BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268–0001

POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97–1

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CRUM TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC., MYSTIC COLOR LAB, AND SEATTLE FILMWORKS, INC. (NDMS/USPS–T28—1–13)

The United States Postal Service hereby provides responses of witness Crum to the following interrogatories of Nashua Photo Inc., District Photo Inc., Mystic Color Lab, and Seattle Filmworks, Inc.: NDMS/USPS–T28—1–13, filed on August 8, 1997. *Interrogatory NDMS/USPS–T28—14 was redirected to witness Degen and* interrogatories NDMS/USPS–T28—15–16 were redirected to witness Moden.

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

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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August 22, 1997

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-1.

Please refer to your testimony at page 10, where you refer to LR-H-108.

e. When did Christensen Associates commence the study in LR-H-108?

RESPONSE

e. The analyses provided in LR-H-108 commenced in April 1997 and use both costs and volumes from fiscal year 1996. The Standard Mail (A) Bulk Parcel Characteristics Study field survey took place between April 1996 and May 1996.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-2.

In Docket No. MC97-2, you submitted testimony concerning cost data to support a proposed surcharge for Standard A pieces that are neither letter- nor flat-shaped. Your testimony in that docket referred to Library Reference PCR-38.

a. Other than the changes to the title page to designate the library reference in this docket, is the study submitted in this docket as LR-H-108 identical to the study in LR-PCR-38?

b. Unless your answer is an unqualified affirmative, please describe how the study in LR-H-108 differs from that in LR-PCR-38?

RESPONSE

a. No.

b. LR-H-108 uses 1996 costs and volumes, allocates Vehicle Service Driver costs based on 'Cube' as opposed to 'Volume', and incorporates the Postal Service's new MODS-based cost pool/volume variability approach into mail processing. Also, LR-H-108 presents all bulk Standard Mail (A) costs and volumes combined (Regular, Enhanced Carrier Route, Nonprofit, and Nonprofit Enhanced Carrier Route).

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-3.

Your testimony at page 10 presents FY 1996 volume shares for bulk Standard A letters, flats, and parcels (derived from Library Reference H-108).

a. Describe in detail which pieces of mail are referred to as 'parcels".
b. Identify all characteristics that distinguish parcels from flats.
c. With respect to LR-H-108 and your testimony, are IPPs and 'parcels" synonymous? Unless your answer is an unqualified affirmative, please explain all differences between the two.

RESPONSE

a. My overall definition of 'parcels' is based on the In-Office Cost System (IOCS) Field Operating Instructions Handbook F-45 (Docket No. MC96-3, LR-SSR-12) definitions. I have attached pages 94-95, 141-142 for your convenience. It is important to note that for the purposes of my analysis, I do not mean to differentiate parcels from IPPs. Thus 'parcels' in my testimony refers to all pieces within the IOCS-defined category of IPP Machinable, IPP Nonmachinable, Parcel Machinable, Parcel Outside. Specifically for volumes, data are entered into the Permit system based on the shape determination on the postage (mailing) statement. Postage (mailing) statements specifically reference the Domestic Mail Manual (DMM-C050). These two sources define parcels by identical criteria.

The Rural Carrier Cost System is unique and is the only source I am aware of that defines a flat versus a parcel by different dimensional criteria. I have attached the two relevant pages from the Rural Carrier Route Test Instructions Handbook F-56 (LR-H-25). Please notice that the definition of a flat (as opposed to a parcel) is generally broader for purposes of the Rural Carrier Cost System. This means that a higher proportion of costs are allocated to flats than to parcels (as the shapes are consistently defined above in every other data source) in my analysis. Since my source of volumes is as described

above, the analysis in LR-H-108, therefore, conservatively presents the Rural Carrier cost difference between flats and parcels in Standard Mail (A).

b. Please see my response to (a) above.

c. Yes. Please see my response to (a) above.

Appendix A

Identifying Parcels

The numbers in parentheses refer to sections of the Domestic Mail Manual (DMM).

IPP (Irregular Parcels) Machinable

Small, rectangular parcels, weighing 6 to 8 ounces with sufficient density to allow sorting by automatic parcel sorting equipment are considered machinable irregular parcels.

IPP (Irregular Parcels) Nonmachinable

Irregular parcels cannot be processed by bulk mail center (BMC) parcel sorters. Irregular parcels have one or more of the following characteristics:

- Length–less than 6 inches.
- Width–less than 3 inches.
- Height/thickness–less than 0.25 inch.
- Weight–less than 8 ounces (Exception: Pieces weighing between 6 and 8 ounces are machinable if all sides are rectangular).
- Rolls and tubes up to 26 inches long.
- Unwrapped, paper-wrapped, or sleeved-wrapped articles not letter-size (DMM C050.2) or flat-size (DMM C050.3).
- Merchandise samples not individually addressed.
- Articles enclosed in envelopes not letter-size (DMM C050.2), flat-size (DMM C050.3), or regular (machinable) parcels (DMM C050.4).

Parcel–Machinable

Machinable parcels can be processed by BMC parcel sorters. Machinable parcels meet the following minimum and maximum criteria and do not have characteristics that would make them flat-size (DMM C050.3), irregular parcels (DMM C050.5), or outside parcels (DMM C050.6).

	Minimum Criteria	Maximum Criteria
Length	6 in.	34 in.
Width	3 in.	17 in.
Height/Thickness	0.25 in.	17 in.
Weight	8 oz. *Exception: Pieces weighing between 6 and 8 oz. are machinable if all sides are rectangular*	35 lbs. The maximum weight of a machinable (regular) carton containing books or other printed matter is 25 lb.

Machinable Parcels
Exhibit A-1

ATTACHMENT TO RESPONSE TO NDMS/USPS-T28-3

PAGE 2 OF 6

Nonmachinable Items

The following items are considered nonmachinable:

- Rolls-and tubes.
- Paper-wrapped or sleeve-wrapped printed matter.
- Merchandise samples not individually addressed.
- Enveloped materials not reinforced with tape.
- Articles not securely packaged.
- Unpackaged articles.

Parcels–Outside

Parcels considered outside parcels cannot be processed in postal sacks because of size, shape, density, container, or contents. Characteristics include:

- Length–greater than 34 inches.
- Width–greater than 17 inches.
- Height/Thickness–greater than 17 inches.
- Weight–greater than 35 pounds.
- High density–parcels weighing more than 15 pounds and exerting more than 60 pounds per square foot pressure on their smallest side (e.g., metal castings, hardware, machine parts, auto parts, and similar heavy items) or cartons of books and other printed matter weighing more than 25 pounds (considered outside parcels).
- Liquids–the following:
  - Cartons containing more than 24 ounces of liquid in one or more glass containers.
  - Cartons containing 1 gallon or more of liquid in metal or plastic containers.
  - Cans, paints.
- Rolls and tubes greater than 26 inches in length.
- Metal band-strapped boxes, metal boxes, and wood boxes.
- Articles outside boxes or other containers, including tires, trailer hitches, exhaust pipes, shrubs, and trees.
- Harmful matter and hazardous materials (DMM C020 for mailability requirements).
- Containers with all dimensions exceeding the minimum dimensions for a machinable (regular) parcel if their coefficient of friction or ability to slide on a smooth, hard surface is not similar to that of a domestic class fiberboard box of the same approximate size and weight.

a. ***Letter.*** Letter-shape mail consists of pieces with the following dimensions that *do not fall within one of the card-shape categories listed in paragraphs b, c, d,* e, and f below:

Minimum Size	Maximum Size
Length – 5 in. Height – 3 1/2 in. Thickness – .007 in.	Length – 11 1/2 in. Height – 6 1/8 in. Thickness – 1/4 in.

b. ***Postal Card.*** This is a blank card sold by the USPS with a preprinted, *precanceled* postage stamp.

c. ***Private Mailing Card.*** This is a private mailing card for the transmission of messages with postage or a permit imprint affixed. In the case of return postal/private mailing cards, *do not mark short paid* to indicate that a fee is due.

d. ***USPS Form (Penalty Indicia).*** This is a Postal Service card that has the Postal Service indicia in the upper right corner of the address side and, generally, a form number that is printed in the lower left corner of the reverse side of the card. Forms 3811, *Domestic Return Receipt* (postal card), and 3811-A, *Domestic Return Receipt* (after mailing), are considered USPS forms if they are found in the mailstream unattached to a mailpiece.

Note: If you are not certain the piece is a postal card, private mailing card, or a USPS form, review the examples in the Handbook F-46, *In-Office Cost Sampling System–Mail Identification Examples.*

e. ***Other Agency Card.*** This shape is a U.S. Government card that has "Postage and Fees Paid" indicia in the upper right corner on the address side of the card.

f. ***Oversized Card.*** This is a privately printed mailing card larger than 4¼ inches by 6 inches If the employee is handling such a card, regardless of the mailer, enter ***Oversized Card*** in Question 22.

g. ***Flat.*** Flat-shape mail is unwrapped, paper-wrapped, sleeve-wrapped, and enveloped matter that exceeds one or more of the maximum dimensions for letter-size mail but that does not exceed any of the maximum dimensions for flat-size mail.

ATTACHMENT TO RESPONSE TO NDMS/USPS-T28-3

PAGE 4 OF 6

Minimum Size	Maximum Size
Length – over 11 1/2 in. Height – over 6 1/8 in. Thickness – .007 in.	Length – 15 in. Height – 12 in. Thickness – 3/4 in

h. *IPP Machinable, IPP Nonmachinable, Parcel Machinable, Parcel Outside.* These four shapes are listed in Question 22. *Do not* determine which of these shapes to mark by the way a parcel is being handled. Instead, apply the criteria of length, width, height/thickness, and weight. **See Appendix A. Definitions.**

i. *Keys and Identification Items.* These articles are often considered nonmachinable IPPs. However, for the In-Office Cost System, they are specifically identified.

j. *Detached Address Card-Parent Piece Unidentifiable.* Enter this item if the employee is handling a detached address card and the parent piece is not accompanying the card, or it is not possible to identify the parent piece.

Note: Definitions for the shapes of mail can be accessed on the computer by pressing the <F1> key.

12–31 If you enter Item A, B, C, D, E, or F in Question 22, you are asked if the mailpiece is ***Automation Compatible.*** Automation Compatibility must be determined by using the current version of the *Automation Compatibility & Mail Dimensions Standards Template–IOCS/RPW.*

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SHAPE – SINGLE PIECE

                                  Template MUST BE USED to
A.  Letter                        determine Automation Compatibility.
B.  Postal Card
C.  Private Mailing Card          Automation Compatible?
D.  USPS Form (Penalty Indicia)   (Y/N)  [ ]
E.  Other Agency Card
F.  Oversized Card                Is there a RBCS ID on
G.  Flat                          the back of the piece?
H.  IPP Machinable                (Y/N)  [ ]
I.  IPP Nonmachinable
J.  Parcel Machinable
K.  Parcel Outside
L.  Keys and Identification Items
M.  Detached Address Card – Parent
      Piece Unidentifiable
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ATTACHMENT TO RESPONSE TO NDMS/USPS-T28-3

Appendix A — Identifying Shapes, Types, and Classes of Mail

A. Identifying Shapes and Types of Mail

1. **Shapes and Types.** Six shapes and types of mail are distinguished in the rural carrier mail count. "Letter-size," "flat-size," and "parcels" relate to shapes. "Boxholder," "accountable," and "postage due" relate to types. Each of these shapes and types is used during national and special mail counts in evaluating rural routes.

2. **Different Definitions.** Please note that shapes identified in Handbook PO-603, *Rural Carrier Duties and Responsibilities,* are significantly different from the *Domestic Mail Manual* definition of shapes used in the City Carrier Cost System.

3. **Template.** Use the Carrier Cost System Rural Carrier Route Template (referred to as rural carrier route template in this handbook) to identify the shape of mailpieces. The template is printed with the measurements of each shape of mail and can help you determine whether the piece is a letter, flat, or parcel. In addition to the original large yellow model, the template exists as a facsimile in the rural carrier data entry program and is printed on Form 2849.

4. **Special Count of Mail.** If you are uncertain about the shape of a piece when using these definitions, count the item as it would be counted during the annual Special Count of Mail on select rural routes. The carrier or postmaster can tell you how a mailpiece was counted during the national count.

5. **OBSS Case.** The OBSS case (One-Bundle, Sliding-Shelf) adds another dimension to the counting of mail. All mail for a stop is cased together without regard to size or shape. Shapes of mail in OBSS cases follow the same general rules. However, the mail may have to be separated into letters, flats, and parcels for each selected stop before recording the number of pieces by shape. The definitions of these shapes and types of mail are also the same as for the national Special Count of Mail.

6. **Definitions.** Not Delivery Point Sequenced (DPS) Route.

   a. **Letter-Shape Mail.** This consists of ordinary letters, cards, newsletter-type mail, and circulars, 5 inches or less wide and 3/8 inch or less thick, which can be cased in the separations of the carrier case. Small magazines and small catalogs 5 inches or less wide and 3/8 inch or less thick are included.

   b. **Flat-Shaped Mail.** This mail consists of newspapers, magazines, catalogs, rolls, and other pieces exceeding letter-size dimensions that can be cased for delivery. Any mailpiece that exceeds the 5-inch maximum width of a letter must be recorded as flat-shaped mail. Do not include items specifically referenced in the definition of parcels.

c. **Parcel-Shaped Mail.** This mail consists of any article that exceeds any one of the following dimensions: 5 inches high, 18 inches long, and 1-9/16 inches wide.

d. **Example:** Record a rigid article that measures 4 inches by 15 inches by 1-3/4 inches (4" x 15" x 1-3/4") as a parcel because the 1-3/4 inch thickness exceeds the 1-9/16 inch criteria. A rigid article that measures 5 inches by 18 inches by 1-9/16 inches would be recorded as a flat because none of the dimensions exceeds the stated criteria. This includes articles properly prepared and endorsed "Do Not Fold or Bend." In addition, any nonrigid article that cannot fit in the letter or flat separations (where flat separations are used) with other mail is considered a parcel. The carrier has the option of handling odd size articles either with flat mail or separately regardless of how it is credited in the rural route count. Record the piece as it is credited in the rural route count. Each direct bundle distributed and tied out at the mail distribution cases is counted as a parcel. Direct bundles tied out at the carrier's case are not counted as parcels.

7. **Definition.** Delivery Point Sequenced (DPS) Route. Same as above, except widths are 6-1/8 inches for the maximum letter and minimum flat dimension.

8. **Parcels.** Only parcels taken out for delivery for the first time are included in the count. A notice of attempt to deliver a parcel, delivered in place of a parcel, is counted as the parcel. Record the notice under the same class as the parcel.

9. **Identifying and Comparing Shapes and Types of Mail**

a. **Maximum Sizes.** These maximums for rural carriers deviate from the DMM maximums for letter-shape mail of 11-1/2 inches for length, 6-1/8 inches for width (or "height") and 1/4 inch for thickness. It is particularly important to note that the maximum width for a rural route letter is 5 inches rather than the DMM standard of 6-1/8 inches. Hence, letter-shape mail more than 5 inches wide must be recorded as flat-shaped mail on rural routes. It is important that the 5-inch width dividing line between letters and flats be recognized because the Carrier Cost System data are used to allocate costs to classes and subclasses in conjunction with the Special Count of Mail on rural routes in which the maximums listed above (i.e., 18 inches, 5 inches, and 3/8 inch) are used rather than the DMM maximums. (DMM C050)

b. **Boxholder**

(1) *Definition.* Boxholder consists of a mailing scheduled for delivery to each stop or possible box and to each post office box on a route. The individual name and street address or post office box number may be omitted under the simplified address format for boxholder mail. This omission is also true for official matter mailed by government agencies (federal, state, county, or municipal) as described in DMM E215.1.2.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-4.

Your testimony at page 11 states that '[s]everal studies supply additional data as necessary." Please identify all other studies that supplied additional data, and provide references to the data that were utilized from each other study which you identify.

RESPONSE

The Standard Mail (A) Bulk Parcel Characteristics Study is described in Appendix C of LR-PCR-38. The Density Study is described in Docket No. MC95-1, LR-MCR-13. These studies are used to provide the density (pounds/cubic foot) of Bulk Standard Mail (A).

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-5.

a. Does the Postal Service have a definition of an IPP in terms of length, height, weight, shape etc.? If so, please provide.
b. What distinguishes an IPP from a parcel (i.e., a piece that is a non-letter, non-flat)?
c. Are IPPs ever machinable? On what machines? Please supply all cost data available that show the cost of processing (i) machinable IPPs versus the cost of processing (ii) nonmachinable IPPS, or (iii) machinable small parcels versus (iv) nonmachinable small parcels.

RESPONSE

a. Yes. Please see my response to NDMS/USPS-T28-3(a).

b. Please see my response to NDMS/USPS-T28-3(a).

c. Yes. Parcel sorting machines and Small Parcel and Bundle Sorters. (i) and (ii)

Please refer to Docket No. MC97-2, LR-PCR-50. I am aware of no other cost data to answer your question as it relates to Standard Mail (A) parcels.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-6.

a. Please provide cross references between the components of the hardcopy version of LR-H-108 and all of the various directions and files within each directory found on the CD version of LR-H-108.
b. For each individual file contained in the CD version of LR-H-108, please indicate the program (including the version of the program) that was used to generate the file (e.g., Excel 5.0, WordPerfect 7.0., etc.)

RESPONSE

The attached pages describe the contents of the CD/ROM files for LR-H-108. Please note that not all the files have a direct cost reference to the hard-copy version of LR-H-108. As discussed in Appendix A, many of the files were developed on a UNIX system using the FORTRAN programming language. For this reason, several of these files will not be accessible through standard PC word processing or spreadsheet software programs.

ATTACHMENT TO RESPONSE TO NDMS/USPS-T28-6

The directory "EXCEL" stores the Excel 7.0 spreadsheets which contain the analyses presented in the library reference.

	File	Input File	Includes Tables (from LR-H-108)
1	cstbyshp.xls	LR-H-106 Data	
2	dlvcst96.xls	CRA Workpapers	Table 5, Table 6
3	estsan96.xls	est3np.csv, est3np_w.csv	
4	estsar96.xls	est3rd.csv, est3rd_w.csv	
5	iospt96.xls	CRA Workpapers	Table 4
6	sa96shp.xls	All other spreadsheets	Table 3, Table 7
7	stda96.xls	estsar96.xls, estsan96.xls	Table 1, 2, A-1 - A-4

The following programs are located in the directory "PROGRAMS" on the CD/ROM. They were all created by the UNIX program editor "emacs". Files with an .f extension are Fortran source code, files with an .sm extension are DGUX sort/merge source codes, and the remaining files are either Korn shell or C shell scripts.
These files are documented in Appendix A of the hard-copy version of LR-H-108.

	Unix Program Name	CD-ROM Name	Program Documentation at Page	Source Code at Page	Created by
1	proctape.pmt	proctape.pmt	A-6	A-20	emacs
2	breakout.new	breakout.new	A-6	A-25	emacs
3	pipare.sm	pipare.sm	A-6	A-26	emacs
4	unpackpi_tdt.f	unpackpi.f	A-6	A-27	emacs
5	sorttmp.sm	sorttmp.sm	A-6	A-30	emacs
6	reverreg_tdt.f	reverreg.f	A-7	A-31	emacs
7	sorttrn.sm	sorttrn.sm	A-7	A-33	emacs
8	permitbyap.f	perbyap.f	A-7	A-34	emacs
9	doextract	doextract	A-8	A-38	emacs
10	revaccts_byap.f	revacc.f	A-8	A-40	emacs
11	strata_dan.f	strata.f	A-8	A-44	emacs
12	pmtstrata.f	pstr.f	A-9	A-47	emacs
13	brvstrata.f	bstr.f	A-9	A-49	emacs
14	pmtzcat_3rd	zcat_3rd	A-11	A-51	emacs
15	bin3rd96.f	bin3rd96.f	A-11	A-52	emacs
16	check3rd.f	check3rd.f	A-11	A-59	emacs
17	pmtzcat_stda	zcat_std	A-11	A-65	emacs
18	bin_stda.f	bin_stda.f	A-11	A-67	emacs
19	check_stda.f	chkstd.f	A-11	A-74	emacs
20	bravzcat	bravzcat	A-12	A-82	emacs
21	rollbrv.f (regular rate)	rollbrv.f	A-12	A-83	emacs
22	check3rdb.f	chk3rdb.f	A-12	A-90	emacs
23	wgt_3rd_roll.f	wroll3d.f	A-12	A-96	emacs
24	permit.h	permit.h	A-12	A-100	emacs
25	permit_read.h	p_read.h	A-12	A-101	emacs
26	wgt_std_roll.f	wrollst.f	A-12	A-	emacs
27	permit_stda.h	pstda.h	A-14	A-	emacs
28	permit_read_stda.h	pstda_rd.h	A-15	A-	emacs
29	est3rd96.f	est3rd96.f	A-14	A-102	emacs
30	est3rd96_w.f	est3rd_w.f	A-15	A-112	emacs
31	pmtzcat_3np	zcat_3np	A-16	A-122	emacs
32	bin3np96.f	bin3np96.f	A-16	A-123	emacs
33	check3np.f	check3np.f	A-16	A-130	emacs
34	bravzcat	bravzcat	A-16	A-137	emacs
35	rollbrv.f (nonprofit rate)	rolbrvnp.f	A-16	A-138	emacs
36	wi_cat	wi_cat	A-16	A-152	emacs
37	weight_roll_np.f	wrlnp.f	A-17	A-153	emacs
38	est3np.f	est3np.f	A-17	A-159	emacs
39	est3np_w.f	est3np_w.f	A-17	A-168	emacs

The following files are stored in directory "MAPS". They are information files used by the programs documented in Appendix A.

	Unix File Name	CD-ROM Name	Creating Program at Page	Created by	Format
1	finno.pmt (regular rate)	finnor.pmt	-NA-	emacs	ascii
2	finno.brv (regular rate)	finnor.brv	-NA-	emacs	ascii
3	finno.pmt (nonprofit)	finnon.pmt	-NA-	emacs	ascii
4	finno.brv (non profit)	finnon.brv	-NA-	emacs	ascii
5	finstrata_date.pmt (regular rate)	findt.pnt	A-9	pmtstrata.f	ascii
6	finstrata.brv(regular rate)	finst.brv	A-9	brvstrata.f	ascii
7	finstrata_date.pmt (nonprofit)	finstnp.pmt	A-9	pmtstrata.f	ascii
8	finstrata.brv(nonprofit)	finstnp.brv.	A-9	brvstrata.f	ascii
9	vip3rd.96	vip3rd.96	-NA-	emacs	ascii
10	vipstda96.dat	vipstda96.dat	-NA-	emacs	ascii
11	error.codes	error.cds	-NA-	emacs	ascii
12	vip96inf.prn	vip96inf.prn	-NA-	emacs	ascii
13	vip3np.96	vip3np.96	-NA-	emacs	ascii
14	finsbyap.all (regular rate)	finsbyap.all	-NA-	emacs	ascii
15	finsbyap.all (nonprofit)	finsbynp.all	-NA-	emacs	ascii

The following files are in directory "DATA". These are the raw transaction files of PERMIT and BRAVIS data. They are stored in "gzip" format, which is a standard UNIX compression format. The Microsoft utility "Winzip" is able to un-compress these files.

	Unix File Name	CD-ROM Name	Creating Program at Page	Created by	Format
1	permit.3rd.*	p3rd.*	A-7	permitbyap.f	gzip
2	permit.3np.*	p3np.*	A-7	permitbyap.f	gzip
3	bravis.3rd.*	b3rd.*	-NA-**	-NA-	gzip
4	bravis.3np.*	b3np.*	-NA-	-NA-	gzip

where * is 01, 02, ... 13

** - The BRAVIS files are simply the linked versions of diskette files used to produce the volume data.

The following files are in directory "OUTPUT". These are files created by Fortran programs that are either used by other programs or imported into Excel for creation of tables.

	Unix File Name	CD-ROM Name	Creating Program at Page	Created by	Format
1	strata.41411	strata.411	A-9	strata_dan.f	ascii
2	strata.41414	strata.414	A-9	strata_dan.f	ascii
3	est3rd.csv	est3rd.csv	A-14	est3rd96.f	ascii
4	est3rd.control	est3rd.cnt	A-14	est3rd96.f	ascii
5	est3rd_w.csv	est3rd_w.csv	A-15	est3rd96_w.f	ascii
6	est3np96.csv	est3np96.csv	A-17	est3np96.f	ascii
7	est3np.control	est3np.cnt	A-17	est3np96.f	ascii
8	est3np_w.csv	est3np_w.csv	A-18	est3np96_w.f	ascii

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-7.
Did you make any effort to compute separately the cost of Standard A Regular Rate ECR parcels and ECR flats? If so, please provide those results, and show the computation used to derive those results. If not, please explain why you made such a computation in your testimony in Docket No. MC97-2, USPS-T-7, but did not feel that it was necessary in this docket.

RESPONSE

Yes. Those results are provided in the CD/ROM version of LR-H-108. Look under

ex~00001/sa96shp.xls, sheet 'BrCrt'. Though the table says "1995", it actually shows FY

1996 data.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-8.

Are the costs shown in Table 3 of LR-H-108 for Regular Rate and Nonprofit Rate combined?

RESPONSE

Yes. Please see my testimony at page 11, lines 15 and 16 or Table 3, page 2,

Distribution Keys, Volume of Mail, Source, Table 2.

NDMS/USPS-T28-9.

LR-H-108 states (p. 2) that "the mailing statement includes the shape ... and weight by detailed rate category of mail."

a. Provide a copy of a blank mailing statement.
b. Please explain all ways in which the mailing statement distinguishes between Standard A parcels and flats.
c. How does the mailing statement distinguish between an 8-ounce flat and an 8-ounce non-flat (i.e., a "parcel")?
d. Suppose envelopes with height 7" and length 9-1/2" contained photographic prints with thickness that varied between 3/4 " and 1" thick. How would such envelopes be recorded on a mailing statement? In the survey conducted for LR-H-108, would such envelopes be classified as flats or parcels?
e. How would 7" x 9-1/2" envelopes containing 1 to 3 rolls of film be recorded on a mailing statement? In the survey conducted for LR-H-108, would such envelopes be classified as flats or parcels?
f. Suppose a Standard A bulk mailing consists of non-identical 7" x 9-1/2" envelopes (i.e., varying weight and thickness). Assume some envelopes are less than 3/4" thick while others exceed 3/4" thick. In the survey conducted for LR-H-108, would such pieces be recorded as flats or parcels?

RESPONSE

a. Mailing (postage) statements can be found on the U.S. Postal Service web site (www.usps.gov/busctr/welcome.htm, "print-on-demand forms"). I have printed and attached a copy of one for your convenience.

b. Please see my response to NDMS/USPS-T28-3(a).

c. Please see my response to NDMS/USPS-T28-3(a).

d. Please see my response to NDMS/USPS-T28-3(a). According to the DMM definition, all pieces of mail with a thickness exceeding 3/4" are to be classified as parcels.

e. I do not know the weight or dimensional characteristics of an envelope containing between one and three rolls of film. The data in LR-H-108 defines pieces as flats or parcels based on the sources described in my response to NDMS/USPS-T28-3(a).

f. Assuming you are referring to the analysis presented in LR-H-108 and not the survey referred to in LR-H-108 and supplied as LR-PCR-50, they would be classified as flats and parcels based on the Processing Category checked on the Postage (mailing) statement. Also, according to the DMM, flats and parcels have different preparation requirements, making your hypothetical situation appear unlikely.

ATTACHMENT TO RESPONSE TO NDMS/USPS-T28-9

United States Postal Service

PAGE 1 OF 2

Postage Statement — Standard Mail (A) (Other Than Nonprofit) — Permit Imprint

MAILER: Complete all items by typewriter, pen, or indelible pencil. If you need a receipt, prepare in duplicate.

Mailer Information

Post Office of Mailing		Mailing Date	Processing Category ☐ Letters (DMM C050) ☐ Flats (DMM C050) ☐ Automation Flats (DMM C820) ☐ Machinable Parcels (DMM C050) ☐ Irregular Parcels (DMM C050)	USPS Authorized Mailing ID Code(s)
Permit No	Federal Agency Cost Code	Statement Sequence No.		
Permit Holder's Name and Address *(Include ZIP Code)*	Telephone	Receipt No		Prepared Under DMM *(Check all that apply)* ☐ M610 (Letters, flats, parcels) ☐ M610 (Upgradable letters) ☐ M620 (Enhanced Carrier Route) ☐ M810 (Automation letters) ☐ M820 (Automation flats)
		Number of Containers *(Fill in all that apply)* 1-Ft MM Trays_____ 2-Ft MM Trays_____ 2-Ft EMM Trays_____ Total Ltr. Trays_____ Flat Trays N/A Sacks_____ Pallets_____ Other_____		
		Weight of a Single Piece ___.___ ___ ___ ___ pounds		If Sacking, Based On ☐ 125 pieces ☐ 15 pounds ☐ Both
Customer No. _____ (Dun & Bradstreet) CTAS Cust. Ref. ID _____		Total Pieces	Total Weight	
Name and Address of Individual or Organization for Which Mailing Is Prepared *(If other than permit holder)* Customer No. _____ (Dun & Bradstreet)		Name and Address of Mailing Agent *(If other than permit holder)* Customer No. _____ (Dun & Bradstreet)		

Postage Computation

- For **Regular automation rate letter-size** *(DMM C810)* **or flat-size** pieces *(see DMM C820)* weighing **.2068 lb.** *(3.3087 oz.)* **or less**, go to **Part A** on reverse of this form.
- For **Regular nonautomation rate** pieces *(DMM C050)* weighing **.2068 lb.** *(3.3087 oz.)* **or less**, go to **Part B** on reverse of this form.
- For **Enhanced Carrier Route rate** pieces *(DMM C050)* weighing **.2066 lb.** *(3.3062 oz.)* **or less**, go to **Part C** on reverse of this form.
- For **Enhanced Carrier Route rate** pieces weighing **more than .2066 lb.** *(3.3062 oz.)*, or **Regular rate** pieces weighing **more than .2068 lb.** *(3.3087 oz.)* **but all less than 1.0 lb.** *(16.0 oz.)*, go to **Part D** on reverse of this form

Postage *(From reverse side)*

Part A	$
Part B	$
Part C	$
Part D	$

☐ Additional Postage Payment *(State reasons)*
☐ Single-Piece Rate ☐ Nonstandard Surcharge ☐ Special Service *(Specify)*

No. Pieces | Rate/Fee Per Pc. x $ _____ = $

Is applicable bulk per piece rate affixed to each piece? *(Form 3602-PR required)*
☐ Yes ☐ No

Total Postage → $

Certification

☐ **For Enclosed Reply Pieces** *(Automation rates only) (Effective 1/1/97): I certify that all business reply, courtesy reply, or metered reply letter-size cards or envelopes, enclosed in the pieces described above, bear the correct facing identification mark (FIM) and barcode under DMM C810.*

☐ **For ZIP Codes** *(Nonautomation rates only): I certify that the ZIP Codes appearing on the pieces described above have been verified and corrected where necessary within 12 months of the date of this mailing using a USPS-approved method.*

The signature of a mailer certifies that it will be liable for and agrees to pay, subject to appeals prescribed by postal laws and regulations, any revenue deficiencies assessed on this mailing. *(If this form is signed by an agent, the agent certifies that it is authorized to sign this statement, that the certification binds the agent and the mailer, and that both the mailer and the agent will be liable for and agree to pay any deficiencies.)*

The submission of a false, fictitious, or fraudulent statement may result in imprisonment of up to 5 years and a fine of up to $10,000 (18 USC 1001). In addition, a civil penalty of up to $5,000 and an additional assessment of twice the amount falsely claimed may be imposed (31 USC 3802).

I hereby certify that all information furnished on this form is accurate and truthful, that this mailing meets all applicable CASS/MASS standards for address and barcode accuracy, and that the material presented qualifies for the rates of postage claimed.

Signature of Permit Holder or Agent *(Both principal and agent are liable for any postage deficiency incurred.)* | Telephone

USPS Use Only

Single-Piece Weight ___.___ ___ ___ ___ pounds		Are figures at left adjusted from mailer's entries? ☐ Yes ☐ No		
Total Pieces	Total Weight	If "Yes," Reason		
Total Postage				
Check One ☐ Presort Verification Not Scheduled ☐ Presort Verification Performed as Scheduled		Date Mailer Notified	Contact	By *(Initials)*
				Round Stamp *(Required)*

I CERTIFY that this mailing has been inspected concerning: (1) eligibility for postage rate claimed; (2) proper preparation *(and presort where required)*; (3) proper completion of postage statement; and (4) payment of required annual fee.

Signature of Weigher | Time AM PM

PS Form 3602-R, October 1996 — Financial Document — Forward to Finance Office

Form 3602-R — Standard Mail (A) (Other Than Nonprofit) — Permit Imprint

Postage Computation

A Regular Automation Rates — Letters (DMM C810) and Flats (DMM C820) Weighing .2068 Lb. *(3.3087 Oz.)* or Less

Entry Discount (If any)	Presort / Automation Discounts	Net Rate	Count (Pcs. / Lbs.)	Charge
None	5-Digit Letter	.155 x	_____ pcs	= $_____
	3-Digit Letter	.175 x	_____ pcs	= $_____
	Basic Letter	.183 x	_____ pcs.	= $_____
	3/5 Flat	.189 x	_____ pcs.	= $_____
	Basic Flat	.277 x	_____ pcs.	= $_____
DBMC	5-Digit Letter	.142 x	_____ pcs.	= $_____
	3-Digit Letter	.162 x	_____ pcs.	= $_____
	Basic Letter	.170 x	_____ pcs.	= $_____
	3/5 Flat	.176 x	_____ pcs.	= $_____
	Basic Flat	.264 x	_____ pcs.	= $_____
DSCF	5-Digit Letter	137 x	_____ pcs.	= $_____
	3-Digit Letter	.157 x	_____ pcs.	= $_____
	Basic Letter	.165 x	_____ pcs.	= $_____
	3/5 Flat	.171 x	_____ pcs.	= $_____
	Basic Flat	.259 x	_____ pcs.	= $_____

Total — Part A *(Carry to front of form)* $_____

C Enhanced Carrier Route Rates — Pieces Weighing .2066 Lb. *(3.3062 Oz.)* or Less

Entry Discount (If any)	Presort / Automation Discounts	Net Rate	Count (Pcs. / Lbs.)	Charge
None	Saturation Letter	.133 x	_____ pcs.	= $_____
	Saturation Nonletter	.137 x	_____ pcs.	= $_____
	High Density Letter	.142 x	_____ pcs.	= $_____
	Basic Automation Letter	.146 x	_____ pcs.	= $_____
	High Density Nonletter	.147 x	_____ pcs.	= $_____
	Basic Letter	.150 x	_____ pcs.	= $_____
	Basic Nonletter	.155 x	_____ pcs.	= $_____
DBMC	Saturation Letter	.120 x	_____ pcs.	= $_____
	Saturation Nonletter	.124 x	_____ pcs.	= $_____
	High Density Letter	.129 x	_____ pcs.	= $_____
	Basic Automation Letter	.133 x	_____ pcs.	= $_____
	High Density Nonletter	.134 x	_____ pcs.	= $_____
	Basic Letter	.137 x	_____ pcs.	= $_____
	Basic Nonletter	.142 x	_____ pcs.	= $_____
DSCF	Saturation Letter	.115 x	_____ pcs.	= $_____
	Saturation Nonletter	.119 x	_____ pcs.	= $_____
	High Density Letter	124 x	_____ pcs.	= $_____
	Basic Automation Letter	.128 x	_____ pcs.	= $_____
	High Density Nonletter	.129 x	_____ pcs.	= $_____
	Basic Letter	.132 x	_____ pcs.	= $_____
	Basic Nonletter	.137 x	_____ pcs	= $_____
DDU	Saturation Letter	.110 x	_____ pcs.	= $_____
	Saturation Nonletter	.114 x	_____ pcs.	= $_____
	High Density Letter	.119 x	_____ pcs.	= $_____
	Basic Automation Letter	.123 x	_____ pcs.	= $_____
	High Density Nonletter	.124 x	_____ pcs.	= $_____
	Basic Letter	.127 x	_____ pcs.	= $_____
	Basic Nonletter	.132 x	_____ pcs.	= $_____

Total — Part C *(Carry to front of form)* $_____

B Regular Nonautomation Rates — Pieces Weighing .2068 Lb. *(3.3087 Oz.)* or Less

Entry Discount (If any)	Presort / Automation Discounts	Net Rate	Count (Pcs. / Lbs.)	Charge
None	3/5 Letter	.209 x	_____ pcs.	= $_____
	3/5 Nonletter	.225 x	_____ pcs	= $_____
	Basic Letter	.256 x	_____ pcs	= $_____
	Basic Nonletter	.306 x	_____ pcs	= $_____
DBMC	3/5 Letter	.196 x	_____ pcs.	= $_____
	3/5 Nonletter	.212 x	_____ pcs.	= $_____
	Basic Letter	.243 x	_____ pcs.	= $_____
	Basic Nonletter	.293 x	_____ pcs.	= $_____
DSCF	3/5 Letter	.191 x	_____ pcs	= $_____
	3/5 Nonletter	.207 x	_____ pcs.	= $_____
	Basic Letter	.238 x	_____ pcs	= $_____
	Basic Nonletter	.288 x	_____ pcs	= $_____

Total — Part B *(Carry to front of form)* $_____

D Check One: ☐ Regular Rate Pieces Weighing More Than .2068 Lb. *(3.3087 Oz.)* but Less Than 1.0 Lb. *(16.0 Oz.)* ☐ Enhanced Carrier Route Rate Pieces Weighing More Than .2066 Lb. *(3.3062 Oz.)* but Less Than 1.0 Lb. *(16.0 Oz.)*

Entry Discount (If any)	Presort / Automation Discounts	Net Rate	Count (Pcs. / Lbs.)	Charge
None	Saturation ECR	.000 x	_____ pcs.	= $_____
	plus	663 x	_____ lbs	= $_____
	High Density ECR	.010 x	_____ pcs.	= $_____
	plus	.663 x	_____ lbs.	= $_____
	Basic ECR	.018 x	_____ pcs.	= $_____
	plus	.663 x	_____ lbs.	= $_____
	3/5 Automation*	.049 x	_____ pcs.	= $_____
	plus	.677 x	_____ lbs	= $_____
	3/5 Nonautomation	.085 x	_____ pcs.	= $_____
	plus	.677 x	_____ lbs.	= $_____
	Basic Automation*	.137 x	_____ pcs.	= $_____
	plus	.677 x	_____ lbs	= $_____
	Basic Nonautomation	166 x	_____ pcs.	= $_____
	plus	.677 x	_____ lbs	= $_____
DBMC	Saturation ECR	000 x	_____ pcs.	= $_____
	plus	.599 x	_____ lbs.	= $_____
	High Density ECR	.010 x	_____ pcs.	= $_____
	plus	.599 x	_____ lbs.	= $_____
	Basic ECR	.018 x	_____ pcs.	= $_____
	plus	.599 x	_____ lbs.	= $_____
	3/5 Automation*	.049 x	_____ pcs	= $_____
	plus	.613 x	_____ lbs.	= $_____
	3/5 Nonautomation	.085 x	_____ pcs.	= $_____
	plus	.613 x	_____ lbs.	= $_____
	Basic Automation*	.137 x	_____ pcs.	= $_____
	plus	.613 x	_____ lbs.	= $_____
	Basic Nonautomation	.166 x	_____ pcs.	= $_____
	plus	.613 x	_____ lbs.	= $_____
DSCF	Saturation ECR	000 x	_____ pcs.	= $_____
	plus	.578 x	_____ lbs.	= $_____
	High Density ECR	.010 x	_____ pcs.	= $_____
	plus	.578 x	_____ lbs.	= $_____
	Basic ECR	.018 x	_____ pcs.	= $_____
	plus	.578 x	_____ lbs	= $_____
	3/5 Automation*	.049 x	_____ pcs.	= $_____
	plus	592 x	_____ lbs	= $_____
	3/5 Nonautomation	.085 x	_____ pcs.	= $_____
	plus	.592 x	_____ lbs.	= $_____
	Basic Automation*	.137 x	_____ pcs.	= $_____
	plus	.592 x	_____ lbs.	= $_____
	Basic Nonautomation	.166 x	_____ pcs.	= $_____
	plus	.592 x	_____ lbs.	= $_____
DDU	Saturation ECR	.000 x	_____ pcs.	= $_____
	plus	.552 x	_____ lbs.	= $_____
	High Density ECR	.010 x	_____ pcs.	= $_____
	plus	.552 x	_____ lbs.	= $_____
	Basic ECR	018 x	_____ pcs.	= $_____
	plus	.552 x	_____ lbs.	= $_____

*Available only for automation-compatible flats (DMM C820)

Total — Part D *(Carry to front of form)* $_____

NDMS/USPS-T28-10.

With respect to the study in LR-H-108, please describe all edit programs and other checks used to assure that parcels were not mis-recorded as flats, and vice-versa.

RESPONSE

The analysis in LR-H-108 itself does not contain any "edit programs" as such.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-11.
Please refer to LR-H-108, at the table showing FY 1996 Bulk Standard Mail (A) costs by shape. The costs shown under Cost Segment 3. 1a, Mail Processing Variable with Piggyback, are sourced to LR-H-106. Please provide precise citations to the page, row and column(s) in LR-H-106 where the mail processing costs for letters (1,692,471), flats (1,417,869) and IPPs & Parcels (278,593) can be found.

RESPONSE

The costs you cite from LR-H-108 can not be directly pulled from LR-H-106, but can be calculated from the data provided there. Base Year 1996 "Mail Processing Variable (costs) w/Pigbk" from LR-H-108 are found by multiplying the 'Adjusted Costs' of each cost pool in the four sub-categories for each shape by both the respective 'Premium Pay Factor' and the respective 'Piggyback Factor' and then summing the products across the four subclasses by shape in bulk Standard Mail (A).

'Adjusted Costs' is a grouping of mail processing costs by cost pool for each shape and subclass in bulk Standard Mail (A). 'Premium Pay Factor' is a single number for each subclass in Standard Mail (A). 'Piggyback Factor' is a group of numbers with one for each cost pool.

The adjusted costs can be found in LR-H-106 at the following locations:

Shape	Sheet	Page	3rd nPrf Carr-Rt	3rd nPrf Other	3rd Reg Carr-Rt	3rd Rg Other
Letters	'Adj. Letter'	II-2	I12-I56	J12-J56	K12-K56	L12-L56
Flats	'Adj. Flatcst'	III-2	I12-I56	J12-J56	K12-K56	L12-L56
Parcels	'Adj. Parcelcst'	IV-2	I12-I57	J12-J57	K12-K57	L12-L57

The premium pay factors can be found in the spreadsheet CSTSHAPE.xls included in LR-H-106 on sheet 'PremPay', cells I14-L14.

The piggyback factors can be found in LR-H-106 on page VI-2 and on sheet 'Pigbkfctrs', cells H12-H57.

Upon recalculating the mail processing costs, two very minor discrepancies were discovered. Letters should be $1,692,478 and flats should be $1,417,875. This obviously causes no change to any of my results derived from LR-H-108.

U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF NDMS

NDMS/USPS-T28-12.

Please refer to LR-H-106, page IV-5, and LR-H-108, pp. 6-7. As shown below, these two sources show different volumes for Standard A parcels. Please reconcile fully.

	LR-H-106 (Millions)	LR-H-108 (Thousands)
3rd nPr Cr Rte	1	1,389
3rd nPr Other	46	42,360
Subtotal	47	43,749
3rd Reg Cr Rte	77	69,464
3rd Reg Other	991	869,434
	1,068	938,898
Total	1,115	982,647

RESPONSE

LR-H-108 uses Base Year 1996 actual volumes to compare with Base Year 1996 actual costs. I make an adjustment to put the results in Test Year 1998 dollars. LR-H-106 uses the Test Year 1998 volume forecast. Since LR-H-108 and LR-H-106 are measuring two different sets of numbers and I do not use the Test Year 1998 volume forecast shown in LR-H-106 in my analysis, it is not possible to reconcile these results.

NDMS/USPS-T28-13.

Please provide the source of the mail processing cost data in LR-H- 106 and explain how the data collection process distinguished between flats and parcels at the time the data were recorded and collected.

RESPONSE

"The total volume variable mail processing labor costs for the base year by rate category and by cost pool are developed in LR-H-146, part III." (LR-H-106, Overview and Summary, page I-1). Flats and parcels are distinguished by the IOCS shape designation.

Please see my response to NDMS/USPS-T28-3(a).

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: 22 AUGUST 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
August 22, 1997