September 16, 2008

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VICE PRESIDENT, SOUTHEAST AREA OPERATIONS

SUBJECT: Audit Report – Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Southeast Area (Report Number DR-AR-08-007)

This report presents the results of our self-initiated audit, Vehicle Maintenance Facilities (VMF) – Scheduled Maintenance Service in the Southeast Area (Project Number 08XG005DR000). The overall objectives were to assess whether the Southeast Area accomplished all required scheduled maintenance and whether they integrated both VMFs and local commercial resources for optimum efficiency. Click here to go to Appendix A for additional information about this audit.

Conclusion

The Southeast Area completed the majority of their required scheduled preventive maintenances (SPM[1]) during fiscal year (FY) 2007. However, management could further optimize efficiency through the more effective use of VMF and local commercial resources. Better optimizing its resources could save the Southeast Area an estimated $27 million over 10 years.

Scheduled Maintenance Performance

Southeast Area VMF units and local commercial vendors (LCVs) completed an average of 95 percent of their required SPMs. Five VMF units completed all of the SPMs, and five VMF units ranged between 81 and 95 percent of the required SPMs. Not completing all the required SPMs occurred because of:

- A shortage of assigned maintenance technicians.
- An inadequate process for VMF units to manage available maintenance and repair resources.

[1] An SPM usually includes a preventive maintenance inspection and any repairs needed to maintain the vehicle or meet safety and reliability standards.

- The practice of changing vehicle status from "maintenance not performed" (also called "maintenance in arrears") to "maintenance performed" by adjusting the SPM schedule.

- Frequent reluctance on the part of Vehicle Post Offices (VPO) to release a vehicle for an SPM because the VMF could not provide them with a reserve vehicle.[2]

Without completing all the required scheduled maintenance and repairs, some of the Postal Service vehicles are vulnerable to breakdowns, which could adversely affect timely mail delivery, and potentially affect the well-being of employees and the public. Since the Postal Service does not plan to begin replacing its current fleet of Long Life Vehicles (vehicles that are more than 20 years old) until 2018, we believe it is critical that these vehicles receive SPMs in a timely manner. Click here to go to Appendix B for additional information about this issue.

We recommend the Vice President, Southeast Area Operations, direct district managers to:

1. Assess vehicle maintenance technician positions at individual vehicle maintenance facilities to ensure sufficient staff is available for maintenance service.

2. Monitor and track key maintenance activities to ensure timely completion of all required scheduled maintenance and repairs.

3. Require vehicle maintenance facility officials to immediately conduct all maintenance in arrears and properly record vehicle status if maintenance was not conducted.

4. Discontinue the practice of adjusting the vehicle maintenance schedules when they have vehicles in arrears balances to eliminate situations where maintenance was not performed.

Optimum Use of Resources

The Southeast Area did not always optimize its resources to ensure that maintenance and repair funds were expended in the most efficient and cost-effective manner. Specifically, maintenance officials often used LCVs for vehicle maintenance and repairs when using VMF resources would have been more efficient and economical. Likewise, VMF resources were often used when LCVs would have been more efficient and economical. Additionally, VMF officials used maintenance employees to shuttle vehicles between facilities for maintenance and repairs when more economical means existed.

[2] Reserve vehicles are used to replace vehicles until scheduled preventive maintenance is completed.

This occurred because the VMF units' vehicle maintenance plan not fully consider:

- The optimal combination of VMF resources and LCVs for performing scheduled maintenance and repairs.

- The cost-effectiveness of using LCVs instead of VMF resources to shuttle vehicles between facilities for maintenance and repairs.

As a result, the Southeast Area expended more resources than necessary to complete vehicle maintenance and repairs. By optimizing its resources, the Southeast Area could reduce operating costs by about $2.7 million annually, or more than $27 million over 10 years. Click here to go to Appendix C for additional information.

We recommend the Vice President, Southeast Area Operations, direct district managers to:

5. Work with vehicle maintenance facility officials to:

   - Maintain the most efficient combination of vehicle maintenance facility and local commercial resources based on geographical location and costs.

   - Make optimal use of the Postal Service's national vehicle shuttle agreement or other local commercial shuttle services, when cost-effective, for transporting vehicles to and from maintenance facilities.

Management's Comments

Management agreed with our findings, recommendations, and monetary impact[3] of over $27 million over 10 years. Management stated they will focus on completing 100 percent of required SPMs and integrate VMF and local commercial resources to optimize efficiency and reduce costs. They will require each district to conduct an assessment to quantify the resources required to perform all SPMs. Furthermore, management plans to send a memorandum directing districts to monitor and track key maintenance activities. In addition, Southeast Area management issued a memorandum to the district managers instructing them to complete missing or past due maintenance in arrears and all remaining scheduled maintenance work. The Area Vehicle Maintenance Programs Analyst will monitor and follow-up monthly with each district. Management will also ensure use of a national shuttle agreement or other local commercial service. We have included management's comments, in their entirety, in Appendix G.

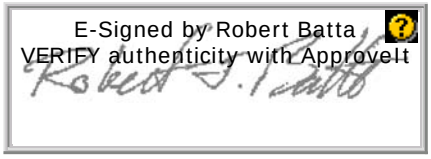
[3] In subsequent discussions held with management, we reached agreement on total monetary impact.

Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to the recommendations in the report and management's corrective actions should resolve the issues identified in the report.

We will report $27,620,773 of funds put to better use in our *Semiannual Report to Congress*. The OIG considers recommendation 5 significant and, therefore, it requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when management completes corrective actions. This recommendation should not be closed in the follow-up tracking system until the OIG provides written confirmation the recommendation can be closed.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Rita Oliver, Director, Delivery, or me at (703) 248-2100.



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APPENDIX A: ADDITIONAL INFORMATION

BACKGROUND

The Postal Service invested over $3 billion in vehicle assets for the purpose of transporting and delivering the mail. Vehicle inventory consists of 219,522 delivery, transport, and administrative vehicles. Delivery and collection vehicles (Figure 1) account for 195,211 or about 89 percent of the total fleet. The Postal Service acquired the majority of the long life vehicles between 1987 and 1994 and planned to maintain them for 24 years. Since about 7,700 of these vehicles were purchased in 1987, they are approaching the end of their useful life. Additionally, the Postal Service recently stated that capital constraints now dictate that many of these vehicles must stay in service until 2018 — 7 years past the planned lifespan.

Figure 1
Delivery and Collection Vehicles in VMFs for SPM

Source: Postal Service

Management established 190 main and 131 auxiliary VMFs to maintain these assets in a technically reliable, safe, clean, and neat condition for maximum mail transportation. Vehicle maintenance includes selecting and training maintenance technicians; providing garages, tools, and equipment; performing repairs; and monitoring and maintaining preventive maintenance standards. The geographic location of VMFs and auxiliary VMFs varies in each area as needed to support vehicle maintenance and reduce transportation costs. Auxiliary VMFs were established for situations where vehicle maintenance requirements exceed VMF resources or when shuttle time or geographical distances warrant the use of an auxiliary VMF.

Area officials are responsible for validating staffing requirements for vehicle-related positions and ensuring an adequate scheduled maintenance program.
Vehicle maintenance managers have overall responsibility for oversight of all maintenance and repair services performed at VMF units, as well as any work contracted to commercial vendors. Although the VMF manager has overall responsibility for vehicle maintenance, vehicles are usually assigned to a VPO. VPOs can be post offices, branches, stations, associated offices, or other delivery and support facilities. Officials at VPOs can also contract with LCVs for maintenance and repair

services, but they are required to document the repairs and obtain the VMF manager's approval for repairs and services costing more than $250.

The Postal Service developed Handbook PO-701, *Fleet Management*, to assist operating personnel in maintaining the vehicle fleet in the most economical manner possible. The handbook requires a maintenance plan that provides for regular examination and service of Postal Service-owned vehicles. VMF managers must prepare a vehicle maintenance plan designating how and when each vehicle will receive scheduled maintenance. The handbook also emphasizes preventive or scheduled maintenance over reactive or unscheduled maintenance.

The Postal Service also established a Model Vehicle Maintenance Facility Performance Review program. The review program is an integral part of VMF operations and a key tool for determining the efficiency of a unit at any given point in time and for identifying areas that require corrective action. Districts must ensure that self-reviews are performed in all vehicle maintenance facilities on a quarterly basis. VMFs must achieve a score of 85 or more to be certified. The area must certify or recertify each unit at least every three years.

The Postal Service uses the Vehicle Management Accounting System (VMAS) to code and track costs. VMAS is a computer-based support system designed to collect, process, store, present, and communicate vehicle maintenance data. The table below shows the VMF expenses including commercial vendors' expense for FY 2007.

Table 1. Maintenance Expenditures for FY 2007 by Area

Postal Service Area of Operation	VMF and Commercial Expenditures		
	Commercial Vendor Expenses in FY 2007	VMF Expenses in FY 2007	Total Expenses in FY 2007
Southeast	$13,867,484	$52,648,111	$66,515,595
Great Lakes	15,152,866	46,536,525	61,689,391
Eastern	12,213,149	45,085,152	57,298,301
Western	10,382,055	45,808,493	56,190,548
Pacific	9,105,547	42,819,217	51,924,764
Northeast	10,821,346	37,860,317	48,681,663
New York	12,433,942	36,814,803	49,248,745
Southwest	7,194,386	36,503,347	*43,697,733*
Capital Metro	7,643,667	32,808,458	40,452,125
Total	**$98,814,442**	**$376,884,423**	**$475,698,865**

Source: Postal Service Category Management Center

OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this audit were to assess whether the Southeast Area accomplished all required scheduled maintenance, and whether they integrated both VMFs and local commercial resources for optimum efficiency.

To accomplish the objectives, we randomly selected and reviewed vehicle service files for three VMFs in the Southeast Area. We documented the scheduled maintenances, the number of SPMs required, and whether they were conducted in a timely manner. We reviewed the Web-Enabled Enterprise Information System (WebEIS) to analyze vehicles in "maintenance in arrears" status and compared the number of SPMs completed to the actual maintenance records. We also obtained and reviewed Web-based Complement Information System (WebCOINS) data on the complement of vehicle maintenance technicians.

We reviewed FY 2007 scheduled maintenance services for selected Southeast Area VMFs (See Appendix E). We identified the number of Preventive Maintenance Inspections (PMIs)[4] to be performed at each VMF, the VPOs where the vehicles were located, and the VPOs' distance from the VMFs; and documented the number of vehicle maintenance technicians assigned to each VMF.

We identified each VMF's and LCV's expenditures for scheduled maintenance. In discussions with VMF managers and reviews of maintenance records, we documented the number of SPMs and SPM inspections required for each location on a yearly basis. Using the VMAS vehicle work order history, we analyzed the average time to perform an SPM at the 10 VMFs reviewed in our sample.

We also developed an optimization model that used the above operational data to establish a baseline, standards, key characteristics, and shuttle usage and cost. Using this data, we established an optimum operating efficiency for each VMF. Click here to go to Appendix D, "Calculation of Cost Savings," for the model and assumptions we used to compute monetary benefits.

We conducted this performance audit from October 2007 through September 2008 in accordance with generally accepted government auditing standards and included tests of internal controls that we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We relied on data from VMAS and WebEIS. We did not audit these systems, but performed a limited review of data integrity to support our reliance on the data. We discussed our observations and

[4] A PMI is that portion of required scheduled maintenance a vehicle must receive to determine if mechanical and safety systems are functioning properly.

conclusions with management officials on August 11**,** 2008, and included their comments where appropriate.

PRIOR AUDIT COVERAGE

The OIG has issued three reports related to our objectives.

Report Title	Report Number	Final Report Date	Monetary Outcomes
Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Southwest Area	DR-AR-08-006	August 14, 2008	$34,522,159
Maintenance and Repair Payments to Commercial Vendors Using Postal Service Form 8230, Authorization for Payment	DR-MA-07-005	September 21, 2007	$1,571,517
Management of Delivery Vehicle Utilization	DR-AR-06-005	June 14, 2006	$22,796,487

The Southwest Area audit, like this one of the Southeast Area, is part of a series of audits on this topic. Like this audit, the Southwest Area audit concluded that they did not complete SPMs on all vehicles, and did not always integrate both VMF and LCV resources for optimum use of available resources. Management stated that a shortage of assigned maintenance technicians contributed to these conditions; however, while some locations required additional staff, our analysis did not support an overall need for additional maintenance technicians.

The 2007 audit concluded that using the Postal Service (PS) Form 8230, Authorization for Payment, to pay commercial vendors for maintenance and repair services was not cost-effective and did not have adequate controls to reconcile payments and ensure that repair costs were reasonable. This situation existed because management did not realize the cost and time impact of using PS Form 8230, and therefore did not monitor its use. As a result, the Postal Service will spend at least $1.2 million more than necessary; will not have sufficient assurance that vehicles are appropriately repaired;

and will not receive more than $301,799 in revenues from Voyager Card rebates. We recommended that district management discontinue, with some exceptions, the use of PS Form 8230 to pay commercial vendors for maintenance and repair. Management agreed with our findings and recommendations.

The 2006 audit concluded the Postal Service officials have made significant strides in reducing costs associated with delivery vehicle expenditures over the past 3 years. However, delivery management officials could further improve the use of vehicles that support delivery operations. Postal Service officials maintained excess and underused delivery vehicles, and they leased delivery vehicles from employees and commercial vendors when Postal Service-owned vehicles were available. Additionally, delivery officials did not monitor the reasonableness of payments or the need for contracts with employees for use of their personal vehicles. These conditions existed primarily due to management not consistently following guidance and not having visibility and control of excess Postal Service-owned delivery vehicles within their areas. Additional controls over payment to employees could also reduce the potential for mismanagement or uneconomical payments. Management agreed with our findings, recommendations, and monetary impact.

APPENDIX B: SCHEDULED MAINTENANCE PERFORMANCE

The Southeast Area completed 95 percent of their required SPMs during FY 2007.[5] Five VMF units completed all of their required SPMs. The other five VMF units completed between 81 and 95 percent of their required SPMs. (See Table 2.)

Table 2. Scheduled Preventive Maintenance Performed in FY 2007

VMF Location	Required In FY 2007	Performed	Percentage Performed
Miami	5,761	5,214	91
Montgomery	1,186	1,117	94
Memphis	3,589	3,423	95
Sarasota	1,296	1,296	100
Tampa	4,029	4,029	100
Pensacola	1,319	1,319	100
Macon	900	781	87
Birmingham	2,424	2,424	100
Fort Lauderdale	3,181	3,181	100
Jackson	1,446	1,169	81
Total/Average	**25,131**	**23,953**	**95**

Source: VMAS and OIG optimization model

Several factors contributed to the five VMFs not completing all their required SPMs.

- Insufficient Staff. Officials stated that they did not complete all of the required SPMs due to a shortage of assigned maintenance technicians. Officials determine their technician staffing requirements based on either the "rule of thumb" or SPM-per-technician ratio. Officials stated that they used the ratio concept because the Postal Service has not established a formal policy for staffing VMF maintenance technician positions.[6] We reviewed WebCOINS which showed the Southeast Area VMFs have 22 full-time maintenance technician vacancies. However, our optimization model[7] analysis only supported the need for 16 additional full-time maintenance technicians in these VMFs. (See Table 3.)

[5] In FY 2007, approximately 25,131 SPMs were required in the 10 units we reviewed in the Southeast Area.
[6] We intend to address a need for a standardized staffing matrix in our national capping report to Postal Service Headquarters.
[7] Our optimization model's solution bases staff increase/decrease requirements on the number of "assigned" full-time maintenance technician positions.

Table 3. Estimated VMF Staffing Increase/Reduction Needs Based on OIG Optimization Model

VMF Location	Assigned Vehicles	Technicians Assigned	Staff Increase (Reduction) per OIG Optimization Model
Miami	2,610	27	7
Montgomery	469	10	0
Memphis	1,427	26	2
Sarasota	648	12	0
Tampa	1,868	42	0
Pensacola	549	15	0
Macon	313	6	0
Birmingham	923	11	1
Fort Lauderdale	1,547	18	6
Jackson	589	11	0
Total	**10,943**	**178**	**16**

Source: VMAS, VMF management, and OIG Optimization Model

- Reporting and Tracking of Maintenance Activities. Our review indicated that officials were completing Model Vehicle Maintenance Facility Performance Reviews for the VMFs; however, the area's oversight efforts were not effective in managing vehicle maintenance programs to ensure timely completion of all SPMs due to inadequate and unreliable performance data.[8] For example, two of the 10 VMFs in our sample indicated completion of more than 90 percent of their required SPMs in FY 2007, whereas the maintenance status reports showed no vehicles requiring maintenance at the end of September 2007.

- Maintenance Reserve Vehicles. Our review indicated that the VPO officials were reluctant to release a vehicle for SPM because the VMF could not provide a substitute or reserve vehicle.[9] Our review of the 10 VMF units indicated 377 reserve vehicles assigned, however, four of the 10 VMFs had shortages, five VMFs had overages, and the remaining VMF had a sufficient number of reserve vehicles assigned.[10]

- "Maintenance in Arrears" and Schedule Adjustment. The Southeast Area VMFs sometimes changed vehicle status from "maintenance not performed" (also called "maintenance in arrears") to "maintenance performed." For example, one VMF indicated that on August 31, 2007, 164 vehicles were reflected as "maintenance in arrears" in WebEIS. The location also had a consistent number of vehicles in arrears every month during FY 2007, approximately 35 to 178

[8] Per Handbook PO 701*, Fleet Management*.
[9] VMFs provide reserve vehicles to VPOs as a replacement while an assigned vehicle is undergoing scheduled maintenance.
[10] The OIG previously reported on maintenance reserve vehicles in *Management of Delivery Vehicle Utilization*, (Report Number DR-AR-06-006, dated June14, 2006).

vehicles per month. However, on September 30, 2007, this location had no vehicles in arrears. VMF management could not show whether the vehicles received the proper scheduled maintenance.[11] Officials stated that they adjusted the SPM schedule to prepare the annual maintenance plan for the next FY.

Without completing all the required scheduled maintenance and repairs, some of the Postal Service vehicles are vulnerable to breakdowns, which could adversely impact timely mail delivery, and potentially impact the well-being of employees and the public. Since the Postal Service does not plan to begin replacing its current fleet of Long Life Vehicles (vehicles that are more than 20 years old) until 2018, we believe it is critical that these vehicles receive the required maintenance.

[11] The "Vehicle in Arrears" status is a performance measure for VMFs.

APPENDIX C: OPTIMUM USE OF RESOURCES

The Southeast Area did not always optimize its resources to ensure that maintenance and repair funds were expended in the most efficient and cost-effective manner. Specifically, maintenance officials often used LCVs for vehicle maintenance and repairs when using VMF resources would have been more efficient and economical. Likewise, VMF resources were often used when LCVs would have been more efficient and economical. Additionally, VMF officials used maintenance employees to shuttle vehicles from the VPO to the VMF when more economical means existed.

Several factors contributed to these conditions.

- Optimum Use of VMF and Commercial Resources. The vehicle maintenance plan did not consider an optimum combination of both VMF and commercial resources.[12] Generally, it is more cost effective[13] for the VMF to perform SPMs on VPO vehicles stationed within 50 miles of the VMF. However, a LCV should perform SPMs on vehicles when the VPO is more than 50 miles from the nearest VMF. We determined that 4,887 SPMs should have been performed at the other site - either the VMF or the commercial facility. (See Table 4.)

Table 4. VMF and Local Commercial Vendor Resources

VMF Location	FY 2007 SPMs Performed by		Total SPMs Performed	SPMs Performed Using the Least Optimal Site		Total SPMs That Could Have Been More Optimally Performed
	VMF	Local Vendors		VMF	Local Vendors	
Miami	1,837	3,377	5,214	127	1,295	1,422
Montgomery	1,083	34	1,117	237	21	258
Memphis	2,817	606	3,423	46	283	329
Sarasota	1,081	215	1,296	253	100	353
Tampa	3,920	109	4,029	0	109	109
Pensacola	1,219	100	1,319	51	88	139
Macon	606	175	781	45	17	62
Birmingham	2,033	391	2,424	0	387	387
Fort Lauderdale	1,714	1,467	3,181	0	1,403	1,403
Jackson	1,085	84	1,169	424	1	425
Total	**17,395**	**6,558**	**23,953**	**1,183**	**3,704**	**4,887**

Source: VMAS data and OIG optimization model

[12] The VMAS does not track the number of SPMs accomplished. The OIG's efficiency and optimization model estimated the number completed by analyzing all work orders assigned to code 22 (scheduled maintenance), and with some adjustment, considered all work over 2 hours as an SPM.

[13] Cost effectiveness is based on the overhead costs to transport vehicles between the VMF and the VPO, vehicle maintenance technician or other VMF personnel.

- Vehicle Shuttling. In most cases, we found that the Postal Service's national vehicle shuttle agreement or local commercial shuttling services were more cost-effective than using VMF maintenance technicians. The Southeast Area used 13,469 workhours for vehicle maintenance technicians to shuttle vehicles rather than perform maintenance. The shuttle hours related to SPM were equivalent to seven vehicle maintenance technician positions at a cost of $579,723.[14] (See Table 5.)

Table 5. Vehicle Maintenance Technician Hours used for Shuttling

VMF Location	Number Of Vehicle Maintenance Technicians Assigned	Estimated Scheduled Maintenance Hours Available	Total Shuttle Hours Used In FY 2007	Percentage Of Direct Maintenance Hours Used For Shuttling	Shuttle Hours Used For Scheduled Maintenance	Equivalent Maintenance Technician Positions	Cost Of Shuttle Hours Used By Maintenance Technicians
Miami	27	37,886	34.7	0%	4.5	0.00	$194
Montgomery	10	14,032	1,067.6	8%	727.9	0.41	31,329
Memphis	26	36,483	7,379.9	20%	2,627.3	1.50	113,079
Sarasota	12	16,838	944.1	6%	150.4	0.09	6,473
Tampa	42	58,934	7,960.8	14%	4,280.9	2.44	184,250
Pensacola	15	21,048	1,573.5	7%	1,525.7	0.87	65,666
Macon	6	8,419	28.1	0%	28.1	0.02	1,209
Birmingham	11	15,435	4,003.1	26%	2,034.7	1.16	87,573
Fort Lauderdale	18	25,258	2,515.7	10%	181.0	0.10	7,790
Jackson	11	15,435	3,679.0	24%	1,908.9	1.09	82,159
Total/Average	**178**	**249,770**	**29,186.3**	**12%**	**13,469.4**	**7.68**	**$579,723**

Source: VMAS and OIG Optimization Model

We found the Southeast Area VMF managers and VMPA to be proactive in managing vehicle maintenance and receptive to the intent of our audit and recommendations. Management did express concern that their assessment of available staff contributed to their not optimizing the use of both VMF and commercial available resources to reduce operating cost. This assessment included a district level decision to use available and sufficient VMF staff resources for shuttling, incorporating multi-tasking, trustworthiness in their VMFs, and no knowledge of a national shuttling agreement.

The OIG acknowledges the issues management raised and the financial challenges currently faced by the Postal Service that affect VMF operations. Notwithstanding these concerns and challenges, in our opinion, opportunities exist to become more efficient and potentially save money. Specifically, the Southeast Area could lower overall VMF operating costs by approximately $2.7 million annually. These efficiencies, when projected for the 23 VMFs in the Southeast Area over a 10-year period, could save $27,620,773. (See Appendix D.)

[14] This estimate of equivalent technician positions applies only to the hours used for shuttling. It does not relate to any actual reductions in this report.

APPENDIX D: OIG CALCULATION OF COST SAVINGS

The OIG identified $27,620,773 in funds put to better use over the next 10 years for the Southeast Area's 23 VMFs.[15]

Savings in Dollars

VMF Location	Annual Savings	Savings over 10 Years
Miami[16]	$226,745	$2,267,452
Montgomery	43,801	438,012
Memphis	132,767	1,327,666
Sarasota	93,819	938,192
Tampa	323,151	3,231,509
Pensacola	49,977	499,772
Macon	8,284	82,841
Birmingham	67,038	670,376
Fort Lauderdale	213,584	2,135,835
Jackson	41,738	417,376
Totals	**$1,200,904**	**$12,009,032**
Projected Savings Over 23 VMFs in Southeast Area		**$27,620,773**

Source: OIG Optimization Model

We calculated the savings based on the following methodology and assumptions.

- Each VMF has a list of VPOs for which it is responsible for vehicle maintenance. Each VPO has a number of Postal Service vehicles that require regular SPM. The number of SPMs that a vehicle requires is determined at the beginning of the year based on the demands that the assigned route places on the vehicle. All SPMs for a given year must be performed on each vehicle; however, the VMF may delegate some of this workload to commercial vendors that are near the VPOs. We refer to this contract labor as LCVs.

- The purpose of this audit was to determine the optimal use of the SPMs to be performed by the VMFs' LCVs. We took into consideration the mechanic labor costs and all relevant shuttling costs. As with the SPMs, VMFs may contract out

[15] At 95 percent confidence level, the OIG estimates the 10-year savings amount to range between $13.84 and $41.40 million. We used the mid point estimated of $27.62 million in our statistical projection.
[16] For the Miami VMF, the OIG optimization model calculated savings in efficiency and shuttling of $214,081 and $60,136, respectively for total savings of $274,218. The total savings was then multiplied by a discount factor of 0.79 for an annual estimated savings of $226,745 and a 10-year savings of $2,267,452. This same formula was used for the nine other VMFs and projected to the 23 VMFs in the Southeast Area.

shuttling. The Postal Service has a national vehicle shuttle agreement, and the OIG used that rate in the analysis. However, VMFs can use a less expensive local shuttle contractor if one can be identified.

- We developed the optimization model to find a least-cost solution based on performing all required SPMs. We used the VMFs' FY 2007 operational data to establish a baseline, assuming that any SPMs not currently performed by VMFs are completed by LCVs.[17] We restricted the scope of this audit to maintenance technicians' time spent performing scheduled maintenance and shuttling activities. This analysis draws no conclusions regarding the time dedicated to other activities or how maintenance technicians used the remainder of their time.

- We optimized the VMFs' scheduled maintenance and shuttling time for each of the next 10 years, assuming that the Postal Service would reduce the labor contingent by 4.4 percent per year, the historical Southeast Area attrition rate.[18] This optimization gives the least-cost solution and specifies how the SPMs at each VPO should be distributed between the VMFs and the LCVs. The model shows which shuttling jobs should be done by both the VMFs and contractors. The model analyzes all costs and hours (for SPMs at VMFs, SPMs at LCVs, VMF shuttling, and contract shuttling). The model also shows the SPMs performed by VMFs and LCVs, and to the total amount that could be more optimally performed by either.

- In these optimizations, we assumed that each VMF would operate at a standard efficiency. We used Southeast Area's VMFs' average time per SPM as a standard for the time it takes to complete an SPM in that area. If a particular VMF performed better than this standard, we assumed that the VMF maintained its current efficiency.

- The VMAS does not track the number of SPMs accomplished for each vehicle. The OIG's efficiency and optimization model estimated the number of SPMs completed by analyzing all work orders assigned to code 22 (scheduled maintenance), and considered all work lasting at least 2 hours[19] as an SPM. We explained the process to the VMF managers and then confirmed/adjusted the number of SPMs required and completed.

[17] We obtained the current number of SPMs performed by VMFs and LCVs from VMAS located at the VMFs and transmitted to the mainframe computer at San Mateo Information Technology and Accounting Service Center. Because a VMF may not perform all its required SPMs, we assumed that LCVs would perform the remaining SPMs. In addition, in some cases, a VMF performed more SPMs than required at a VPO. We credited the VMFs with these additional SPMs and determined a comparable solution by reassigning this SPM to the other VPOs having a shortfall. We accomplished this in part by assuming that the baseline case kept the scheduled maintenance hours and shuttling hours constant at current levels.

[18] The historical attrition rate for Southeast Area maintenance technicians was determined by averaging the past 6 years (2001 - 2007) of data obtained from the WebEIS.

[19] We used 2 hours because of the Postal Service's requirement for a "Type A" and "Type B" maintenance inspection prior to any repair work. These inspections require between 1.5 and 2.5 hours.

- We identified cost savings if the VMF was not efficiently using its shuttling time. We compared the VMF's total shuttling time to the aggregate time that should be needed to perform all of the VMF's shuttling, assuming that two vehicles were transported on each trip. The cost of any excess time was time that could have been saved, although the actual amount of time that could be saved was likely to be higher because the VMFs probably did not perform all of their own shuttling.

- For our model, we made certain assumptions regarding the minimum and maximum levels of overtime. The number of hours of straight time worked for each mechanic per year is 1,754.[20]

- Based on the above analyses and projections, we estimated that the Southeast Area could reduce costs by using local commercial resources for shuttling and SPM requirements when appropriate. We projected over the Southeast Area's universe of 23 VMFs, a reduction of costs by approximately $2.7 million annually, or more than $27 million over a 10-year period. These savings include consideration for an overall decrease of seven vehicle maintenance technician positions through attrition over time.

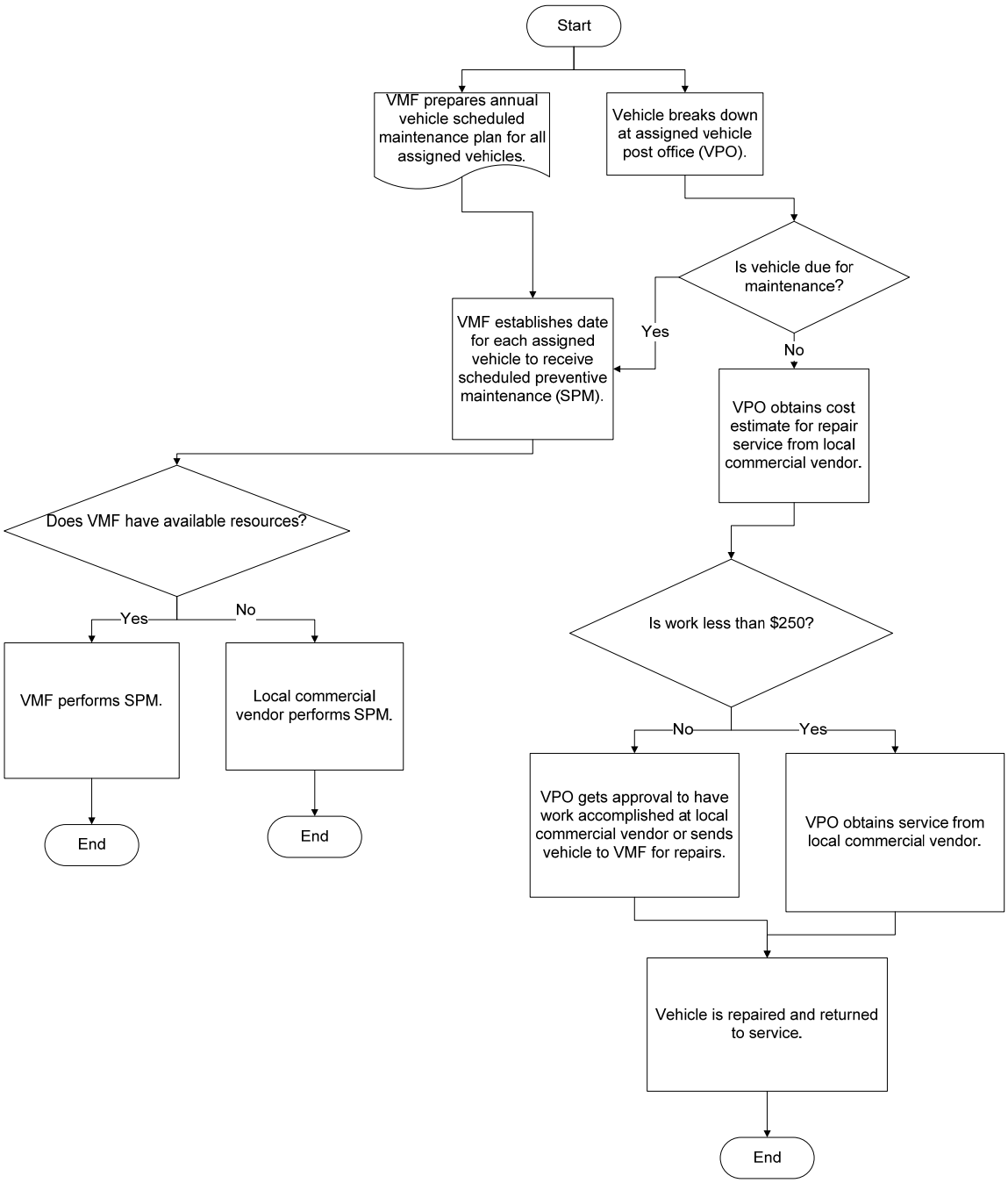
[20] Source: Finance Memorandum dated March 6, 2006, "Workhour Rates for Fiscal Years 2005 - 2007."

APPENDIX E: SELECTED DISTRICTS AND VEHICLE MAINTENANCE FACILITIES

District	VMF
Alabama	Birmingham
	Montgomery
Mississippi	Jackson
North Florida	Pensacola
South Florida	Fort Lauderdale
	Miami
South Georgia	Macon
Suncoast	Sarasota
	Tampa
Tennessee	Memphis

Source: OIG Experts Sample

APPENDIX F: SCHEDULED MAINTENANCE PROCESS[21]



[21]Source: Postal Service Handbook PO-701, *Fleet Management*, March 1991.

APPENDIX G: MANAGEMENT'S COMMENTS

TERRY J. WILSON
VICE PRESIDENT, AREA OPERATIONS
SOUTHEAST AREA

UNITED STATES POSTAL SERVICE

August 22, 2008

LUCINE WILLIS
DIRECTOR, AUDIT OPERATIONS
OFFICE OF THE INSPECTOR GENERAL

SUBJECT: Response to Draft Audit Report – Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Southeast Area (Report Number DR-AR-08-DRAFT)

The Southeast Area concurs with the Office of Inspector General recommendations in the subject draft (Project 08XG005DR000) and the methodology used to estimate the annual savings of $2.8 million by optimizing the use of local vendors and the national shuttle agreement. The Southeast Area will take immediate action to implement the following five recommendations:

1. **Assess vehicle maintenance technician positions at individual vehicle maintenance facilities to ensure sufficient staff is available for maintenance service.**

   Management Response: We agree that an assessment of the vehicle maintenance facility (VMF) staffing should be conducted. Southeast Area Office personnel have been working with the Headquarters' Vehicle Operations Team to develop workload criteria for VMFs. Three Southeast Area VMFs are involved as test sites as HQs Vehicle Operations continues to validate the criteria. Even though the HQs workload criteria has not been validated, each District will be required to conduct an assessment to quantify the resources required to perform all scheduled maintenance. Target completion date: October 3, 2008.

2. **Monitor and track key maintenance activities to ensure completion of all required scheduled maintenance, repairs and maintenance requirements are met in a timely manner.**

   Management Response: We agree that monitoring and tracking key maintenance activities will affect completion of scheduled maintenance in a timely manner. A memorandum will be sent directing Districts to monitor and track key maintenance activities to ensure a timely completion of all required scheduled maintenance, repairs and maintenance requirements. This item will be implemented immediately and monitored monthly.

3. **Require VMF officials to immediately conduct all missing or past due maintenance in arrears and properly record vehicle status if maintenance was not conducted.**

   Management Response: We agree that all scheduled maintenance work in arrears should be completed. A letter will be sent directing Districts to complete missing or past due maintenance in arrears and all remaining schedule maintenance work by September. 30, 2008.

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4. **Discontinue the practice of adjusting the vehicle maintenance schedules when they have vehicles in arrears balances to eliminate situations where maintenance was not performed.**

   Management Response: We agree that any practice to clear a scheduled maintenance in arrears other than completing the required service should cease. Although schedules may be adjusted for legitimate reasons, such as vehicle transfers or acquisition of new vehicles, Districts will be required to inform vehicle maintenance personnel of the seriousness of not completing schedule maintenance, adjusting scheduled maintenance schedules other than for legitimate reasons and the liability assumed by the Postal Service if a vehicle is involved in an accident. This item will be implemented immediately. The Area Vehicle Maintenance Programs Analyst will monitor and follow-up monthly with each District.

5. **District managers to work with vehicle maintenance facility officials to modify the annual vehicle maintenance plan to provide for all scheduled vehicle maintenance to better manage and improve efficiency. The plan should:**

   - **Make optimal use of both vehicle maintenance facilities and local commercial resources for repairing and maintaining vehicles based on the vehicles' geographical location.**

   - **Make optimal use of the Postal Service's national shuttle agreement or other local commercial shuttle services, when cost-effective, for transporting vehicles to and from maintenance facilities.**

   Management Response: We agree with both items. First, the local VMF should utilize the most efficient mix of career and contract resources to repairing and maintaining vehicles; and second, to optimize use of the national shuttle agreement or other local commercial shuttle services when cost effective. Districts will be directed to comply with both recommendations. Target completion date: October 31, 2008.

The Southeast Area will focus on completing 100 percent of required scheduled preventive maintenance in our VMFs and integrate both VMF and local commercial resources to optimize efficiency and reduce costs. Southeast Area Vehicle Maintenance Programs Analyst Brenda Dupree will monitor the results of the five recommendations and may be contacted at 901-747-7635.

Terry J. Wilson.

cc: Jordan Small
Wayne Corey
Dave Patterson
Southeast Area District Managers
Ray Darragh
Donnie Collins