March 19, 2010

JOSEPH D. MOELLER
MANAGER, REGULATORY REPORTING AND COST ANALYSIS

SUBJECT: Audit Report – Management of Special Studies
(Report Number CRR-AR-10-002)

This report presents the results of our audit of the management of special studies (Project Number 09RG020CRR000). Our objectives were to evaluate U. S. Postal Service controls over special studies and efforts to comply with regulatory mandates that affect special studies. The Postal Service uses these studies to attribute its costs to the various categories of mail and special services and to develop workshare cost avoidance estimates. The Postal Accountability and Enhancement Act of 2006 (the Postal Act of 2006) requires the U.S. Postal Service Office of Inspector General (OIG) to audit the data collection systems and procedures the Postal Service uses in their pricing process. This self-initiated audit addresses financial and operational risk. See Appendix A for additional information about this audit.

Conclusion

Controls over special studies are generally adequate to ensure that special studies are updated with recurring data inputs. Specifically, management updates the studies with recurring financial and operational information and coordinates changes to the studies with the Postal Regulatory Commission (PRC). However, improvements are needed over controls to ensure the studies are updated with non-recurring financial and operational data. Additionally, the Postal Service complied with the regulatory mandate to list the special studies and discuss whether the studies reflected current operating conditions.

The Postal Service should prioritize updating the non-recurring data inputs in the special studies. We identified 13 one-time studies or data collection efforts that could be considered special studies. Those 13 are generally used to attribute Postal Service costs to mail categories and special services. We selected for further evaluation the oldest of the 13 studies, the Postmaster Variability Study, which was completed in 1984. In addition to the Postmaster Variability Study, another seven studies were conducted in the 1990s and may need to be updated. We also identified 18 other analyses that could

be considered special studies. Primarily, those are cost models that are not one-time studies but models that continually evolve. We judgmentally selected the Periodicals Destination Entry Cost Avoidance Model, and found 24 data inputs in that model were developed in the 1990s and may no longer be representative of operating conditions. This older data was also used in other cost models. Updating non-recurring data inputs used in cost models could help the Postal Service develop more accurate worksharing cost avoidance estimates.

During our review, the Postal Service filed its FY 2009 *Annual Compliance Report* (ACR) with the PRC. The report complied with the regulatory mandate[1] to include a listing of special studies and a discussion on whether they reflect current operating conditions and procedures. The Postal Service had 26 special studies on their list and they noted that there has not been a PRC rulemaking that provides a definition and listing of special studies.

The Postal Service also noted that updating the Postmaster Variability Study was a low priority, but the study could be replaced or updated as resources permit, to account for changes in postmaster activities. The Postal Service further stated that the Periodicals Destination Entry Cost Avoidance Model was based on a PRC methodology. All of the dropship cost avoidance models, including the Periodicals Destination Entry Cost Avoidance Model, would have to be examined in the future to ensure they accurately reflect operations after network changes.

Postmaster Variability Study

The Postal Service has not updated the Postmaster Variability Study, completed in 1984, and it may not be representative of current postmaster variability.[2] Specifically, the analysis used FY 1979 postmaster salaries and FY 1978 Workload Service Credit (WSC) Index data to determine that the estimated postmaster variability was 18.23 percent. For example, the minimum postmaster salary for Executive and Administrative Schedule (EAS)-23[3] increased from $22,500 in 1979 to $52,433 in 2008. To the extent that postmaster salaries and WSCs have changed in the past 30 years, the study may not be representative of postmaster variability. Only a new study can provide a more accurate estimate of postmaster variability.

A relatively small change in the postmaster variability estimate can have a significant impact in the attribution of volume variable postmaster costs. For example, a 5 percent change in postmaster variability will increase or decrease the volume variable costs by approximately $39.9 million over a 2-year period. We consider this $39.9 million to be a

[1] *Notice of Final Rule Prescribing Form and Content of Periodic Reports*, Section 3050.12, Obsolescence of Special Studies Relied on to Produce the Postal Service's Annual Periodic Reports to the Commission, April 16, 2009.
[2] The degree to which postmaster costs vary in relation to mail volume.
[3] The 1984 study was based on postmaster salaries EAS-22 and below, which has since changed to include EAS-23 and below.

potential misallocation of costs.[4] See Appendix D for details on this non-monetary impact. This potential cost misallocation could affect the integrity of Postal Service cost and pricing estimates. Further, more accurate cost allocation and pricing estimates could assist in maintaining stakeholder confidence and goodwill in the processes the Postal Service uses to price its products and services.

The PRC accepted the Postmaster Variability Study in 1984, but recommended the Postal Service conduct a new study using a different costing approach. The PRC recommended the Postal Service update the study with current salary and WSC data in subsequent rate cases if it did not conduct a new study. In 1997 and again in 2007, the Postal Service considered conducting a new study; however, management stated they set aside the study due to higher priority work. Postal Service personnel stated they are awaiting PRC guidance to prioritize updating the Postmaster Variability Study as well as other special studies. See Appendix B for our detailed analysis of this topic.

We recommend the manager, Regulatory Reporting and Cost Analysis, direct the manager, Cost Attribution, to:

1. Develop a plan for the timely update of the Postmaster Variability Study.

Periodicals Destination Entry Cost Avoidance Model

The Periodicals Destination Entry Cost Avoidance Model contains non-recurring data inputs that may not be representative of current operating conditions. We found the Postal Service developed 24 of the 46 data inputs in the model in the 1980s and 1990s. Specifically, the agency developed two productivities,[5] two conversion factors,[6] and three mail flow percentages[7] from a 1984 study. An additional 12 productivities were from a 1996 field study conducted at six bulk mail centers (BMCs). Finally, one facility factor and four mail volume proportion[8] inputs were developed in the early to mid-1990s.

The productivities and volume proportions from the above-mentioned field studies are also used as data inputs 77 times in six additional special studies cost models. To the extent the non-recurring data inputs are not representative of current operating conditions, the workshare cost-avoidance estimates and discounts based on those models may be inaccurate. To estimate how changes in non-recurring data inputs can affect cost avoidance estimates, we performed a sensitivity analysis on each data input.

[4] A misallocation of costs can occur when Postal Service costs are misclassified as volume variable, product specific, or institutional costs.
[5] Productivities are the number of items (mailpieces, sacks, or containers) handled per man-hour.
[6] Container conversion factors involve the number of sacks per in-house container and per BMC container.
[7] Sack sorting machine mail flow percentages involve the sorting of sacks to vans, in-house containers, and BMC containers.
[8] Proportions are a percentage of mail that is processed to a certain sort. For example, 75 percent of the mail is sorted to the Destination Sectional Center Facility (DSCF) level while 25 percent is sorted to the Destination Delivery Unit (DDU) level.

We varied each input by 5 percent and estimated that the effect on the cost-avoidance estimates ranged from no effect for certain productivities to approximately $2 million for a facility factor.[9] This 5 percent change in one data input, holding all other inputs equal, can affect cost-avoidance estimates by $4 million over a 2-year period. We consider this $4 million to a potential misallocation of costs. See Appendix F for details on this non-monetary impact. This potential cost misallocation could affect the integrity of Postal Service cost and pricing estimates.

Postal Service personnel stated they are awaiting PRC guidance to prioritize updating the non-recurring data inputs. Additionally, the impact recent operational changes have on the special studies will be evaluated when the changes are fully implemented. See Appendix B for our detailed analysis of this topic.

We recommend the manager, Regulatory Reporting and Cost Analysis, direct the manager, Special Studies, to:

2. Identify non-recurring data inputs that should be updated in each cost model.

3. Update the non-recurring data inputs or identify cost-effective alternative methods to obtain the necessary cost allocation information and update the cost models accordingly.

Management's Comments

Management agreed with the findings and recommendations. In response to recommendation 1, management will develop steps needed to update the Postmaster Variability Study. In response to recommendation 2, management indicated they identified recurring and non-recurring inputs in the studies and provided that information to the PRC. In response to recommendation 3, management stated they were awaiting PRC guidance in the strategic rulemaking to prioritize study updates. Management further stated that the presentation of certain data in Table 4 of the report could be misleading to readers. See Appendix D for management's comments in their entirety.

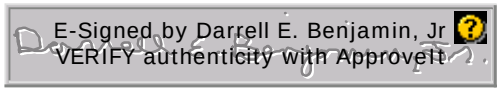
Evaluation of Management's Comments

The OIG considers management's comments responsive to all the recommendations and management's corrective actions should resolve the issues identified in the report. The strategic rulemaking, initiated by the PRC, is still scheduled for FY 2010. The strategic rulemaking should assist the Postal Service in prioritizing updates of the studies and data. Based on management's comments regarding Table 4, we clarified the narrative description of the table.

[9] Because of the complexity of the model and the interrelationships among the data inputs, we did not estimate an overall non-monetary impact on revenue from uniformly increasing or decreasing all the data inputs at once by 5 percent.

We consider recommendation 1 significant, and therefore require OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. These recommendations should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that 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 Paul Kuennen, director, or me at 703-248-2100.



Darrell E. Benjamin, Jr.
Deputy Assistant Inspector General
for Revenue and Systems

Attachments

cc: Joseph Corbett
Virginia Mayes
Jeffrey Colvin
Sally K. Haring

APPENDIX A: ADDITIONAL INFORMATION

BACKGROUND

For FY 2009, we identified 31 analyses that could be considered Postal Service special studies. In general, the studies can be divided into two groups. The first type of special study includes 13 studies that are a one-time analyses or data collection efforts. This type of special study has an established completion date and is primarily used to attribute costs to the various categories of mail and special services. These cost attribution studies often involve substantial fieldwork or analyses to develop the cost variabilities and distribution factors needed to attribute and distribute costs to different categories of mail and special services. Examples include studies to determine postmaster variability or city carrier street time activity. Management does not update or revalidate these special studies annually, but ultimately replaces them with new or updated special studies.

The second type of special study includes 18 cost model special studies. These cost models are used to develop workshare cost avoidance estimates that help determine workshare discounts rates. Cost model special studies are generally not one-time studies, but rather cost models that have evolved over time. Depending on their complexity, these cost models can have hundreds of recurring and non-recurring data inputs. The Postal Service updates recurring data inputs annually, examples include cost data from accounting records, wage rates, mail processing costs by shape, piggyback factors,[10] and Management Operating Data System (MODS) data. While the recurring data inputs are updated annually, the non-recurring data inputs are generally updated when there are operational or productivity changes that affect the models. Updating non-recurring data inputs generally requires additional fieldwork or analysis. Appendix C lists each special study and the date the Postal Service completed it or first filed it with the PRC.

The Postmaster Variability Study is an econometric analysis used to estimate the degree to which EAS-23 and lower level postmaster costs vary in relation to changes in mail volume. The rationale behind this study was that management could estimate the volume-variable costs of EAS-23 and lower level postmasters[11] by determining the average change in salary of postmasters due to a change in the level of activity as measured by the WSC index.[12]

[10] Piggyback factors are employed in cost studies to augment labor cost estimates and add costs associated with supervisors, administration, the facility, and equipment. A piggyback factor is, in general terms, the ratio of total volume variable costs to volume variable labor costs for a specific function or operation.
[11] Postmaster EAS-24 and above costs are assumed to be 100 percent institutional (or fixed) in that their duties and responsibilities are not directly related to changes in mail volume.
[12] The WSC is part of the Expanded Postmaster Criteria System (EPCS). The EPCS is a system the Postal Service uses to determine postmasters' pay according to a unitary system involving nine workload criteria. It evaluates, ranks, and classifies postmaster positions by an index of WSCs.

Based on the results of the study, the Postal Service estimated that EAS-22 and lower level postmaster costs were 18.23 percent volume variable. Management applies that percentage to the total accrued costs for EAS-23 and lower level postmasters to determine the total volume-variable costs. The Postal Service then distributes those costs to mail categories and special services. In FY 2008, total EAS-23 and lower level postmaster costs were $2.2 billion and, based on the study, about $399 million (18.23 percent) of those costs were estimated to be volume-variable.

The Periodicals Destination Entry Cost Avoidance Model is used to develop destination entry cost avoidance estimates for Periodicals mail delivered to various Postal Service facilities.[13] As with other Postal Service market-dominant products, any price increases to Periodicals is limited to the Consumer Price Index-All Urban Areas.

A manager and five analysts in the Special Studies group are responsible for cost model special studies. A manager and 10 analysts in the Cost Attribution group are responsible for cost attribution special studies. Both groups report to the manager, Regulatory Reporting and Cost Analysis, within Finance.

The PRC is an independent agency with regulatory oversight of the Postal Service. The Postal Act of 2006 gave the PRC additional information-gathering and reporting functions. In April 2009, to implement these new functions, the PRC issued a ruling governing the obsolescence of special studies.[14] The ruling directed the Postal Service to annually provide a list of special studies and indicate the completion date and whether the study reflects current operating conditions and procedures. The PRC also indicated that it would address the issue of obsolescent special studies as part of a future strategic rulemaking that would evaluate and prioritize the cost of research needed to update the special studies.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to evaluate Postal Service controls over special studies and efforts to comply with regulatory mandates that affect special studies.

To assess controls over special studies, we interviewed managers and staff analysts in the Special Studies and Cost Attribution groups. Additionally, we reviewed FY 2009 changes to special studies documented in PRC rulemaking proceedings.

To assess efforts to comply with regulatory mandates, we interviewed Postal Service managers and PRC staff and inventoried special studies and cost models used as inputs into the ACR.

[13] Destination Bulk Mail Center (DBMC), DSCF, and DDU.
[14] *Notice of Final Rule Prescribing Form and Content of Periodic Reports*, Section 3050.12, Obsolescence of Special Studies Relied on to Produce the Postal Service's Annual Periodic Reports to the Commission, April 16, 2009.

To examine controls over updating special studies, we selected for review one cost attribution special study and one cost model special study. We selected the Postmaster Variability Study for review because it was the oldest cost attribution special study. We judgmentally selected the Periodicals Destination Entry Cost Avoidance Model for review based on prior and planned OIG work involving the workshare cost avoidance models, which are impacted by the Periodicals Destination Entry Cost Avoidance Model.

To determine whether management updated the Postmaster Variability Study, we analyzed postmaster salary and WSC data used in the study and compared that data to current salary and WSC data. We also reviewed PRC proceedings that addressed the study and interviewed managers and analysts responsible for it.

To determine whether management updated the Periodicals Destination Entry Cost Avoidance Model, we identified data input into the model and traced the origin of those data inputs in prior PRC proceedings. To assess whether the model reflected current operating conditions, we verified that MODS operation numbers used in the model were active operation numbers.

We conducted this performance audit from May 2009 through March 2010 in accordance with generally accepted government auditing standards and included such tests of internal controls as 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 that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We discussed our observations and conclusions with management officials on December 16, 2009, and included their comments where appropriate.

PRIOR AUDIT COVERAGE

Report Title	Report Number	Final Report Date	Monetary Impact	Report Results
Data Quality Issues with the City Carrier Street Time Study	CRR-AR-09-001	1/21/2009	None	The sample design for the City Carrier Street Time Study appears to be reasonable. However, the data collection process needed better documentation and control. Numerous data quality issues remained in the data records even after a rigorous data cleansing effort. Additionally, the Postal Service did not control or document the data cleansing process very well and the survey data is now more than 6 years old. Management generally agreed with the findings but stated that the study was large enough that missing or some incorrect data would not materially impact the results and the PRC accepted it. Management agreed with all recommendations.

APPENDIX B: DETAILED ANALYSIS

Postmaster Variability Study

The Postal Service has not updated the Postmaster Variability Study, an econometric analysis relied upon since 1984 to attribute postmaster volume variable costs to Postal Service mail categories and services, and it may not be representative of current postmaster variability. For example, in performing a regression analysis of how EAS-23 and lower level postmaster costs vary in relation to changes in mail volume, the Postal Service used the 1979 postmaster salary at each grade level as the dependent variable and the 1978 postmaster WSC Index as the independent variable. However, postmaster salaries have more than doubled since 1979, as shown in Table 1, and there have been modifications to the WSC Index.

Table 1. Minimum Postmaster Salaries, FY 1979 and 2008

EAS Grade Levels	Minimum Postmaster Salaries		
	FY 1979	FY 2008	Percentage Increase
A	$3,063	$7,201	235
C	6,123	14,402	235
E	9,186	21,603	235
11	12,400	31,102	251
13	13,800	34,115	247
15	15,400	37,862	246
18	18,100	42,743	236
20	20,200	47,197	234
21	21,300	49,490	232
22/23	22,500	52,433	233
Average Minimum Salary	$14,207	$33,815	238

The WSC Index has also been modified, although overall WSC factors have not changed. The WSC Index evaluates postmaster workload by activity and revenue unit factors. These factors reflect various associate offices' functional activities performed in connection with window, lobby, and delivery services; mail processing, distribution, and collection; and general administration. Improvements in automation and other technological advances have likely altered the postmasters' functions to some degree. A small change in postmaster variability can affect the attribution of volume-variable costs to mail categories and special services. We conducted a sensitivity analysis that increased/decreased the 18.23 percent variability by 5 percent. At 5 percent, the change in postmaster variability results in a $19.9 million difference in FY 2008 postmaster costs attributed to mail categories and special services. See Appendix D for more details on the sensitivity analysis.

When the Postal Service introduced the Postmaster Variability Study in the 1984[15] and 1987[16] rate cases, the PRC recommended the agency conduct a new study using a different methodology. At a minimum, as an alternative, the PRC recommended the Postal Service update the econometric analysis in subsequent rate cases with updated postmaster salaries and WSC Index data.

Management stated they did not update the data in subsequent rate cases because they planned, at various times, to conduct a new study using a different cost methodology. In 1997 and again in 2007, they made preliminary plans to conduct a new study, but stopped because of higher priority work. Currently, the Postal Service is waiting on PRC guidance to prioritize the updating of all special studies. The PRC is planning a strategic rulemaking designed to evaluate whether management needs to update the special studies or replace them with new studies, and to prioritize the Postal Service work updating and conducting the studies. An updated Postmaster Variability Study could assist management in ensuring that postmaster volume variable costs are identified and accurately attributed to mail categories and special services.

Periodicals Destination Entry Cost Avoidance Model

Non-Recurring Inputs Not Representative

The Periodicals Destination Entry Cost Avoidance Model contains data inputs that may not be representative of current operating conditions. The model has 46 data inputs, 22 of those data inputs are recurring financial and operational data[17] that management updates annually. The other 24 data inputs are non-recurring data that may not be representative of current operating conditions. The Postal Service first developed the model in 1984 and has adjusted it over the years to account for new equipment and/or processes. However, the 24 non-recurring data inputs[18] in the model were first developed in field studies conducted in the 1980s and 1990s and are updated only when a new field study is conducted. See Appendix E for a complete list of the 46 data inputs.

Development of Non-Recurring Data Inputs

Seven of the 24 non-recurring data inputs were developed in a 1984[19] field study that relied on a publisher's survey and econometric analysis. The seven inputs included two productivities, two conversion factors, and three sack sorting machine mail flow

[15] PRC Docket R84-1.
[16] PRC Docket R87-1.
[17] These data inputs include wage rates, piggyback factors, premium pay factors, pieces per pound, pieces per sack/pallet, and certain productivities for automated sack sorting machines.
[18] These data inputs are primarily productivities for allied operations, facility factors, volume proportions, container conversion factors, and mail flow percentages.
[19] PRC Docket R97-1, USPS-LR-H-111 & Docket R84-1, USPS-T-14.

percentages. Twelve of the 24 non-recurring data inputs were productivities developed in a 1996[20] field study conducted at six BMCs.

Finally, one facility factor and four mail volume proportion data inputs are based on fieldwork studies conducted about 1990. The BMC Realization Factor is a facility factor that measures the efficiency at a BMC, calculated as the total direct labor hours "earned" for all mail processing operations divided by total direct labor hours "clocked" for the same operations over the same time period. The four mail volume proportions include the proportion of volume from destinating BMCs going directly to DSCFs and DDUs and the proportion of DSCFs that are mechanized to those that are not mechanized. The Postal Service has not updated the mail volume proportions since they were first introduced in the 1990 rate and 1995 mail classification cases.[21]

Non-Recurring Inputs in Other Special Studies

The productivities and volume proportions from the 1984, 1990, and 1996 studies are also used as a non-recurring data input in six additional special studies. In total, the productivities and volume proportions are used 77 times in the six cost models. Table 2 lists the special studies and the non-recurring data inputs from the 1984, 1990, or 1996 sources.

Table 2. Special Studies

Special Study	Data Inputs from Studies
Bound Printed Matter Mail Processing Cost Model	11
Media Mail Processing Cost Model	11
Bulk Parcel Return Service Cost Model	14
Standard Parcels Mail Processing Cost Model	13
Standard Letters Destination Entry Cost Avoidance Model	14
Standard Flats Destination Entry Cost Avoidance Model	14
Total:	77

Under a Postal Service network realignment plan, BMCs are being transformed into network distribution centers (NDCs) that will consolidate the processing and dispatch of originating mail and reduce transportation costs. The new network, when fully implemented, will replace BMCs with three types of NDC facilities. Each type of NDC facility will have various level of processing and distribution functions. Management stated that, once the NDC activation is complete, they will determine whether operational changes impact the models.

To estimate how changes in Periodicals Destination Entry Cost Avoidance Model inputs can impact the resulting cost-avoidance estimates, we performed a sensitivity analysis

[20] PRC Docket R97-1, USPS-LR-H-132.
[21] PRC Docket R90-1, Exhibit USPS-T-12B; and Docket MC95-1, Exhibit USPS-T-11U.

on each of the 24 inputs developed in the 1990s. We varied each input by 5 percent, and estimated that the effect on the cost-avoidance estimates ranged from no effect for certain productivities to approximately $2 million for the BMC Realization Factor.[22] In addition to the impact on cost-avoidance estimates, inaccurate data inputs could also impact the integrity of the data used to develop workshare discounts. See Appendix F for details of the sensitivity analysis.

More accurate estimates for the data inputs would have to come from updated field studies. The importance of the data in terms of the effect on the results of the study should be considered (e.g., whether updated data would significantly change the model and cost-avoidance estimates). Also, the cost in terms of dollars and resources spent collecting data should be considered to determine if it is beneficial to update the study. Management stated that it may need to update the Periodicals Destination Entry Cost Avoidance Model, as well as other cost models, based on changes underway to the Postal Service network. Management also stated that unless the PRC, the Postal Service, or other interested parties make a compelling argument that the data inputs do not represent current postal operations, it would not immediately change the data inputs and cost models. The Postal Service is awaiting guidance from the PRC on prioritizing study and data updates.

Identifying non-representative data inputs in each cost model and collaborating with the PRC in the strategic rulemaking to prioritize updating the non-representative data inputs will help the Postal Service more accurately determine cost avoidance and workshare discount estimates.

[22] Because of the complexity of the model and the interrelationships among the data inputs, we did not estimate an overall non-monetary impact on revenue from uniformly increasing or decreasing all the data inputs at once by 5 percent.

APPENDIX C: LISTS OF SPECIAL STUDIES

Tables 4 and 5 list the cost attribution and cost model special studies, respectively, and the rate or classification case or annual compliance report when the models were first filed. For the cost attribution special studies, we also list the year the Postal Service conducted the study**.**

Table 3. Cost Attribution Special Studies

Study	Year Conducted	First Filed
Postmaster Variability Study	1984	R84-1
Special Purpose Route Study	1997	R97-1
Vehicle Service Driver Study	1993	R97-1
Alaska Preferential Study	1994	R97-1
Alaska Non-Preferential Study	1994	R97-1
Hawaii Study	1994	MC–97
Highway Variability Study	1999	R2000-1
Surface Densities Study	2001[1]	R2001-1
City Carrier Cost Street Time Study	2002	R2005-1
Facility Space Survey	1999	R2005-1
Highway Plant Load Study	2003	R2005-1
Rail Plant Load Study	2003	R2005-1
Retail Window Transaction Time Study	2005	R2006-1

[1]Updated in FY 2010

The cost model special studies listed in Table 4 are generally not one-time studies, but rather cost models that have evolved over time. The current cost models may not bear any resemblance to the cost models that were originally introduced. For example, the First-Class Letters cost model was first introduced in PRC Docket R76-1. However, the model has been reworked several times since then including PRC Docket R2001-1. Table 4 lists the special studies and the PRC docket where the study was first filed.

Table 4. Cost Model Special Studies

Study	Docket First Filed
First-Class Letters Cost Model	R76-1
Standard Regular Letters Cost Model	R84-1
First-Class Presort Flats Cost Model	R94-1
Standard Regular Flats Cost Model	R94-1
Periodicals Outside County Flats Cost Model	R94-1
Standard Mail Hybrid/Parcel Cost Study	R2006-1
Periodicals Destination Entry Cost Avoidance Model	R84-1
Standard Letters Destination Entry Cost Avoidance Model	R90-1
Standard Flats Destination Entry Cost Avoidance Model	R90-1
Bound Printed Matter Mail Processing Cost Model	R76-1
Media Mail: Mail Processing Cost Model	R76-1
Bound Printed Matter Transportation Cost Model	R97-1
Bulk Parcel Return Service Cost Study	R97-1
Enhanced Carrier Route Mail Processing Unit Costs	R2001-1
Qualified Business Reply Mail and BRM Costs	R2001-1
Bound Printed Matter Mail Processing Costs	R2001-1
Special Services (Public Portion)	R2006-1
Delinked First Class Mail Workshare Estimates	R2006-1

APPENDIX D: POSTMASTER VARIABILITY SENSITIVITY ANALYSIS

We conducted a sensitivity analysis of costs for EAS-23 and below postmasters that increased/decreased the 18.23 percent variability by +/- 5 percent.[23] At 5 percent, the percentile change ranges from 17.32 to 19.14 percent. This 5 percent change in variability results in a $19.9 million difference (+/-) in FY 2008 postmaster volume variable costs. Under this scenario, the postmaster FY 2008 volume variable costs of $399 million would be under- or overstated by $19.9 million a year, or approximately $39.9 million over a 2-year period. A misallocation of postmaster volume variable costs could affect Postal Service rates and cost coverages for mail categories and special services. Table 5 shows the sensitivity analysis calculations using FY 2008 cost data.

Table 5. Sensitivity Analysis: FY 2008 Postmaster Costs

Postmaster Costs	Percentage	Amount
(1) Total Accrued Cost of EAS-23 and below		$2,189,946,000
(2) Current Variability	18.23	
Volume Variable Cost (1) x (2)		399,227,000
Change in Variability		
5 percent decrease ($2,189,946,000 x 17.32 percent)	17.32	379,299,000
5 percent increase ($2,189,946,000 x 19.14 percent)	19.14	419,156,000
Annual Impact ($419,156,000 – 399,227,000)		19,929,000
2-Year Impact ($19,929,000 x 2)		$39,858,000

Table 6. Non-Monetary Impact

Finding	Impact Category	Amount
One	Misallocation of Costs	$39,858,000
	Total	**$39,858,000**

[23] The OIG uses 5 percent to estimate potential cost misallocations and a 2-year period to report potential impact.

APPENDIX E: PERIODICALS DESTINATION ENTRY COST AVOIDANCE MODEL INPUTS

Table 7 lists the 46 data inputs into the Periodicals Destination Entry Cost Avoidance Model. For the 24 non-recurring data inputs, the source is the PRC docket where the data input was first introduced. For the 22 recurring data inputs, the source is the most recent update, which was the Postal Service's FY 2009 ACR, filed in December 2009.

Table 7. List of Model Inputs and Sources

	Productivities	Source
1	Unload sacks from van to in-house container (IHC) - Sectional Center Facility (SCF)	Docket No. R97-1
2	Move all-purpose container (APC), IHC to outbound dock – SCF	Docket No. R97-1
3	Load sacks to van from IHC – BMC	Docket No. R97-1
4	Unload sacks to conveyor - SCF	Docket No. R97-1
5	Load sacks to van from extendible conveyor - SCF	Docket No. R97-1
6	Sack sorter – SCF	ACR 2009
7	Unload pallets – BMC	Docket No. R97-1
8	Move pallets to outbound dock - SCF	Docket No. R97-1
9	Load pallets to van – BMC	Docket No. R97-1
10	Unload sacks to extendible conveyor - BMC	Docket No. R97-1
11	Load sacks to van from extendible conveyor - BMC	Docket No. R97-1
12	Load wheeled containers to van - BMC	Docket No. R97-1
13	Load sacks from roller table to IHC - BMC	Docket No. R97-1
14	Sack sorter – BMC	ACR 2009
15	Crossdock pallets – BMC	Docket No. R97-1
16	Primary Non Machinable Outside (NMO) item sort - BMC	ACR 2009
17	Secondary NMO sort - BMC, SCF	ACR 2009
18	Load NMOs to van from IHC - BMC	Docket No. R97-1
	CONTAINER CONVERSION FACTORS	
19	Sacks per IHC	Docket No. R97-1
20	Sacks per BMC container	Docket No. R97-1
	SACK SORTING MACHINE MAILFLOW	
21	Sack Sorter Machine (SSM) to load to van from extendible conveyor	Docket No. R97-1
22	SSM to roller table to BMC containers and load BMC containers to van	Docket No. R97-1
23	SSM to roller table to in-house containers and load sacks to van from IHCs	Docket No. R97-1

	Productivities	Source
	PIGGYBACK FACTORS	
24	Piggyback Factor for Sack Sorters at BMCs	ACR 2009
25	Piggyback Factor for Sack Sorters at Non-BMCs	ACR 2009
26	Piggyback Factor for Platform at BMCs	ACR 2009
27	Piggyback Factor for Platform at Non-BMCs MODS Facilities	ACR 2009
28	Piggyback Factor for Platform at Non-BMCs Non-MODS Facilities	ACR 2009
29	Piggyback Factor for Opening Units	ACR 2009
30	Piggyback Factor for Other Mail Processing – BMCs	ACR 2009
	PAY FACTORS/WAGE RATES	
31	FY 2008 Other Mail Processing Productive Hourly Wage Rate	ACR 2009
32	FY 2008 Premium Pay Factor for All Facilities	ACR 2009
33	FY 2008 Premium Pay Factor for Non-BMC Facilities	ACR 2009
	PROPORTIONS	
34	Proportion of SCFs That Are Mechanized	Docket No. MC95-1
35	Proportion of SCFs That Are Not Mechanized	Docket No. MC95-1
36	Proportion of Volume from DBMCs to DDUs via DSCFs	Docket No. R90-1
37	Proportion of Volume from DBMCs Directly to DDUs	Docket No. R90-1
38	Proportion of Volume Bypassing DADC	Docket No. R2006-1
39	Proportion of Volume Not Bypassing DADC	Docket No. R2006-1
40	Proportion of Periodicals Mail in Sacks	ACR 2009
41	Proportion of Periodicals Mail on Pallets	ACR 2009
	OTHER INPUTS	
42	Periodical Pieces per Sack	ACR 2009
43	Periodical Pieces per Pallet	ACR 2009
44	FY 2008 Pieces per Pound for Outside County Publications	ACR 2009
45	FY 2008 Pieces per Pound for Total Periodicals	ACR 2009
46	BMC Realization Factor	Docket No. R94-1

APPENDIX F: SENSITIVITY ANALYSIS OF PERIODICALS DESTINATION ENTRY COST AVOIDANCE MODEL INPUTS

To estimate how changes in Periodicals Destination Entry Cost Avoidance Model inputs can affect the resulting cost-avoidance estimates, we performed a sensitivity analysis on each of the 24 inputs developed in the 1990s. We varied each input by 5 percent, and calculated the effect each 5 percent change had on the cost-avoidance estimates. The impact on cost-avoidance estimates ranged from no effect for certain productivities to about $2 million for the BMC Realization Factor. Because it was unlikely that the 24 data inputs would uniformly increase or decrease by 5 percent, we did not calculate a total impact.

The Periodicals Destination Entry Cost Avoidance Model estimates for FY 2008 were used to develop Periodicals workshare discounts and pass-through. The model provided three estimates for Destination Automated Distribution Centers (DADC), DSCF, and DDU.

When we varied the BMC Realization Factor by 5 percent,[24] the resulting cost-per-pound estimates changed from 1.2 percent for DDUs to 9.9 percent for DADCs, as shown in Table 8.

Table 8. Change in Cost-Per-Pound Estimates

Non-Transportation Cost Element	Cost Per Pound			
	Current Estimate*	Estimate Based on 5 Percent Increase to BMC Realization Factor*	Difference in Estimate*	Percent Difference
DADC	$0.0081	$0.0089	$0.0008	9.87
DSCF	$0.0328	$0.0336	$0.0008	2.53
DDU	$0.0702	$0.0710	$0.0008	1.21

*Rounded to four decimals.

To estimate the potential impact on cost-avoidance estimates for the change in the BMC Realization Factor, we multiplied the difference in cost-per-pound estimates by the FY 2008 Periodicals weight estimates, as shown in Table 9.

[24] The BMC Realization Factor was increased by 2.98 percent, from 0.971 to 1.00, because by definition it cannot be greater than 1.0. Increasing the current factor by 5 percent would cause the factor to be 1.01955.

Table 9. Impact on Cost-Avoidance Estimates

Non-Transportation Cost Element	FY 2008 Periodicals Weight Estimate (in pounds)	Difference in Estimate*	Impact on Cost Avoidance
DADC	398,628,697	$0.0008	$319,604
DSCF	1,990,493,289	$0.0008	1,647,629
DDU	26,064,866	$0.0008	22,068
Totals	2,415,186,852		$1,989,301

*Rounded to four decimals

We obtained the weight estimates from the FY 2008 billing determinants for periodicals. This includes Advertising and Editorial pounds for Regular, Non-Profit, and Classroom rates, as shown in Table 10.

Table 10. FY 2008 Periodicals Weight Estimates

	Periodicals Rate Class			
	Regular	**Non-Profit**	**Classroom**	**Total**
Advertising Pounds				
DADC	156,644,606	13,145,171	361,550	170,151,327
DSCF	817,539,154	77,417,945	2,241,319	897,198,418
DDU	14,298,312	281,069	4,173	14,583,554
Editorial Pounds				
DADC	198,336,412	28,956,204	1,184,755	228,477,370
DSCF	930,060,686	157,586,938	5,647,248	1,093,294,872
DDU	10,377,696	1,086,667	16,948	11,481,312
Subtotals				
DADC	354,981,018	42,101,375	1,546,304	398,628,697
DSCF	1,747,599,839	235,004,883	7,888,567	1,990,493,289
DDU	24,676,008	1,367,737	21,121	26,064,866
Total Pounds	2,127,256,865	278,473,995	9,455,992	2,415,186,852

Of the 24 data inputs, the BMC realization factor has the greatest impact on cost-avoidance estimates. We consider this $2 million impact a potential cost misallocation of $4 million over a 2-year period.

Table 11. Non-Monetary Impact

Finding	Impact Category	Amount
Two	Misallocation of Costs	$3,998,602
	Total	$3,998,602

APPENDIX G: MANAGEMENT'S COMMENTS

FINANCE

UNITED STATES POSTAL SERVICE

March 15, 2010

LUCINE M. WILLIS
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Transmittal of Draft Audit Report-Management of Special Studies (Report Number CRR-AR-10-Draft)

This provides management's response to the subject audit report. We appreciate the opportunity to review and provide comments.

The Postal Service agrees with the audit team's conclusions that, "controls over special studies are generally adequate to ensure that special studies are updated with recurring data inputs. Specifically, management updates the studies with recurring financial and operational information and coordinates changes to the studies with the Postal Regulatory Commission (PRC)." All of the special studies examined by the audit team are incorporated into the Postal Service's Annual Compliance Report and are reviewed regularly by the PRC.

As noted in Appendix B, "[t]he Postal Service is awaiting guidance from the PRC on prioritizing study and data updates. Identifying non-representative data inputs in each cost model and collaborating with the PRC in the strategic rulemaking to prioritize updating the non-representative data inputs will help the Postal Service more accurately determine cost avoidance and workshare discount estimates." As a result, while the Postal Service does have, in general, its own prioritization of resource use regarding the updates of inputs as is recommended below, the upcoming collaboration with the PRC regarding this area suggests that it may not be appropriate for the Postal Service to unilaterally "prioritize updating the non-recurring data inputs in the special studies" as was recommended by the audit team.

The audit team recommended the manager, Regulatory Reporting and Cost Analysis, direct the manager, Cost Attribution, to:

Recommendation #1
Develop a plan for the timely update of the Postmaster Variability Study.

475 L'ENFANT PLAZA SW
WASHINGTON DC 20260-5000
WWW.USPS.COM

Response
I will direct the manager, Cost Attribution, to describe the steps that would be necessary to update the Postmaster Variability Study. The completion of this task is expected within 45 days. The Postal Service appreciates the audit team's acknowledgement that the PRC plans to establish administrative procedures for the purpose of prioritizing the many Postal Service studies that require updating. The Postal Service will obviously collaborate in this effort.

Recommendation #2
Identify non-nonrecurring [sic] data inputs that should be updated in each cost model.

Response
We agree with the recommendation, and, as a matter of course, have identified the inputs in the cost models that are candidates for updating. The Postal Service maintains that the documentation required for each and every special study and cost avoidance model filed annually with the PRC provide a comprehensive mapping of data inputs, both recurring and non-recurring, along with their date of collection or measurement.

Recommendation #3
Update the non-recurring data inputs or identify cost-effective alternative methods to obtain the necessary cost allocation information and update the cost models accordingly.

Response
As suggested in the recommendation itself regarding cost-effective alternatives, updating all of the non-recurring data inputs would be both expensive and, as in the case of updating inputs likely to be immediately affected by operational changes, inefficient. The Postal Service will be collaborating with the PRC in determining the priorities regarding the updates of non-recurring inputs. The timing of the updates, therefore, depends upon this effort and the allocation of available resources.

The Postal Service agrees that the audit team accurately reflected the views of postal management when it summarized as follows: "More accurate estimates for the data inputs would have to come from updated field studies. The importance of the data in terms of the effect on the results of the study should be considered (e.g., whether updated data would significantly change the model and cost-avoidance estimates). Also, the cost in terms of dollars and resources spent collecting data should be considered to determine if it is beneficial to update the study. Management stated that it may need to update the Periodicals Destination Entry Cost Avoidance Model, as well as other cost models, based on changes underway to the Postal Service network. Management also stated that unless the

PRC, the Postal Service, or other interested parties make a compelling argument that the data inputs do not represent current postal operations, it will not immediately change the data inputs and cost models. "

Incidentally, the Postal Service notes that Table 4 could mislead a reader. The audit team report itself notes that "current cost models may not bear any resemblance to the cost models that were originally introduced." However, Table 4 lists the First-Class Letters Cost Study as having first been filed in Docket No. R76-1, even though it was completely overhauled several times in between, including in Dockets No. R2000-1 and R2001-1. Similarly, the Periodicals outside County Flats Cost Model is listed in Table 4 as having been first filed in Docket No. R94-1, whereas the model for Periodicals costs was completely overhauled in Docket No. R2006-1. Table 4 could leave the misimpression that the studies are much older than even their oldest input data.

This report does not contain information that may be exempt from disclosure under the Freedom of Information Act.

Joe Moeller
Manager, Regulatory Reporting and Cost Analysis

cc: Joe Corbett
Jeff Colvin
Sally Haring
Virginia Mayes