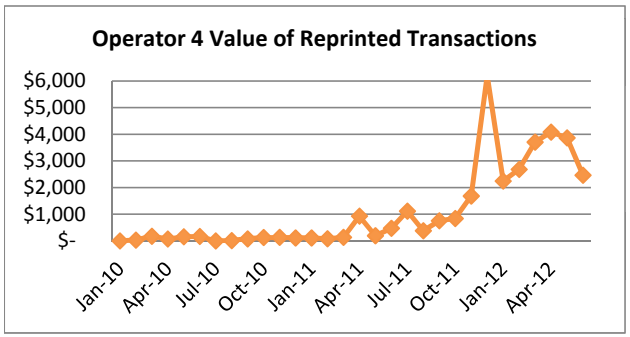


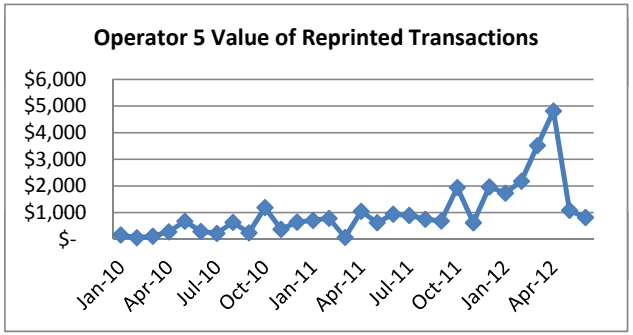


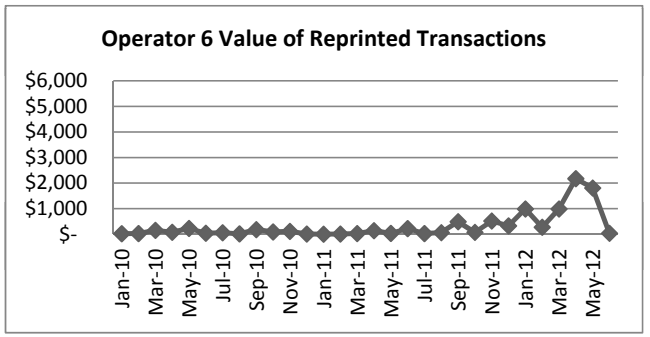












6/18/12

Acct (Multiple Items)
100 + 120

Row Labels	Sum of Duplicate	Sum of Lost $$
[redacted] Operator 1 (Reprints enabled)	3	$ 50.00
[redacted] * Operator 7 (Reprints disabled)	1	$ 10.00
[redacted] * Operator 6 (Reprints disabled)	3	$ 56.00
Grand Total	**7**	**$ 116.00**

Alleged perpetrators, Operators 1, 2 and 4, names redacted below.

Effective June 9, 2012 only [redacted], [redacted], and [redacted] could print duplicate tickets

* no legitimate need to print duplicate tickets for others

Auditor note: This analysis was prepared and provided by the SWM Fiscal Manager. The report shows that duplicate tickets were printed for transactions created by scale house operators that *did not have the ability* to reprint transactions. The only operator on duty at the time that could print duplicate transactions was one of the suspected operators. Report has not been audited.

Operator numbers correspond with operator numbers found in Appendices A and B.

Prepared by SWM, P1 of 1