DOCKET SECTION

POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97-1

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS BARON TO INTERROGATORIES OF
THE ADVERTISING MAIL MARKETING ASSOCIATION
(AMMA/USPS–T17—1–5)

The United States Postal Service hereby provides responses of witness Baron

to the following interrogatories of the Advertising Mail Marketing Association:

AMMA/USPS–T17—1–5, filed on October 30, 1997.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking

Richard T. Cooper

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2993; Fax -5402
November 19, 1997

<u>AMMA/USPS-LR-H-113-1</u>

The FY1996 study contained in LR-H-113 was based on a sample of 4,817 observations (page 6). Please describe in detail the design and execution of the sampling study including, but not limited to:

    a.   The study objectives;
    b.   The universe of study;
    c.   The frame;
    d.   Stratification;
    e.   Sample size by stratum;
    f.   The assumed standard deviations of the variables and desired reliability of the estimates that were used in determining the sample size(s);
    g.   Who designed and carried out the study; and,
    h.   The period of time over which the observations were taken.

RESPONSE:

MODS offices are facilities that report data electronically to the Postal Service corporate database through the Management Operating Data System (MODS). The 4,817 observations described on page 6 of LR-H-113 represent records from the population of all MODS offices that reported work hours and volumes for certain mail processing operations in accounting periods FY 1996-AP1 through FY 1996-AP13. These observations do not represent a sample of facilities, but rather represent the entire universe of such MODS offices. Therefore no sampling "study" was undertaken, and no sample design was required.

AMMA/USPS-LR-H-113-2

For the results of the FY1996 sample that are presented on pages 100-102 of LR-H-113, please provide the following:

a.   Source(s) for the variabilities (Column F);

b.   The number of observations and standard error due to sampling for each line in Columns C through G and J of the table on pages 100-102; and,

c.   Explain any "non-sampling" errors that may occur in these estimates and not be reflected in the standard errors stated in part b (e.g., accounting errors in population totals and differences in time periods).

RESPONSE:

a. See USPS-T-14, pg. 9, Table 1.

b. This question is not applicable. The FY 1996 MODS data set used to derive the results presented on pages 100-102 of LR-H-113 is not a sample drawn from a larger population of MODS data. Instead, it constitutes the population itself. In particular, the 4,817 observations in this data set on workhours and volumes by operation were obtained from the population of all MODS sites over all accounting periods in FY 1996.

c. Non-sampling errors may result from inaccurate measurements of the actual volumes processed or workhours expended by a given site in a given operation.

AMMA/USPS-LR-H-113-3

The "RBCS Keying Productivity" reported on page 10 of LR-H-113 was revised on 08/18/97.

    a.   Please confirm that the <u>only</u> difference between the original and the revision of this page was the change of time period from FY96Q4 to FY96 Annual;

    b.   If you cannot confirm part a, please provide a complete explanation of all changes;

    c.   Please provide the 95% confidence limits on the three estimates (images, hours and productivity) for both the original and the revised pages including the sources for these calculations.

RESPONSE:

a. Confirmed. After the initial version of LR-H-113 was filed, a page 10a was inserted into it, showing alternative productivity calculations based on annual FY 1996 numbers.

b. Not applicable.

c. 95% confidence intervals are only defined for estimates of population statistics, such as means and ratios, which are derived from samples of population values. The images, hours, and productivity averages reported in LR-H-113 are themselves population statistics. They are derived from the population of FY 1996 observations for these variables.

<u>AMMA/USPS-LR-H-113-4</u>

Pages 2 and 5 of LR-H-113 state that the SAS procedure ". . .PROC UNIVARIATE" is used to analyze the distribution of the productivities and that the highest 1% and the lowest 1% of the sampled productivities were eliminated as outliers.

Please explain why there was an automatic elimination without inspection of the individual extreme observations?

RESPONSE:

It is very difficult, if not impossible, to determine through simple visual inspection, an operationally feasible upper or lower bound for the productivity of any given operation. Engineers have no standards that define the exact productivity, or even a reasonably narrow range of productivities, that define the upper or lower bounds of what is considered reasonable. Given this uncertainty, operations experts at the Postal Service have agreed that the elimination of productivities that fall outside the upper and lower 1% tails of the distribution of all observed productivities is a sensible way to eliminate values that are clearly and unequivocally outside the bounds of reason. In addition, this tails test approach can be efficiently implemented over the large numbers of operations for which separate productivity data sets have been produced.

AMMA/USPS-LR-H-113-5

USPS Witness Daniel (USPS-T-29 at 4 line 11) references USPS LR-H-113 as the source of "non-class specific FY97 MODS barcode sorter accept rates. . "

    a.   For each parameter estimated in LR-H-113 and used in USPS-T29 Appendix I pages 40 or 43 or used to derive any values on these pages, please complete the following table and the exact paired references (cross walk) between the source and use of each parameter:

	Source : LR-H-113			Use: USPS-T-29 Appendix I	
Parameter Name (1)	Location (Page, Line, Column, etc.) (2)	Value (3)	Standard Deviation (4)	Name (if different) (5)	Location (and derivation if derived) (Page,Line,Column,etc.) (6)

    b.   Please confirm that USPS-T-29 makes "proper" use of the estimates that come form LR-H-113? (By "proper" we mean the proper time period(s) and in a manner consistent with the objective of the sample design and analysis.)

    c.   If part b is not confirmed, please explain why you cannot confirm to the use of these estimates.

RESPONSE:

a. The information requested is as follows:

(Note that at no time did we calculate standard deviations, since we viewed our

measures of productivities and accept rates as population parameters.)

Source: LR-H-113			Use: USPS-T-29 Appendix I	
Parameter Name	Location Page, Line, Column	Value	Name	Location
BCS Non-Incoming Secondary MPBCS/DBCS Acceptance Rate	Page 100, Table Line 6, Column J	95.0%	BCS OP	Middle of page 40 of 43
BCS Non-Incoming Secondary MPBCS/DBCS Acceptance Rate	Page 100, Table Line 6, Column J	95.0%	BCS OS	Middle of page 40 of 43
BCS Non-Incoming Secondary MPBCS/DBCS Acceptance Rate	Page 100, Table Line 6, Column J	95.0%	BCS MMP	Middle of page 40 of 43
BCS Non-Incoming Secondary MPBCS/DBCS Acceptance Rate	Page 100, Table Line 6, Column J	95.0%	BCS SCF	Middle of page 40 of 43
BCS Non-Incoming Secondary MPBCS/DBCS Acceptance Rate	Page 100, Table Line 6, Column J	95.0%	BCS IP	Middle of page 40 of 43
BCS Incoming Secondary and Box Section MPBCS/DBCS	Page 100, Table Line 8, Column J	89.9%	BCS IS	Middle of page 40 of 43
BCS Sector Segment and DPS on MPBCS/DBCS	Page 100, Table Line 9, Column J	95.0%	DBCS First Pass	Middle of page 40 of 43
BCS Sector Segment and DPS on MPBCS/DBCS	Page 100, Table Line 9, Column J	95.0%	DBCS Second Pass	Middle of page 40 of 43
OCR Non-Incoming Secondary	Page 100, Table Line 3, Column G	7,350	Non-Incoming Secondary MLOCR	Top of page 43 of 43
RBCS Keying Productivity	Page 10	815.5	Non-Incoming Secondary RBCS	Top of page 43 of 43
RBCS LMLM	Page 100, Table Line 21, Column G	4,985	Non-Incoming Secondary RBCS	Top of page 43 of 43
BCS Non-Incoming Secondary MPBCS-OSS	Page 100, Table Line 7, Column G	11,984	Non-Incoming Secondary MPBCS-OSS	Top of page 43 of 43
BCS Non-Incoming Secondary MPBCS/DBCS	Page 100, Table Line 6, Column G	7,467	Non-Incoming Secondary MPBCS/DBCS	Top of page 43 of 43
BCS Incoming Secondary and Box Section MPBCS/DBCS	Page 100, Table Line 8, Column G	6,633	Incoming Secondary MPBCS	Top of page 43 of 43
BCS Sector Segment and DPS on MPBCS/DBCS	Page 100, Table Line 9, Column G	8,393	Incoming Secondary DBCS Sector Segment/DPS	Top of page 43 of 43
Manual Letters Bulk Business Mail	Page 100, Table Line 13 Column G	812	Manual Productivities Manual OP (Bulk Business Mail)	Middle of page 43 of 43
Manual Letters Outgoing Secondary	Page 100, Table Line 14 Column G	691	Manual Productivities Manual OS	Middle of page 43 of 43
Manual Letters State Distribution (Managed Mail)	Page 100, Table Line 15 Column G	759	Manual Productivities Manual Managed Mail (State)	Middle of page 43 of 43
Manual Letters SCF	Page 100, Table Line 16 Column G	896	Manual Productivities Manual SCF	Middle of page 43 of 43
Manual Letters Incoming Primary	Page 100, Table Line 17, Column G	562	Manual Productivities Manual IP	Middle of page 43 of 43
Manual Letters Incoming Secondary	Page 100, Table Line 18, Column G	646	Manual Productivities Manual MODs Sites	Middle of page 43 of 43

b. Confirmed. The appropriate time period is FY1996 AP-1 through FY 1996 AP-13. Please see my response to AMMA/USPS-LR-H-113-1. Note however, that the question of whether the LR-H-113 estimates are used in a manner "consistent with the objective of the sample design and analysis" does not apply to the analysis actually conducted. The estimates in LR-H-113 are not derived from a sample of the relevant data, but from the population of all relevant MODS sites and accounting periods.
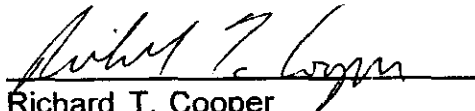
DECLARATION

I, Donald M. Baron, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

Donald M. Baron

Dated: _11-19-97_

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

Richard T. Cooper

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260–1137
November 19, 1997