DOCKET SECTION

RECEIVED

Nov 25 4 22 PM '97

POSTAL RATE AND FEE CHANGES, 1997	Docket No. R97–1

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS CRUM TO INTERROGATORIES OF
THE ADVERTISING MAIL MARKETING ASSOCIATION
(AMMA/USPS–T28—1–14)

The United States Postal Service hereby provides responses of witness Crum to

the following interrogatories of the Advertising Mail Marketing Association: AMMA/

USPS–T28—1–14. Each interrogatory is stated verbatim and is followed by the

response. These interrogatories, which were filed on November 6 and November 14,

1997, were misnumbered, and have been renumbered by the Postal Service with the
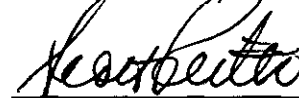
consent of AMMA.

The Postal Service had objected to the first set of these on November 14.

AMMA agreed not to pursue a motion to compel or to seek to have witness Crum

appear if the Postal Service would provide answers informally. The Postal Service

agreed. Given that the Postal Service has offered to file answers to some of the

NDMS interrogatories to which it also objected at the same time, the Postal Service

decided to file the AMMA answers as well for the sake of completeness of the record.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking

Scott L. Reiter

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260–1137
(202) 268–2999; Fax –5402
November 25, 1997

AMMA/USPS-T-28-1

The following question refers to Table 1 of LR-H-108, "Controlled to GFY RPW."

    a. Please confirm that the average revenue generated in FY96 by Standard (A) flats is 19.04 cents per piece.

    b. Please confirm that the average revenue generated in FY96 by Standard (A) parcels is 44.18¢ per piece.

    c. If you cannot confirm one or more of parts a or b, please provide the calculations necessary to develop the average revenue per piece.

RESPONSE

a. Table 1 of Exhibit K in my testimony refers to only Commercial Rate letters, flats, and parcels. I confirm that your calculation is correct for Commercial Rate only.

b. Table 1 of Exhibit K in my testimony refers to only Commercial Rate letters, flats, and parcels. I confirm that your calculation is correct for Commercial Rate only.

c. If you are interested in data for both Non-profit and Commercial Rate pieces, you need to include Table 2 data in your calculations.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
ADVERTISING MAIL MARKETING ASSOCIATION

AMMA/USPS-T-28-2

The following questions refer to Table 7 of LR-H-108.

a. Please provide the page number(s), line number(s) and column number(s) in LR-H-111 for line "2) Cost Avoidance of the Entry Cost Avoidance." Please provide derivation(s) if the citation(s) is (are) not to the same values as used in Table 7.

b. Please provide the page number(s), line number(s) and column number(s) in Exhibit USPS-T-29C for line "5) Presort Cost Avoidances." Please provide derivation(s) if the citation(s) is (are) not to the same values used in Table 7.

RESPONSE

a. Please refer to page 2, Results - Standard Mail (A). Also, please note that Table 7 is contained in Exhibit K in my direct testimony and not in LR-H-108.

b. Please refer to USPS-29C, pages 2 and 4. The numbers in Table 7 can be calculated by subtracting "Saturation", "High Density", "Basic" under Enhanced Carrier Route, and "3/5 Digit" under Regular Presort from "Basic" Regular Presort for "Flats or Nonletters". The Commercial Rate results from page 2 are weighted with the Nonprofit Rate results from page 4 based on the respective proportions of total Bulk Standard Mail (A) volume listed in Tables 1 and 2 of Exhibit K. Please note that errata to USPS-29C were filed on October 1, 1997.

2

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
ADVERTISING MAIL MARKETING ASSOCIATION

AMMA/USPS-T-28-3

Please provide detailed citations to the sources of the values in the sheets "Letter",
"FLATSCT" and "PCLCST" in the EXCEL spreadsheet titled "Cstbyshp.xls."

RESPONSE

The sources for the sheets you request are pages II-1, III-1, and IV-1 respectively of

Library Reference H-106.

AMMA/USPS T-28-4

In Table 3 of LR-H-108, cost category "3.1a Mail Processing Variable w/Pigbk" is sourced to LR-H-106.

    a. Please confirm that the data collection and analysis in LR-H-106 used to develop the costs in line 3.1a of Table 3 provide separate costs for each of the shapes: letters, flats and parcels. If you cannot confirm part a, please explain.

    b. Please confirm that the result of using disaggregate costs in Standard (A) mail show the following:

	Average Costs (cents/piece)		
	Letters	Flats	Parcels
	(1)	(2)	(3)
3.1a Mail Processing Variable w/Pigbk	4.0427	4.9416	28.3512

If you cannot confirm please show and explain the calculation you would perform to get the average cost per piece.

RESPONSE

a. Confirmed that LR-H-106 includes mail processing costs by shape. Please note that Table 3 is in Exhibit K of my direct testimony.

b. Confirmed, except I get a "3" and not a "2" in the 4th digit after the decimal place for parcels.

4

AMMA/USPS-T-28-5

In Table 7 of LR-H-108, line "5) Presort Cost Avoidance" is sourced to Exhibit USPS-T-29C. Please provide exact reference to Exhibit USPS-T-29C for the data used in Table 7.

RESPONSE

Please see my response to AMMA/USPS-T28-2(b).

AMMA/USPS-T-28-6

In Table 3 of LR-H-108 line "14b Highway" and line "14c Railroad", the derivations of these costs of surface transportation by shape are obtained by "C.S. Total dist to shape by cube."

      a. Please confirm that the surface transportation costs in 14b and 14c of Table 3 under the Column heading "Sum of Shapes" are the Cost Segment Totals for these lines. If you cannot confirm, please explain.

      b. Please provide the source for these total costs of surface transportation.

      c. Please confirm that these surface transportation costs in Table 3 are distributed to letters, flats and parcels in proportion to the total cubic feet of letters, flats and parcels, respectively. If you cannot confirm, please explain.

RESPONSE

a. Confirmed. Please note that Table 3 is part of Exhibit K to my testimony and not in LR-H-108.

b. These numbers can be found in the Base Year 1996 Cost Segments and Components Report produced by witness Alexandrovich and contained in USPS-T-5. Please see Exhibit 5A, page 43. Add the "Total Regular" and "Total Nonprof" to get the numbers in Table 3.

c. Confirmed that these surface transportation costs are distributed to shape based on our best estimate of cubic feet by shape.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
ADVERTISING MAIL MARKETING ASSOCIATION

AMMA/USPS-T-28-7

The following questions involve the EXCEL spreadsheet for LH-R-108 titled Estar96.xls.

    a. In the sheet titled "DATA", please provide a "decoder" that fully defines each code used in Columns A through H, inclusive.

    b. In the sheet titled "wtdata", please provide headings for <u>all</u> Columns, a decoder for Columns A, B and C, and a source for the data in Columns D through V inclusive.

    c. In the sheet titled "PISM", please provide headings for all Columns, a decoder for Column A and B, and exact source(s) for Columns C through U, inclusive.

RESPONSE

a. Column H indicates shape: 1 = letters, 2 = flats, 3 = IPPs and parcels.

Column G indicates detailed rate category, see the diagram on the following page

for an explanation.

Column F indicates the numerical ordering of the detailed categories in Column

G.

Column E indicates aggregate rate detail: 1 = basic, 2 = 3/5-digit, 3 = carrier

route, high density and saturation.

Column D is a two digit code, with the first digit from Column E and the second

digit from Column H.

Column C is a consolidation to detailed presort level by letter and non-letter rates

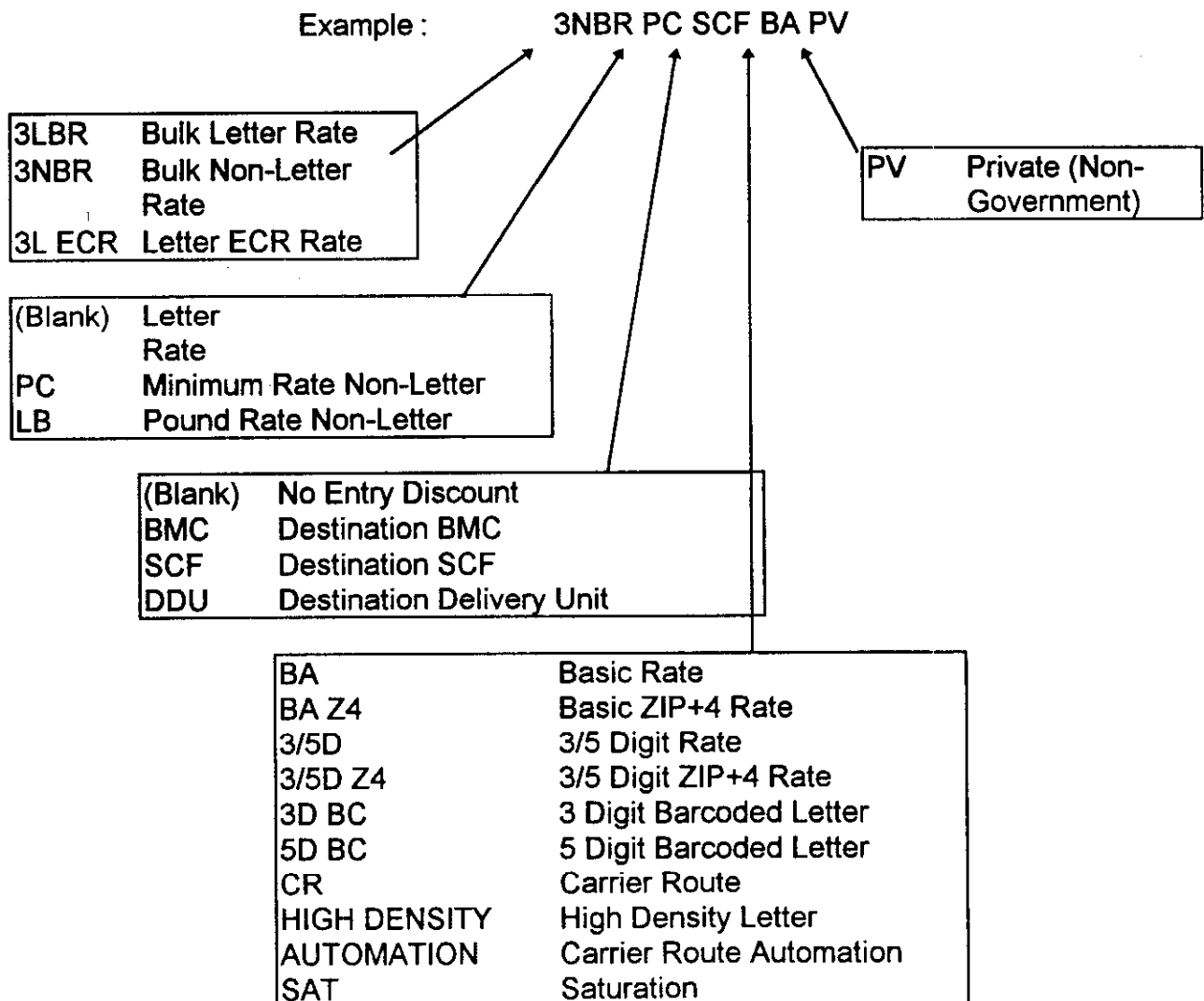as shown in Estar96.xls in the sheet "RateDetail".

Column B is a two digit code, where the first digit is Column H and the second

digit has the following coding: 1 = basic, 2 = basic barcoded, 3 = 3/5-digit, 4 =

3/5-digit barcoded, 5 = carrier route, 6 = high density, and 7 = saturation.

Column A is a three digit code, the first digit is Column H, the second digit

indicate entry discount (1 = no discount, 2 = DBMC discount, 3 = DSCF discount,

4 = DDU discount), and the third digit indicates subclass (1 = basic and 3/5-digit,

2 = carrier route, high density, and saturation).

Coding Scheme for Column G:

Example :　　　3NBR PC SCF BA PV

3LBR	Bulk Letter Rate
3NBR	Bulk Non-Letter Rate
3L ECR	Letter ECR Rate

PV	Private (Non-Government)

(Blank)	Letter Rate
PC	Minimum Rate Non-Letter
LB	Pound Rate Non-Letter

(Blank)	No Entry Discount
BMC	Destination BMC
SCF	Destination SCF
DDU	Destination Delivery Unit

BA	Basic Rate
BA Z4	Basic ZIP+4 Rate
3/5D	3/5 Digit Rate
3/5D Z4	3/5 Digit ZIP+4 Rate
3D BC	3 Digit Barcoded Letter
5D BC	5 Digit Barcoded Letter
CR	Carrier Route
HIGH DENSITY	High Density Letter
AUTOMATION	Carrier Route Automation
SAT	Saturation

FLAT BA Z4 BC	Basic Barcoded Flats
FLATS 3/5D Z4 BC	3/5 Digit Barcoded Flats
125	High Density Non-Letter

b. Column A has the same coding as Column D of sheet "Data" as explained in part (a)

of this interrogatory.

Column B has the same coding as Column F of sheet "Data".

Column C has the same coding as Column H of sheet "Data".

Columns D through S contain weight (in pounds) of mail by weight increments 1 to

16 ounces respectively.

Column T contains pieces.

Column U contains weight in pounds.

Column V contains revenue in dollars.

The source of the data in columns D through V is the output of program "est3rd_w.f"

as described at page A15 of Library Reference H-108, specifically the file

"est3rd_w.csv".

c. Column A has the same coding as Column F of sheet "Data".

Column B has the same coding as Column H of sheet "Data".

Columns C through R contain pieces of mail by weight increments 1 to 16 ounces

respectively.

Column S contains pieces.

Column T contains weight in pounds.

Column U contains revenue in dollars.

The source of the data in columns C through U is the output of program "est3rd.f" as

described at page A14 of Library Reference H-108, specifically the file "est3rd.csv".

AMMA/USPS-T-28-8

The following questions refer to the densities used to compute the cubic feet of mail in Table 3 of Exhibit K (formerly LR-H-108).

a. Please confirm that the density used for all Standard (A) letters, regardless of subclass, was 28.4219 pounds per cubic foot and that this density was the average for all "Third Class Bulk Regular Letters" from MC95-1: LR-MCR-13. If you cannot confirm please provide to correct value(s) and source(s).

b. Please confirm that the density used for all Standard (A) flats, regardless of subclass, was 20.6526 pounds per cubic foot and that this density was the average for all "Third Class Bulk Regular Flats" from MC95-1: LR-MCR-13. If you cannot confirm, please provide the correct value(s) and source(s).

c. Please confirm that the density used for Standard (A) ECR parcels is 4.4 pounds per cubic foot and was taken from MC95-1: LR-MCR-13. If you cannot confirm, please provide the correct value and source.

d. Please confirm that the density used for Standard (A) Nonprofit ECR parcels is 11.03 pounds per cubic foot and was taken from MC95-1: LR-MCR-13. If you cannot confirm, please provide the correct value and source.

e. Please confirm that the density used for Regular Non-Carrier Route parcels is 8.18 pounds per cubic foot and was taken from MC95-1: LR-MCR-13. If you cannot confirm, please provide the correct value and source.

f. Please confirm that the density used for Nonprofit Non-Carrier Route parcels is 13.36 pounds per cubic foot and was taken from MC95-1: LR-MCR-13. If you cannot confirm, please provide the correct value and source.

g. Please provide the standard errors for each of the density estimates shown in parts a through f.

RESPONSE

a.   Confirmed.

b.   Confirmed.

c.   The density you cite is correct, but the source is LR-PCR-38, Appendix C,

Table C-1.

d.   The density you cite is correct, but the source is LR-PCR-38, Appendix C,

Table C-1. This data was originally left off Table C-1, and is being attached for

your convenience.

e.   The density you cite is correct, but the source is LR-PCR-38, Appendix C,

Table C-1.

f.   The density you cite is correct, but the source is LR-PCR-38, Appendix C,

Table C-1. This data was originally left off Table C-1, and is being attached for

your convenience.

g.   These numbers are not available.

Table C-1
Third-Class Parcel Characteristics Study
Average Weight and Average Cube by Subclass

	Rate Category	IPP Machinable	IPP Non-machinable	Parcel Machinable	Parcel Outside	Total
Pieces	Bulk Reg CRT	332,293	4,315,512	0	0	4,647,805
	Bulk Reg Other	6,122,312	22,790,532	35,231,517	9,606	64,153,967
	NP CRT	3,173	3,837	0	0	7,010
	NP Other	23,840	692,747	694,544	39,091	1,450,222
	Total Bulk 3C					70,259,004
Weight	Bulk Reg CRT	47,828	607,037	0	0	654,865
(pounds)	Bulk Reg Other	2,347,715	5,387,507	23,468,088	6,472	31,209,782
	NP CRT	1,196	1,489	0	0	2,685
	NP Other	9,613	250,847	483,160	11,336	754,956
						32,622,288
Cube	Bulk Reg CRT	12,305,720	244,924,839	0	0	257,230,559
(inch3)	Bulk Reg Other	552,562,275	1,424,744,955	4,611,017,833	1,883,677	6,590,208,740
	NP CRT	190,394	230,244	0	0	420,638
	NP Other	562,174	33,376,536	55,158,815	8,540,693	97,638,218
	Total Bulk 3C					6,945,498,156
Avg Weight	Bulk Reg CRT	2.30	2.25			2.25
(ounces)	Bulk Reg Other	6.14	3.78	10.66	10.78	7.78
	NP CRT	6.03	6.21			6.13
	NP Other	6.45	5.79	11.13	4.64	8.33
	Total Bulk 3C					7.43
Avg Density	Bulk Reg CRT	6.72	4.28			4.40
(lbs/ft3)	Bulk Reg Other	7.34	6.53	8.79	5.94	8.18
	NP CRT	10.85	11.18			11.03
	NP Other	29.55	12.99	15.14	2.29	13.36
	Total Bulk 3C					8.12

AMMA/USPS-T-28-9

Please confirm that MC95-1: LR-MCR-13 (Supplement 1) estimated the average density for parcels in "Third Class Bulk Regular" as 14.9254 pounds per cubic foot. If you cannot confirm please provide the correct information.

RESPONSE

Confirmed.

AMMA/USPS-T-28-10

Please describe in detail the design and execution of the sampling study that developed densities in MC97-2: LR-PCR-38, 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

Please refer to LR-PCR-38, Appendix C and LR-PCR-53 (which was provided in response to RIAA/USPS-T7-9 in Docket No. MC97-2). The study was designed by myself in coordination with experts from Christensen Associates and other Postal Service personnel. Field postal employees carried out the study after training teleconferences conducted by myself, another member of Product Cost Studies, and Christensen staff members. Christensen collected the results and put them into their current electronic format. Additional data relating to question (e) is attached.

ATTACHMENT TO RESPONSE TO AMMA/USPS-T28-10

Parcel Characteristics Study: Sample Size by Stratum

Strata	Description of Offices	Universe Size (No. of Offices)	Sample Size (No. of Offices)	Universe Volume	Sample Volume
1	Certainty	6	6	174,029,839	174,029,839
2	Big - Non-Identical	8	3	59,598,887	31,137,331
3	Big - Identical	19	12	142,150,868	104,934,577
4	Small - Non-Identical 5-18	29	9	100,486,357	30,286,977
5	Small - Identical 5-18	62	11	189,155,419	38,747,484
6	Small - Non-Identical 19-20	60	2	20,429,900	3,779,620
7	Small - Identical 19-29	755	6	64,402,186	4,852,588
Total		939	49	750,253,456	387,768,416

AMMA/USPS-T-28-11
Please explain why you used the densities from MC97-2: LR-PCR-38 for parcels
and the densities from MC95-1: LR-MCR-13 for letters and flats.

RESPONSE

The purpose and intention of LR-MCR-13 was to collect density information for

letters and flats to support transportation cost allocation. Parcel data was only

provided as a specific response to OCA/USPS-T8-8(b) in Docket No. MC95-1.

While the frequency of samples was 462 for flats and 756 for letters, it was only

42 for parcels. I believed the accuracy of our estimates could be improved by

collecting density data as part of our parcel characteristics study where analysis

of parcels was both the purpose and the intent. In the study described in LR-

PCR-38, detailed characteristic information was collected on 15,859 Bulk

Standard Mail (A) parcels from 4,624 mailings. Additionally, the study described

in LR-PCR-38 was carefully designed and stratified to get a nationally

representative sample of Bulk Standard Mail (A) parcels in particular (refer to

Appendix C of LR-PCR-38 for a description of the statistical details). Please also

see my response to a similar question in the transcript of my oral cross

examination, Volume 5, page 2335, lines 1-10 (as corrected).

AMMA/USPS-T-28-12

The following questions apply to MC97-2: LR-PCR-38, referenced as the source of the densities used in Table 3 of Exhibit K.

     a.   Please confirm that the densities of parcels in Standard (A) ECR and NonCarrier come from EXCEL worksheet Pchar3c.xls: Girth. If you cannot confirm, please provide to correct information.

     b.   Please provide identification and description for each code used in columns A and B, lines 27 through 54 of Pchar3c.xls: Girth.

     c.   Please define the "Height/Width Aspect Factor" used to compute densities and the source of its value, "0.148."

     d.   Please provide a verbal description of the logic used in the computation of densities using the "'Height/Width Aspect Factor."

     e.   Was a "Height/Width Aspect Factor" used in estimating the densities of flats and/or letters in MC95-1: LR-MCR-13.

     f.   If your answer to part e is no, please explain why one study used this factor and the other did not.

RESPONSE

a.   Confirmed that they are shown both there and in the hard-copy version of

LR-PCR-38, page C-3.

b.   In column A, "1" means Carrier Route, "2" means Other, "3" means

Nonprofit Carrier Route, "4" means Nonprofit Other. In column B, "1" means

cubic volume calculated by multiplying length*width*height, "2" means cubic

volume calculated by use of extremely conservative height-width aspect factor.

c.   For pieces that were rectangular, length, width, and height were recorded. For pieces that were not rectangular, survey takers were asked to measure the length and the girth (the distance around) of the parcel. For example, say we have a piece with a measured length of 10 inches with a girth of 20 inches. That piece could have a width of 5 inches and a height of 5 inches (girth = 2*width + 2*height). This assumption would also result in the highest possible estimate of cubic volume (250 cubic inches) for that piece and also cause the highest possible density estimate. This piece would have a "height-width aspect factor" of one. Alternately, that piece could have a height of only .38 inches and a width of 9.62 inches. This very flat piece would have a volume of about 37 cubic inches. Dividing 37 by 250 results in the "height-width aspect factor" of .148 which was used in the analysis.

d.   The height-width aspect factor was used to estimate cubic volume for pieces that had only length and girth recorded. The majority (82 percent) had length, width, and height recorded so no aspect factor was used and the cubic volume was calculated directly. The aspect factor that we had to pick for pieces with no height recorded ranged from .148 up to a maximum of 1. While I believe the true aspect factor actually lies somewhere between .148 and 1, I took the most conservative approach available to me which would result in the highest parcel density. Any higher assumption about the aspect factor than the one that I

made would result in a lower density for parcels and a larger cost difference

between flats and parcels in Bulk Standard Mail (A).

e.   No.

f.   LR-MCR-13 calculated density by weighing a mail container of known size

and not looking at individual pieces. Therefore no "height/width aspect factor"

was used.

AMMA/USPS-T-28-13

Please provide the reason(s) why the study design in MC95-1: LR-MCR-13
was not repeated when developing the data for Exhibit K.

RESPONSE

I was trying to develop an understanding of the characteristics of Standard Mail

(A) (then third class) parcels in addition to calculating their density. LR-MCR-13

only calculated density. Please refer to the transcript of my oral cross

examination, Volume 5, page 2337, lines 9-12. Please also refer to my response

to AMMA/USPS-T28-11.

AMMA/USPS-T-28-14

Please provide the reason(s) why the study design in MC97-2: LR-PCR-38
Appendix C was not repeated when developing the data for Exhibit K.

RESPONSE

Please see the transcript of my oral cross examination, Volume 5, page 2337,

lines 13-18.

DECLARATION

I, Charles L. Crum, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

Charles L. Crum

Dated: 25 November 1997

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.

Scott L. Reiter

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260–1137
November 25, 1997