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POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

Before the

UNITED STATES POSTAL RATE COMMISSION

In the Matter of: **POSTAL RATE AND FEE CHANGES**

Docket No. R97-1

VOLUME 19-E

DESIGNATED RESPONSES OF
UNITED STATES POSTAL SERVICE WITNESSES

DATE: Friday, December 19, 1997

PLACE: Washington, D.C.

PAGES: 9603 - 10047

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BEFORE THE
POSTAL RATE COMMISSION

- - - - - X
In the Matter of: :
POSTAL RATE AND FEE CHANGES : Docket No. R97-1
- - - - - X

Third Floor Hearing Room
Postal Rate Commission
1333 H Street, N.W.
Washington, D.C. 20268

Volume 19-E
Friday, December 19, 1997

The following documents were transcribed into the
record.

BEFORE:

HON. EDWARD J. GLEIMAN, CHAIRMAN
HON. W. H. "TREY" LeBLANC, III, COMMISSIONER
HON. GEORGE A. OMAS, COMMISSIONER

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BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, DC 20268-0001

Postal Rate and Fee Changes, 1997

Docket No. R97-1

DESIGNATION OF INTERROGATORY RESPONSES
PROVIDED BY INDIVIDUAL WITNESSES

<u>Party</u>	<u>Interrogatories</u>
Norma B. Nieto (T02) Office of the Consumer Advocate	UPS/USPS-T02-10 Written responses to questions during oral cross-examination at Tr. 7/3507, 3531
Ralph J. Moden (T04) Office of the Consumer Advocate	ABA,EEI&NAPM/USPS-T25-10, 12 redirected to T04 NAA/USPS-T04-20 UPS/USPS-T04-10
Joe Alexandrovich (T05) Office of the Consumer Advocate	DFC/USPS-T05-11-16 POIR No. 3, Question 17 POIR No. 4, Question 8a POIR No. 6, Question 4 Written response to OCA's question during oral cross-examination at Tr. 13/7176
George S. Tolley (T06) Office of the Consumer Advocate	POIR No. 7, Questions 6-8 Written response to Presiding Officer's question during oral cross-examination at Tr. 13/6939
Gerald L. Musgrave (T08) Office of the Consumer Advocate	POIR No. 5, Question 1
William P. Tayman (T09) Office of the Consumer Advocate	DMA/USPS-T09-35-38 POIR No. 5, Questions 15-16

Carl G. Degen (T12)

Office of the Consumer Advocate

TW/USPS-5 redirected to T12

TW/USPS-T12-41

POIR No. 5, Question 20

Written responses to questions during oral cross-examination at Tr. 12/6637, 6642 (lines 4-6 and 8-11), 6643, 6644, 6660

Postal Rate Commission

Written response to Presiding Officer's questions during oral cross-examination at Tr. 18/8268, 8337, 8354

Michael D. Bradley (T14)

Office of the Consumer Advocate

POIR No. 7, Questions 1-5

Richard L. Patelunas (T15)

Office of the Consumer Advocate

ABP/USPS-T15-3 (revised)

DFC/USPS-6 redirected to T15

DFC/USPS-T24-1-2 redirected to T15

MMA/USPS-T05-6a redirected to T15

NDMS/USPS-T15-1 (attachment revised 10/31)

OCA/USPS-4-6 redirected to T15

OCA/USPS-T05-3-6, 9, 28-29 redirected to T15

OCA/USPS-T09-21a-b redirected to T15

OCA/USPS-T24-25, 60b, 74b (revised) redirected to T15

UPS/USPS-T33-58 redirected to T15 (revised)

POIR No. 5, Question 14

United Parcel Service

UPS/USPS-T33-15 redirected to T15 (revised)

Peter D. Hume (T18)

Office of the Consumer Advocate

NNA/USPS-T18-1

Michael A. Nelson (T19)

Office of the Consumer Advocate

OCA/USPS-T05-15 redirected to T19

David E. Treworgy (T22)

Office of the Consumer Advocate

OCA/USPS-T22-12, 20b, e, g

POIR No. 5, Question 17

Written response to OCA's questions during oral cross-examination at Tr. 3/1295, 1296-8

Paul M. Lion (T24)

Office of the Consumer Advocate

OCA/USPS-T24-96 (revised), 97, 98 (revised), 99-101

Written response to OCA's question during oral cross-examination at Tr. 3/1192-3

Leslie M. Schenk (T27) Office of the Consumer Advocate	OCA/USPS-T27-1-6
Charles L. Crum (T28) Advertising Mail Marketing Association Office of the Consumer Advocate	RIAA/USPS-T28-5 POIR No. 4, Question 8c Written response to AMMA's question during oral cross-examination at Tr. 17/8054-7, 8067, 8068
Sharon Daniel (T29) Advertising Mail Marketing Association Office of the Consumer Advocate	AMMA/USPS-1 (revised) redirected to T29 AMMA/USPS-1 (revised) redirected to T29 OCA/USPS-T12-43 redirected to T29
Donald J. O'Hara (T30) Office of the Consumer Advocate	ABA,EEI&NAPM/USPS-T30-2-4, 6
David R. Fronk (T32) Office of the Consumer Advocate	ABA/USPS-T25-2-5 redirected to T32 POIR No. 5, Question 18 Written response to OCA's question during oral cross-examination at Tr. 4/1686-7
Thomas M. Sharkey (T33) Office of the Consumer Advocate	DBP/USPS-8r, 11a-b, 12a-b redirected to T33 POIR No. 7, Question 20
Altaf H. Taufique (T34) Office of the Consumer Advocate	POIR No. 6, Question 2
Joseph D. Moeller (T36) Office of the Consumer Advocate	Written response to RIAA's question during oral cross-examination at Tr. 6/3094-6
Virginia J. Mayes (T37) Office of the Consumer Advocate	DBP/USPS-39l, 82 redirected to T37 OCA/USPS-T37-1 (partial) POIR No. 5, Question 13 POIR No. 6, Question 3
Mohammad A. Adra (T38) Office of the Consumer Advocate	POIR No. 5, Question 12

Susan W. Needham (T39)

Office of the Consumer Advocate

DBP/USPS-16a-d, 21m-p, r, v, y-aa, cc, 37,
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 POIR No. 5, Questions 2-7
 POIR No. 7, Question 19
 Written response to Mr. Popkin's question during
 oral cross-examination at Tr. 3/697-99

Michael K. Plunkett (T40)

Office of the Consumer Advocate

DBP/USPS-29 (revised), 73-78, 83, 85-87, 90
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 POIR No. 5, Questions 8-11
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 Written response to Mr. Popkin's question during
 oral cross-examination at Tr. 3/971
 Written response to OCA's question during oral
 cross-examination at Tr. 3/1047

William M. Takis (T41)

Office of the Consumer Advocate

Written response to question during oral
 cross-examination at Tr. 9/4790

John V. Currie (T42)

Postal Rate Commission

OCA/USPS-T42-2

Michael R. McGrane (ST44)

Office of the Consumer Advocate

POIR No. 7, Questions 15, 18

Marc A. Smith (ST45)

Office of the Consumer Advocate

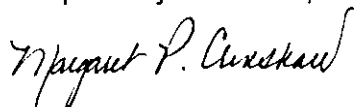
POIR No. 7, Questions 9-14, 16-17

Marc A. Smith (ST46)

Nashua Photo Inc., District Photo Inc.,
 Mystic Color Lab, and Seattle
 Filmworks, Inc.

NDMS/USPS-T28-38d, 41i redirected to ST46

Respectfully submitted,



Margaret P. Crenshaw
 Secretary

**Designated Interrogatory Responses
of
Norma B. Nieto (T02)**

RESPONSE OF POSTAL SERVICE WITNESS NIETO TO INTERROGATORIES
OF UNITED PARCEL SERVICE

9609

UPS/USPS-T2-10. Please confirm that NASS, and thus TRACS, does not include emergency highway contracts. If confirmed, please explain how the construction of the highway sample frame accounts for these contracts for developing distribution keys. If not confirmed, please explain your answer.

Response to UPS/USPS-T2-10:

Confirmed. TRACS does not sample emergency contracts since the schedule information for these contracts is not available at the time of sampling. The TRACS distribution key for regular highway contracts is applied to all the costs in a particular account.

RESPONSE OF POSTAL SERVICE WITNESS NIETO TO QUESTIONS POSED
DURING ORAL CROSS-EXAMINATION

Tr. 7/3507 (Florida Gift Fruit Shippers Association)

"Mr. Chairman, I would request that the Postal Service identify the four TRACS tests and the two TRACS tests and the one TRACS test that are referred to by the witness in answer to our interrogatory T-2-41."

Response:

Please refer to the attachment to this question.

RESPONSE OF POSTAL SERVICE WITNESS NIETO TO QUESTIONS POSED
DURING ORAL CROSS-EXAMINATION

Response to question posed at Tr. 7/3507, lines 2-5.

There were four Intra-BMC TRACS tests in which a portion of the truck was vertically used up to 96":

TESTID	ACCT	FTYPE	UNLOAD	EMPTY	REMAIN	WHEELED	PALLETS	SACKS	EXPRESS	OTHER	NWHEELED	NPALLETS	P1HEIGHT	P2HEIGHT	HSACKS	HEXPRESS	HOTHER	AVG_HT
02198BM	53127	SCF	55	45	0	40	5	10	0	0	9	2	14	11	106.00	0	0	72.77
05138JS	53127	BMC	85	15	0	50	15	2	0	18	11	3	49	49	34	0	96	72.13
06022XX	53127	BMC	100	0	0	30	50	5	0	15	6	11	72	48	30	0	96	67.50
06532CP	53127	SCF	100	0	0	60	0	20	0	20	13	0	0	0	96.00	0	96	81.60

There were two Intra-BMC TRACS tests in which the entire truck was vertically used up to 96":

TESTID	ACCT	FTYPE	UNLOAD	EMPTY	REMAIN	WHEELED	PALLETS	SACKS	EXPRESS	OTHER	NWHEELED	NPALLETS	P1HEIGHT	P2HEIGHT	HSACKS	HEXPRESS	HOTHER	AVG_HT
06188KK	53127	BMC	100	0	0	0	0	0	0	100	0	0	0	0	0	0	96	96.00
77736UY	53127	BMC	100	0	0	0	0	100	0	0	0	0	0	0	100.00	0	0	100.00

There was one Inter-BMC TRACS test in which a portion of the truck was vertically used up to 96":

TESTID	ACCT	FTYPE	UNLOAD	EMPTY	REMAIN	WHEELED	PALLETS	SACKS	EXPRESS	OTHER	NWHEELED	NPALLETS	P1HEIGHT	P2HEIGHT	HSACKS	HEXPRESS	HOTHER	AVG_HT
08188HE	53131	BMC	90	10	0	30	0	10	0	50	9	0	0	0	55	0	97	84.00

Variable definitions:

TESTID	Test ID
ACCT	Account
FTYPE	Test Facility Type
UNLOAD	Percent of truck which was unloaded
EMPTY	Percent of truck which was already empty
REMAIN	Percent of truck which was not unloaded
WHEELED	Percent of truck which contained wheeled containers which were unloaded
PALLETS	Percent of truck which contained pallets which were unloaded
SACKS	Percent of truck which contained loose sacks which were unloaded
EXPRESS	Percent of truck which contained loose Express items which were unloaded
OTHER	Percent of truck which contained other loose items which were unloaded
NWHEELED	Number of wheeled containers unloaded
NPALLETS	Number of pallets unloaded
P1HEIGHT	Height of the first of up to two sampled pallets
P2HEIGHT	Height of the second of up to two sampled pallets
HSACKS	Height of the loose sacks
HEXPRESS	Height of the loose Express items
HOTHER	Height of the other loose items
AVG_HT	Average height, which is calculated as the weighted average of the above heights (the two pallet heights are first straight-averaged together; a standard height of 72" is used for wheeled containers), weighted by floorspace percentage for each itemgroup (Wheeled, Pallets, Express, Sacks, Other).

- * Note that a height of greater than 96" (e.g., 100, or 106) reflects a DCT's visual estimation of a height which was too high to actually reach with a tape measure. For the purposes of this identification of tests in which a portion of the truck or all of the truck was filled to the ceiling, these measurements are assumed to be indicative of a true height of 96". This is not a reason for concern as heights are not used in the expansion process except in the calculation of the cubic feet of pallets.

Tr. 7/3531 (American Business Press)

"I was wondering if it would be possible for the witness or for the Postal Service to provide some written substantiation of her estimate that in quarter 4 of 1995 the periodical density factors were updated, and if so, what factors were used?"

Response:

The density factor for PQs 1-3 was 17.543 lbs/cuft, from the Form 22 Density Study of PQ4, FY92. Updated density factors for periodicals were used in PQ4 of FY96 with the implementation of the new mail classifications into the data collection systems. The density used in PQ4 of FY96 was 18.262 lbs/cuft. A description of the study and methodology used can be found in Docket. No. MC95-1, LR-MCR-13. This study was conducted in PQ4 of FY94.

**Designated Interrogatory Responses
of
Ralph J. Moden (T04)**

RESPONSE OF POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF ABA, EEI, AND NAPM
REDIRECTED FROM WITNESS HATFIELD

9614

ABA&EEI&NAPM/USPS-T-25-10. Explain the function of and how each of the following operates:

- (a) MLOCR ISS, and
- (b) MPBCS OSS.

RESPONSE:

(a) The MLOCR-ISS is a modified MLOCR than can "lift" an image of a mailpiece's address. The address information is subsequently processed by the Remote Computer Reader (RCR) and/or a keyer at a Remote Encoding Center (REC) to determine the appropriate ZIP+4/Delivery Point Barcode. A flourescent ID tag is applied on the back of the mailpiece at the time of the image lift, so the mailpiece can be matched up with the information returned by the RCR or REC site.

(b) The MPBCS-OSS is a modified barcode sorter that can read the ID tag and can spray a barcode on a mailpiece that was initially processed across the MLOCR-ISS. Information that was returned by the RCR or a REC is matched to the flourescent ID tag on the back of the mailpiece and a barcode is applied to the mailpiece.

RESPONSE OF POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF ABA, EEI, AND NAPM
REDIRECTED FROM WITNESS HATFIELD

9615

ABA&EEI&NAPM/USPS-T-25-12. You state that "finest depth of sort can mean either a 5-digit, 9-digit, or 11-digit barcode." (Testimony at 12). Please explain the criteria used by the Postal Service to determine which depth of sort is to be employed.

RESPONSE:

See sections A800.2.0 and C840.1.4 of the DMM for the criteria used by the Postal Service to determine which depth of sort is to be employed.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA**

9616

NAA/USPS-T4-20. Please refer to your response to NAA/USPS-T4-5(f). You note that letters are not eligible for the automated Carrier Route rate for DCBS [sic] zones.

- a. Are letters eligible for the ECR high density letter rate for DCBS [sic] zones? Please explain why or why not.
- b. Are letters eligible for the ECR saturation high density letter rate for DCBS [sic] zones? Please explain why or why not.

Response:

a. - b. Yes, as long as they meet the preparation requirements for that rate category. The zone's processing category does not figure into the equation. Also, letters may also be eligible for the basic carrier route rate if they meet the preparation requirements for that rate category.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF UNITED PARCEL SERVICE

9617

UPS/USPS-T4-10. Please refer to the attachment to your response to interrogatory APMU/USPS-T33-13(b), redirected from witness Sharkey. The first page of that attachment states, "On April 7, I provided you with seven initial steps to improve Priority Mail performance." Are the seven initial steps set forth in writing? If so, please produce a copy of the document listing those steps.

Response:

I have been unable to locate a copy of the April 7 memo that is referenced.

**Designated Interrogatory Responses
of
Joe Alexandrovich (T05)**

DFC/USPS-T5-11. Please refer to your response to DFC/USPS-T5-5(c).

- a. If necessary, could the Postal Service, using a reasonable expenditure of time and resources, train IOCS data collectors to distinguish between stamped cards and other cards? Please answer to the best of your knowledge. If your answer is anything other than an unqualified yes, please explain your answer fully.
- b. Using a reasonable expenditure of time and resources, is the Postal Service unable to train IOCS data collectors to distinguish between stamped cards and other cards? Please answer to the best of your knowledge. If your answer is anything other than an unqualified no, please explain your answer fully.
- c. Please define "other agency cards."

Response to DFC/USPS-T5-1

- a-b. Setting aside, for the moment, what you would consider a "reasonable expenditure," it may be safe to assume that additional training designed to improve data collectors' ability to distinguish stamped cards from private postcards would result in fewer coding errors, but some errors may still occur. Moreover, my response to DFC/USPS-T5-5(c) also states that the Postal Service plan to make the treatment of postal cards consistent with that of stamped envelopes made the distinction between stamped and private cards irrelevant. Since eliminating this distinction made it unnecessary for a data collector to differentiate between stamped and private cards, any amount of money spent to improve their ability to do so might be considered unwarranted and unreasonable.

Response of United States Postal Service Witness Alexandrovich
to
Interrogatories of Douglas F. Carlson

9620

- c. "Other agency cards" refers to U.S. Government cards that bear a
"Postage and Fees Paid" indicia in the upper right corner of the address
side of the card.

Response of United States Postal Service Witness Alexandrovich
to
Interrogatories of Douglas F. Carlson

9621

DFC/USPS-T5-12. Please refer to your response to DFC/USPS-T5-5(d). Please confirm that no studies or other analyses have concluded that the reliability of the cost data for postal cards that you presented in Attachment 1 to Response to DFC/USPS-T5-2(b) has been affected in any significant way by the misidentification of stamped cards and other cards by IOCS data collectors. If you do not confirm, please explain fully and provide relevant documents. of any such changes.

Response to DFC/USPS-T5-12

Confirmed.

Response of United States Postal Service Witness Alexandrovich
to
Interrogatories of Douglas F. Carlson

9622

DFC/USPS-T5-13. *Please refer to your response to DFC/USPS-T5-9(b).*

- a. Please confirm that errors in properly coding stamped cards, private post cards, and other agency cards might have caused the attributable cost for stamped cards that you provided in Attachment 1 to Response to DFC/USPS-T5-2(b) to be overstated. If you do not confirm this possibility, please explain fully and provide copies of relevant documents or studies.
- b. Please confirm that errors in properly coding stamped cards, private post cards, and other agency cards might have caused the attributable cost for private post cards that you provided in Attachment 1 to Response to DFC/USPS-T5-2(b) to be understated. If you do not confirm this possibility, please explain fully and provide copies of relevant documents or studies.

Response to DFC/USPS-T5-13

- a-b. Coding errors could cause costs to be either overstated or understated.

There is also the possibility that coding errors could more or less cancel out, leaving costs relatively unaffected. Please note that if data collectors are identifying postal cards as belonging to the larger category of private postcards, then postal card costs could be understated.

Response of United States Postal Service Witness Alexandrovich
to
Interrogatories of Douglas F. Carlson

9623

DFC/USPS-T5-14. Please answer DFC/USPS-T5-9(c) using the definition of "public interest" that the Postal Service used when it determined, under 39 U.S.C. § 3622(a), that a stamped-card fee would be in the public interest.

Response to DFC/USPS-T5-14

I am still not sure what criteria you would use to define the public interest. I also am not sure that the Postal Service is required to make a determination that changes in data collection methods are in the public interest, or that the definition of "public interest" would be the same for purposes of determining whether to recommend a change in classification and for purposes of making a change in data collection methods. Nevertheless, it seems to me that if the Postal Service determined to change the data collection method for cards because of coding errors and to make the treatment of postal cards more consistent with stamped envelopes, this could be said to be in the public interest.

Response of United States Postal Service Witness Alexandrovich
to
Interrogatories of Douglas F. Carlson

9624

DFC/USPS-T5-15. Please refer to Attachment 1 to DFC/USPS-T5-15. This attachment depicts four cards, numbered one through four. Assume that these cards are consistent with the requirements of DMM § C100.2.1 and any other applicable regulations defining a First-Class Mail card. (Note that the image of each card has been reduced so that the four cards will fit on one sheet of paper.)

For each card, please state, to the best of your ability, whether the card is (i) a stamped card or (ii) a private post card. To the extent that you have doubt about the categorization of each card, please provide your best determination and specify the factors that prevent you from making a definitive determination or the additional information that you would need to make a definitive determination.

Response to DFC/USPS-T5-15

Please note that I have never been trained as a data collector. To the best of my ability, however, I would identify Cards #1, #3, and # 4 as private postcards and Card #2 as a stamped card.

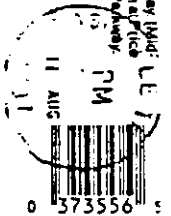
Revised 11/24/97

9625

#1

(Actual size: 4" x 6")

Nashville TN 372
8-11-97



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2511 South Main Street, Suite 200, Berkeley, CA 94702-7040

Doug Carlson
PO Box 12574

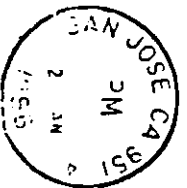
Berkeley CA 94712-3574



#2

(Actual size: 3 1/2" x 5 1/2")

Doug Carlson
PO Box 7868
Santa Cruz CA 95061

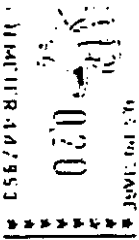


Attachment 1 to DFC/USPS-T5-15

#3

(Actual size: 4" x 6")

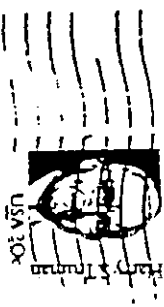
Douglas F. Carlson
PO Box 12574
Berkeley CA 94712-3574



#4

(Actual size: 4" x 6")

Douglas F. Carlson
PO Box 12574
Berkeley CA 94712-3574



DFC/USPS-T5-16.

a. Do you believe that stamped cards are less expensive to process than private post cards? (Note that this question does not ask you to agree that the cost differential is any particular number of cents; I am asking only for confirmation that the cost of processing stamped cards is lower than the cost of processing private post cards.) If your answer is anything other than an unqualified yes, please explain your answer fully, reconcile your answer with the data provided in Attachment 1 to Response to DFC/USPS-T5-2(b), and provide copies of all data, studies, and documents that support your position.

b. Please refer to your response to DFC/USPS-T5-13, where you stated, "Please note that if data collectors are identifying postal cards as belonging to the larger category of private postcards, then postal card costs could be understated." Please provide a complete explanation, using a numerical example if necessary, of why postal-card costs would be understated in the situation that you described.

c. Assume that the cost of processing stamped cards is lower than the cost of processing private post cards. If a stamped card, with its lower cost characteristics, were mistakenly identified as a private post card, please explain why assignment of the processing costs for this stamped card to the private-post-cards category would not cause the processing costs for *private post cards* to be understated.

Response to DFC/USPS-T5-16

- a. CRA unit mail processing costs for postal cards have historically been lower than those of private postcards, on average.
- b. The costs for postal cards would be understated in the circumstance described because it would reduce the cost pool associated with postal cards. Unit costs are developed by dividing total volume variable costs by volume. For example, IOCS tallies are used in the development of certain volume variable costs for a particular class, subclass, or special service—the numerator in the equation. Volume data from the Revenue, Pieces,

and Weight (RPW) report is used in the denominator to calculate unit volume variable costs. If an IOCS data collector mistakenly identifies a postal card as a private postcard, then the cost pool for postal cards will be reduced and the unit cost for postal cards will be understated.

Conversely, the cost pool for private postcards will be increased in this situation, thereby overstating the unit costs for private postcards.

- c. Your question indicates a misunderstanding of how unit costs are developed. As explained in subpart (b) above, unit costs are developed by dividing total volume variable costs by volume. Misidentifying a postal card as a private postcard reduces the costs associated with postal cards and increases the costs associated with private postcards. However, this IOCS coding error has absolutely no effect on the volume associated with either of these subclasses. RPW data, which are used to determine volumes, are collected independently of IOCS data. In the situation described in the question, an additional IOCS tally for private postcards would increase the costs associated with private postcards (numerator), while having no effect on the volume (denominator). As such, the unit costs of private postcards would increase.

Response of United States Postal Service Witness Alexandrovich to Presiding
Officer's Information Request No. 3, Question 17

17. In Docket No. R90-1, the Commission recommended a new treatment for Eagle network distribution keys. In Docket No. R94-1, witness Barker stated that the Eagle network keys shown in Worksheet 14.0.7, pages 1-4, reflected the Commission's R90-1 method. The adjustments were documented in Library Reference G-115, the TRACS Eagle Estimation Programs Overview. See Docket No. R94-1, Tr. 26E/14480-82.

In MC97-2, witness Patelunas confirmed that the Service used the Commission's methodology in the development of FY 1995 Eagle Network TRACS distribution keys shown in USPS-T-5, Workpaper B, Worksheet 14.0.3.

Do the Eagle network TRACS distribution keys shown in USPS-T-5, Workpaper 14.03, reflect the Docket No. R94-1 methodology? If yes, what adjustments were made in light of the change from cubic foot-miles to pound-miles as noted by witness Nieto, USPS-T-2, page 6.

RESPONSE

The Eagle network TRACS distribution keys shown in Workpaper 14.0.3 are used to distribute only nonpremium costs. The methodology used to distribute these nonpremium costs is consistent with the Commission's R94-1 distribution of nonpremium costs except for the fact that the TRACS network distribution keys in Workpaper 14.0.3 are based on pound-miles while the Commission's R94-1 keys use cubic-foot miles. The keys shown in Workpaper 14.0.3 do not include the Commission's R94-1 reallocation of premium cost to Priority and Express Mail, as premium costs are treated as incremental costs to the subclasses for which the networks exist as discussed in witness Takis' testimony.

Presiding Officer's Information Request No. 4

POIR No. 4:

8. Alaska Bypass Mail

a. Witness Mayes identifies the 1996 Intra-BMC Alaska Bypass volume (USPS-T-37, Workpaper 1.A, page 1) and revenues (USPS-T-37, Workpaper 1.D, page 7).

(1) Please provide the Bypass transportation costs which are included in the *Alaskan nonpriority air costs*.

(2) Please identify and provide any clerk and mailhandling costs for processing Bypass mail.

RESPONSE

(1) Total Parcel Post Bypass Transportation costs:

$$58.88\% * 82,495 = 48,573$$

(2) There are no clerk and mailhandling costs for processing Bypass mail.

Presiding Officer's Information Request No. 6

4. WS 7.0.4.2, line 75, "Summary - Accrued Costs, Load" is the sum of lines 50d, "Total Distributed Load Costs Minus Time at Stop," 33h, "Accrued Reg. Box Load," and 33i, "Load - EM Box." Please confirm that it should be the sum of lines 50d, 33h, and 33g, "Accrued EM Box Load."

Response

Not confirmed. The following explanation may reduce any confusion. Line 33h, "Accrued Reg Box Load," does not include fixed time at a stop, whereas line 33g, "Accrued EM Box Load" does include fixed time at a stop. Line 33i, "Load - EM Box" does not include fixed time at a stop. Line 75, "Summary - Accrued Costs, Load," is the sum of all accrued load cost elements minus time at a stop (which is part of access costs); therefore, line 75 correctly equals the total of 50d, 33h, and 33i.

OCA Oral Cross-Examination: Tr. 13/7176 refers to workpaper A-3, page 20.1. The questions are on pages 7176-7177. The first question is: what is "the source of those percentages and those volume variabilities" found in workpaper A-3, page 20.1? The second question is: "if one of those percentages were manually changed, or we wanted to change that, a percentage, would that change be made at this point, from this point on in your workpapers, or do you have to go back to an initial program?"

OCA Oral Cross-Examination Response:

1. Please refer to Attachment I that accompanies this response. Column (2) shows the footnotes on page 20.1 of workpaper A-3 that are the basis for the questions. Column (3) shows the source referenced in the footnotes. Column (4) shows the footnotes referenced in column (3) and the sources for column (4) appear in column (5). Likewise, column (6) shows the footnotes referenced in column (5) and the sources for column (6) appear in column (7). After walking through the series of footnotes, the source of all the percentages is USPS Library Reference H-24.
2. Any change to the volume variabilities that appear on page 20.1 of workpaper A-3 would be made in workpaper A-1, Manual Input Requirement. This is the initial step in the Postal Service's cost model; thus, all the subsequent workpapers would be impacted accordingly.

Component		WP A-3 20.1 Footnote	Source	WP A-3 Page Footnote	Source	WP A-1 Page Footnote	Source
(1)		(2)	(3)	(4)	(5)	(6)	(7)
CFS		1	A-3, pp 3-4, col 1	A-3, p. 4.1, ftnt 1	A-1, pp. 105-106, ftnt 6	A-1, p. 106.1, ftnt 6	L-REF-H-24
OCR	Pref	2	A-3, pp 5-6, col 1	A-3, p. 6.1, ftnt 1	A-1, pp. 107-108, ftnt 5	A-1, p. 108.1, ftnt 5	L-REF-H-24
	Non-pref			A-3, p. 6.1, ftnt 1	A-1, pp. 119-120, ftnt 1	A-1, p. 120.1, ftnt 1	L-REF-H-24
MPBCS		3	A-3, pp 5-6, col 2	A-3, p. 6.1, ftnt 2	A-1, pp. 107-108, ftnt 6	A-1, p. 108.1, ftnt 6	L-REF-H-24
CSBCS		4	A-3, pp 5-6, col 4	A-3, p. 6.1, ftnt 4	A-1, pp. 109-110, ftnt 2	A-1, p. 110.1, ftnt 2	L-REF-H-24
DBCS		5	A-3, pp 5-6, col 3	A-3, p. 6.1, ftnt 3	A-1, pp. 109-110, ftnt 1	A-1, p. 110.1, ftnt 1	L-REF-H-24
LSM		6	A-3, pp 5-6, col 5	A-3, p. 6.1, ftnt 5	A-1, pp. 109-110, ftnt 3	A-1, p. 110.1, ftnt 3	L-REF-H-24

**Designated Interrogatory Responses
of
George S. Tolley (T06)**

RESPONSE OF POSTAL SERVICE WITNESS TOLLEY
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

6. Please provide the formula used to calculate the following TYBR discounts:

<u>Mail Category</u>	<u>Before-Rates Discount</u>
Standard A Nonprofit	
Presort Nonletters	4.478295
Automation Basic Flats	2.107374
Automation 3/5-Digit Flats	6.919693

These discounts appear in USPS-T-7, "Direct Testimony of Thomas E. Thress," Table IV-1, page 221, and LR-H-295, "Diskette Relating to Revisions of Dr. Tolley, USPS-T-6," Spreadsheets SF_R97.WK4 and SF_R97AR.WK4, page PAF Params, Cells AW30, AY30, and BB30.

RESPONSE:

These discounts are calculated in the file, D3N_NL.WK4, which is contained in Library Reference LR-H-312, and is being filed with this response.

RESPONSE OF POSTAL SERVICE WITNESS TOLLEY
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

7. Refer to LR-H-172, "Derivation of After-Rates Fixed Weight Price Indices," Spreadsheet STASP96A.WK4, "Standard A Single Piece." Please confirm that the following changes should be made in FY 1996 Billing Determinants and fixed weight price indices (FWIs) for Standard A Single Piece mail:

- a. Cells SGL_PC:C16 and UNIFIED:C8, figure 0.343 should be changed to 0.686.
- b. Cells BULK:B17 and BULK:C17, figure 2.828 should be changed to 2.282.
- c. Cells BULK:C29 and UNIFIED:C9, figure 145.667 should be changed to 145.121.
- d. Cell UNIFIED:C11, figure 146.010 should be changed to 145.807.
- e. Cell UNIFIED:E2, figure 1.022448 should be changed to 0.978045 (1/1.022448).
- f. Cells UNIFIED:E172 through UNIFIED:E181, figure 0.976318 should be changed to 0.928992.
- g. Cells UNIFIED:E183 through UNIFIED:E193, figure 1.024883 should be changed to 0.975477.

RESPONSE:

(a) - (g). Confirmed.

RESPONSE OF POSTAL SERVICE WITNESS TOLLEY
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

8. Refer to LR-H-295, "Diskette Relating to Revisions of Dr. Tolley, USPS-T-6," Spreadsheet SF_R97AR.WK4. Please provide the source of the before-rates Standard A single piece FWI entry of "\$0.974030" in cell FWIs:AC8.

RESPONSE:

This figure is obtained from the file 3S96.WK4, in cells UNIFIED:E119 - E193. This file differs from the before-rates fixed-weight index spreadsheet as filed in LR-H-171 in that single-piece keys and IDs weighing two ounces or less are combined (as has been done historically) into a single row, rather than being separated into keys and IDs weighing less than one ounce and those weighing between one and two ounces, as is necessary in order to calculate the after-rates fixed-weight price index for Standard A single-piece mail. If the errors identified in questions 7.b & 7.e. of this P.O.I.R. are also corrected in the file 3S96.WK4, the before-rates fixed-weight index for Standard single-piece mail, as calculated in this file, will be equal to \$0.928992, as identified in question 7.f. of this P.O.I.R. In other words, the before-rates fixed-weight price index for Standard A single-piece mail calculated in the file 3S96.WK4 (if corrected) is exactly equal to the before-rates fixed-weight price index for Standard A single-piece mail as calculated in the file STASP96A.WK4 in LR-H-172 (if corrected).

The spreadsheet 3S96.WK4 is contained in Library Reference LR-H-312, filed with this response. In order to show the source of the \$0.974030 figure cited in this question, the errors identified in question 7 of this P.O.I.R. have not been corrected in this spreadsheet. As noted above, correcting these errors would result in the file 3S96.WK4 yielding the same before-rates fixed-weight price index as the file STASP96A.WK4 filed in LR-H-172.

QUESTION: Your revised volume forecast that we were discussing a moment ago that you submitted on October 9th did not, to the best of my understanding, account for Witness Mayes' revised revenue adjustment factors. And my question is, do you plan to revise your volume forecast for bound printed matter and parcel posts to account for Ms. Mayes' revised revenue adjustment factors?

RESPONSE:

Although the before- and after-rates values of the fixed weight indices do respond to changes in the revenue adjustment factors, the volume forecasts for all mail categories are independent of these revenue adjustment factors. Therefore, no revisions to the volume forecasts are necessary to account for Witness Mayes' revised revenue adjustment factors.

The rate effect multiplier is the component of the volume forecasting equation which contains the fixed weight indices. For each price included in the rate multiplier, there is a price ratio having the following form:

$$\text{Price Ratio} = \left(\frac{P_t}{P_0} \right)^e \quad (1)$$

where:

P_t is the deflated price in the projection quarter t
 P_0 is the deflated price in the base year, and
 e is the price elasticity.

The deflated price can be represented as follows:

$$P_t = \frac{ARP_t \cdot RAF}{PC_t} \quad (2)$$

where:

ARP_t is the calculated average revenue per piece in quarter t
 RAF is the revenue adjustment factor, and
 PC_t is the price deflator in quarter t .

The numerator of the deflated price term in equation 2 is simply the fixed weight index, which is obtained by taking the calculated average revenue per piece for each rate category and multiplying by the revenue adjustment factor.

If one were to change the revenue adjustment factor used in calculating the fixed weight index, it would change both the numerator and denominator of the price ratio shown in equation 1 by the same proportion. This implies that the price ratio, and as a consequence the rate multiplier and the volume forecast itself, remains unaffected by changes in the revenue adjustment factor.

**Designated Interrogatory Responses
of
Gerald L. Musgrave (T08)**

**RESPONSE OF POSTAL SERVICE WITNESS MUSGRAVE
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 5**

1. Please refer to the following table which presents witness Musgrave's volume forecasts for Priority Mail and the annual growth rates implied by those forecasts.

a. Explain why the forecast growth rate for Priority Mail drops from 13.08 percent in GFY 1997 to 6.72 percent in TYBR (GFY 1998).

b. Also explain the low Priority Mail growth rates of 3.31 percent and 3.71 percent forecasted for TYAR (GFY 1998) and GFY 1999 respectively.

Priority Mail Volume Forecasts and
Annual Growth Rates

Item	Volume (Thousands)	Percent Change
GFY 1996 (Base Year)	937,273 <u>1/</u>	
GFY 1997 (Before Rates)	1,059,882 <u>2/</u>	13.08%
GFY 1998 (TYBR)	1,131,156 <u>2/</u>	6.72%
GFY 1998 (TYAR)	1,094,946 <u>2/</u>	3.31%
GFY 1999 (After Rates)	1,135,563 <u>3/</u>	3.71%

1/ FY 1996 RPW

2/ USPS-T-8, Table 1 (Revised 8/18/97)

3/ LR-H-125, "Before Rates and After Rates Forecasts
for Priority Mail and Express Mail," page 9
(Revised 8/18/97)

RESPONSE:

1. While the forecasted growth in Priority Mail depends on the values of each of the individual Postal quarterly multipliers, combining the multipliers into annual values for Postal rates, UPS rates, Economic, and Demographic impacts can be used to answer the question. The answer is based on the multipliers presented in Library Reference H-125. The accompanying spreadsheet (Library Reference H-306) shows the detailed calculations. The calculations I cite, in this response, are color coded in the spreadsheet. Multipliers are based on Postal quarters and it should be remembered that the total annual effect is obtained by multiplying the multipliers together. Converting the impact of the multipliers from Postal Fiscal Years to Governmental Fiscal Years results in rounding and averaging differences in the range of 0.02 to 0.05 (0.0002 to 0.0005) percent. The

Base Year used to produce the forecasts in the testimony are Postal quarters 96:3 through 97:2 equaling 991.266 million pieces, (See USPS-T-8, Table 1, Revised 8/18/97) rather than the PFY 1996 equaling 937.273, presented above in the POIR.

1a. Government Fiscal Years 1996 to 1997 Before Rates Volume

From the Base Year used in the testimony to GFY 1997 before rates, lower real Postal rates (Priority Mail and Parcel Post) resulted in increased volume of 1.09 percent. Short-run and long-run economic conditions resulted in a 2.51 percent increase in volume with population adding an additional 0.70 percent. UPS price increases resulted in a 1.86 percent increase in volume. The net result is an increase of 6.95 percent in GFY 1997 volume over the actual Base Year period used to produce forecasts in the testimony. The difference in Base Year periods accounts for the difference between 13.08% and 6.95%.

GFY 1997 Before-Rates to GFY 1998 (TYBR) Volume

The volume growth in the before-rates environment is approximately the same at 6.74 percent. From GFY 1997 before rates to GFY 1998 before rates, lower real Postal rates (Priority Mail and Parcel Post) would result in an increase in volume of 1.77 percent. Short-run and long-run economic conditions would result in a 2.05 percent increase in volume with population adding an additional 0.82 percent. UPS price increases would result in a 1.59 percent increase in volume. The net result would be a 6.74 percent increase in 1998 volume over 1997, if Postal rates did not increase.

1b. GFY 1997 Before-Rates to 1998 After-Rates Volume

From GFY 1997 before-rates to GFY 1998 after-rates, higher real Postal rates (Priority Mail and Parcel Post) would result in a decrease in volume of 1.38 percent.

Short-run and long-run economic conditions would result in a 2.01 percent increase in volume with population adding an additional 0.78 percent. Combining the economic and demographic impacts would result in a 2.81 percent impact. UPS price increases would result in a 1.55 percent increase in volume. The net result would be a 3.3 percent increase in GFY 1998 after-rates volume over GFY 1997, if rates proposed by the Postal Service were adopted. The decrease in growth is primarily the result of the proposed Postal rate increases.

GFY 1998 After-Rates to 1999 After-Rates Volume

From GFY 1998 after-rates to GFY 1999 after-rates, lower real Postal Rates (Priority Mail and Parcel Post) would result in an increase in volume of 0.47 percent. The small net impact results from the lagged effect of the previous price increases. Short-run and long-run economic conditions would result in a 1.19 percent increase in volume with population adding an additional 0.94 percent. Combining the economic and demographic impacts would result in a 2.14 percent impact. UPS price increases would also result in a 1.08 percent increase in volume. The net result would be approximately the same growth, at a 3.72 percent increase in GFY 1999.

In summary, the growth of GFY 1997 over the Base Year Period is 6.95 percent and is approximately the same as the GFY 1998 before-rates over GFY 1997 growth of 6.74 percent. The difference from 13.08 %, results from using the Base Year Period in the testimony rather than GFY 1996, as listed in the POIR. The reduced volume growth in the after-rates environment at 3.3 percent for GFY 1998 and 3.7 percent in GFY 1999 is primarily due to the proposed increase in Postal rates.

**Designated Interrogatory Responses
of
William P. Tayman (T09)**

RESPONSE OF WITNESS TAYMAN TO INTERROGATORIES OF
THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T9-35. Please confirm that the Postal Service's FY 1997 fiscal year ended on September 30, 1997. If not confirmed, please list the date that the Service's fiscal year 1997 ended.

RESPONSE:

Confirmed.

RESPONSE OF WITNESS TAYMAN TO INTERROGATORIES OF
THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T9-36. Please provide total cost data (including all relevant reports or studies) for the Postal Service for fiscal year 1997.

RESPONSE:

The Postal Service's FY 1997 revenues, expenses, and net income have not yet been finalized. Accounting records are currently undergoing a year end audit. Following the completion of the audit, and approval of the audited financial statements by the Board of Governors at their December meeting, the Postal Service's accounting records will be provided to the Postal Rate Commission.

RESPONSE OF WITNESS TAYMAN TO INTERROGATORIES OF
THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T9-37. Please provide total revenue data (including all relevant reports or studies) for the Postal Service for fiscal year 1997.

RESPONSE:

See my response to DMA/USPS-T9-36.

RESPONSE OF WITNESS TAYMAN TO INTERROGATORIES OF
THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T9-38. Please provide total net income data (including all relevant reports or studies) for the Postal Service for fiscal year 1997.

RESPONSE:

See my response to DMA/USPS-T9-36.

RESPONSE OF WITNESS TAYMAN TO PRESIDING OFFICER
INFORMATION REQUEST NO. 5

15. Please provide all workpapers showing formulae and calculations for the cash flow forecasts for FY 1997, Test Year Before Rates, and the Test Year After Rates as shown in USPS Exhibit 9-F, revised 9/04/97. If the workpapers are on a spreadsheet or other computerized format, please provide the workpapers on a diskette or a CD-ROM.

RESPONSE:

The spreadsheets used to calculate the cash flows shown in USPS Exhibit 9-F, revised 9/4/97, are provided as Library Reference H-310.

**RESPONSE OF WITNESS TAYMAN TO PRESIDING OFFICER
INFORMATION REQUEST NO. 5**

16. Please provide all workpapers showing formulae and calculations for the estimates of investment income for FY 1997, Test Year Before Rates, and Test Year After Rates as shown in USPS Exhibit 9-G. The workpapers should show the derivation of the estimated average investment balance and how these estimates are tied to the estimates of the estimated cash flows. If the workpapers are on a spreadsheet or other computerized format, please provide the workpapers on a diskette or a CD-ROM.

RESPONSE:

The spreadsheets used to calculate the investment income shown in USPS Exhibit 9-G are provided as Library Reference H-310.

**Designated Interrogatory Responses
of
Carl G. Degen (T12)**

**Response of United States Postal Service Witness Degen
to Interrogatories of Time Warner, Inc.
(Redirected from the Postal Service)**

TW/USPS-5. In his response to TW/USPS-12-28e, witness Degen filed data sets tw28emod, tw28ebmc, and tw28enmd, which show the volume variable costs allocated to subclasses and special services based on counted mixed mail items, by item type and cost pool. One of the item types sometimes counted by the IOCS clerks was international sacks. At the MODS cost pool called INTL, presumably dealing with international mail, 29.8% of the volume variable costs allocated based on counting international sacks was allocated to the Periodicals subclasses. 40.7% was allocated to Express Mail, 3.6% to Priority, 13.6% to Registry and 11.1% to First Class. None was allocated to international mail. A number of other item types were also counted at the INTL cost pool, and international sacks were also counted at other cost pools. However, only at BMC's did any of these counts show international mail. At the BMC's, it appears that all mail counted in international sacks was identified as international mail, versus none in MODS offices.

- a. Please confirm that periodicals sent abroad are classified as international mail and not as part of the Periodicals subclass. If not confirmed, please explain.
- b. Do the Periodicals volumes shown in the billing determinants and used for domestic rate design purposes include any periodicals mailed to other countries? If yes, please explain.
- c. Is it likely that mail found in international sacks at the INTL cost pool is in fact international mail? If no, please explain.
- d. Does the Postal Service have any explanation for why mail counted in international sacks at BMC's was always classified as international mail, but never classified as international mail when the count occurred in MODS offices?
- e. Has any adjustment been applied, either by Degen or others using his results, to correct the apparent misclassification described above? If yes, please describe those corrections and provide references to the part(s) of the Postal Service's filing where such adjustments were made.

TW/USPS-5 Response.

The data cited in the question reflect a misclassification that affects the response to TW/USPS-T12-28 but not the Base Year 1996 inputs. The misclassification is not of the contents of counted sacks sampled in IOCS,

**Response of United States Postal Service Witness Degen
to Interrogatories of Time Warner, Inc.
(Redirected from the Postal Service)**

but rather of IOCS tallies for "counted" items versus other IOCS item tallies with direct activity codes. Records for counted item tallies may be identified by the presence of an alphabetic code in variable F9253B, which corresponds to question 24 responses. Prior to July 1, 1996, the valid range of values for F9253B was 'A'-'X'; for the rest of FY 1996, the valid range was 'A'-'N' (see the LR-H-23 hardcopy documentation). The latter range reflects a reduction in the number of question 24 mail categories, which was intended to mitigate potential mail identification problems related to reclassification (see my response to OCA/USPS-T12-39). When the tw28emod, tw28enmd, and tw28ebmc data sets were produced, counted item tallies were identified as tallies with F9253B values between 'A'-'N.' Tallies with F9253B values between 'O'-'X' were considered to be other (non-counted) direct item tallies, and were not represented in the data sets. In particular, F9253B values 'S'-'X' corresponded to International Mail categories in question 24 prior to July 1, 1996. The data sets understate the counted item costs for several item types. However, the understatement is most severe for international sacks, which would, naturally, be expected to contain primarily international mail. Additionally, in the tw28emod data set, costs for activity code 5461 (mixed International Mail) are classified as mixed-mail costs. Corrected data sets tw28emdr, tw28bmr, and tw28nmr will be filed in LR-H-296. Again, since the cost

**Response of United States Postal Service Witness Degen
to Interrogatories of Time Warner, Inc.
(Redirected from the Postal Service)**

distribution programs do not make use of F9253B data, the error is irrelevant to the mixed-mail distribution procedure.

- a. Confirmed.**
- b. My understanding is that the specified volumes are for domestic Periodicals.**
- c. Yes. Using data in tw28emdr, 85.6% of counted international sack costs are associated with IOCS records that have International Mail activity codes.**
- d. In the BMC data set, counted item tallies with activity code 5461 were classified as counted item tallies (with an International Mail activity code) rather than as mixed-mail tallies. Also see the explanation above.**
- e. Invariably, some sacks are used to transport mail other than the primary subclass(es) with which they are associated. Our finding that the international sacks in the MODS INTL cost pool are 85.6% International Mail does not indicate a mail identification problem. No adjustment has been made.**

**Response of United States Postal Service Witness Degen
to Interrogatories of Time Warner, Inc.**

TW/USPS-T12-41. Please refer to your answer to MPA/USPS-T12-8d. Your response included the filing of a spreadsheet, included in LR-H-277, which disaggregates, by activity code, the costs that were classified as Window Service and Administrative Support costs in FY1996, but were classified as Mail Processing costs in BY1996, using your new Segment 3 costing method.

- a. Please provide, in a format similar to that used in your response to MPA/USPS-T12-8d, by activity code, the costs (if any) that were classified as Mail Processing costs in costs if FY96, but were reclassified as (1) Window Service costs and (2) Administrative and Support costs in BY96. As in your response to MPA/USPS-T12-8d, please separate costs corresponding to direct, mixed item, mixed container and not handling costs.**
- b. Please provide, in a format similar to that requested above, by activity code, the costs (if any) that were classified as Window Service costs for FY96, but were reclassified as Administrative and Support costs in BY96.**
- c. Please provide, in a format similar to that requested above, by activity code, the costs (if any) that were classified as Administrative and Support costs in FY96, but were classified as Window Service costs in BY96.**

TW/USPS-T12-41 Response.

- a. The requested data will be filed in LR-H-296 as spreadsheet TW-41a.xls.**

Please note that I have provided IOCS tally costs rather than volume variable costs (in the sense of my response to TW/USPS-T12-24 part a).

- b. The requested data will be filed in LR-H-296 as spreadsheet TW-41b.xls.**

As in part (a), the spreadsheet presents IOCS tally costs.

- c. The requested data will be filed in LR-H-296 as spreadsheet TW-41c.xls.**

As in part (a), the spreadsheet presents IOCS tally costs.

20. Refer to LR H-146, pages IV-8 through IV-19. Please explain why IOCS tallies for operations unrelated to the MODS cost pool titles are included in the pools. For example, why are 44,877 in OCR costs found in the mods 11 bcs cost pool?

20. Response.

I believe that the question refers to pages VI-8 through VI-19 of LR-H-146, the crosswalk of CRA space categories to MODS-based cost pools.

The simple explanation is that the IOCS-based CRA space categories are based on the sampled employee's observed activity, while the MODS-based cost pool assignment is based on the employee's clocked-in MODS operation number. The data on pages VI-8 to VI-19 show that in cases where there are IOCS space categories that correspond to the cost pool title, the space category and MODS cost pool are consistent the vast majority of the time. However, the sampled employee's activity does not always correspond to the clocked-in MODS operation. Please see pages 6-7 of my direct testimony, USPS-T-12, and Tr. 12/6154 and Tr. 12/6273 for additional discussion. Apparent discrepancies between the space category and MODS cost pool titles can be the result of several phenomena:

1. There is not a one-to-one correspondence between IOCS space categories and the MODS cost pools. In particular, the "distribution" space categories (OCR, sorting to letter case, etc.) are defined such that

they encompass both distribution and allied labor. Employees assigned to allied and support operations will often be observed working in the vicinity of the direct operations that they support. For instance, if the data collector observes an employee performing an allied labor activity, the type of allied labor being performed is recorded in question 18d, part 2, and the type of distribution operation is recorded in question 19. The employee may be legitimately clocked into an allied labor (LDC 17) MODS operation, but the logic of program PIGGYF96 (LR-H-146) assigns the tallies to the space category using only the question 19 response, i.e., to the type of distribution operation being supported. This may create the erroneous impression that the employee working an allied labor MODS operation is performing distribution work.

2. The employee may be temporarily engaged in an activity that is different from the clocked-in operation. For such "incidental" activities, it may be inefficient for the employee to reclock. In this case, I might expect employees to be observed working operations which are physically adjacent to their assigned operation, or which are under the same supervisor. So, for instance, an employee assigned to a BCS operation might temporarily monitor an adjacent OCR as needed or directed. OCR and BCS are the only operations where this appears to be happening on a widespread basis; the effect on the cost distributions is mitigated by

the similarity of the operations—i.e., both are letter automation operations.

3. The employee may have switched operations for a more extended period of time but not reclocked.
4. A few MODS operations simply do not have corresponding IOCS-based space categories. For instance, there is not an "accountables cage" space category to correspond to the Registry cost pool.
5. The clocked-in MODS operation number may be inaccurately recorded on the tally. Since entering the question 18 and 19 data involves hundreds of thousands of keystrokes, some errors are inevitable. Suppose that the data collector keys the MODS operation number into the CODES IOCS software incorrectly 0.1% of the time. One would then expect there to be about 167 errors in the MODS mail processing tallies (0.1% of 167,036). Note that there are only 1,287 cells in the MODS portion of the crosswalk matrix (39 MODS cost pools by 33 non-BMC space categories). Thus, the error rate would only have to be 0.77% ($1,287/167,036$) for there to be one tally with an erroneous MODS operation number for every cell in the matrix. Some errors in entering the MODS operation number will be innocuous. If the data collector mistakenly enters operation 211 instead of 210, the tally will still be assigned to the "1Platform" cost pool. However, transposing digits of

the MODS operation number is likely to result in the assignment of a valid MODS number in a different cost pool, since there are hundreds of valid three-digit codes. While attention has focused on the entry of the MODS operation number, it also may be the case that the employee's observed activity was recorded incorrectly in questions 18 and 19. I would expect the actual error rates to be small. The effect of these types of errors, combined with a low error rate, would be to assign small amounts of cost to many space category/cost pool combinations "at random."

6. The RBCS keying operation is not sampled in IOCS. RBCS keying costs account for approximately 98% of LDC 15. Thus, the distribution of LDC 15 costs to IOCS space category should be disregarded.

Examining the data at pages VI-8 to VI-19 of LR-H-146, I conclude that the space categories and cost pool titles are generally consistent in the letter and flat distribution operations where the closest correspondences would be expected to be found. Excluding the overhead-related space categories (6521-6523, plus "00 Not Used" and "999999"), I observe that the "worst case" MODS distribution operation, OCR, has 76.7% of its costs assigned to the OCR space category, and 95.5% of its costs are assigned to letter automation (OCR plus BCS) space categories. The other letter and flat

distribution cost pools are significantly more homogeneous, with 87.4% (BCS) to 95.8% (LSM) of the costs assigned to the corresponding space category. For the purpose of cost distribution, where homogeneous cost pools are desirable, the MODS-based cost pools are greatly superior to previous cost pools based on the IOCS CAG stratum and basic function, used in the LIOCATT process. The MODS-based cost pools also avoid tally cost weighting problems that would arise with a purely IOCS-based approach to operational cost pools (please see my responses to DMA/USPS-T12-13 and DMA/USPS-T12-18 for further discussion).

Written Response of United States Postal Service Witness Degen
to Oral Questions of Alliance of Nonprofit Mailers

Q. Suppose that this tally involves nonprofit Standard A mail. In this case it's a single piece of flat-shaped mail, and the piece is recorded as weighing six pounds and six ounces... Do you have any idea of how the F-45 handbook would call for the disposition of such a tally? (Tr. 12/6637 lines 14-17; 21-22.)

A. The F-45 handbook (LR-H-49) contains no specific instructions for the disposition of such a tally. Mail class is recorded in question 23b. The question 23b instructions indicate that the Third-Class/Standard Mail (A) categories apply to mailpieces weighing less than 16 ounces. Weight is recorded in question 23g. The instructions to question 23g (LR-H-49, p. 131) are simply to record the weight in pounds and ounces, rounded to the nearest ounce, for mailpieces weighing more than 4 ounces. It cannot be determined from the hypothetical whether the mail class was misidentified or the weight was incorrectly entered.

Written Response of United States Postal Service Witness Degen
to Oral Questions of Alliance of Nonprofit Mailers

Q. Would you accept, subject to check, that the rate schedule for Standard A letters doesn't go beyond 3.3 ounces? (Tr. 12/6642 lines 4-6.)

A. Upon checking the Standard Mail (A) rate schedules, my understanding is that eligibility for Standard Mail (A) letter rates is limited to letter-size mailpieces weighing less than 3.3 ounces. Heavier Standard Mail (A) mailpieces could still be considered letters under DMM C050, and for the purposes of shape identification in IOCS, but would not be eligible for the letter-size rates.

Written Response of United States Postal Service Witness Degen
to Oral Questions of Alliance of Nonprofit Mailers

Q. Now, when IOCS clerks distinguish between letters and non-letters, do they consider only the outside dimensions of the piece, or do they also consider the weight of the piece? (Tr. 12/6642 lines 8-11.)

A. Shape data are collected in IOCS question 22. The instructions to question 22 (please see LR-H-49, pages 92-93, and Appendix A) indicate that the data collector should consider the outside dimensions of the piece, but not the weight of the piece, in determining whether the piece is letter-sized. This approach is consistent with the definition of the letter-size mail processing category in DMM C050.

Written Response of United States Postal Service Witness Degen
to Oral Questions of Alliance of Nonprofit Mailers

Q. Suppose at the... moment of data collection the Postal Service employee is handling a bundle... of mail. Is the... tally supposed to reflect the weight of the entire bundle or the weight of a single piece in the bundle. (Tr. 12/6643, lines 21-25.)

A. The tally is supposed to reflect the weight of the mailpiece selected (per the Top Piece Rule) for the question 22 and 23 responses. More generally, weight will only be recorded for an item tally if the tally contains identical mail or is subject to the Top Piece rule, in which cases the employee again selects a single piece upon which the question 22 and 23 responses are based. No weight will be recorded in other cases, i.e., mixed-mail item tallies subject to counting in question 24 and "uncounted" item tallies.

Written Response of United States Postal Service Witness Degen
to Oral Questions of Alliance of Nonprofit Mailers

Q. Suppose that... at the point of data collection the employee is working on a container that... contains a number of items... What would the tally-taker record, the weight of the container, the weight of an individual item, or the weight of a representative piece? (Tr. 12/6644 lines 4-6; 9-11.)

A. If the contents of the container are identical mail, then the weight of the representative piece selected for the question 22 and 23 responses is recorded. Otherwise, no weight is recorded for the container.

**Written Response of United States Postal Service Witness Degen
to Oral Question of Dow Jones & Company, Inc.**

Q. Is it a fact that under the new methodology you assumed that loose letters and flats in containers have the same subclass composition as all individually-handled letters and flats at each MODS cost pool. (Tr. 12/6660, lines 2-5.)

A. No. Loose letters in containers and loose flats in containers are separate mixed-mail categories under the new methodology. Correct statements would be as follows. Loose letters in containers are assumed to have the same subclass composition as all individually handled letters in the same MODS cost pool. Loose flats in containers are assumed to have the same subclass composition as all individually handled flats in the same MODS cost pools. Please see Docket No. R97-1, Tr. 12/6173, for a general summary of mixed-mail distribution rules under the new methodology.

Q. Do you know how many times and at what times Headquarters may have approved changes in conversion factors, and what percentages of mail... may have been impacted by this establishment of... local conversion factors? (Tr. 18/8268 lines 4-8)

A. To the extent that the transcript (at Tr. 18/8267-8269) might have left the impression that there is some—although “very limited”—authorization of local conversion factors including those applied to Scale Weight System (SWS) transactions, my current understanding is somewhat different. I have been informed that Headquarters has not approved any changes in SWS conversion factors that convert weight to pieces. The use of national conversion factors for SWS has been the policy of the USPS over time. My understanding is that the SWS conversion factors are hard-coded into the system, so they cannot be overwritten by local units. Note that the section on MODS data in the Inspection Service workload audit makes no mention of sites using locally developed SWS conversion factors. Rather than my recollection of very limited local deviations from SWS conversion factors, there have actually been none.

With respect to conversion factors based on inputs other than weight, I am aware of one situation in which sites may be authorized to use locally developed conversion factors. Recall that parcel FHP volumes are determined by conversions from containers to pieces or by direct piece counts. Sites are allowed to develop local container to piece conversion

Written Response of United States Postal Service Witness Degen
to Oral Questions of the Presiding Officer

factors for manually processed Priority mail, for which mixed shapes are commonly included in the same container. For example, a site processing mostly parcel-shaped Priority mail because of a local originator of parcel shipments such as a catalog retailer would have a different count of pieces per container than a site processing Priority mail for an area with many small non-manufacturing businesses, where there would be a higher concentration of flat-shaped Priority. In such cases, use of locally developed pieces per container conversion factors would improve the accuracy of Priority FHP volumes. If a site develops its own pieces per container factor for manually processed Priority FHP, it must have on hand documentation as to how that conversion factor was developed, in case of an audit. Machine counts are used at all sites processing Priority mail of mixed shapes on mechanized equipment (e.g., Small Parcel and Bundle Sorters). I am not aware of the extent to which this type of local conversion factor is used in the field; such information would have to be obtained from the field units themselves. I believe this is consistent with my earlier statement that the use of local conversion factors is very limited.

Q. Can you give me a sense of what the range is and the standard deviations are of the changes that result in these average percentage revisions [reported in response to DMA/USPS-T12-9, Tr. 12/6160-6161]? (Tr. 18/8337 lines 14-16)

A. The requested statistics are reported in the table below. Please note that the maximum and minimum percentage changes appear to be outliers, as they are 8.9 and 10 standard deviations away from the mean.

Summary statistics related to response to DMA/USPS-T12-9.

Statistic	Value
Mean	-0.09%
Median	0%
Standard Deviation	1.30%
Maximum	11.48%
Minimum	-13.11%
N	335

Q. Could you please provide some specific examples of the activities that compose these \$17 million in IOCS administrative costs that are performed while clocked into BCS operations [and migrated costs for other operations]? (Tr. 18/8354 lines 13-16)

A. I provided a breakdown by cost pool and IOCS activity code of the migrated costs in spreadsheet DMA-12.xls, USPS-LR-H-296. This spreadsheet indicates the IOCS activities actually observed of employees who were recorded as clocked into MODS mail processing operations. Four activity codes account for the vast majority of costs migrating from the administrative component to mail processing. These are 6521 (breaks/personal needs), 6522 (clocking in/out), 6523 (empty equipment), and 6630 (general administrative). In the old methodology, the 6522 costs were redistributed among components in the worksheets, and 6523 costs were reassigned to mail processing. Most of the activity code 6630 costs are in catch-all categories: "General Administrative Activities" in IOCS question 18G, and "None of the above" in the selections for question 18G "Other." See USPS-LR-H-49, pages 76-77 and 80. The next largest categories for activity code 6630 are the "union business" and "talking to supervisor" categories in question 18G. The 6521 tallies have MODS mail processing operation numbers, but the data collector did not indicate in question 18G that the employee was on break from mail processing.

**Designated Interrogatory Responses
of
Michael D. Bradley (T14)**

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #7

1. In his oral testimony, in response to questions from the bench, witness Bradley stated that he would like to examine "each of the individual mail processing sites to see how volume and hours are related, once other factors are controlled for." Tr. 11/5582. Witness Bradley indicated that he had not done so. Tr. 11/5584.

- a. For the cost pools listed in Table 7 of USPS-T-14, please provide the facility-level variabilities that would be obtained with the model given on page 36 of USPS-T-14. Specifically, estimate this model, including the serial correlation correction, for each facility separately, using only the time series data on that facility. This will yield a unique variability estimate for each facility from the time series variation of the dependent variables and regressors. Please report these results in a table containing the facility specific variability, its standard deviation, and the sample average over time of $\ln(TPH_{it})$ for that facility.
- b. Please note the range of facility specific variabilities obtained in "a." for each cost pool and discuss whether it supports the assumption that a single cost pool variability can be validly estimated for the MODS facilities as a whole.
- c. Please test the hypothesis that, for each cost pool, all of the facility-level variabilities obtained in "a." are equal versus the unrestricted alternative that the true facility-level variabilities "are statistically significantly different from one another." Tr. 11/5586 at lines 11-12.
- d. Please discuss whether the results obtained from "c" support the assumption that a single cost pool variability can be validly estimated for the MODS facilities as a whole.

1. Response:

- a. This question requests site-specific variabilities and describes one procedure for generating them, a procedure which implies a daunting task. Specifically, the suggested procedure requires the estimation and interpretation of 2,369 regressions, each corrected for serial correlation. While the estimation of the regressions can be done by a computer, the review and interpretation of them

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to
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cannot. The proposed procedure envisions reviewing each estimated equation for statistical reliability, obtaining the estimated variability from each equation, calculating its standard deviation, collecting all such variabilities in a table, and combining this information with the mean $\ln(\text{TPH})$ for the relevant site. If this procedure takes only 5 minutes per regression, it would require no less than 11,845 minutes, which is approximately 197 hours or 24.67 workdays. If this procedure ended up taking 10 minutes per regression, the time requirement would double to nearly 50 workdays.¹

Despite the magnitude of the task involved, I began the procedure with the Bar Code Sorting (BCS) cost pool. Recall that the estimated variability for this activity from Table 7 of my testimony is 94.5%, and that the TPH for this activity are generated by machine counts. I then began the procedure of estimating the 287 individual regressions as specified in the question. Attachment 1 to this response shows the econometric output for the first 8 of the regressions, which I reviewed. Examination of that attachment shows immediately that the proposed procedure for estimating site-specific variabilities will not work, because of multicollinearity in the

¹ A review of ten minutes per regression equation seems quite brief. Econometric equations that are presented before the Commission are typically reviewed for hours, not minutes.

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data at the site level. In the case of the first site, IDNUM 9810, there is not a single statistically significant estimated coefficient, despite the fact that the R^2 is over 94%. In addition, the estimated coefficient on TPH has an implausible negative coefficient. As described by Greene, these are the classic symptoms of multicollinearity:

9.2.3. The Symptoms of Multicollinearity

When the regressors are highly correlated, we often observe the following problems:

1. Small changes in the data can produce wide swings in the parameter estimates.
2. Coefficients may have very high standard errors and low significance levels in spite of the fact that they are jointly highly significant and the R^2 in the regression is quite high.
3. Coefficients will have the wrong sign or implausible magnitude.²

This last characteristic of multicollinearity is particularly noteworthy because it means that use of site-specific data to generate site-specific variabilities will lead to variabilities of the wrong sign or implausible magnitude. For example,

² See William H. Greene, Econometric Analysis, Macmillan, New York, 1993 at 267.

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to
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multicollinearity would explain the site-specific variabilities for the manual letter and flat activities with the wrong signs and implausible magnitudes cited by the Presiding Officer in his questioning of me. Tr. 11/5584.³ Finally, the procedure proposed in this question for calculating site-specific variabilities does not work, even if mechanically applied, because the estimated coefficients for TPH are unreliable.⁴

Remember that multicollinearity is a data problem, not a specification problem. It is not caused by any infirmities in the model or the panel data, *per se*, but rather by the severe reduction in data set size when one goes from the large panel data set to the quite small site-specific data sets. In particular, it has been noted in the econometrics literature that a single time series of data may not have sufficient variation to estimate flexible functional forms like the translog. The prescribed remedy for this problem — indeed, the remedy I employ in USPS-T-14 — is to employ panel data. A panel data set:

³ The sources or methods of calculation of the variability numbers used by the Presiding Officer were not discussed.

⁴ Please note that the sum of the TPH and lagged TPH coefficients from these equations is not the estimated variability. Because these are site-specific equations, they are not globally mean centered and the variability would have to be calculated by inserting the site-specific means for hours and TPH.

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[G]ives the researcher a large number of data points, increasing the degrees of freedom and reducing the collinearity among explanatory variables — hence improving the efficiency of econometric estimates. (Emphasis added)⁵

Fortunately, despite the intractability of the proposed approach, there is a method available for calculating the site-specific variabilities requested by the Presiding Officer. A feature of my analysis in USPS-T-14 is that the variabilities are not constrained to be equal for all sites. The translog function form cannot provide a second order approximation to a general cost function while restricting, *a priori*, the site-specific variabilities to be equal.

Moreover, one should understand that in estimating the cost equations with mean-centered data and presenting a single variability estimate for each cost pool, one does not impose any such constraint. Mean-centering the data simply implements the widely adopted procedure for calculating the system variability, which is equivalent to the variability formula being evaluated at the sample means of the right-hand-side variables. However, the model given on page 36 of USPS-T-14 can be used to estimate site-specific variabilities as follows: A non-mean centered version of the equation is used to evaluate the elasticity formula given by:

⁵ See, Cheng Hsiao, Analysis of Panel Data, Cambridge University Press, Cambridge, 1986, at 1-2.

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$\partial \ln(HRS) / \partial \ln(TPH)$. In the case of the model given on page 36, the explicit form of this formula is:

$$\begin{aligned} \hat{\varepsilon}_i = & (\hat{\delta}_1 + \hat{\delta}_2) + (\hat{\delta}_3 + \hat{\delta}_4) \ln \bar{TPH}_i \\ & + \hat{\delta}_{11} \ln \bar{MANR}_i + \hat{\delta}_{12} \bar{TIME1}_i + \hat{\delta}_{13} \bar{TIME2}_i \end{aligned}$$

The 2,369 site-specific variabilities, along with their standard errors and associated mean $\ln(TPH)$ are presented in Attachment 2. Please keep in mind that the fact that one can produce them does imply that these site-specific variabilities are important or even meaningful, because the variability analysis applies to the aggregate cost pool. One can, of course, find the average of the site-specific variabilities and the averages are presented in Attachment 3. Even though this averaging of the site-specific variabilities produces results quite close to those presented in USPS-T-14, and thus serves as a verification of those results, I do not recommend it. In fact, I agree with the Commission that such a disaggregated approach is fraught with difficulty and should not be used:

When an econometric analyst estimates functional forms which provide variabilities as functions of output, like the quadratic, Higinbotham, and translog models, he is faced with the decision of selecting a level of output at which the variability will be evaluated. For his model, witness Higinbotham computed the "overall variability" as a cost-weighted average

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to
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of the variabilities estimated at all sample values of output. Witness Lion, on the other hand, computed the variabilities for the five models at the sample mean value of output. We accept Witness Lion's method for several reasons. In the first place, the sample mean is an estimate of the population mean and reflects the central tendency of data. Its significance can be measured statistically. Additionally, under normal conditions, cost functions behave better around the mean values.

Moreover, it is standard practice in econometric cost studies of transportation industries to report elasticities at the sample mean, particularly when the translog cost function is used.

However, witness Higinbotham's weighted average variability has no such antecedent in the econometric literature. Finally, deviating from the standard practice by moving to a weighting scheme introduces ambiguity as to the final result. For example, witness Higinbotham has weighted variabilities by the cost of each contract, although other reasonable weighting schemes could also be chosen which would yield a different result. Thus, choosing a weighted variability in lieu of the standard sample mean introduces an arbitrary element, which one could manipulate according to the desired result.⁶

- b. The ranges of the site-specific variabilities are provided in Attachment 3. It is obvious that the calculated site-specific variabilities are not identical, but to interpret this finding, one must keep in mind that the fact that site-specific variabilities are not identical does not bear on the appropriateness of specifying a single variability for each MODS cost pool. Recall that the aim of the analysis is to estimate the system

⁶ See, PRC Op., R87-1, App. J, CS XIV, at 26-27

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response to small sustained changes in the volume of mail. Thus, a single variability is ultimately required. Nevertheless, a review of the site-specific variabilities validates the estimated equations presented in USPS-T-14, in that the range of site-specific variabilities is quite small relative to the variation in the sizes of activities. For example, there is tremendous variation in the sizes (as measured by TPH) of the manual letter activities. The smallest averages 652 thousand TPH per accounting period and the largest averages 52.633 million TPH per accounting period. This means that the largest site is 8,000 percent larger than the smallest site. Nevertheless, the range in the site-specific variabilities is a few percentage points. Attachment 4 presents the frequency distribution for the site-specific variabilities for the manual letter activity. This shows that the site-specific variabilities are closely clustered around 80%.

If the econometric results were fragile, one would expect to find many sites with economically meaningless variabilities, such as negative variabilities or variabilities greatly in excess of 100 percent. Of the 2,369 site-specific variabilities, only one is negative and none exceed 116 percent. This indicates that the econometric equations are very robust. In addition, the site-specific variabilities strongly reject the old assumption that the volume variability of mail processing labor is 100 percent. Of the 2,369 site-specific variabilities, only 11 of them are 100 percent or

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greater. Moreover, the variabilities of 100 percent or more are in only two activities and there are no variabilities of 100 percent or more for the manual letter, manual flat, OCR, LSM, BCS, FSM or SPBS activities.

Finally it is important to recognize that the use of single variability for a cost pool does not require the assumption that the evaluated variability at each site is the same. One does not have to assume that the variabilities are identical across sites as the old 100 percent methodology implicitly did. Rather, one can directly estimate the system response to a small sustained increase or decrease in volume. For the four important reasons given at Tr. 11/5494-5496, the best way to calculate the system response is with a single fixed effects equation.

- c. The transcript cite does not relate to assumptions about equality of variabilities. Rather, it relates to hypothesis tests on specific estimated coefficients.:

One could use the Chow test to estimate whether or not individual betas estimated for facilities are significantly different from one another. Tr. 11/5586.

The "betas" referred to in the quotation are estimated parameters, not variabilities. As shown in my answer to part a, the individual site-specific betas cannot be reliably estimated, so that in this particular case, the Chow-type test is not relevant.

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Nevertheless, the results provided in parts a. and b. above indicate that the calculated site-specific variabilities are not identical.

- d. The results support two things. First, they show that the single, system-wide variabilities presented in USPS-T-14 are accurate and appropriate for calculating volume variable costs for each of the MODS cost pools. It is thus appropriate to have a single system variability for each MODS cost pool. Second, the results show that at both the system level and the site level, variabilities are less than 100 percent and are different across MODS cost pools. The results thus show that it is not appropriate to assume a single facility-wide variability of 100 percent across MODS cost pools.

BCS
OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9810

Dependent Variable = KRS

Ordinary Least Squares Estimates

SSE	0.393086	DfE	48
MSE	0.008189	Root MSE	0.090495
SBC	-63.1597	AIC	-128.42
Reg Rsq	0.9433	Total Reg	0.9433
Durbin-Watson	1.9693		

Variable	Df	B Value	Std Error	t Ratio	Approx Prob
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Intercept	1	40.4909726	37.741	1.073	0.2887
TPH	1	-6.5724156	7.358	-0.893	0.3762
TPH2	1	0.3471515	0.403	0.862	0.3929
MANR	1	4.5197177	3.683	1.227	0.2258
MANR2	1	0.3039696	0.248	1.224	0.2271
MANRTPH	1	-0.3635325	0.389	-0.934	0.3548
TIM1TPH	1	0.0075584174	0.007954	0.950	0.3467
TIM1MANR	1	0.0051470797	0.007619	0.676	0.5026
TIME1	1	-0.0602675	0.082	-0.734	0.4667
TIME12	1	-2.231733E-6	0.00124	-0.018	0.9857
TIM2TPH	1	-0.001301515	0.016	-0.084	0.9338
TIM2MANR	1	0.0108146	0.00742	1.457	0.1515
TIME2	1	0.0291528	0.138	0.211	0.8339
TIME22	1	0.0001670871	1.056	0.049	0.2961
AP02	1	0.003105254	0.064	0.049	0.9615
AP03	1	0.0166350	0.062	0.267	0.7909
AP04	1	0.0888913	0.067	1.334	0.1887
AP05	1	-0.0567243	0.057	-0.988	0.3282
AP06	1	-0.00498033	0.066	-0.076	0.9399
AP07	1	-0.0506790	0.059	-0.864	0.3916
AP08	1	-0.0357874	0.062	-0.577	0.5669
AP09	1	-0.0164458	0.063	-0.263	0.7937
AP10	1	0.0071099329	0.065	0.110	0.9131
AP11	1	-0.0122527	0.063	-0.196	0.8455
AP12	1	-0.0399308	0.061	-0.653	0.5171
AP13	1	0.0119549	0.064	0.188	0.8518
TPH1	1	-0.2684220	3.291	-0.082	0.9353
TPH21	1	0.0141431	0.177	0.080	0.9367

Estimates of Autocorrelations

Lag Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1

0 1.000000 0.000523
1.005172 703E-6 0.000523

Attachment to 'Jense to POIR # 7-1 Page 1 of 17'

1
 BLS
 OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9810

Preliminary MSE = 0.005172

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.00052265	0.14586497	-0.003583

Yule-Walker Estimates

SSE	DFE	Root MSE	AIC	Reg Rsq	Durbin-Watson
0.393086	47	0.091452	-126.42	0.9432	1.9699

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	40.4479132	38.140	1.061	0.2943
TPH	1	-6.5630553	7.435	-0.883	0.3819
TPH2	1	0.3466629	0.407	0.852	0.3985
MANR	1	4.5199125	3.722	1.214	0.2307
MANR2	1	0.3038884	0.251	1.211	0.2321
MANR1TPH	1	-0.3635783	0.393	-0.925	0.3599
TIM1TPH	1	0.007549576	0.008038	0.939	0.3524
TIM1MANR	1	0.0051471651	0.0077	0.668	0.5071
TIME1	1	-0.0601756	0.083	-0.725	0.4721
TIME12	1	-2.368027E-6	0.000125	-0.019	0.9850
TIM2TPH	1	-0.001304223	0.016	-0.083	0.9343
TIM2MANR	1	0.0108155	0.0075	1.442	0.1559
TIME2	1	0.0291741	0.140	0.209	0.8355
TIME22	1	0.0001672281	0.00016	1.046	0.3009
AP02	1	0.0030769595	0.065	0.048	0.9622
AP03	1	0.0166228	0.063	0.264	0.7932
AP04	1	-0.0567133	0.058	-0.977	0.3334
AP05	1	-0.005009455	0.066	-0.075	0.9402
AP06	1	-0.0507021	0.059	-0.856	0.3965
AP07	1	-0.0358179	0.063	-0.571	0.5707
AP08	1	-0.0164633	0.063	-0.260	0.7956
AP10	1	0.0071032388	0.065	0.108	0.9141
AP11	1	-0.0122385	0.063	-0.194	0.8473
AP12	1	-0.0399400	0.062	-0.646	0.5215
AP13	1	0.0119407	0.064	0.186	0.8535
TPH1	1	-0.2689451	3.326	-0.081	0.9359
TPH21	1	0.0141773	0.179	0.079	0.9372

BCS
OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9865

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE	0.967052	DFE	48
MSE	0.020147	Root MSE	0.14194
SBC	5.257245	AIC	-60.0033
Reg Rsq	0.8749	Total Rsq	0.8749
Durbin-Watson	0.5797		

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	127.771581	94.172	1.357	0.1812
TPH	1	-44.793773	26.611	-1.683	0.0988
TPH2	1	2.890522	1.644	1.758	0.0852
MANR	1	-27.124284	16.001	-1.695	0.0965
MANR2	1	1.709291	0.770	2.219	0.0313
MANRTPH	1	3.622167	1.878	1.929	0.0597
TIM1TPH	1	0.0100664076	0.017	0.590	0.5582
TIM1MANR	1	-0.0125447181	0.011	-1.146	0.2576
TIME1	1	-0.087820903	0.142	-0.619	0.5386
TIME12	1	-0.000340741	0.00653	-0.521	0.6044
TIM2TPH	1	-0.064934526	0.048	-1.359	0.1804
TIM2MANR	1	-0.039550438	0.023	-1.738	0.0886
TIME2	1	0.479616	0.411	1.167	0.2490
TIME22	1	0.0009096136	0.000262	3.471	0.0011
AP02	1	0.142474	0.097	1.464	0.1496
AP03	1	0.0949478294	0.102	0.935	0.3546
AP04	1	0.124360	0.143	0.871	0.3879
AP05	1	0.0058107519	0.102	0.057	0.9550
AP06	1	0.144333	0.122	1.182	0.2432
AP07	1	0.160105	0.098	1.628	0.1101
AP08	1	0.0569359548	0.095	0.602	0.5498
AP09	1	0.124268	0.105	1.184	0.2421
AP10	1	0.0632973463	0.102	0.618	0.5396
AP11	1	0.0562915012	0.103	0.545	0.5882
AP12	1	0.0632373304	0.094	0.670	0.5058
AP13	1	0.0831418143	0.101	0.827	0.4124
TPH1	1	12.123678	5.822	2.082	0.0427
TPH21	1	-0.696934	0.344	-2.026	0.0483

Estimates of Autocorrelations

Lag	Covariance	Correlation
-1	0.012724	1.000000
0	0.709109	0.09023
1		
2		
3		
4		
5		
6		
7		
8		
9		

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1 BCS OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9865

Preliminary MSE = 0.006326

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.70910881	0.10284927	-6.894641

Yule-Walker Estimates

SSE	DFE	Root MSE	AIC	Total Rsq	Reg Rsq	Durbin-Watson
0.367294	47	0.08401	-130.879	0.9525	0.8027	1.2715

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	27.7340098	58.970	0.470	0.6403
TPH	1	-13.6734862	16.432	-0.832	0.4096
TPH2	1	0.8910473	1.021	0.873	0.3871
MANR	1	-5.6991082	10.266	-0.555	0.5814
MANR2	1	0.4428895	0.573	0.773	0.4436
MANRTPH	1	0.7916888	1.198	0.661	0.5120
TIM1TPH	1	0.0082523136	0.010	0.791	0.4328
TIM1MANR	1	-0.0101270	0.009655	-1.049	0.2996
TIM1	1	-0.0803421	0.090	-0.891	0.3777
TIM12	1	-0.000113571	0.00039	-0.291	0.7722
TIM2TPH	1	-0.0181019	0.035	-0.516	0.6083
TIM2MANR	1	-0.006758548	0.017	-0.406	0.6868
TIM2	1	0.1130421	0.300	0.376	0.7083
TIM22	1	0.000598311	0.000251	2.390	0.0209
AP02	1	0.1034162	0.049	2.113	0.0399
AP03	1	0.0827386	0.065	1.280	0.2069
AP04	1	0.1260989	0.095	1.323	0.1921
AP05	1	0.0378241	0.075	0.502	0.6179
AP06	1	0.0895483	0.088	1.022	0.3121
AP07	1	0.1215048	0.074	1.652	0.1052
AP08	1	0.0300629	0.072	0.415	0.6802
AP09	1	0.0572912	0.075	0.764	0.4488
AP10	1	0.01535629	0.071	0.215	0.8306
AP11	1	0.0526565	0.071	0.747	0.4589
AP12	1	0.0321059	0.059	0.542	0.5904
AP13	1	0.0359168	0.052	0.685	0.4965
TPH1	1	7.0609646	3.738	1.889	0.0651
TPH21	1	-0.3973671	0.221	-1.796	0.0790

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BCS OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9875

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE	0.201262	DfE	32
MSE	0.006289	Root MSE	0.079306
SBC	-56.9352	AIC	-115.577
Reg Rsq	0.9682	Total Rsq	0.9682
Durbin-Watson	1.2593		

Variable	Df	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-22.2326632	33.890	-0.656	0.5165
TPH	1	3.5802087	4.831	0.741	0.4641
TPH2	1	0.1650637	0.148	1.115	0.2733
MANR	1	-12.3265551	10.007	-1.232	0.2270
MANR2	1	1.3277367	0.576	2.303	0.0279
MANRTPH	1	2.21133789	1.381	1.601	0.1191
TIM1TPH	1	0.0048569378	0.010	0.464	0.6457
TIM1MANR	1	0.0057691077	0.013	0.448	0.6568
TIME1	1	-0.0818331	0.082	-0.999	0.3253
TIME12	1	0.000822623	0.000562	1.465	0.1528
TIM2TPH	1	-0.0288005	0.016	-1.757	0.0884
TIM2MANR	1	-0.0622449	0.023	-2.743	0.0099
TIME2	1	0.0801388	0.144	0.557	0.5816
TIME22	1	0.0005712038	0.000316	1.806	0.0803
AP02	1	0.0551049	0.062	0.893	0.3786
AP03	1	0.0706135	0.065	1.088	0.2846
AP04	1	-0.0460687	0.064	-0.720	0.4768
AP05	1	0.0607798	0.061	1.002	0.3240
AP06	1	0.0654331	0.067	0.980	0.3344
AP07	1	0.0224568	0.059	0.381	0.7057
AP08	1	0.0214662	0.061	0.354	0.7254
AP09	1	0.0120168	0.059	0.204	0.8397
AP10	1	-0.0241495	0.066	-0.368	0.7154
AP11	1	0.0312236	0.064	0.489	0.6279
AP12	1	0.0185759	0.064	0.290	0.7738
AP13	1	0.0207348	0.063	0.327	0.7459
TPH1	1	-1.2838149	1.402	-0.915	0.3668
TPH21	1	0.0782675	0.086	0.911	0.3690

Estimates of Autocorrelations

Lag Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1

0 0.003354 1.000000 0.360183
 0.001208

BCS OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9875

Preliminary MSE = 0.002919

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.36018306	0.16755049	-2.149699

Yule-Walker Estimates

SSE	DFF	Root MSE	AIC	Total Rsq	Reg Rsq	Durbin-Watson
0.162286	31	0.072354	-126.353	0.9744	0.9632	1.7630

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-7.62507672	28.956	-0.263	0.7940
TPH	1	1.15568812	4.013	0.288	0.7753
TPH2	1	0.17978277	0.119	1.512	0.1407
MANR	1	-5.48481193	8.783	-0.624	0.5369
MANR2	1	1.05836823	0.499	2.121	0.0420
MANRTPH	1	1.26888184	1.210	1.049	0.3024
TIM1TPH	1	0.000880393	0.008947	0.098	0.9222
TIM1MANR	1	0.00448302	0.012	0.380	0.7065
TIME1	1	-0.05634090	0.071	-0.789	0.4361
TIME12	1	0.0009114127	0.000508	1.794	0.0826
TIM2TPH	1	-0.02571857	0.014	-1.814	0.0793
TIM2MANR	1	-0.04230149	0.021	-1.988	0.0557
TIME2	1	0.09826784	0.121	0.809	0.4245
TIME22	1	0.0005863816	0.000281	2.085	0.0454
AP02	1	0.06451329	0.049	1.326	0.1946
AP03	1	0.09100967	0.058	1.567	0.1273
AP04	1	-0.02424514	0.063	-0.388	0.7008
AP05	1	0.06487573	0.058	1.112	0.2746
AP06	1	0.09736539	0.063	1.556	0.1298
AP07	1	0.04043128	0.057	0.714	0.4806
AP08	1	0.03956799	0.058	0.686	0.4977
AP09	1	0.03203731	0.056	0.571	0.5721
AP10	1	0.0007978221	0.062	0.013	0.9898
AP11	1	0.04953019	0.061	0.807	0.4258
AP12	1	0.02424045	0.060	0.404	0.6890
AP13	1	0.02689491	0.052	0.607	0.6057
TPH1	1	-0.36664893	1.235	-0.297	0.7685
TPH21	1	0.02117136	0.076	0.280	0.7815

Attachment-1 to Response to POIR # 7-1 par 5 of 1

1 BCS OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES A LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9879

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE 2.24527 DFE 88
MSE 0.025514 Root MSE 0.159732
SBC 4.701612 AIC -72.3989
Reg Rsq 0.9733 Total Rsq 0.9733
Durbin-Watson 1.1453

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-126.886494	62.318	-2.036	0.0447
TPH	1	27.280183	15.348	1.777	0.0790
TPH2	1	-1.614626	0.958	-1.685	0.0955
MANR	1	20.036241	16.143	1.241	0.2179
MANR2	1	-0.612407	1.146	-0.534	0.5944
MANRTPH	1	-2.423689	2.030	-1.194	0.2358
TIM1TPH	1	0.0176342797	0.014	1.216	0.2271
TIM1MANR	1	0.040786848	0.017	2.445	0.0165
TIM1	1	-0.160106	0.121	-1.328	0.1875
TIM2	1	0.0010534124	0.000308	3.416	0.0010
TIM2TPH	1	0.144061	0.052	2.754	0.0072
TIM2MANR	1	0.128315	0.054	2.397	0.0186
TIM2	1	-1.190242	0.435	-2.733	0.0076
TIM22	1	-0.001502186	0.000676	-2.223	0.0288
AP02	1	0.0447607022	0.083	0.538	0.5916
AP03	1	-0.012719361	0.087	-0.146	0.8846
AP04	1	0.0407878456	0.097	0.423	0.6736
AP05	1	-0.009018275	0.085	-0.106	0.9154
AP06	1	0.117729	0.095	1.236	0.2197
AP07	1	0.0584898145	0.081	0.720	0.4737
AP08	1	0.0808675683	0.083	0.971	0.3344
AP09	1	0.071652584	0.088	0.810	0.4200
AP10	1	0.0865393309	0.085	1.024	0.3088
AP11	1	0.0314090159	0.087	0.362	0.7182
AP12	1	0.0844164052	0.087	0.973	0.3331
AP13	1	0.0347530069	0.083	0.417	0.6776
TPH1	1	4.060690	1.921	2.114	0.0375
TPH21	1	-0.227183	0.105	-2.158	0.0337

Estimates of Autocorrelations

Lag Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1
0 0.019356 1.000000
D08241 0.425752

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BCS OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9879

Preliminary MSE = 0.015847

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.42575247	0.09700900	-4.388794

Yule-Walker Estimates

SSE	1.670771	DfE	87
MSE	0.019204	Root MSE	0.138579
SBC	-24.6275	AIC	-104.482
Reg Rsq	0.9443	Total Rsq	0.9802
Durbin-Watson	1.9298		

Variable	Df	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-77.393211	57.928	-1.336	0.1850
TPH	1	18.9452889	14.115	1.342	0.1830
TPH2	1	-1.1547717	0.880	-1.313	0.1927
MANR	1	19.4585961	14.664	1.327	0.1880
MANR2	1	-0.8939461	1.017	-0.879	0.3816
MANRTPH	1	-2.3824840	1.830	-1.302	0.1964
TIM1TPH	1	0.01033327	0.014	0.721	0.4729
TIM1MANR	1	0.0199484	0.018	1.125	0.2637
TIM1	1	-0.0915571	0.118	-0.774	0.4413
TIM12	1	0.0004590871	0.000297	1.546	0.1257
TIM2TPH	1	0.0708286	0.052	1.370	0.1743
TIM2MANR	1	0.0952485	0.053	1.786	0.0775
TIM2	1	-0.5317665	0.430	-1.236	0.2200
TIM22	1	-0.000367615	0.000692	-0.531	0.5968
AP02	1	0.0160917	0.062	0.259	0.7963
AP03	1	-0.0193328	0.076	-0.254	0.7999
AP04	1	0.0231671	0.085	0.273	0.7859
AP05	1	0.0348263	0.078	0.446	0.6567
AP06	1	0.0674360	0.085	0.798	0.4271
AP07	1	0.0614253	0.077	0.798	0.4270
AP08	1	0.0647670	0.079	0.818	0.4155
AP09	1	0.0478257	0.081	0.591	0.5559
AP10	1	0.0731423	0.078	0.940	0.3501
AP11	1	0.0200814	0.078	0.257	0.7977
AP12	1	0.0776175	0.075	1.041	0.3008
AP13	1	0.0246172	0.062	0.395	0.6936
TPH1	1	1.3529554	1.560	0.868	0.3881
TPH21	1	-0.0725287	0.085	-0.853	0.3961

BCS OPERATIONS/ HOURS ON TPN
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9882

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE	1.461244	DFE	30
MSE	0.048708	Root MSE	0.220699
SBC	64.78231	AIC	7.089903
Reg Rsq	0.8459	Total Rsq	0.8459
Durbin-Watson	1.1304		

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-98.5214715	86.201	-1.143	0.2621
TPH	1	18.5855413	15.058	1.234	0.2267
TPH2	1	-0.4110426	0.792	-0.519	0.6074
MANR	1	-47.3446106	14.568	-3.250	0.0028
MANR2	1	-2.5267826	1.172	-2.157	0.0392
MANRTPH	1	4.20333585	1.645	2.555	0.0159
TIM1TPH	1	-0.0680136	0.055	-1.233	0.2272
TIM1MANR	1	0.0378285	0.045	0.840	0.4074
TIME1	1	0.6052261	0.310	1.950	0.0606
TIME12	1	0.0008174431	0.003389	0.241	0.8110
TIM2TPH	1	0.0066094033	0.031	0.213	0.8331
TIM2MANR	1	-0.0959929	0.044	-2.199	0.0358
TIME2	1	-0.3222753	0.280	-1.151	0.2587
TIME22	1	0.000299519	0.000371	0.807	0.4262
AP02	1	0.1249506	0.217	0.576	0.5689
AP03	1	0.1331143	0.196	0.678	0.5027
AP04	1	0.3346043	0.180	1.857	0.0732
AP05	1	0.0930846	0.185	0.504	0.6177
AP06	1	0.1387946	0.204	0.679	0.5023
AP07	1	0.0762342	0.184	0.414	0.6815
AP08	1	0.1628515	0.199	0.818	0.4197
AP09	1	0.1935446	0.201	0.964	0.3429
AP10	1	0.1991010	0.216	0.920	0.3649
AP11	1	0.0949945	0.211	0.449	0.6564
AP12	1	0.2484862	0.191	1.300	0.2035
AP13	1	0.2669280	0.190	1.402	0.1711
TPH1	1	-8.2690688	8.286	-0.998	0.3263
TPH21	1	0.4665080	0.475	0.982	0.3338

Estimates of Autocorrelations

Lag Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1

0 1.000000 0.432017
 1 1.0884 0.432017

BCS
OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES A LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9882

Preliminary MSE = 0.020492

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.43201697	0.16747221	-2.579634

Yule-Walker Estimates

SSE	DFE	Root MSE	AIC	Total Rsq	Durbin-Watson
1.000303	29	0.185723	-12.6847	0.7608	1.2078

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-35.1173634	71.563	-0.491	0.6273
TPH	1	10.8393012	11.324	0.957	0.3464
TPH2	1	-0.2540041	0.611	-0.415	0.6808
MANR	1	-25.8470667	11.565	-2.235	0.0333
MANR2	1	-1.5784036	0.888	-1.777	0.0861
MANRTPH	1	2.1994347	1.337	1.645	0.1109
TM1TPH	1	-0.0508732	0.041	-1.231	0.2282
TM1MANR	1	0.0220352	0.035	0.628	0.5349
TIME1	1	0.4603287	0.227	2.032	0.0514
TIME12	1	0.000275077	0.002953	0.093	0.9264
TM2TPH	1	0.0080786922	0.024	0.332	0.7419
TM2MANR	1	-0.0622463	0.035	-1.759	0.0892
TIME2	1	-0.2534556	0.201	-1.261	0.2174
TIME22	1	0.0002429727	0.000348	0.699	0.4903
AP02	1	0.0431042	0.158	0.273	0.7867
AP03	1	0.1081266	0.166	0.653	0.5191
AP04	1	0.2431376	0.165	1.475	0.1509
AP05	1	0.0214398	0.167	0.128	0.8989
AP06	1	0.0262073	0.185	0.142	0.8882
AP07	1	0.006305777	0.168	0.037	0.9704
AP08	1	0.0824066	0.180	0.457	0.6508
AP09	1	0.159920	0.178	0.899	0.3761
AP10	1	0.2335310	0.187	1.249	0.2218
AP11	1	0.1397009	0.182	0.766	0.4501
AP12	1	0.2479935	0.167	1.488	0.1476
AP13	1	0.2879662	0.145	1.983	0.0569
TPH1	1	-9.3639154	7.017	-1.334	0.1924
TPH21	1	0.5440662	0.403	1.350	0.1874

BCS OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9913

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE 1.312944 DFE 33
MSE 0.039786 Root MSE 0.199465
SBC 54.06027 AIC -5.0442
Reg Rsq 0.9190 Total Rsq 0.9190
Durbin-Watson 2.0739

Variable DF B Value Std Error t Ratio Approx Prob

Intercept	1	5.6439150	20.855	0.271	0.7884
TPH	1	10.6653753	8.430	1.265	0.2147
TPH2	1	-1.1332649	0.867	-1.307	0.2003
MANR	1	68.6212877	43.201	1.588	0.1217
MANR2	1	-4.1979119	4.074	-1.030	0.3103
MANRTPH	1	-8.9730540	5.871	-1.528	0.1359
TIM1TPH	1	0.0525096	0.044	1.194	0.2410
TIM1MANR	1	0.0501697	0.058	0.859	0.3966
TIME1	1	-0.6351841	0.532	-1.195	0.2406
TIME12	1	0.0035460636	0.005393	0.657	0.5154
TIM2TPH	1	0.0173168	0.029	0.593	0.5570
TIM2MANR	1	0.1176718	0.082	1.441	0.1591
TIME2	1	-0.0421670	0.235	-0.180	0.8586
TIME22	1	0.0001997383	0.00033	0.605	0.5491
AP02	1	-0.1198418	0.167	-0.716	0.4792
AP03	1	0.1667776	0.192	0.868	0.3918
AP04	1	0.3007427	0.315	0.956	0.3462
AP05	1	-0.0852950	0.156	-0.548	0.5876
AP06	1	-0.1128740	0.176	-0.640	0.5263
AP07	1	0.1397135	0.170	0.820	0.4180
AP08	1	0.02933827	0.156	0.189	0.8514
AP09	1	-0.01737309	0.165	-0.105	0.9169
AP10	1	0.0568050	0.154	0.368	0.7151
AP11	1	0.1780422	0.166	1.071	0.2920
AP12	1	0.1714366	0.181	0.949	0.3493
AP13	1	0.2265893	0.181	1.253	0.2190
TPH1	1	-2.7859021	1.798	-1.550	0.1308
TPH21	1	0.1755245	0.115	1.520	0.1380

Estimates of Autocorrelations

Log Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1
0 0.021524 1.000000
-0.0008 -0.037239

1 BCS OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9913

Preliminary MSE = 0.021494

Estimates of the Autoregressive Parameters

Variable	Coefficient	Std Error	t Ratio
Lag 1	0.03723904	0.17665408	0.210802

Vule-Walker Estimates

SSE	DFE	Root MSE	AIC	Total Rsq
1.310143	32	0.202341	-3.1731	0.9192
MSE		0.040942		
SBC		58.04224		
Reg Rsq		0.9226		
Durbin-Watson		2.0380		

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	5.8983591	21.018	0.281	0.7808
TPH	1	10.6256881	8.613	1.234	0.2263
TPH2	1	-1.1284346	0.888	-1.271	0.2130
MANR	1	68.6531741	44.256	1.551	0.1307
MANR2	1	-4.1740974	4.172	-1.000	0.3246
MANRTPH	1	-8.9707945	6.014	-1.492	0.1456
TIM1TPH	1	0.0518762	0.045	1.157	0.2560
TIM1MANR	1	0.0508007	0.060	0.850	0.4019
TIME1	1	-0.6359624	0.545	-1.167	0.2518
TIME12	1	0.003653352	0.005512	0.663	0.5122
TIM2TPH	1	0.0178429	0.030	0.602	0.5517
TIM2MANR	1	0.1182727	0.084	1.416	0.1666
TIME2	1	-0.0467963	0.239	-0.196	0.8458
TIME22	1	0.0001976929	0.000334	0.592	0.5579
AP02	1	-0.1202169	0.173	-0.696	0.4912
AP03	1	0.1699763	0.196	0.868	0.3918
AP04	1	0.3028493	0.320	0.945	0.3517
AP05	1	-0.0884656	0.158	-0.559	0.5800
AP06	1	-0.1099280	0.179	-0.613	0.5443
AP07	1	0.1483038	0.174	0.853	0.3998
AP08	1	0.0328712	0.158	0.208	0.8367
AP09	1	-0.0130166	0.168	-0.077	0.9388
AP10	1	0.0606827	0.157	0.387	0.7016
AP11	1	0.1845857	0.169	1.090	0.2840
AP12	1	0.1846382	0.183	1.007	0.3214
AP13	1	0.2359157	0.185	1.275	0.2115
TPH1	1	-2.8367407	1.820	-1.559	0.1288
TPH21	1	0.1780237	0.117	1.523	0.1376

Attachment 1 + Response to POIR #7-1 page 1a + 1 /

1 BCS OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9917

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE	0.053838	DFE	16
MSE	0.003365	Root MSE	0.058007
SBC	-62.3781	AIC	-102.911
Reg Rsq	0.9743	Total Rsq	0.9743
Durbin-Watson	1.5272		

NOTE: Model is not full rank. OLS estimates for the parameters are not unique. Some statistics will be misleading. A reported DF of 0 or B means that the estimate is biased.
 The parameter estimate for the following LHS variable is set to 0, since this variable is a linear combination of other RHS variables as shown.

TIM1TPH = 0
 TIM1MANR = 0
 TIME1 = 0
 TIME12 = 0

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	-34.8438101	24.666	-1.413	0.1769
TPH	1	5.9558524	4.064	1.466	0.1621
TPH2	1	-0.1176474	0.233	-0.506	0.6200
MANR	1	-5.6301459	3.201	-1.759	0.0977
MANR2	1	-0.0336502	0.062	-0.546	0.5923
MANRTPH	1	0.5897370	0.324	1.823	0.0871
TIM1TPH	0	0	.	.	.
TIM1MANR	0	0	.	.	.
TIME1	0	0	.	.	.
TIME12	0	0	.	.	.
TIM2TPH	1	-0.0319732	0.019	-1.721	0.1045
TIM2MANR	1	-0.007364229	0.005123	-1.438	0.1698
TIME2	1	0.2682335	0.170	1.582	0.1332
TIME22	1	0.000237893	0.000133	1.795	0.0916
AP02	1	-0.0106304	0.048	-0.220	0.8289
AP03	1	-0.000353679	0.051	-0.007	0.9946
AP04	1	0.0787358	0.091	0.866	0.3993
AP05	1	-0.0681130	0.053	-1.280	0.2188
AP06	1	0.0495543	0.062	0.804	0.4331
AP07	1	-0.0224048	0.068	-0.331	0.7446
AP08	1	-0.005059684	0.057	-0.088	0.9307
AP09	1	-0.0271159	0.055	-0.493	0.6287
AP10	1	0.0019555928	0.056	0.035	0.9724
AP11	1	0.0172405	0.052	0.332	0.7440
AP12	1	0.0163254	0.052	0.317	0.7555
AP13	1	0.0282874	0.048	0.590	0.5638
TI	1	-0.5448811	2.835	-0.192	0.8500

Attachment 1 to "response to POIR # 7-1 page 13 of 17"

1 BCS OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES & LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9917

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
TPH21	1	0.0226613	0.154	0.148	0.8845

Estimates of Autocorrelations

Lag Covariance Correlation -1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1

0	0.001346	1.000000
1	0.000313	0.232904

Preliminary MSE = 0.001273

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.23290419	0.25109834	-0.927542

Yule-Walker Estimates

SSE	0.049416
DFE	15
Root MSE	0.057397
AIC	-104.283
Reg Rsq	0.9748
Total Rsq	0.9764
Durbin-Watson	1.6191

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
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Intercept	1	-35.1023429	23.353	-1.503	0.1536
TPH	1	6.4446605	3.741	1.723	0.1055
TPH2	1	-0.1476487	0.212	-0.696	0.4968
MANR	1	-5.1841824	3.015	-1.720	0.1061
MANR2	1	-0.0438356	0.059	-0.744	0.4686
MANRTPH	1	0.5328435	0.308	1.732	0.1039
TIM1TPH	0	0	.	.	.
TIM1MANR	0	0	.	.	.
TIM1	0	0	.	.	.
TIM12	0	0	.	.	.
TIM2TPH	1	-0.0335430	0.019	-1.796	0.0927
TIM2MANR	1	-0.006258942	0.005553	-1.127	0.2774
TIM2	1	0.2877194	0.170	1.690	0.1117
TIME22	1	0.0002200234	0.000145	1.517	0.1502
AP02	1	-0.009518387	0.043	-0.221	0.8283
AP03	1	-0.00038736	0.051	-0.008	0.9940
AP04	1	0.0946349	0.094	1.006	0.3304
AP05	1	-0.0646459	0.053	-1.216	0.2428
AP	1	0.0546862	0.063	0.865	0.4006

1 BCU OPERATIONS/ HOURS ON TPH
 INCLUDING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
 USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9917

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
AP07	1	-0.00705241	0.067	-0.105	0.9181
AP08	1	0.0032694374	0.058	0.056	0.9558
AP09	1	-0.0213618	0.056	-0.383	0.7073
AP10	1	0.0168397	0.056	0.298	0.7695
AP11	1	0.0270611	0.052	0.520	0.6107
AP12	1	0.0211878	0.050	0.424	0.6777
AP13	1	0.0344009	0.043	0.794	0.4397
TPH1	1	-0.9780274	2.759	-0.355	0.7279
TPH21	1	0.0471584	0.149	0.316	0.7563

USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES A LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9961

Dependent Variable = HRS

Ordinary Least Squares Estimates

SSE	0.148214	DFE	48
MSE	0.003088	Root MSE	0.055568
SBC	-137.288	AIC	-202.548
Reg Rsq	0.9810	Total Rsq	0.9810
Durbin-Watson	1.5239		

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	122.062848	37.122	3.288	0.0019
TPH	1	-14.727537	7.358	-2.002	0.0510
TPH2	1	0.719804	0.397	1.812	0.0763
MANR	1	10.348673	11.715	0.883	0.3814
MANR2	1	0.145732	0.347	0.420	0.6762
MANRTPH	1	-0.970568	1.195	-0.812	0.4208
TIM1TPH	1	0.0011402177	0.009539	0.120	0.9054
TIM1MANR	1	0.0037886583	0.006936	0.546	0.5874
TIM1	1	-0.004204346	0.092	-0.046	0.9636
TIM12	1	0.0000138594	0.000124	0.112	0.9115
TIM2TPH	1	-0.0333391499	0.019	-1.758	0.0851
TIM2MANR	1	0.0046169252	0.015	0.300	0.7654
TIM2	1	0.360100	0.182	1.981	0.0533
TIME22	1	-0.000065002	0.000157	-0.414	0.6804
AP02	1	0.0103688634	0.043	0.244	0.8085
AP03	1	0.043608986	0.047	0.931	0.3565
AP04	1	0.0517948226	0.061	0.843	0.4034
AP05	1	-0.084176913	0.043	-1.939	0.0584
AP06	1	0.0426301958	0.061	0.698	0.4886
AP07	1	0.0502631357	0.040	1.252	0.2167
AP08	1	0.052019181	0.040	1.295	0.2015
AP09	1	0.0746561018	0.046	1.610	0.1139
AP10	1	-0.002424138	0.044	-0.055	0.9562
AP11	1	-0.003498472	0.043	-0.082	0.9353
AP12	1	0.0476881881	0.043	1.122	0.2675
AP13	1	0.0405313921	0.043	0.952	0.3459
TPH1	1	-7.305763	3.404	-2.146	0.0370
TPH21	1	0.346522	0.167	2.078	0.0431

Estimates of Autocorrelations

Lag	Covariance	Correlation
-1	0.00195	1.000000
1	0.00437	0.224334
2	0.00000	0.000000
3	0.00000	0.000000
4	0.00000	0.000000
5	0.00000	0.000000
6	0.00000	0.000000
7	0.00000	0.000000
8	0.00000	0.000000
9	0.00000	0.000000

RCS
OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
USES 12 AP DUMMIES TO CAPTURE SEASONAL EFFECTS

Autoreg Procedure

IDNUM=9961

Preliminary MSE = 0.001852

Estimates of the Autoregressive Parameters

Lag	Coefficient	Std Error	t Ratio
1	-0.22433417	0.14214723	-1.578182

Yule-Walker Estimates

SSE	DFF	Root MSE	AIC	Reg Rsq	Durbin-Watson
0.13782	47	0.054151	-206.023	0.9723	1.6935
MSE					
SBC					
Reg Rsq					

Variable	DF	B Value	Std Error	t Ratio	Approx Prob
Intercept	1	111.707974	36.990	3.020	0.0041
TPH	1	-14.395463	7.167	-2.009	0.0503
TPH2	1	0.723906	0.391	1.853	0.0701
MANR	1	6.746237	10.975	0.615	0.5417
MANR2	1	0.119636	0.342	0.349	0.7335
MANRTPH	1	-0.626167	1.117	-0.561	0.5777
TIM1TPH	1	0.002412614	0.009429	0.256	0.7992
TIM1MANR	1	0.0020286512	0.006279	0.323	0.7481
TIME1	1	-0.02098352	0.090	-0.232	0.8174
TIME12	1	0.0000182106	0.000134	0.136	0.8925
TIME2TPH	1	-0.030892439	0.018	-1.680	0.0996
TIM2MANR	1	0.0017103852	0.015	0.115	0.9087
TIME2	1	0.328463	0.174	1.884	0.0658
TIME22	1	-0.000044333	0.000154	-0.288	0.7747
AP02	1	0.00416333002	0.039	0.107	0.9149
AP03	1	0.02833027581	0.045	0.622	0.5369
AP04	1	0.0341619704	0.061	0.565	0.5751
AP05	1	-0.077716922	0.042	-1.838	0.0723
AP06	1	0.0260502925	0.059	0.441	0.6611
AP07	1	0.0394506186	0.040	0.995	0.3248
AP08	1	0.0441435719	0.040	1.106	0.2742
AP09	1	0.06133861914	0.045	1.354	0.1823
AP10	1	-0.01506881	0.043	-0.351	0.7274
AP11	1	-0.017882436	0.042	-0.427	0.6711
AP12	1	0.03610222686	0.041	0.877	0.3851
AP13	1	0.02672533266	0.039	0.682	0.4985
TPH1	1	-6.107688	3.250	-1.879	0.0664
TPH21	1	0.291538	0.160	1.822	0.0748

Manual Letters

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.803	0.0059	135.410	7.892
2	26	0.791	0.0074	106.560	7.369
3	104	0.786	0.0069	113.528	7.595
4	120	0.721	0.0078	92.600	9.782
5	164	0.761	0.0073	104.479	8.280
6	242	0.733	0.0073	99.880	9.168
7	341	0.783	0.0071	110.855	7.606
8	401	0.718	0.0078	91.514	9.254
9	415	0.706	0.0081	87.413	9.815
10	503	0.726	0.0076	96.140	9.320
11	523	0.816	0.0055	147.836	7.812
12	614	0.777	0.0074	104.897	7.648
13	621	0.721	0.0077	93.768	9.616
14	659	0.821	0.0059	139.373	7.061
15	686	0.688	0.0088	78.302	10.438
16	754	0.750	0.0074	101.271	8.440
17	779	0.754	0.0069	109.649	8.641
18	829	0.851	0.0044	191.621	7.189
19	862	0.710	0.0081	87.419	9.325
20	877	0.726	0.0076	96.151	9.292
21	916	0.740	0.0074	99.672	8.884
22	952	0.721	0.0078	92.172	9.212
23	1245	0.693	0.0085	81.659	10.133
24	1309	0.769	0.0069	111.560	8.064
25	1364	0.750	0.0076	99.074	8.308
26	1374	0.761	0.0067	114.383	8.578
27	1423	0.780	0.0071	109.849	7.684
28	1484	0.820	0.0051	160.885	7.574
29	1485	0.711	0.0080	89.146	9.615
30	1607	0.785	0.0066	119.284	7.855
31	1684	0.700	0.0085	82.220	9.793
32	1747	0.774	0.0075	103.285	7.786
33	1749	0.727	0.0077	94.798	9.108
34	1803	0.689	0.0087	79.083	10.387
35	1872	0.714	0.0082	87.356	10.067
36	1913	0.755	0.0068	111.168	8.703
37	1940	0.846	0.0057	149.147	6.533
38	2007	0.754	0.0069	109.433	8.897
39	2033	0.743	0.0073	101.709	8.695
40	2169	0.693	0.0085	81.491	10.179
41	2173	0.770	0.0064	121.021	8.456
42	2283	0.780	0.0071	109.982	7.777
43	2371	0.764	0.0069	110.107	8.288
44	2375	0.758	0.0077	98.317	8.045
45	2386	0.806	0.0055	146.874	7.863
46	2444	0.712	0.0081	87.894	9.603
47	2467	0.794	0.0071	112.669	7.338
48	2501	0.791	0.0079	100.242	7.204
49	2587	0.746	0.0071	104.441	8.762
50	2594	0.762	0.0068	112.737	8.396
51	2687	0.727	0.0075	96.415	9.269
52	2696	0.833	0.0065	127.474	8.367
53	2752	0.846	0.0046	184.266	7.349
54	2814	0.811	0.0061	132.796	7.233
55	2823	0.720	0.0077	92.825	9.707
56	3033	0.781	0.0068	115.157	7.783
57	3084	0.780	0.0066	117.572	7.903
58	3246	0.804	0.0066	121.382	7.323
59	3294	0.853	0.0062	137.732	7.818
60	3304	0.679	0.0094	72.133	10.867
61	3329	0.812	0.0061	132.299	8.353
62	3346	0.766	0.0068	112.680	8.292
63	3358	0.731	0.0074	98.338	9.278
64	3359	0.742	0.0072	103.671	8.853
65	3361	0.759	0.0071	106.884	8.411
66	3364	0.677	0.0094	71.903	10.871
67	3394	0.748	0.0070	106.451	8.758

68	3411	0.731	0.0076	95.656	8.982
69	3437	0.729	0.0074	98.050	9.209
70	3495	0.874	0.0050	174.709	7.202
71	3547	0.856	0.0057	149.429	7.807
72	3593	0.783	0.0067	117.468	7.868
73	3594	0.833	0.0085	127.878	8.336
74	3606	0.791	0.0062	127.566	7.816
75	3645	0.887	0.0048	186.309	7.090
76	3702	0.745	0.0072	103.993	8.783
77	3709	0.765	0.0084	90.932	7.659
78	3712	0.898	0.0045	201.416	6.839
79	3725	0.705	0.0081	86.650	9.857
80	3753	0.731	0.0076	96.118	8.987
81	3782	0.827	0.0064	128.821	8.381
82	3821	0.764	0.0068	112.151	8.255
83	3908	0.716	0.0078	91.299	9.516
84	3921	0.766	0.0074	104.265	8.020
85	3923	0.825	0.0069	120.093	6.670
86	3940	0.802	0.0060	133.186	7.522
87	3972	0.760	0.0071	107.836	8.417
88	3997	0.807	0.0066	121.721	7.217
89	4144	0.849	0.0060	142.235	7.972
90	4166	0.797	0.0060	133.768	7.705
91	4183	0.764	0.0065	116.975	8.500
92	4255	0.781	0.0064	123.005	7.966
93	4256	0.812	0.0060	134.617	8.020
94	4270	0.710	0.0080	88.383	9.890
95	4278	0.839	0.0047	177.891	7.395
96	4284	0.819	0.0056	146.851	8.075
97	4347	0.788	0.0060	131.260	7.956
98	4384	0.838	0.0048	175.881	7.489
99	4385	0.832	0.0049	170.419	7.581
100	4439	0.729	0.0077	95.148	9.053
101	4453	0.718	0.0079	91.314	9.838
102	4483	0.874	0.0047	187.458	7.052
103	4537	0.762	0.0075	101.971	8.116
104	4538	0.762	0.0076	99.660	8.010
105	4542	0.726	0.0075	96.534	9.410
106	4653	0.763	0.0079	96.942	9.671
107	4756	0.723	0.0076	94.820	9.563
108	4818	0.773	0.0072	107.619	7.849
109	4834	0.826	0.0054	153.434	7.873
110	4873	0.812	0.0068	119.519	7.060
111	4920	0.791	0.0062	128.647	7.775
112	4937	0.825	0.0051	161.811	7.458
113	4945	0.742	0.0074	99.645	8.720
114	4965	0.884	0.0049	182.233	7.161
115	4970	0.762	0.0066	115.301	8.543
116	5057	0.721	0.0077	93.284	9.349
117	5066	0.769	0.0074	103.684	7.940
118	5087	0.712	0.0079	90.040	9.718
119	5096	0.709	0.0081	87.939	9.559
120	5106	0.746	0.0075	99.488	8.617
121	5113	0.768	0.0068	113.659	8.896
122	5182	0.735	0.0074	99.578	9.048
123	5201	0.847	0.0064	132.219	7.953
124	5204	0.723	0.0076	94.995	9.430
125	5255	0.767	0.0069	111.440	8.122
126	5279	0.802	0.0070	114.958	7.188
127	5284	0.743	0.0081	92.277	8.378
128	5296	0.695	0.0087	80.229	10.376
129	5341	0.784	0.0061	128.390	8.047
130	5413	0.785	0.0063	125.440	7.885
131	5417	0.845	0.0048	175.918	7.411
132	5438	0.800	0.0060	133.059	7.571
133	5507	0.740	0.0083	88.712	8.307
134	5525	0.853	0.0045	190.589	7.029
135	5563	0.838	0.0047	177.661	7.441
136	5566	0.788	0.0063	124.176	7.917
137	5573	0.806	0.0058	139.309	7.615

138	5590	0.741	0.0083	89.327	8.316
139	5604	0.796	0.0064	123.757	7.520
140	5656	0.851	0.0055	154.650	6.480
141	5683	0.793	0.0057	138.253	8.075
142	5697	0.704	0.0082	86.178	9.958
143	5708	0.724	0.0076	85.610	9.541
144	5757	0.810	0.0060	134.346	7.283
145	5837	0.729	0.0075	97.873	9.274
146	5865	0.742	0.0079	94.316	8.520
147	5909	0.731	0.0075	97.603	9.114
148	5921	0.775	0.0061	126.147	8.494
149	5997	0.710	0.0081	88.166	9.931
150	6048	0.830	0.0061	136.220	6.787
151	6063	0.827	0.0056	148.454	8.108
152	6078	0.725	0.0081	89.448	8.803
153	6083	0.804	0.0068	118.677	7.183
154	6088	0.768	0.0065	118.066	8.332
155	6098	0.792	0.0065	121.824	7.580
156	6104	0.724	0.0076	95.033	9.612
157	6218	0.794	0.0059	135.267	7.903
158	6266	0.710	0.0081	87.767	9.464
159	6282	0.736	0.0072	102.025	9.172
160	6306	0.763	0.0070	109.216	8.195
161	6332	0.719	0.0079	91.057	9.133
162	6343	0.798	0.0065	122.397	7.433
163	6391	0.802	0.0057	141.362	7.740
164	6499	0.797	0.0063	127.396	7.560
165	6549	0.699	0.0084	83.709	10.127
166	6550	0.814	0.0059	138.669	8.395
167	6551	0.820	0.0066	123.605	8.430
168	6556	0.807	0.0068	118.017	7.095
169	6557	0.767	0.0075	102.798	7.966
170	6571	0.761	0.0066	114.629	8.761
171	6594	0.762	0.0073	104.284	8.313
172	6635	0.824	0.0052	159.814	7.304
173	6643	0.731	0.0079	92.306	8.830
174	6655	0.769	0.0066	116.858	8.477
175	6664	0.749	0.0069	108.737	9.108
176	6737	0.810	0.0061	132.831	7.307
177	6744	0.761	0.0067	113.032	8.481
178	6745	0.762	0.0067	114.589	8.527
179	6755	0.677	0.0092	73.602	10.724
180	6761	0.776	0.0070	111.347	7.836
181	6792	0.793	0.0075	106.552	7.302
182	6838	0.757	0.0072	105.268	8.540
183	6971	0.789	0.0066	119.435	8.414
184	6989	0.753	0.0070	107.999	8.644
185	6994	0.756	0.0068	112.098	8.616
186	7010	0.772	0.0068	113.437	8.034
187	7044	0.796	0.0061	129.693	7.783
188	7049	0.813	0.0057	143.793	8.101
189	7051	0.801	0.0070	114.484	7.237
190	7069	0.751	0.0078	95.815	8.253
191	7073	0.724	0.0080	90.228	9.002
192	7093	0.801	0.0059	135.636	8.167
193	7097	0.840	0.0048	174.138	7.439
194	7100	0.769	0.0064	120.565	8.411
195	7123	0.745	0.0073	102.112	8.601
196	7126	0.758	0.0067	112.847	8.582
197	7127	0.815	0.0059	137.687	7.218
198	7178	0.843	0.0044	190.869	7.352
199	7192	0.785	0.0060	130.442	8.051
200	7198	0.831	0.0056	148.946	7.959
201	7271	0.735	0.0075	98.474	8.963
202	7314	0.717	0.0078	92.506	9.429
203	7346	0.746	0.0071	104.861	8.794
204	7418	0.719	0.0078	92.602	9.403
205	7422	0.742	0.0075	99.545	8.698
206	7444	0.738	0.0072	102.726	9.112
207	7450	0.742	0.0075	99.114	8.793

208	7463	0.747	0.0069	108.099	9.037
209	7480	0.817	0.0054	152.281	7.894
210	7512	0.825	0.0054	152.323	7.188
211	7564	0.758	0.0067	112.520	8.634
212	7583	0.773	0.0068	113.388	8.092
213	7603	0.788	0.0062	127.556	7.864
214	7606	0.769	0.0065	118.804	8.792
215	7626	0.794	0.0066	119.590	7.572
216	7637	0.791	0.0069	115.455	7.502
217	7655	0.699	0.0083	84.406	9.938
218	7689	0.723	0.0076	94.780	9.251
219	7791	0.742	0.0071	104.837	9.207
220	7794	0.833	0.0049	170.015	7.604
221	7800	0.753	0.0077	97.852	8.259
222	7807	0.785	0.0064	122.513	8.542
223	7865	0.787	0.0059	134.243	8.210
224	7884	0.779	0.0078	99.385	9.419
225	7897	0.739	0.0074	100.391	8.862
226	7914	0.773	0.0065	118.340	8.373
227	7942	0.854	0.0050	172.667	7.404
228	8004	0.832	0.0051	164.556	7.135
229	8112	0.774	0.0073	106.057	7.829
230	8115	0.774	0.0064	121.743	8.196
231	8145	0.812	0.0061	133.574	8.345
232	8153	0.831	0.0050	165.097	7.628
233	8169	0.786	0.0065	121.399	7.899
234	8195	0.707	0.0081	87.680	9.705
235	8208	0.791	0.0059	135.118	8.348
236	8228	0.820	0.0051	161.379	7.522
237	8239	0.690	0.0087	79.668	10.329
238	8265	0.779	0.0067	116.311	7.944
239	8289	0.693	0.0085	81.254	10.226
240	8315	0.783	0.0072	108.390	7.809
241	8329	0.780	0.0063	123.439	8.048
242	8333	0.717	0.0080	89.243	9.204
243	8334	0.820	0.0068	121.349	6.816
244	8342	0.739	0.0075	98.778	8.803
245	8378	0.714	0.0081	88.188	9.322
246	8384	0.756	0.0075	100.674	8.237
247	8421	0.715	0.0079	90.273	9.649
248	8439	0.768	0.0065	118.779	8.386
249	8505	0.770	0.0072	107.617	8.054
250	8535	0.766	0.0066	116.659	8.446
251	8551	0.803	0.0056	142.437	7.711
252	8554	0.797	0.0058	136.533	8.347
253	8557	0.771	0.0066	117.096	8.897
254	8579	0.772	0.0065	118.354	8.186
255	8592	0.793	0.0069	114.551	7.403
256	8668	0.803	0.0056	144.233	7.825
257	8692	0.806	0.0079	102.390	6.854
258	8743	0.704	0.0082	86.194	9.974
259	8806	0.777	0.0067	115.488	7.997
260	8909	0.760	0.0071	106.419	8.300
261	8938	0.781	0.0064	121.540	8.009
262	8941	0.779	0.0067	116.969	7.881
263	8942	0.812	0.0056	144.983	8.139
264	8964	0.740	0.0072	103.434	9.083
265	8965	0.770	0.0066	116.655	8.199
266	9035	0.890	0.0049	180.930	6.953
267	9056	0.743	0.0070	105.989	9.060
268	9090	0.786	0.0066	119.186	7.816
269	9098	0.783	0.0061	128.548	8.083
270	9110	0.788	0.0060	130.833	8.018
271	9112	0.730	0.0081	89.912	8.659
272	9114	0.690	0.0086	80.092	10.277
273	9210	0.705	0.0086	82.492	9.317
274	9221	0.786	0.0068	115.635	7.725
275	9240	0.703	0.0083	84.966	10.074
276	9242	0.779	0.0064	122.006	8.069
277	9263	0.760	0.0068	111.586	8.431

278	9270	0.776	0.0065	118.987	8.034
279	9303	0.730	0.0078	93.971	8.929
280	9322	0.747	0.0069	107.694	8.900
281	9443	0.795	0.0058	136.562	7.868
282	9486	0.701	0.0083	84.924	9.757
283	9522	0.772	0.0069	111.367	7.959
284	9524	0.697	0.0084	82.757	10.147
285	9562	0.809	0.0055	148.077	7.962
286	9567	0.857	0.0049	175.807	7.396
287	9589	0.688	0.0086	79.723	10.218
288	9605	0.798	0.0057	139.980	8.228
289	9607	0.829	0.0051	164.037	7.281
290	9653	0.827	0.0054	152.639	7.692
291	9660	0.887	0.0048	185.560	7.103
292	9666	0.806	0.0068	118.494	7.198
293	9696	0.753	0.0074	102.327	8.428
294	9698	0.816	0.0063	130.271	7.069
295	9705	0.839	0.0065	129.102	6.554
296	9749	0.828	0.0051	163.283	7.272
297	9775	0.840	0.0054	155.220	7.788
298	9779	0.749	0.0070	107.508	8.776
299	9792	0.796	0.0074	108.194	7.235
300	9807	0.698	0.0084	83.584	10.104
301	9809	0.831	0.0058	143.298	8.239
302	9810	0.775	0.0062	124.261	8.278
303	9865	0.801	0.0056	143.133	8.149
304	9875	0.804	0.0063	128.588	7.456
305	9879	0.735	0.0073	100.880	9.371
306	9882	0.830	0.0054	153.512	7.016
307	9913	0.818	0.0055	149.806	8.192
308	9917	0.800	0.0076	105.966	7.080
309	9961	0.740	0.0072	102.996	9.286

Manual Flats

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	26	0.831	0.0071	116.454	6.412
2	104	0.851	0.0063	135.821	6.665
3	120	0.851	0.0080	106.100	8.935
4	164	0.842	0.0067	124.897	7.843
5	242	0.838	0.0074	113.423	8.538
6	336	0.931	0.0068	137.057	7.022
7	341	0.816	0.0084	97.176	6.001
8	401	0.795	0.0079	100.981	8.049
9	415	0.802	0.0081	99.221	8.818
10	503	0.826	0.0073	113.852	6.317
11	507	0.939	0.0065	143.588	6.763
12	523	0.932	0.0063	147.423	7.085
13	614	0.834	0.0068	122.203	6.772
14	621	0.837	0.0072	115.820	8.403
15	659	0.932	0.0058	160.074	7.413
16	686	0.802	0.0092	86.850	9.694
17	754	0.798	0.0079	101.581	7.207
18	779	0.836	0.0066	126.095	7.708
19	829	0.966	0.0048	203.342	6.233
20	862	0.801	0.0079	101.750	8.478
21	877	0.807	0.0075	107.636	8.099
22	916	0.818	0.0073	111.981	7.994
23	952	0.811	0.0074	109.485	8.078
24	1245	0.800	0.0086	93.420	9.224
25	1309	0.887	0.0057	155.549	7.246
26	1364	0.809	0.0076	106.340	7.057
27	1374	0.840	0.0066	126.923	7.808
28	1423	0.847	0.0064	131.461	6.580
29	1484	0.937	0.0059	159.978	7.125
30	1485	0.814	0.0077	105.555	8.604
31	1607	0.838	0.0067	125.621	6.811
32	1684	0.808	0.0077	104.889	8.473
33	1749	0.796	0.0078	101.939	8.059
34	1803	0.804	0.0090	89.171	9.559
35	1872	0.842	0.0083	101.857	9.096

36	1913	0.835	0.0066	126.363	7.578
37	1940	0.945	0.0055	171.895	6.870
38	2007	0.779	0.0102	76.186	8.472
39	2033	0.812	0.0073	110.972	7.567
40	2169	0.794	0.0081	97.903	8.678
41	2173	0.864	0.0060	144.535	7.525
42	2283	0.850	0.0064	133.474	6.980
43	2371	0.841	0.0065	129.555	7.634
44	2375	0.806	0.0081	99.056	6.482
45	2386	0.922	0.0066	140.572	7.502
46	2390	0.922	0.0068	135.865	7.368
47	2444	0.811	0.0083	97.910	9.095
48	2467	0.837	0.0070	119.345	6.461
49	2501	0.817	0.0079	103.733	6.377
50	2587	0.834	0.0070	119.857	8.129
51	2594	0.874	0.0063	138.079	7.588
52	2687	0.825	0.0074	112.211	8.391
53	2696	0.958	0.0050	191.730	6.473
54	2814	0.902	0.0053	170.125	6.938
55	2823	0.813	0.0078	103.888	8.698
56	3033	0.843	0.0065	130.480	6.847
57	3084	0.804	0.0082	97.551	6.461
58	3246	0.848	0.0065	130.104	6.351
59	3294	0.953	0.0052	182.858	6.626
60	3304	0.799	0.0095	83.805	9.881
61	3329	0.944	0.0056	170.002	6.911
62	3346	0.855	0.0062	138.448	7.600
63	3358	0.814	0.0075	108.749	8.341
64	3359	0.821	0.0071	115.443	7.778
65	3361	0.831	0.0070	118.380	6.580
66	3364	0.781	0.0094	82.846	9.762
67	3394	0.842	0.0066	128.662	7.732
68	3411	0.799	0.0077	103.415	7.854
69	3437	0.835	0.0072	116.682	8.177
70	3495	0.947	0.0054	174.289	6.811
71	3579	0.970	0.0044	220.559	6.421
72	3593	0.850	0.0066	129.596	6.365
73	3594	0.961	0.0047	203.430	6.678
74	3606	0.861	0.0058	147.696	7.120
75	3702	0.851	0.0064	134.050	7.724
76	3709	0.809	0.0077	104.534	6.823
77	3725	0.807	0.0078	103.964	8.549
78	3753	0.803	0.0077	104.299	7.784
79	3782	0.932	0.0051	184.055	6.977
80	3821	0.870	0.0070	125.069	8.017
81	3908	0.810	0.0077	105.837	8.462
82	3921	0.813	0.0077	105.236	6.645
83	3923	0.901	0.0050	180.880	6.566
84	3940	0.870	0.0057	152.459	6.508
85	3972	0.821	0.0071	115.086	7.153
86	3997	0.837	0.0073	114.371	6.065
87	4166	0.883	0.0054	163.801	6.789
88	4183	0.851	0.0063	135.815	7.298
89	4255	0.872	0.0058	150.284	7.156
90	4256	0.826	0.0060	153.608	6.774
91	4270	0.828	0.0080	103.660	8.930
92	4278	0.932	0.0067	140.161	6.987
93	4284	0.915	0.0049	187.865	6.418
94	4347	0.869	0.0057	152.190	6.845
95	4384	0.930	0.0061	151.309	7.340
96	4439	0.786	0.0081	96.975	8.018
97	4453	0.842	0.0080	105.269	8.941
98	4483	0.949	0.0054	174.692	6.669
99	4537	0.816	0.0073	111.995	7.166
100	4538	0.823	0.0074	111.589	7.250
101	4542	0.821	0.0075	109.241	8.517
102	4653	0.916	0.0066	138.158	8.072
103	4756	0.812	0.0077	105.595	8.536
104	4818	0.856	0.0061	140.886	7.131
105	4834	0.924	0.0065	143.129	7.431

106	4873	0.818	0.0085	95.994	5.745
107	4920	0.865	0.0058	148.466	6.879
108	4937	0.933	0.0058	161.731	7.510
109	4945	0.838	0.0065	128.052	7.578
110	4965	0.981	0.0040	246.430	6.062
111	4970	0.860	0.0064	133.523	7.920
112	5057	0.805	0.0075	106.847	7.734
113	5087	0.805	0.0080	101.206	8.709
114	5096	0.811	0.0080	101.267	8.884
115	5106	0.816	0.0075	108.645	7.408
116	5113	0.879	0.0070	125.618	7.938
117	5182	0.837	0.0070	118.929	8.281
118	5201	0.946	0.0056	169.218	6.776
119	5204	0.835	0.0073	114.796	8.435
120	5255	0.856	0.0060	141.721	6.894
121	5279	0.883	0.0053	165.948	6.547
122	5296	0.802	0.0084	95.124	9.135
123	5341	0.854	0.0063	136.156	6.935
124	5413	0.868	0.0057	151.264	6.780
125	5417	0.945	0.0056	168.828	6.789
126	5438	0.886	0.0054	163.371	6.929
127	5507	0.766	0.0090	84.736	7.510
128	5525	0.944	0.0053	178.164	6.637
129	5563	0.950	0.0051	186.922	6.974
130	5566	0.854	0.0063	136.728	6.821
131	5573	0.871	0.0056	155.502	6.853
132	5590	0.806	0.0075	107.014	7.563
133	5604	0.829	0.0060	155.154	7.397
134	5656	0.952	0.0052	181.570	6.661
135	5683	0.920	0.0066	139.290	7.615
136	5697	0.822	0.0087	94.366	9.378
137	5708	0.834	0.0073	113.585	8.483
138	5757	0.855	0.0062	138.019	6.484
139	5837	0.824	0.0070	117.549	7.904
140	5865	0.787	0.0084	94.003	7.291
141	5909	0.832	0.0073	114.010	8.426
142	5921	0.868	0.0058	149.323	7.399
143	5997	0.831	0.0075	111.554	8.542
144	6048	0.902	0.0049	183.926	6.377
145	6063	0.936	0.0059	159.359	7.139
146	6078	0.790	0.0081	97.249	8.276
147	6088	0.847	0.0064	132.493	7.451
148	6098	0.896	0.0051	174.783	6.672
149	6104	0.829	0.0078	105.176	8.862
150	6218	0.919	0.0067	137.040	7.591
151	6266	0.784	0.0083	95.067	8.506
152	6282	0.840	0.0070	119.609	8.093
153	6306	0.839	0.0065	128.190	7.028
154	6332	0.795	0.0082	97.401	8.665
155	6343	0.856	0.0064	134.428	6.214
156	6391	0.919	0.0066	138.813	7.620
157	6499	0.863	0.0059	147.028	6.761
158	6543	0.878	0.0067	131.895	7.926
159	6549	0.810	0.0088	92.351	9.414
160	6550	0.933	0.0060	154.909	7.244
161	6551	0.939	0.0057	163.675	7.049
162	6556	0.876	0.0058	148.816	6.311
163	6557	0.805	0.0081	99.937	6.522
164	6571	0.853	0.0066	129.989	7.976
165	6594	0.825	0.0069	119.878	7.572
166	6635	0.940	0.0057	164.480	7.023
167	6643	0.806	0.0075	107.665	7.909
168	6655	0.871	0.0063	137.559	7.437
169	6664	0.860	0.0068	126.071	8.204
170	6676	0.850	0.0066	128.933	6.810
171	6737	0.857	0.0063	136.454	6.321
172	6744	0.847	0.0064	133.091	7.633
173	6745	0.887	0.0061	143.369	7.627
174	6755	0.766	0.0096	79.834	9.772
175	6761	0.876	0.0060	145.010	7.442

176	6763	0.862	0.0068	125.902	7.562
177	6782	0.839	0.0067	125.429	6.661
178	6838	0.832	0.0070	119.358	7.550
179	6971	0.928	0.0069	133.574	7.110
180	6989	0.830	0.0068	122.133	7.724
181	6994	0.833	0.0067	123.990	7.488
182	7010	0.819	0.0073	111.734	6.854
183	7044	0.853	0.0063	134.842	6.448
184	7049	0.834	0.0060	154.531	7.123
185	7051	0.855	0.0063	135.843	6.344
186	7069	0.774	0.0092	84.610	6.793
187	7073	0.793	0.0079	100.362	8.083
188	7093	0.916	0.0070	131.381	7.584
189	7097	0.936	0.0060	157.322	7.067
190	7100	0.875	0.0062	140.832	7.622
191	7126	0.864	0.0062	138.453	7.570
192	7127	0.920	0.0060	154.025	7.322
193	7192	0.882	0.0054	164.018	6.847
194	7188	0.951	0.0053	181.331	6.676
195	7271	0.829	0.0074	111.857	8.497
196	7314	0.832	0.0077	108.699	8.573
197	7346	0.833	0.0070	118.362	8.116
198	7418	0.810	0.0079	102.745	8.723
199	7422	0.828	0.0068	121.090	7.697
200	7444	0.835	0.0070	119.160	8.226
201	7450	0.832	0.0075	110.486	8.020
202	7463	0.828	0.0075	110.475	7.717
203	7480	0.946	0.0055	173.602	6.825
204	7564	0.853	0.0065	131.336	7.599
205	7583	0.844	0.0065	129.407	7.025
206	7603	0.840	0.0066	128.032	6.814
207	7606	0.869	0.0057	152.570	7.060
208	7626	0.918	0.0069	133.345	7.498
209	7637	0.870	0.0060	144.530	6.347
210	7655	0.794	0.0082	97.411	8.742
211	7689	0.840	0.0075	111.603	8.507
212	7791	0.862	0.0074	116.422	8.564
213	7794	0.939	0.0057	163.871	7.045
214	7800	0.837	0.0066	126.646	7.693
215	7807	0.863	0.0061	142.608	6.832
216	7865	0.927	0.0063	147.980	7.408
217	7884	0.911	0.0070	130.835	8.195
218	7897	0.806	0.0076	106.010	7.267
219	7914	0.854	0.0064	134.511	7.148
220	7942	0.955	0.0052	182.686	6.499
221	7975	0.886	0.0061	146.114	6.575
222	8004	0.937	0.0056	165.935	7.242
223	8112	0.857	0.0060	143.444	7.161
224	8115	0.906	0.0065	139.695	7.699
225	8145	0.927	0.0064	146.141	7.312
226	8163	0.936	0.0060	156.859	7.078
227	8169	0.844	0.0066	128.299	6.591
228	8195	0.798	0.0078	102.578	8.173
229	8208	0.922	0.0066	140.165	7.513
230	8228	0.948	0.0054	175.635	6.792
231	8239	0.795	0.0087	91.156	9.305
232	8265	0.860	0.0061	142.126	7.512
233	8289	0.809	0.0087	93.381	9.337
234	8315	0.831	0.0070	118.880	6.572
235	8329	0.873	0.0056	154.823	6.769
236	8333	0.803	0.0076	105.202	8.044
237	8334	0.876	0.0055	158.440	6.439
238	8342	0.830	0.0073	113.774	8.396
239	8378	0.796	0.0078	101.440	7.836
240	8384	0.809	0.0077	105.449	7.058
241	8439	0.854	0.0062	137.645	7.283
242	8505	0.843	0.0065	129.856	6.989
243	8535	0.836	0.0066	127.247	7.389
244	8551	0.874	0.0056	156.707	6.656
245	8554	0.924	0.0064	144.285	7.512

246	8557	0.849	0.0063	135.572	7.220
247	8579	0.863	0.0062	138.936	7.538
248	8592	0.855	0.0061	140.941	6.832
249	8668	0.880	0.0053	165.345	6.739
250	8692	0.849	0.0067	127.234	6.202
251	8722	0.852	0.0063	135.290	6.899
252	8743	0.803	0.0083	97.190	8.994
253	8806	0.848	0.0062	137.153	7.279
254	8909	0.815	0.0073	112.412	7.364
255	8938	0.852	0.0061	139.557	7.356
256	8941	0.839	0.0073	114.308	5.990
257	8942	0.931	0.0062	151.409	7.268
258	8964	0.834	0.0069	121.374	8.007
259	8965	0.851	0.0062	137.151	7.099
260	9035	0.956	0.0051	189.078	6.524
261	9056	0.835	0.0068	123.239	7.705
262	9090	0.844	0.0066	128.874	6.723
263	9098	0.876	0.0058	151.330	7.215
264	9110	0.871	0.0056	156.737	7.020
265	9112	0.791	0.0081	98.292	7.482
266	9114	0.793	0.0081	97.625	8.648
267	9210	0.775	0.0088	88.531	8.353
268	9221	0.836	0.0070	119.585	6.342
269	9240	0.817	0.0084	97.432	9.169
270	9242	0.866	0.0061	143.094	7.274
271	9263	0.836	0.0067	125.294	7.344
272	9270	0.873	0.0059	146.795	7.358
273	9303	0.763	0.0093	81.849	7.249
274	9322	0.810	0.0074	108.841	7.317
275	9443	0.825	0.0071	116.448	6.906
276	9486	0.793	0.0083	95.028	8.937
277	9522	0.863	0.0061	141.851	7.379
278	9524	0.815	0.0080	101.945	8.882
279	9562	0.936	0.0058	162.447	7.134
280	9567	0.941	0.0057	166.212	6.993
281	9589	0.799	0.0088	90.661	9.400
282	9605	0.923	0.0065	142.954	7.539
283	9607	0.935	0.0060	156.343	7.091
284	9696	0.812	0.0074	109.232	7.622
285	9705	0.914	0.0044	205.800	6.372
286	9749	0.943	0.0056	168.562	6.896
287	9775	0.956	0.0051	188.402	6.527
288	9779	0.825	0.0069	118.977	7.776
289	9792	0.919	0.0073	126.765	7.389
290	9807	0.797	0.0084	95.344	9.018
291	9809	0.924	0.0062	149.347	7.772
292	9810	0.848	0.0064	132.774	7.247
293	9863	0.938	0.0060	155.738	6.893
294	9865	0.933	0.0060	155.504	7.205
295	9875	0.858	0.0061	140.839	6.601
296	9879	0.817	0.0081	100.777	8.976
297	9882	0.928	0.0062	149.704	7.372
298	9913	0.952	0.0049	193.175	6.878
299	9917	0.843	0.0070	119.766	6.171
300	9961	0.831	0.0069	121.204	7.686

OCR

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.719	0.0094	76.642	8.049
2	104	0.775	0.0091	84.933	8.636
3	120	0.753	0.0126	59.978	9.797
4	164	0.769	0.0101	76.032	9.361
5	242	0.764	0.0112	68.479	9.703
6	341	0.777	0.0092	84.782	8.553
7	401	0.758	0.0110	69.070	9.751
8	415	0.757	0.0126	59.899	10.199
9	503	0.765	0.0111	68.749	9.716
10	614	0.775	0.0096	80.529	8.810
11	621	0.756	0.0125	60.495	9.999

12	686	0.749	0.0138	54.258	10.320
13	754	0.747	0.0100	74.795	9.163
14	779	0.771	0.0101	75.976	9.359
15	862	0.754	0.0119	63.375	10.190
16	877	0.764	0.0113	67.812	9.778
17	916	0.771	0.0109	70.684	9.734
18	952	0.768	0.0115	66.797	9.998
19	1245	0.756	0.0128	59.091	10.258
20	1309	0.772	0.0090	85.588	8.676
21	1364	0.768	0.0102	75.235	9.378
22	1374	0.776	0.0092	84.894	8.858
23	1423	0.775	0.0093	83.564	8.695
24	1485	0.762	0.0121	62.968	10.111
25	1607	0.738	0.0089	82.500	8.270
26	1684	0.760	0.0121	62.991	10.002
27	1747	0.781	0.0100	77.986	9.225
28	1749	0.769	0.0113	68.077	9.694
29	1803	0.749	0.0136	55.045	10.336
30	1872	0.750	0.0127	59.161	9.697
31	1913	0.774	0.0094	82.853	8.939
32	2033	0.771	0.0106	72.930	9.574
33	2169	0.754	0.0131	57.718	10.275
34	2173	0.773	0.0092	84.181	8.817
35	2283	0.737	0.0099	74.739	8.261
36	2371	0.778	0.0096	80.715	9.100
37	2375	0.756	0.0103	73.476	9.222
38	2444	0.775	0.0124	62.632	10.209
39	2467	0.802	0.0091	87.747	8.220
40	2501	0.765	0.0102	74.665	8.552
41	2587	0.783	0.0107	72.910	9.597
42	2594	0.750	0.0092	81.145	8.781
43	2687	0.766	0.0110	69.582	9.700
44	2814	0.754	0.0086	87.245	7.925
45	2823	0.793	0.0123	64.387	9.669
46	3033	0.773	0.0090	86.314	8.607
47	3084	0.757	0.0087	87.452	8.280
48	3246	0.739	0.0092	80.311	8.394
49	3304	0.742	0.0148	50.130	10.309
50	3346	0.801	0.0105	76.628	9.280
51	3358	0.763	0.0113	67.314	9.806
52	3359	0.758	0.0102	74.473	9.312
53	3361	0.732	0.0097	75.234	8.838
54	3364	0.745	0.0142	52.567	10.196
55	3394	0.770	0.0104	74.188	9.486
56	3411	0.772	0.0108	71.631	8.704
57	3437	0.754	0.0106	71.283	9.428
58	3593	0.731	0.0094	78.213	8.459
59	3606	0.769	0.0090	85.279	8.638
60	3702	0.773	0.0102	75.942	9.392
61	3709	0.776	0.0109	71.117	9.438
62	3725	0.757	0.0127	59.444	10.239
63	3753	0.775	0.0104	74.931	9.478
64	3821	0.767	0.0092	83.227	8.858
65	3908	0.736	0.0123	60.080	10.178
66	3921	0.767	0.0093	82.556	8.786
67	3940	0.763	0.0082	92.613	7.931
68	3972	0.730	0.0098	74.535	8.877
69	4166	0.749	0.0087	86.215	8.332
70	4183	0.746	0.0100	74.397	8.115
71	4255	0.765	0.0088	87.296	8.581
72	4270	0.756	0.0124	60.906	9.954
73	4347	0.742	0.0087	85.781	8.192
74	4439	0.769	0.0113	68.165	9.901
75	4453	0.753	0.0125	60.412	9.840
76	4537	0.737	0.0101	73.122	9.017
77	4538	0.727	0.0105	69.564	8.793
78	4542	0.763	0.0111	68.813	9.600
79	4756	0.756	0.0120	63.055	9.872
80	4873	0.747	0.0092	81.106	8.035
81	4920	0.754	0.0089	84.822	8.495

82	4945	0.774	0.0105	73.590	9.566
83	4970	0.769	0.0100	77.118	9.230
84	5057	0.766	0.0114	67.516	9.854
85	5087	0.760	0.0120	63.311	9.948
86	5096	0.765	0.0118	64.645	10.072
87	5106	0.718	0.0107	67.325	9.110
88	5182	0.770	0.0105	73.520	9.503
89	5204	0.763	0.0113	67.397	9.741
90	5255	0.763	0.0098	77.858	9.200
91	5279	0.768	0.0091	84.436	8.030
92	5284	0.775	0.0101	76.962	9.345
93	5296	0.750	0.0134	55.889	10.090
94	5341	0.806	0.0093	86.284	8.676
95	5413	0.769	0.0084	91.619	8.349
96	5507	0.770	0.0111	69.514	9.757
97	5566	0.732	0.0090	81.146	8.376
98	5590	0.778	0.0107	72.650	9.638
99	5604	0.749	0.0089	84.617	8.307
100	5683	0.733	0.0086	84.918	8.122
101	5697	0.756	0.0124	60.794	10.038
102	5708	0.760	0.0114	66.417	9.661
103	5757	0.759	0.0085	89.658	7.911
104	5837	0.767	0.0107	71.743	9.518
105	5865	0.778	0.0110	70.768	9.777
106	5909	0.769	0.0109	70.614	9.678
107	5921	0.771	0.0086	90.196	8.440
108	5997	0.754	0.0126	59.918	9.966
109	6048	0.766	0.0092	83.584	7.175
110	6078	0.759	0.0116	65.359	10.133
111	6083	0.757	0.0093	81.193	8.399
112	6088	0.765	0.0087	88.469	8.521
113	6098	0.751	0.0094	79.977	8.642
114	6104	0.758	0.0118	64.348	9.698
115	6218	0.747	0.0080	93.698	7.806
116	6266	0.765	0.0121	63.124	10.251
117	6282	0.753	0.0103	73.039	9.200
118	6306	0.735	0.0100	73.853	8.949
119	6343	0.769	0.0086	89.805	8.193
120	6391	0.762	0.0077	98.506	7.844
121	6499	0.759	0.0086	88.464	7.963
122	6543	0.753	0.0093	81.229	8.319
123	6549	0.751	0.0136	55.321	10.327
124	6550	0.713	0.0106	66.965	8.010
125	6556	0.781	0.0089	87.766	8.188
126	6571	0.771	0.0107	72.204	9.352
127	6594	0.786	0.0104	75.454	9.294
128	6643	0.776	0.0110	70.354	9.815
129	6655	0.739	0.0097	76.165	8.857
130	6664	0.764	0.0103	74.037	9.104
131	6744	0.777	0.0092	84.261	8.897
132	6745	0.775	0.0093	83.274	8.928
133	6755	0.735	0.0153	48.101	10.781
134	6792	0.747	0.0099	75.506	8.446
135	6838	0.777	0.0104	74.868	9.491
136	6989	0.741	0.0102	72.777	9.250
137	6994	0.712	0.0109	65.076	9.143
138	7010	0.781	0.0094	83.431	8.961
139	7051	0.739	0.0097	76.545	8.145
140	7069	0.768	0.0101	76.242	9.289
141	7073	0.771	0.0117	65.947	10.141
142	7093	0.720	0.0097	74.513	8.131
143	7100	0.762	0.0087	87.550	8.512
144	7123	0.759	0.0099	76.654	9.226
145	7126	0.762	0.0091	84.202	8.733
146	7127	0.734	0.0097	75.321	8.332
147	7192	0.764	0.0092	82.878	8.783
148	7271	0.772	0.0107	72.011	9.643
149	7314	0.752	0.0113	66.600	9.749
150	7346	0.769	0.0107	71.613	9.607
151	7418	0.764	0.0116	66.100	9.964

152	7422	0.772	0.0109	71.131	9.744
153	7444	0.766	0.0106	72.433	9.454
154	7450	0.770	0.0102	75.823	9.290
155	7463	0.761	0.0097	78.642	8.860
156	7480	0.737	0.0081	90.666	7.423
157	7564	0.746	0.0094	79.244	8.791
158	7583	0.734	0.0092	79.755	8.413
159	7603	0.750	0.0086	87.064	8.208
160	7606	0.779	0.0091	85.788	8.665
161	7626	0.734	0.0093	78.591	8.336
162	7637	0.775	0.0090	86.132	8.576
163	7655	0.759	0.0125	60.940	10.180
164	7689	0.755	0.0109	69.131	9.643
165	7781	0.764	0.0103	74.382	9.165
166	7800	0.781	0.0106	73.603	9.535
167	7865	0.736	0.0087	84.515	8.193
168	7897	0.771	0.0108	71.626	9.658
169	7914	0.729	0.0091	80.566	8.339
170	8112	0.776	0.0094	83.008	8.851
171	8115	0.765	0.0088	87.352	8.582
172	8169	0.736	0.0089	82.721	8.272
173	8195	0.763	0.0119	64.265	10.012
174	8228	0.747	0.0084	88.654	8.281
175	8239	0.748	0.0140	53.382	10.508
176	8265	0.781	0.0093	84.110	8.860
177	8289	0.752	0.0133	56.775	10.278
178	8329	0.758	0.0089	84.996	8.644
179	8333	0.770	0.0117	66.033	10.111
180	8334	0.740	0.0100	74.097	8.002
181	8342	0.771	0.0108	71.188	9.731
182	8378	0.730	0.0116	62.903	9.913
183	8384	0.741	0.0097	76.503	8.418
184	8421	0.782	0.0132	60.223	10.208
185	8439	0.756	0.0091	83.407	8.686
186	8505	0.804	0.0095	84.648	8.788
187	8535	0.761	0.0091	83.325	8.721
188	8551	0.753	0.0076	98.572	7.723
189	8554	0.734	0.0093	78.713	8.171
190	8579	0.765	0.0089	85.988	8.672
191	8592	0.775	0.0091	84.907	8.343
192	8668	0.784	0.0087	89.700	8.537
193	8692	0.766	0.0105	72.809	8.253
194	8722	0.744	0.0092	81.182	8.178
195	8743	0.756	0.0123	61.574	9.977
196	8806	0.772	0.0097	79.837	8.880
197	8909	0.781	0.0101	77.194	9.330
198	8938	0.778	0.0092	84.604	8.879
199	8941	0.769	0.0090	85.494	8.700
200	8942	0.717	0.0097	73.854	7.878
201	8964	0.765	0.0109	70.043	9.575
202	8965	0.771	0.0084	91.921	8.308
203	9056	0.755	0.0098	77.306	8.929
204	9090	0.746	0.0086	86.371	8.286
205	9098	0.739	0.0090	82.556	8.456
206	9110	0.779	0.0085	91.444	8.470
207	9112	0.774	0.0113	68.657	9.918
208	9114	0.754	0.0131	57.611	10.252
209	9210	0.756	0.0118	64.045	10.186
210	9240	0.752	0.0127	59.107	10.073
211	9242	0.760	0.0082	92.831	8.066
212	9263	0.749	0.0096	78.487	8.956
213	9303	0.775	0.0107	72.434	9.663
214	9322	0.757	0.0096	79.116	8.927
215	9443	0.728	0.0097	75.282	8.280
216	9486	0.759	0.0129	59.098	10.447
217	9522	0.766	0.0096	79.590	9.082
218	9524	0.752	0.0134	55.943	10.348
219	9562	0.753	0.0077	97.905	7.619
220	9589	0.783	0.0145	53.962	10.720
221	9605	0.726	0.0090	80.711	8.170

222	9666	0.744	0.0094	79.438	8.244
223	9696	0.735	0.0099	74.077	9.000
224	9705	0.757	0.0097	78.441	8.042
225	9749	0.758	0.0074	102.038	7.444
226	9779	0.770	0.0100	77.440	9.253
227	9807	0.765	0.0132	58.023	10.202
228	9810	0.745	0.0085	88.169	8.241
229	9865	0.732	0.0087	84.648	7.917
230	9875	0.747	0.0085	88.216	7.824
231	9879	0.760	0.0113	67.121	9.583
232	9882	0.741	0.0094	78.854	7.872
233	9917	0.735	0.0103	71.139	8.271
234	9961	0.749	0.0106	70.962	9.053

BCS

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.894	0.0070	126.969	8.860
2	26	0.834	0.0084	111.468	9.640
3	104	0.927	0.0076	122.106	9.379
4	120	0.931	0.0093	100.412	10.453
5	164	0.947	0.0084	112.844	10.411
6	242	0.938	0.0085	111.081	10.366
7	336	0.853	0.0067	127.977	7.675
8	341	0.933	0.0078	119.655	9.663
9	401	0.955	0.0092	103.893	10.977
10	415	0.954	0.0097	98.390	11.135
11	503	0.943	0.0087	108.885	10.534
12	523	0.889	0.0070	126.161	8.803
13	614	0.938	0.0081	115.536	9.789
14	621	0.942	0.0092	102.705	10.696
15	659	0.900	0.0074	121.492	8.486
16	686	0.945	0.0102	93.102	11.032
17	754	0.947	0.0088	107.851	10.573
18	779	0.924	0.0077	119.866	9.615
19	829	0.867	0.0055	159.089	7.815
20	862	0.963	0.0095	101.323	11.252
21	877	0.945	0.0089	106.518	10.645
22	916	0.941	0.0083	113.766	10.218
23	952	0.955	0.0091	104.513	10.904
24	1225	0.883	0.0060	147.127	8.414
25	1245	0.956	0.0103	93.070	11.324
26	1309	0.935	0.0078	119.625	9.960
27	1364	0.951	0.0086	110.989	10.491
28	1374	0.925	0.0074	124.786	9.688
29	1423	0.934	0.0078	119.156	9.730
30	1484	0.881	0.0056	156.314	8.141
31	1485	0.953	0.0094	101.650	10.997
32	1607	0.920	0.0075	123.472	9.458
33	1684	0.960	0.0103	92.898	11.459
34	1747	0.940	0.0081	115.815	9.930
35	1749	0.949	0.0088	108.279	10.655
36	1803	0.951	0.0106	89.364	11.284
37	1872	0.924	0.0093	99.107	10.285
38	1913	0.929	0.0078	119.138	9.944
39	2007	0.901	0.0065	138.868	8.698
40	2033	0.943	0.0083	113.908	10.335
41	2169	0.957	0.0106	90.497	11.414
42	2173	0.918	0.0072	127.076	9.527
43	2283	0.933	0.0081	115.842	9.861
44	2371	0.932	0.0076	121.869	9.783
45	2375	0.953	0.0088	108.486	10.499
46	2386	0.893	0.0065	138.310	8.752
47	2390	0.891	0.0069	128.943	8.809
48	2444	0.952	0.0092	103.729	10.894
49	2467	0.928	0.0077	120.191	9.400
50	2501	0.938	0.0087	107.867	9.530
51	2587	0.937	0.0080	116.579	10.137
52	2594	0.932	0.0079	117.384	10.080
53	2687	0.957	0.0097	98.995	11.168

54	2814	0.907	0.0067	135.325	8.752
55	2823	0.935	0.0092	102.219	10.532
56	3033	0.928	0.0075	123.441	9.610
57	3084	0.926	0.0075	123.104	9.680
58	3246	0.911	0.0074	123.367	8.860
59	3304	0.946	0.0115	82.579	11.286
60	3329	0.862	0.0072	119.257	8.060
61	3346	0.929	0.0075	123.648	9.676
62	3358	0.941	0.0086	109.378	10.472
63	3359	0.939	0.0084	112.335	10.397
64	3361	0.937	0.0083	112.825	10.243
65	3364	0.943	0.0111	85.075	11.186
66	3394	0.934	0.0079	117.859	10.053
67	3411	0.949	0.0087	109.608	10.580
68	3437	0.945	0.0090	104.523	10.767
69	3593	0.922	0.0076	120.713	9.570
70	3606	0.904	0.0065	140.101	8.588
71	3702	0.942	0.0084	111.975	10.396
72	3709	0.955	0.0092	104.293	10.281
73	3725	0.954	0.0100	95.213	11.202
74	3753	0.949	0.0087	109.250	10.601
75	3782	0.852	0.0076	112.383	7.586
76	3821	0.933	0.0078	119.875	9.985
77	3908	0.954	0.0096	99.124	11.085
78	3921	0.937	0.0084	111.288	10.082
79	3923	0.915	0.0075	121.997	8.797
80	3940	0.910	0.0067	136.263	8.965
81	3972	0.933	0.0081	115.061	10.086
82	3997	0.915	0.0074	123.366	8.880
83	4166	0.910	0.0072	126.532	9.043
84	4183	0.924	0.0076	121.810	9.804
85	4255	0.919	0.0071	129.770	9.398
86	4256	0.876	0.0073	120.242	8.470
87	4270	0.943	0.0097	97.439	10.853
88	4278	0.884	0.0063	140.840	8.452
89	4284	0.870	0.0069	126.708	8.251
90	4347	0.910	0.0067	134.926	9.160
91	4384	0.885	0.0064	138.236	8.454
92	4385	0.868	0.0055	157.292	7.816
93	4439	0.947	0.0085	110.897	10.495
94	4453	0.932	0.0091	101.971	10.452
95	4537	0.944	0.0085	110.935	10.282
96	4538	0.943	0.0088	107.505	10.290
97	4542	0.940	0.0089	105.397	10.581
98	4653	0.855	0.0064	132.864	7.583
99	4756	0.939	0.0090	104.259	10.580
100	4818	0.937	0.0080	117.733	9.899
101	4834	0.873	0.0068	129.132	8.306
102	4873	0.912	0.0078	119.568	8.817
103	4920	0.923	0.0075	123.377	9.474
104	4937	0.885	0.0057	155.510	8.040
105	4945	0.949	0.0086	110.076	10.551
106	4970	0.923	0.0074	124.764	9.671
107	5057	0.952	0.0092	102.978	10.906
108	5066	0.941	0.0084	111.996	10.130
109	5087	0.945	0.0093	101.221	10.809
110	5096	0.950	0.0095	99.950	10.776
111	5106	0.941	0.0088	107.166	10.486
112	5113	0.909	0.0088	103.544	9.821
113	5182	0.947	0.0087	109.204	10.617
114	5204	0.945	0.0092	103.332	10.748
115	5255	0.932	0.0077	121.242	9.851
116	5279	0.923	0.0076	121.224	9.194
117	5284	0.940	0.0082	115.030	10.233
118	5296	0.937	0.0104	90.406	10.754
119	5341	0.912	0.0069	132.560	9.275
120	5413	0.918	0.0071	130.003	9.396
121	5417	0.872	0.0064	136.147	8.164
122	5438	0.913	0.0068	133.879	9.168
123	5507	0.864	0.0093	104.109	10.814

124	5525	0.876	0.0059	148.045	8.102
125	5563	0.880	0.0070	125.834	8.459
126	5566	0.914	0.0072	126.207	9.345
127	5573	0.910	0.0066	137.162	8.834
128	5590	0.950	0.0086	111.066	10.412
129	5604	0.918	0.0072	128.205	9.222
130	5656	0.885	0.0061	144.086	7.831
131	5683	0.897	0.0064	141.262	8.794
132	5697	0.946	0.0097	97.699	10.927
133	5708	0.934	0.0086	108.333	10.363
134	5757	0.891	0.0063	141.322	8.007
135	5837	0.941	0.0088	107.630	10.536
136	5865	0.954	0.0088	108.719	10.543
137	5909	0.945	0.0087	108.701	10.581
138	5921	0.908	0.0069	131.904	9.234
139	5997	0.939	0.0095	98.759	10.708
140	6048	0.905	0.0070	128.473	8.496
141	6063	0.874	0.0069	126.274	8.357
142	6078	0.962	0.0092	105.060	10.965
143	6083	0.919	0.0075	121.886	9.013
144	6088	0.924	0.0074	124.076	9.727
145	6098	0.915	0.0071	129.861	9.008
146	6104	0.933	0.0089	104.698	10.412
147	6218	0.904	0.0066	136.939	8.979
148	6266	0.960	0.0096	100.510	11.166
149	6282	0.935	0.0087	107.984	10.419
150	6306	0.940	0.0081	116.156	10.210
151	6332	0.959	0.0096	99.812	11.205
152	6343	0.919	0.0072	128.133	9.182
153	6391	0.904	0.0070	128.415	9.073
154	6499	0.916	0.0070	131.698	9.182
155	6543	0.895	0.0069	129.384	8.948
156	6549	0.948	0.0101	94.093	11.094
157	6550	0.865	0.0065	132.635	8.018
158	6556	0.917	0.0086	106.266	8.857
159	6557	0.938	0.0081	115.436	9.993
160	6571	0.921	0.0075	122.879	9.704
161	6594	0.947	0.0085	111.669	10.134
162	6635	0.886	0.0060	147.887	8.212
163	6643	0.957	0.0089	107.165	10.730
164	6655	0.918	0.0077	119.887	9.708
165	6664	0.920	0.0080	115.813	9.853
166	6737	0.910	0.0070	131.067	8.787
167	6744	0.934	0.0078	119.776	9.980
168	6745	0.924	0.0074	124.511	9.691
169	6755	0.951	0.0110	86.611	11.374
170	6761	0.938	0.0080	117.757	10.019
171	6792	0.931	0.0083	112.142	9.528
172	6838	0.942	0.0082	115.186	10.169
173	6971	0.895	0.0084	107.068	9.259
174	6989	0.933	0.0079	118.568	10.020
175	6994	0.928	0.0078	119.625	9.946
176	7044	0.907	0.0069	131.019	9.033
177	7049	0.872	0.0066	132.984	8.230
178	7051	0.923	0.0081	113.803	8.340
179	7069	0.949	0.0085	112.030	10.388
180	7073	0.959	0.0091	105.475	10.869
181	7093	0.887	0.0069	128.887	8.709
182	7100	0.921	0.0075	122.361	9.743
183	7123	0.947	0.0086	110.510	10.587
184	7126	0.929	0.0079	118.091	10.023
185	7127	0.915	0.0074	123.910	8.812
186	7192	0.908	0.0066	137.789	9.043
187	7198	0.866	0.0070	123.814	8.083
188	7271	0.943	0.0083	113.773	10.325
189	7314	0.951	0.0094	101.480	10.998
190	7418	0.951	0.0092	103.014	10.892
191	7422	0.947	0.0085	111.632	10.445
192	7444	0.936	0.0083	112.489	10.281
193	7450	0.932	0.0080	116.316	10.090

194	7463	0.928	0.0084	110.275	10.182
195	7480	0.874	0.0063	138.987	8.214
196	7564	0.927	0.0079	116.868	10.008
197	7583	0.929	0.0079	117.936	9.883
198	7603	0.916	0.0070	131.586	9.316
199	7606	0.907	0.0067	134.961	9.136
200	7626	0.917	0.0074	123.656	9.197
201	7637	0.925	0.0075	123.404	9.355
202	7656	0.956	0.0100	95.506	11.242
203	7689	0.951	0.0092	103.727	10.916
204	7791	0.925	0.0082	112.951	10.021
205	7784	0.871	0.0062	140.255	8.114
206	7800	0.952	0.0087	109.943	10.382
207	7807	0.902	0.0083	108.871	9.487
208	7865	0.898	0.0065	139.242	8.852
209	7897	0.947	0.0085	111.131	10.512
210	7914	0.917	0.0077	119.686	9.671
211	7942	0.841	0.0056	151.386	7.037
212	8004	0.890	0.0062	144.337	8.393
213	8112	0.927	0.0077	120.505	9.448
214	8115	0.913	0.0072	127.072	9.238
215	8145	0.872	0.0075	115.629	8.443
216	8153	0.872	0.0063	137.854	8.168
217	8185	0.957	0.0099	96.357	11.256
218	8208	0.885	0.0072	123.079	8.655
219	8228	0.889	0.0058	154.332	8.377
220	8239	0.951	0.0104	91.554	11.228
221	8265	0.922	0.0072	127.747	9.314
222	8289	0.950	0.0103	91.970	11.116
223	8329	0.916	0.0070	131.653	9.309
224	8333	0.959	0.0093	102.619	10.985
225	8334	0.914	0.0083	110.823	8.838
226	8342	0.946	0.0085	111.478	10.458
227	8378	0.964	0.0099	97.707	11.419
228	8384	0.947	0.0088	108.137	10.505
229	8421	0.936	0.0090	104.645	10.322
230	8439	0.922	0.0075	123.224	9.730
231	8505	0.939	0.0081	115.695	9.966
232	8535	0.924	0.0073	125.908	9.631
233	8551	0.899	0.0063	143.786	8.730
234	8554	0.884	0.0068	129.333	8.630
235	8579	0.924	0.0074	125.167	9.678
236	8592	0.923	0.0075	122.438	9.231
237	8668	0.892	0.0059	152.230	8.308
238	8692	0.926	0.0089	104.301	9.143
239	8722	0.926	0.0078	119.172	9.576
240	8743	0.945	0.0097	97.393	10.911
241	8806	0.928	0.0075	124.478	9.600
242	8909	0.944	0.0088	107.697	10.119
243	8938	0.920	0.0071	130.185	9.304
244	8941	0.927	0.0074	124.670	9.616
245	8942	0.879	0.0068	130.021	8.459
246	8964	0.942	0.0088	107.238	10.584
247	8965	0.926	0.0074	124.697	9.701
248	9056	0.930	0.0085	109.881	10.247
249	9090	0.920	0.0075	122.552	9.473
250	9098	0.912	0.0069	132.685	9.269
251	9110	0.920	0.0071	130.210	9.362
252	9112	0.968	0.0095	102.203	11.175
253	9114	0.954	0.0104	91.450	11.307
254	9210	0.958	0.0095	101.278	11.100
255	9221	0.924	0.0077	120.136	9.536
256	9240	0.958	0.0108	89.013	11.584
257	9242	0.921	0.0073	126.055	9.582
258	9263	0.930	0.0078	119.583	9.964
259	9270	0.927	0.0075	124.244	9.723
260	9303	0.953	0.0088	108.041	10.689
261	9322	0.931	0.0082	113.281	10.192
262	9443	0.920	0.0078	117.592	9.428
263	9486	0.957	0.0095	100.263	11.109

264	9522	0.933	0.0077	120.948	9.801
265	9524	0.952	0.0102	93.051	11.209
266	9562	0.889	0.0067	132.486	8.733
267	9589	0.954	0.0104	92.099	11.113
268	9605	0.891	0.0068	131.376	8.807
269	9607	0.894	0.0070	127.499	8.745
270	9653	0.876	0.0068	129.144	8.367
271	9666	0.916	0.0077	118.615	8.992
272	9696	0.940	0.0084	111.966	10.306
273	9698	0.906	0.0069	132.273	8.605
274	9705	0.914	0.0082	111.916	8.695
275	9749	0.890	0.0059	149.689	8.439
276	9775	0.854	0.0067	127.181	7.656
277	9779	0.933	0.0080	117.162	10.077
278	9807	0.946	0.0098	96.656	10.963
279	9809	0.853	0.0064	133.743	7.541
280	9810	0.914	0.0071	129.394	9.417
281	9865	0.891	0.0069	128.738	8.849
282	9875	0.907	0.0069	132.492	8.787
283	9879	0.925	0.0083	112.122	10.053
284	9882	0.909	0.0072	126.170	8.754
285	9913	0.887	0.0072	123.652	8.829
286	9917	0.927	0.0085	108.601	9.377
287	9961	0.926	0.0088	105.208	10.242

LSM

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	104	0.920	0.0032	288.438	8.524
2	120	0.918	0.0035	259.957	9.907
3	164	0.915	0.0033	276.471	9.365
4	242	0.914	0.0033	273.776	9.838
5	341	0.919	0.0033	281.747	8.620
6	401	0.911	0.0035	259.964	10.008
7	415	0.911	0.0035	262.828	9.910
8	503	0.910	0.0038	239.889	10.451
9	614	0.915	0.0035	262.796	9.035
10	621	0.916	0.0037	248.896	10.160
11	659	0.923	0.0028	335.599	8.409
12	686	0.907	0.0047	193.186	11.239
13	779	0.917	0.0031	295.897	9.409
14	862	0.907	0.0039	234.065	10.563
15	877	0.912	0.0036	251.318	10.240
16	916	0.910	0.0036	250.303	10.226
17	952	0.909	0.0037	245.524	10.321
18	1245	0.908	0.0041	219.502	10.824
19	1309	0.919	0.0031	298.690	8.886
20	1364	0.914	0.0034	269.327	9.244
21	1374	0.916	0.0032	289.790	9.454
22	1423	0.918	0.0033	281.288	8.784
23	1484	0.932	0.0022	427.292	7.931
24	1485	0.909	0.0040	229.765	10.666
25	1607	0.916	0.0029	312.045	8.710
26	1684	0.911	0.0037	244.651	10.349
27	1747	0.916	0.0035	264.399	9.124
28	1749	0.909	0.0037	245.512	10.333
29	1803	0.910	0.0042	214.544	10.794
30	1872	0.915	0.0041	223.460	10.362
31	1913	0.919	0.0031	301.219	9.309
32	1940	0.926	0.0027	347.693	7.936
33	2007	0.915	0.0038	241.222	10.300
34	2033	0.913	0.0034	270.664	9.768
35	2169	0.910	0.0041	221.084	10.762
36	2173	0.922	0.0027	337.915	8.850
37	2283	0.915	0.0032	285.970	8.645
38	2371	0.915	0.0033	281.089	9.532
39	2375	0.913	0.0035	257.719	8.889
40	2444	0.907	0.0042	214.334	10.986
41	2467	0.919	0.0033	279.015	8.539
42	2501	0.914	0.0038	241.793	8.936

43	2587	0.914	0.0033	275.041	9.752
44	2594	0.920	0.0028	327.237	8.557
45	2687	0.913	0.0038	243.769	10.327
46	2789	0.916	0.0032	287.932	8.425
47	2823	0.914	0.0038	238.809	10.334
48	3033	0.919	0.0031	298.927	8.746
49	3246	0.817	0.0031	293.329	8.371
50	3304	0.910	0.0049	184.851	11.175
51	3346	0.916	0.0032	289.814	9.404
52	3358	0.912	0.0036	256.523	10.142
53	3359	0.915	0.0032	283.207	9.614
54	3361	0.914	0.0031	295.991	8.988
55	3364	0.908	0.0048	190.289	11.101
56	3394	0.915	0.0033	281.749	9.669
57	3411	0.909	0.0037	243.516	10.360
58	3437	0.914	0.0032	284.699	9.605
59	3593	0.919	0.0029	313.644	8.289
60	3606	0.919	0.0029	315.787	9.011
61	3702	0.917	0.0031	297.874	9.252
62	3709	0.912	0.0040	230.433	9.148
63	3725	0.913	0.0036	255.862	10.147
64	3753	0.910	0.0037	247.522	10.277
65	3821	0.920	0.0031	300.728	9.017
66	3908	0.915	0.0033	280.053	9.700
67	3921	0.917	0.0032	289.444	9.056
68	3923	0.924	0.0034	274.979	7.873
69	3940	0.924	0.0027	340.672	8.200
70	3972	0.913	0.0032	288.116	9.232
71	3997	0.919	0.0030	307.477	8.201
72	4166	0.923	0.0027	345.646	8.466
73	4183	0.921	0.0027	339.705	8.589
74	4255	0.921	0.0028	328.710	8.634
75	4270	0.913	0.0037	243.968	10.302
76	4347	0.924	0.0026	352.418	8.562
77	4439	0.909	0.0037	243.233	10.377
78	4453	0.916	0.0036	251.330	10.055
79	4537	0.911	0.0034	271.825	9.099
80	4538	0.913	0.0034	266.533	8.760
81	4542	0.913	0.0037	250.230	10.231
82	4653	0.928	0.0039	236.122	9.352
83	4756	0.913	0.0037	244.627	10.287
84	4818	0.918	0.0033	277.220	9.072
85	4920	0.922	0.0028	335.432	8.550
86	4937	0.931	0.0026	354.015	8.251
87	4945	0.913	0.0034	267.235	9.765
88	4970	0.918	0.0030	302.879	9.234
89	5057	0.912	0.0035	258.534	10.095
90	5066	0.911	0.0034	268.831	9.180
91	5087	0.911	0.0037	247.206	10.303
92	5096	0.909	0.0040	228.480	10.683
93	5106	0.913	0.0033	277.674	9.180
94	5113	0.933	0.0019	497.171	7.284
95	5182	0.913	0.0034	269.190	8.893
96	5204	0.913	0.0035	263.707	10.012
97	5255	0.919	0.0030	302.503	8.789
98	5279	0.919	0.0033	282.699	8.263
99	5284	0.914	0.0033	276.768	9.653
100	5296	0.911	0.0044	206.126	10.851
101	5341	0.928	0.0027	340.169	8.368
102	5413	0.923	0.0028	335.680	8.426
103	5438	0.923	0.0027	338.052	8.475
104	5507	0.909	0.0039	232.302	9.889
105	5566	0.920	0.0027	335.649	8.287
106	5573	0.925	0.0027	341.018	8.543
107	5590	0.910	0.0036	250.119	10.006
108	5656	0.930	0.0028	334.870	7.017
109	5683	0.927	0.0024	384.784	8.079
110	5697	0.911	0.0040	228.165	10.599
111	5708	0.912	0.0038	238.158	10.387
112	5757	0.920	0.0029	314.535	8.134

113	5837	0.913	0.0035	258.136	10.111
114	5865	0.911	0.0038	242.718	10.036
115	5909	0.913	0.0034	266.122	9.943
116	5921	0.923	0.0027	336.849	8.954
117	5997	0.913	0.0041	225.302	10.563
118	6048	0.924	0.0031	303.287	7.870
119	6078	0.908	0.0038	237.468	10.250
120	6083	0.921	0.0032	285.372	8.321
121	6088	0.918	0.0029	315.559	8.989
122	6098	0.920	0.0030	303.499	8.582
123	6104	0.915	0.0036	255.779	10.058
124	6218	0.923	0.0026	358.847	8.342
125	6266	0.907	0.0039	230.335	10.667
126	6282	0.917	0.0032	284.204	9.631
127	6306	0.918	0.0031	298.713	8.844
128	6332	0.910	0.0036	252.717	10.106
129	6343	0.918	0.0030	301.925	8.249
130	6391	0.928	0.0024	381.243	7.867
131	6499	0.922	0.0028	324.835	8.445
132	6543	0.927	0.0026	353.169	8.553
133	6549	0.911	0.0041	223.494	10.641
134	6557	0.911	0.0034	269.008	9.094
135	6571	0.920	0.0031	296.878	9.435
136	6594	0.911	0.0037	249.222	9.715
137	6635	0.927	0.0024	383.100	8.193
138	6643	0.910	0.0039	231.925	10.458
139	6655	0.920	0.0027	344.746	8.506
140	6664	0.920	0.0031	301.375	9.367
141	6676	0.912	0.0040	228.308	9.203
142	6737	0.919	0.0030	307.232	8.482
143	6744	0.916	0.0031	292.171	9.485
144	6745	0.916	0.0031	298.658	9.177
145	6755	0.907	0.0049	186.718	11.358
146	6761	0.915	0.0031	292.432	8.683
147	6792	0.914	0.0035	262.845	8.497
148	6838	0.912	0.0035	261.686	9.843
149	6989	0.916	0.0032	284.417	9.572
150	6994	0.915	0.0031	300.521	8.955
151	7010	0.917	0.0031	294.835	9.212
152	7044	0.920	0.0027	341.861	8.254
153	7051	0.919	0.0033	282.683	7.914
154	7069	0.911	0.0035	259.371	9.092
155	7073	0.907	0.0039	232.212	10.515
156	7100	0.923	0.0026	350.699	8.539
157	7123	0.917	0.0032	288.043	9.067
158	7126	0.917	0.0029	311.883	9.039
159	7178	0.937	0.0020	467.220	7.520
160	7192	0.924	0.0026	356.634	8.430
161	7271	0.910	0.0037	248.436	10.205
162	7314	0.913	0.0035	260.363	10.035
163	7346	0.915	0.0033	277.002	9.739
164	7418	0.911	0.0037	244.932	10.357
165	7422	0.912	0.0035	261.100	9.911
166	7444	0.915	0.0034	270.406	9.896
167	7450	0.915	0.0033	275.231	9.816
168	7463	0.923	0.0028	332.629	8.959
169	7564	0.919	0.0028	328.048	8.890
170	7583	0.916	0.0030	309.220	8.623
171	7603	0.922	0.0027	336.600	8.556
172	7606	0.918	0.0032	286.836	9.588
173	7626	0.916	0.0030	302.008	8.606
174	7637	0.920	0.0032	290.811	8.455
175	7655	0.910	0.0039	231.951	10.598
176	7689	0.914	0.0034	272.309	9.813
177	7781	0.917	0.0033	281.706	9.671
178	7800	0.913	0.0035	257.900	9.395
179	7865	0.928	0.0024	378.915	8.445
180	7897	0.913	0.0034	265.315	9.839
181	7914	0.919	0.0027	339.254	8.507
182	8004	0.928	0.0024	389.451	7.890

183	8112	0.917	0.0032	286.454	9.040
184	8115	0.924	0.0027	341.586	8.674
185	8169	0.917	0.0028	325.437	8.615
186	8195	0.911	0.0037	249.429	10.277
187	8239	0.909	0.0043	210.710	10.913
188	8265	0.917	0.0032	286.137	9.262
189	8289	0.909	0.0041	222.441	10.725
190	8315	0.914	0.0033	278.938	8.741
191	8329	0.921	0.0028	326.590	8.815
192	8333	0.909	0.0037	242.990	10.118
193	8342	0.911	0.0035	257.595	10.031
194	8378	0.910	0.0034	267.549	9.673
195	8421	0.910	0.0041	224.087	10.745
196	8439	0.921	0.0028	334.565	8.754
197	8505	0.917	0.0034	271.183	9.342
198	8535	0.917	0.0031	293.915	9.500
199	8551	0.927	0.0025	375.453	8.180
200	8579	0.917	0.0029	318.452	8.732
201	8592	0.918	0.0032	286.345	8.767
202	8692	0.915	0.0040	228.254	8.690
203	8722	0.918	0.0031	293.439	8.148
204	8743	0.910	0.0041	224.176	10.658
205	8806	0.917	0.0033	275.373	8.965
206	8909	0.910	0.0036	254.556	9.493
207	8938	0.919	0.0030	309.868	9.055
208	8941	0.920	0.0030	310.766	8.646
209	8964	0.915	0.0034	273.271	9.849
210	8965	0.915	0.0031	298.407	9.178
211	9056	0.920	0.0030	308.233	9.257
212	9090	0.917	0.0029	312.402	8.514
213	9098	0.923	0.0027	348.143	8.621
214	9110	0.922	0.0027	342.362	8.722
215	9114	0.908	0.0044	208.631	10.995
216	9210	0.906	0.0040	224.712	10.798
217	9221	0.916	0.0031	299.322	8.582
218	9240	0.915	0.0041	225.640	10.521
219	9242	0.919	0.0028	324.785	8.795
220	9263	0.916	0.0030	304.625	9.169
221	9270	0.917	0.0029	313.874	8.610
222	9303	0.909	0.0037	247.265	10.209
223	9322	0.918	0.0031	301.361	9.342
224	9443	0.922	0.0028	332.008	8.893
225	9486	0.906	0.0042	216.568	10.972
226	9522	0.919	0.0031	298.503	8.706
227	9524	0.910	0.0041	221.804	10.706
228	9589	0.908	0.0046	198.115	11.287
229	9666	0.916	0.0032	286.592	8.419
230	9696	0.911	0.0032	282.216	9.274
231	9698	0.927	0.0029	315.130	8.115
232	9705	0.922	0.0033	284.018	8.156
233	9779	0.915	0.0033	281.229	9.700
234	9807	0.909	0.0042	215.774	10.832
235	9875	0.919	0.0028	324.304	8.400
236	9879	0.917	0.0034	271.524	9.816
237	9882	0.923	0.0030	310.616	7.985
238	9917	0.918	0.0036	252.481	7.941
239	9961	0.922	0.0029	314.783	9.118

FSM

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.927	0.0056	165.359	6.512
2	26	0.902	0.0068	133.282	7.536
3	104	0.904	0.0060	149.994	7.442
4	120	0.858	0.0071	120.663	7.981
5	164	0.865	0.0068	128.276	8.058
6	242	0.847	0.0074	114.466	8.416
7	341	0.919	0.0077	119.750	7.609
8	401	0.842	0.0079	106.846	8.958
9	415	0.821	0.0084	97.364	9.248

10	503	0.849	0.0073	116.108	8.536
11	614	0.895	0.0066	136.613	7.765
12	621	0.856	0.0071	120.729	8.345
13	686	0.804	0.0093	86.203	9.467
14	779	0.870	0.0066	131.478	8.146
15	862	0.826	0.0085	97.244	9.344
16	877	0.845	0.0077	110.273	8.858
17	916	0.857	0.0074	116.197	8.690
18	952	0.847	0.0076	112.005	8.789
19	1245	0.809	0.0089	91.022	9.410
20	1364	0.879	0.0073	120.199	8.283
21	1374	0.868	0.0066	130.723	8.134
22	1423	0.905	0.0062	147.144	7.465
23	1485	0.832	0.0080	103.688	8.964
24	1607	0.890	0.0065	136.850	7.616
25	1684	0.833	0.0080	104.542	9.014
26	1749	0.844	0.0079	106.785	9.009
27	1803	0.792	0.0100	78.153	9.360
28	1872	0.854	0.0074	114.907	8.157
29	1913	0.872	0.0067	130.063	8.182
30	2007	0.920	0.0102	90.475	8.270
31	2033	0.855	0.0078	109.983	8.580
32	2169	0.822	0.0085	97.156	9.343
33	2173	0.888	0.0059	151.518	7.555
34	2283	0.889	0.0063	141.501	7.493
35	2371	0.874	0.0065	134.912	8.040
36	2444	0.820	0.0085	96.421	9.293
37	2467	0.902	0.0066	136.555	7.438
38	2501	0.905	0.0073	123.850	7.808
39	2587	0.863	0.0069	124.923	8.299
40	2594	0.900	0.0053	169.916	7.066
41	2687	0.844	0.0075	112.831	8.632
42	2789	0.919	0.0068	135.610	7.158
43	2814	0.914	0.0056	163.899	6.712
44	2823	0.829	0.0081	102.731	8.992
45	3033	0.895	0.0063	143.113	7.650
46	3084	0.894	0.0078	114.608	8.019
47	3246	0.912	0.0062	147.666	7.177
48	3304	0.795	0.0097	82.174	9.633
49	3346	0.884	0.0062	142.497	7.891
50	3358	0.840	0.0077	109.179	8.837
51	3359	0.857	0.0072	118.075	8.438
52	3361	0.895	0.0068	131.304	7.625
53	3364	0.785	0.0099	79.199	9.985
54	3394	0.871	0.0067	129.672	8.208
55	3411	0.851	0.0077	109.961	8.874
56	3437	0.853	0.0072	117.910	8.289
57	3593	0.908	0.0063	144.941	7.210
58	3606	0.898	0.0058	155.046	7.498
59	3702	0.876	0.0063	139.360	7.868
60	3709	0.887	0.0073	120.817	8.154
61	3725	0.831	0.0081	103.243	9.049
62	3753	0.854	0.0077	110.413	8.849
63	3821	0.882	0.0063	140.860	7.332
64	3908	0.835	0.0079	105.915	8.953
65	3921	0.914	0.0073	125.767	7.771
66	3940	0.916	0.0058	158.240	7.097
67	3972	0.874	0.0070	123.996	8.056
68	3997	0.910	0.0071	129.071	7.395
69	4166	0.911	0.0062	147.088	7.097
70	4183	0.883	0.0062	141.967	7.696
71	4255	0.897	0.0056	159.036	7.231
72	4270	0.830	0.0081	102.755	8.767
73	4439	0.846	0.0081	105.055	9.069
74	4453	0.845	0.0076	111.594	8.297
75	4537	0.875	0.0069	126.595	8.106
76	4542	0.838	0.0077	108.168	8.778
77	4756	0.833	0.0080	104.676	8.971
78	4818	0.901	0.0055	164.068	7.373
79	4873	0.922	0.0075	122.493	7.282

80	4920	0.902	0.0060	151.148	7.358
81	4945	0.873	0.0065	133.468	8.091
82	4970	0.871	0.0065	133.366	7.884
83	5057	0.857	0.0075	113.719	8.731
84	5066	0.889	0.0069	128.577	7.802
85	5087	0.828	0.0082	101.354	9.103
86	5096	0.821	0.0084	97.565	9.196
87	5182	0.853	0.0072	119.245	8.453
88	5204	0.848	0.0073	115.485	8.447
89	5255	0.898	0.0059	152.428	7.441
90	5279	0.917	0.0062	146.874	7.066
91	5284	0.867	0.0077	113.126	8.656
92	5296	0.812	0.0088	92.265	9.364
93	5341	0.892	0.0062	144.583	7.401
94	5413	0.902	0.0060	150.810	7.201
95	5438	0.907	0.0060	151.944	7.103
96	5507	0.854	0.0087	98.663	9.114
97	5566	0.896	0.0061	146.452	7.351
98	5573	0.909	0.0055	166.706	7.295
99	5590	0.863	0.0075	115.922	8.627
100	5697	0.818	0.0087	94.652	8.957
101	5708	0.846	0.0075	113.546	8.476
102	5837	0.857	0.0071	119.972	8.497
103	5865	0.869	0.0080	108.269	8.739
104	5909	0.846	0.0074	114.420	8.512
105	5921	0.899	0.0055	164.288	7.316
106	5997	0.845	0.0075	113.305	8.523
107	6048	0.944	0.0057	167.069	6.461
108	6078	0.832	0.0081	102.218	9.080
109	6088	0.876	0.0065	134.708	7.856
110	6098	0.917	0.0057	161.171	6.834
111	6104	0.833	0.0080	104.186	8.717
112	6266	0.826	0.0085	97.479	9.396
113	6282	0.856	0.0071	120.908	8.194
114	6306	0.884	0.0065	135.436	7.866
115	6343	0.920	0.0060	153.969	7.144
116	6499	0.905	0.0057	158.866	7.275
117	6543	0.887	0.0062	143.917	7.112
118	6549	0.811	0.0089	91.279	9.220
119	6556	0.926	0.0073	126.510	7.096
120	6557	0.892	0.0077	116.666	7.991
121	6571	0.870	0.0065	134.232	7.913
122	6594	0.869	0.0069	126.483	8.305
123	6643	0.852	0.0076	112.862	8.772
124	6655	0.888	0.0061	146.900	7.208
125	6664	0.870	0.0065	134.176	7.771
126	6737	0.929	0.0073	127.434	7.305
127	6744	0.877	0.0064	137.832	7.839
128	6745	0.886	0.0059	149.780	7.555
129	6755	0.777	0.0102	75.895	10.312
130	6761	0.886	0.0061	145.775	7.368
131	6792	0.896	0.0065	138.444	7.535
132	6838	0.865	0.0071	122.340	8.437
133	6989	0.867	0.0068	126.788	8.288
134	6994	0.871	0.0067	129.512	8.094
135	7010	0.903	0.0063	142.926	7.716
136	7044	0.907	0.0061	149.122	7.212
137	7051	0.910	0.0061	149.580	7.134
138	7069	0.878	0.0085	103.166	8.538
139	7073	0.842	0.0080	105.498	9.062
140	7100	0.891	0.0059	151.886	7.224
141	7123	0.859	0.0070	122.594	8.183
142	7126	0.882	0.0062	142.734	7.564
143	7192	0.912	0.0052	176.337	6.952
144	7271	0.845	0.0074	113.570	8.557
145	7314	0.840	0.0077	108.903	8.493
146	7346	0.857	0.0073	117.721	8.591
147	7418	0.836	0.0079	106.544	8.942
148	7422	0.866	0.0069	126.221	8.312
149	7444	0.854	0.0071	119.673	8.455

150	7450	0.858	0.0070	123.487	8.263
151	7463	0.869	0.0066	132.174	7.927
152	7564	0.875	0.0064	135.790	7.706
153	7583	0.885	0.0064	137.354	7.621
154	7603	0.889	0.0066	134.214	7.671
155	7606	0.908	0.0057	159.254	7.417
156	7637	0.912	0.0061	149.811	7.326
157	7655	0.823	0.0085	97.214	9.347
158	7689	0.850	0.0074	115.715	8.205
159	7791	0.860	0.0076	112.972	7.620
160	7800	0.869	0.0067	130.571	8.164
161	7807	0.900	0.0061	148.242	7.202
162	7897	0.874	0.0074	118.332	8.461
163	7914	0.883	0.0067	131.789	7.503
164	8112	0.898	0.0057	157.142	7.516
165	8169	0.901	0.0062	145.698	7.412
166	8195	0.840	0.0080	105.530	9.054
167	8239	0.803	0.0092	87.755	9.582
168	8265	0.886	0.0081	145.393	7.714
169	8289	0.816	0.0087	93.504	9.201
170	8329	0.910	0.0055	164.235	7.319
171	8333	0.851	0.0080	106.983	8.962
172	8334	0.920	0.0058	160.046	6.946
173	8342	0.853	0.0072	118.413	8.437
174	8378	0.844	0.0079	106.547	8.819
175	8384	0.877	0.0075	116.344	8.172
176	8421	0.821	0.0088	93.632	9.607
177	8439	0.885	0.0062	143.811	7.619
178	8505	0.895	0.0063	141.440	7.826
179	8535	0.879	0.0066	132.508	8.092
180	8551	0.912	0.0054	169.753	7.033
181	8579	0.884	0.0061	145.354	7.512
182	8592	0.900	0.0059	152.876	7.424
183	8668	0.917	0.0051	178.689	7.061
184	8692	0.936	0.0064	145.465	7.123
185	8722	0.899	0.0061	146.787	7.330
186	8743	0.815	0.0087	94.179	9.317
187	8806	0.887	0.0061	145.368	7.772
188	8909	0.873	0.0071	122.816	8.372
189	8938	0.886	0.0061	146.049	7.744
190	8941	0.921	0.0061	150.635	7.178
191	8964	0.859	0.0070	123.637	8.329
192	9056	0.865	0.0068	126.488	8.154
193	9090	0.895	0.0064	140.343	7.470
194	9098	0.894	0.0059	151.076	7.327
195	9110	0.906	0.0055	164.535	7.277
196	9112	0.858	0.0083	103.640	8.727
197	9114	0.827	0.0083	100.128	9.234
198	9210	0.820	0.0085	96.955	9.266
199	9221	0.905	0.0066	136.631	7.414
200	9240	0.819	0.0086	95.737	9.059
201	9242	0.890	0.0059	150.141	7.349
202	9270	0.889	0.0061	146.657	7.426
203	9303	0.856	0.0082	104.979	8.980
204	9322	0.871	0.0073	119.966	8.373
205	9443	0.902	0.0064	140.016	7.767
206	9486	0.814	0.0087	93.096	9.484
207	9522	0.883	0.0062	142.589	7.471
208	9524	0.823	0.0083	98.692	9.184
209	9589	0.810	0.0091	89.398	9.742
210	9666	0.925	0.0065	142.670	7.133
211	9696	0.855	0.0075	114.277	8.417
212	9705	0.928	0.0059	158.214	6.729
213	9779	0.869	0.0068	127.683	8.304
214	9807	0.814	0.0087	93.507	9.384
215	9810	0.888	0.0059	150.456	7.609
216	9875	0.905	0.0059	153.170	7.191
217	9879	0.824	0.0083	99.248	8.991
218	9917	0.911	0.0066	137.192	7.189
219	9961	0.867	0.0067	128.872	8.173

Manual Parcels

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	26	0.491	0.0096	51.124	4.830
2	104	0.140	0.0129	10.912	6.318
3	120	0.614	0.0077	80.124	4.623
4	336	0.516	0.0086	59.840	4.838
5	341	0.413	0.0095	43.653	5.242
6	523	0.620	0.0090	68.737	4.331
7	614	0.354	0.0101	35.081	5.469
8	621	0.192	0.0122	15.720	6.138
9	659	0.814	0.0085	96.041	3.649
10	686	0.376	0.0106	35.594	5.591
11	754	0.452	0.0108	41.928	4.856
12	779	0.496	0.0086	57.477	5.037
13	916	0.879	0.0077	114.101	3.714
14	952	0.489	0.0087	56.196	5.065
15	1245	0.441	0.0092	47.791	5.254
16	1309	0.352	0.0101	34.736	5.486
17	1374	0.666	0.0082	81.446	4.572
18	1423	0.764	0.0074	102.622	3.958
19	1484	0.646	0.0081	79.884	4.322
20	1485	0.773	0.0074	105.008	4.124
21	1607	0.434	0.0099	43.647	5.066
22	1684	0.341	0.0105	32.561	5.648
23	1749	0.282	0.0113	25.032	5.880
24	1803	0.669	0.0083	81.053	4.540
25	1872	0.267	0.0115	23.225	5.940
26	1913	0.401	0.0097	41.268	5.413
27	1940	0.696	0.0076	91.834	4.332
28	2033	0.522	0.0088	59.132	4.759
29	2169	0.708	0.0088	80.596	4.329
30	2173	0.797	0.0070	114.616	3.956
31	2283	0.683	0.0090	75.907	4.084
32	2371	0.579	0.0079	73.208	4.713
33	2386	0.331	0.0104	31.768	5.524
34	2444	0.633	0.0075	83.929	4.556
35	2454	0.797	0.0080	99.429	3.971
36	2467	0.459	0.0106	43.362	4.852
37	2501	0.296	0.0108	27.541	5.699
38	2587	0.416	0.0107	38.795	5.533
39	2687	0.351	0.0111	31.674	5.733
40	2696	0.922	0.0096	95.643	3.176
41	2752	0.587	0.0082	71.774	4.607
42	2789	0.623	0.0090	69.030	4.321
43	2814	0.552	0.0084	65.557	4.694
44	2823	0.712	0.0074	96.207	4.139
45	3033	0.746	0.0099	75.240	3.771
46	3084	0.332	0.0105	31.682	5.511
47	3304	0.303	0.0125	24.319	5.985
48	3346	0.515	0.0085	60.931	4.964
49	3364	0.330	0.0116	28.574	5.836
50	3394	0.667	0.0079	84.156	4.539
51	3411	0.535	0.0084	63.682	4.801
52	3437	0.373	0.0105	35.389	5.597
53	3495	0.654	0.0081	81.067	4.291
54	3547	0.823	0.0080	102.493	3.867
55	3579	0.934	0.0084	111.103	3.428
56	3594	0.666	0.0084	79.731	4.485
57	3606	0.871	0.0074	118.238	3.583
58	3702	0.480	0.0088	54.541	5.101
59	3709	0.477	0.0090	52.865	5.149
60	3725	0.186	0.0131	14.130	6.331
61	3753	0.369	0.0106	34.808	5.632
62	3782	0.885	0.0076	116.814	3.506
63	3821	0.338	0.0103	32.893	5.539
64	3908	0.569	0.0080	71.335	4.751
65	3923	0.665	0.0080	82.811	4.249
66	3940	0.723	0.0081	89.622	4.017

67	3972	0.441	0.0102	43.234	4.986
68	3997	0.541	0.0085	63.622	4.725
69	4183	0.368	0.0099	37.019	5.407
70	4255	0.563	0.0083	68.023	4.659
71	4256	0.329	0.0112	29.500	5.404
72	4270	0.148	0.0133	11.173	6.408
73	4284	0.670	0.0080	83.428	4.231
74	4347	0.668	0.0081	82.430	4.472
75	4384	0.587	0.0082	71.309	4.557
76	4385	0.784	0.0082	95.172	3.777
77	4439	0.240	0.0120	20.035	5.764
78	4483	0.454	0.0092	49.139	5.040
79	4653	0.859	0.0071	121.460	3.834
80	4756	0.344	0.0104	32.933	5.638
81	4834	0.297	0.0108	27.441	5.659
82	4873	0.483	0.0093	62.216	4.939
83	4945	0.682	0.0080	85.568	4.525
84	4970	0.213	0.0123	17.370	6.152
85	5057	0.230	0.0121	19.053	6.088
86	5066	0.349	0.0111	31.599	5.315
87	5087	0.377	0.0100	37.640	5.508
88	5096	0.594	0.0078	76.199	4.653
89	5201	0.749	0.0085	88.300	3.871
90	5204	0.568	0.0081	69.878	4.691
91	5284	0.332	0.0104	31.841	5.618
92	5296	0.354	0.0103	34.301	5.599
93	5413	0.557	0.0084	66.452	4.672
94	5417	0.467	0.0093	50.238	4.966
95	5438	0.473	0.0089	52.847	5.009
96	5525	0.525	0.0087	60.098	4.758
97	5563	0.887	0.0088	100.607	3.376
98	5566	0.538	0.0093	57.932	4.656
99	5573	0.477	0.0093	51.434	5.188
100	5590	0.745	0.0103	72.256	3.745
101	5604	0.372	0.0100	37.269	5.357
102	5656	0.528	0.0086	61.737	4.787
103	5683	0.733	0.0082	89.717	3.965
104	5697	0.120	0.0143	8.417	6.605
105	5708	0.549	0.0081	67.376	4.831
106	5837	0.582	0.0091	61.613	4.961
107	5865	0.778	0.0072	107.873	3.928
108	5909	0.559	0.0091	61.399	4.973
109	5921	0.596	0.0103	58.063	4.310
110	5997	0.098	0.0141	6.956	6.607
111	6048	0.617	0.0081	75.823	4.435
112	6063	0.799	0.0083	96.486	3.723
113	6088	0.501	0.0087	57.394	4.893
114	6098	0.839	0.0102	81.979	3.419
115	6104	0.088	0.0142	6.195	6.646
116	6218	0.547	0.0087	63.244	4.669
117	6266	0.166	0.0130	12.751	6.339
118	6343	0.756	0.0076	100.180	4.111
119	6499	0.654	0.0081	81.320	4.292
120	6543	0.501	0.0087	57.402	4.897
121	6549	0.552	0.0089	61.810	4.988
122	6550	0.490	0.0088	55.586	4.937
123	6551	0.809	0.0074	109.277	3.812
124	6556	0.641	0.0084	76.112	4.583
125	6557	0.620	0.0081	76.685	4.452
126	6571	0.626	0.0076	82.494	4.527
127	6594	0.634	0.0075	83.972	4.497
128	6643	0.361	0.0102	35.281	5.576
129	6664	0.484	0.0088	55.269	5.085
130	6676	0.548	0.0086	63.845	4.677
131	6737	0.683	0.0075	91.656	4.299
132	6744	0.791	0.0075	104.999	3.843
133	6755	0.154	0.0141	10.888	6.515
134	6761	0.670	0.0081	83.023	4.225
135	6763	0.444	0.0092	48.491	5.135
136	6792	0.231	0.0120	19.230	5.866

137	6838	0.517	0.0097	53.332	5.136
138	6971	0.432	0.0109	39.727	4.936
139	6989	0.495	0.0104	47.424	4.709
140	6994	0.441	0.0092	47.781	5.131
141	7010	0.467	0.0090	51.929	5.027
142	7044	0.409	0.0101	40.413	5.162
143	7049	0.695	0.0093	75.113	4.017
144	7051	0.471	0.0097	48.695	4.921
145	7069	0.773	0.0078	99.198	3.850
146	7093	0.491	0.0095	51.918	4.849
147	7097	0.529	0.0084	62.830	4.970
148	7100	0.394	0.0097	40.770	5.318
149	7126	0.340	0.0103	33.165	5.528
150	7127	0.708	0.0088	80.760	4.005
151	7192	0.510	0.0086	59.530	4.895
152	7198	0.804	0.0089	90.268	3.636
153	7271	-0.154	0.0182	-8.457	7.598
154	7314	0.264	0.0112	23.641	5.830
155	7418	0.659	0.0077	85.250	4.546
156	7422	0.384	0.0114	33.741	5.680
157	7444	0.325	0.0107	30.425	5.711
158	7450	0.775	0.0082	94.690	3.818
159	7480	0.584	0.0080	73.051	4.717
160	7512	0.467	0.0091	51.189	4.986
161	7564	0.372	0.0100	37.220	5.358
162	7583	0.606	0.0091	66.877	4.389
163	7603	0.574	0.0082	70.297	4.782
164	7606	0.839	0.0073	114.886	3.866
165	7626	0.590	0.0091	64.833	4.452
166	7637	0.415	0.0095	43.894	5.232
167	7655	0.267	0.0115	23.228	5.940
168	7689	0.165	0.0125	13.154	6.222
169	7781	0.364	0.0102	35.694	5.560
170	7794	0.833	0.0113	73.719	3.368
171	7800	0.292	0.0112	26.129	5.844
172	7884	0.663	0.0082	81.289	4.494
173	7914	0.349	0.0107	32.705	5.398
174	7942	0.735	0.0084	87.705	3.933
175	8004	0.571	0.0080	71.286	4.740
176	8112	0.511	0.0087	58.943	4.855
177	8115	0.388	0.0097	39.858	5.343
178	8145	0.538	0.0086	62.773	4.730
179	8153	0.381	0.0099	38.554	5.331
180	8208	0.565	0.0084	67.538	4.634
181	8303	0.807	0.0080	100.724	3.929
182	8315	0.263	0.0120	21.973	5.624
183	8329	0.879	0.0101	86.934	3.291
184	8333	0.469	0.0102	46.134	5.331
185	8342	0.309	0.0109	28.324	5.775
186	8421	0.422	0.0099	42.645	5.424
187	8439	0.666	0.0082	81.626	4.223
188	8505	0.755	0.0074	102.233	4.096
189	8535	0.416	0.0110	37.771	5.486
190	8551	0.744	0.0074	100.537	4.045
191	8554	0.828	0.0110	75.552	3.409
192	8557	0.581	0.0083	70.397	4.580
193	8579	0.437	0.0093	47.212	5.146
194	8592	0.522	0.0086	60.816	4.809
195	8668	0.940	0.0078	120.215	3.361
196	8692	0.704	0.0080	87.620	4.098
197	8743	0.489	0.0101	48.530	5.304
198	8806	0.753	0.0071	106.007	4.157
199	8938	0.423	0.0095	44.756	5.327
200	8942	0.524	0.0087	60.459	4.782
201	8964	0.335	0.0106	31.725	5.673
202	8965	0.448	0.0092	48.860	5.104
203	9035	0.815	0.0074	109.904	3.785
204	9056	0.307	0.0117	26.233	5.883
205	9090	0.407	0.0103	39.681	5.151
206	9098	0.632	0.0081	78.018	4.376

207	9110	0.711	0.0073	98.166	4.190
208	9114	0.508	0.0092	55.364	5.135
209	9210	0.395	0.0112	35.405	5.618
210	9221	0.489	0.0097	50.452	4.828
211	9240	0.464	0.0090	51.747	5.163
212	9242	0.542	0.0102	53.038	4.536
213	9263	0.635	0.0083	76.178	4.326
214	9270	0.466	0.0090	51.793	5.031
215	9303	0.396	0.0098	40.447	5.434
216	9486	0.085	0.0143	5.932	6.659
217	9522	0.793	0.0107	73.883	3.546
218	9524	0.069	0.0145	4.776	6.720
219	9567	1.001	0.0092	108.514	2.953
220	9589	0.158	0.0131	12.081	6.368
221	9605	0.785	0.0083	94.976	3.771
222	9607	0.482	0.0090	53.501	4.927
223	9653	0.393	0.0104	37.935	5.205
224	9666	0.582	0.0093	62.563	4.460
225	9698	0.376	0.0099	37.864	5.345
226	9749	0.911	0.0090	100.841	3.276
227	9775	0.529	0.0085	61.984	4.786
228	9779	0.323	0.0107	30.109	5.720
229	9807	0.250	0.0121	20.636	6.071
230	9809	0.798	0.0072	111.482	4.012
231	9810	0.035	0.0144	2.429	6.672
232	9863	0.417	0.0100	41.901	5.146
233	9875	0.750	0.0105	71.388	3.716
234	9882	0.714	0.0076	94.633	4.129

Manual Priority

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	82	0.460	0.0089	51.772	6.178
2	120	0.461	0.0089	52.082	6.197
3	164	0.577	0.0080	72.062	5.628
4	242	0.407	0.0095	42.841	6.459
5	336	0.901	0.0081	111.611	4.166
6	341	0.774	0.0071	109.159	4.686
7	401	0.222	0.0118	18.851	7.321
8	415	0.291	0.0109	26.635	7.010
9	523	1.007	0.0083	121.208	3.667
10	621	0.449	0.0090	49.910	6.256
11	686	0.136	0.0131	10.399	7.753
12	764	0.218	0.0122	17.878	7.393
13	779	0.705	0.0068	104.116	5.033
14	877	0.444	0.0092	48.311	6.262
15	916	0.397	0.0106	37.441	6.570
16	952	0.359	0.0101	35.705	6.685
17	1245	0.367	0.0113	32.590	6.691
18	1309	0.659	0.0075	88.203	5.237
19	1364	0.465	0.0090	51.836	6.161
20	1374	0.678	0.0071	96.000	5.208
21	1423	0.973	0.0080	122.300	3.815
22	1485	0.306	0.0107	28.509	6.939
23	1607	0.682	0.0082	83.661	5.218
24	1684	0.319	0.0106	30.172	6.877
25	1749	0.380	0.0098	38.786	6.584
26	1803	0.242	0.0116	20.923	7.243
27	1872	0.569	0.0078	73.125	5.677
28	1913	0.792	0.0065	122.693	4.617
29	2007	0.385	0.0098	39.505	6.562
30	2033	0.499	0.0085	58.753	5.999
31	2169	0.359	0.0104	34.379	6.715
32	2283	0.731	0.0080	91.824	4.985
33	2371	0.784	0.0065	121.130	4.655
34	2375	0.421	0.0095	44.409	6.440
35	2386	1.006	0.0079	126.990	3.807
36	2444	0.519	0.0083	62.912	5.925
37	2467	0.458	0.0091	50.501	6.199
38	2501	0.581	0.0079	73.709	5.610

39	2587	0.447	0.0090	49.467	6.268
40	2687	0.625	0.0073	85.714	5.416
41	2789	0.878	0.0082	119.878	3.805
42	2823	0.235	0.0119	19.819	7.279
43	3033	0.971	0.0087	111.203	3.823
44	3304	0.260	0.0117	22.293	7.149
45	3346	0.474	0.0087	54.249	6.140
46	3358	0.379	0.0098	38.629	6.589
47	3359	0.428	0.0101	42.256	6.430
48	3364	0.070	0.0140	5.012	8.066
49	3394	0.483	0.0089	54.318	6.086
50	3411	0.507	0.0086	58.863	5.966
51	3437	0.460	0.0090	50.955	6.186
52	3495	0.954	0.0068	139.372	3.953
53	3606	0.917	0.0065	140.523	4.020
54	3702	0.739	0.0068	108.304	4.854
55	3709	0.511	0.0086	59.764	5.944
56	3725	0.393	0.0097	40.661	6.525
57	3753	0.562	0.0080	69.909	5.704
58	3821	0.544	0.0083	65.891	5.786
59	3908	0.490	0.0086	57.277	6.062
60	3921	0.576	0.0080	72.097	5.630
61	3923	1.107	0.0087	127.350	3.128
62	3940	0.853	0.0071	119.725	4.312
63	3972	0.586	0.0087	67.159	5.676
64	3997	0.778	0.0071	108.958	4.671
65	4166	0.674	0.0074	91.089	5.163
66	4255	0.964	0.0080	121.204	3.866
67	4256	0.863	0.0085	101.801	4.336
68	4270	0.517	0.0087	59.726	5.937
69	4347	0.952	0.0075	127.672	3.837
70	4385	1.158	0.0096	120.225	2.942
71	4439	0.482	0.0086	55.905	6.097
72	4453	0.450	0.0092	48.908	6.188
73	4537	0.746	0.0079	94.348	4.910
74	4542	0.568	0.0081	70.151	5.662
75	4756	0.254	0.0113	22.439	7.164
76	4818	0.804	0.0069	117.156	4.493
77	4834	0.855	0.0073	116.908	4.328
78	4873	0.916	0.0079	115.603	4.102
79	4920	0.761	0.0076	100.281	4.818
80	4970	0.431	0.0099	43.452	6.402
81	5057	0.467	0.0088	53.119	6.170
82	5087	0.323	0.0105	30.637	6.860
83	5096	0.381	0.0098	39.035	6.564
84	5106	0.411	0.0108	38.222	6.485
85	5182	0.521	0.0083	62.869	5.913
86	5284	0.684	0.0069	99.531	5.134
87	5296	0.129	0.0135	8.560	7.745
88	5417	1.071	0.0101	106.204	3.331
89	5438	0.939	0.0082	114.665	3.983
90	5507	0.543	0.0083	65.682	5.791
91	5566	0.902	0.0086	105.272	4.151
92	5590	0.848	0.0063	134.546	4.342
93	5604	0.764	0.0074	102.378	4.815
94	5697	0.379	0.0099	38.256	6.593
95	5708	0.462	0.0094	49.195	6.239
96	5757	0.631	0.0087	72.630	5.452
97	5837	0.590	0.0076	77.824	5.584
98	5865	0.514	0.0083	61.909	5.947
99	5909	0.395	0.0096	41.079	6.492
100	5921	0.838	0.0064	131.596	4.386
101	5997	0.429	0.0092	46.537	6.351
102	6088	0.488	0.0098	49.989	6.131
103	6098	1.007	0.0079	128.029	3.587
104	6104	0.382	0.0098	39.015	6.577
105	6218	0.964	0.0077	125.236	3.813
106	6266	0.441	0.0091	48.453	6.296
107	6282	0.408	0.0096	42.667	6.433
108	6499	0.959	0.0068	141.805	3.789

109	6549	0.305	0.0108	28.296	6.947
110	6557	0.767	0.0078	87.548	4.812
111	6571	0.495	0.0085	58.246	6.037
112	6594	0.626	0.0075	83.959	5.389
113	6643	0.493	0.0101	48.767	6.091
114	6655	0.576	0.0086	66.821	5.712
115	6664	0.653	0.0071	92.091	5.283
116	6676	0.483	0.0093	49.572	6.220
117	6737	0.866	0.0075	115.274	4.310
118	6744	0.574	0.0078	73.224	6.634
119	6745	0.608	0.0083	73.435	5.547
120	6755	0.324	0.0107	30.346	6.851
121	6761	0.726	0.0072	100.864	4.917
122	6763	0.264	0.0113	23.336	7.129
123	6989	0.576	0.0077	74.827	5.649
124	7044	1.062	0.0087	122.730	3.403
125	7049	1.006	0.0085	118.287	3.668
126	7051	0.888	0.0090	98.300	4.205
127	7093	0.885	0.0079	112.727	4.249
128	7097	1.007	0.0080	126.535	3.613
129	7100	0.634	0.0076	83.261	5.357
130	7126	0.652	0.0075	86.706	5.271
131	7271	0.180	0.0124	14.465	7.542
132	7314	0.521	0.0085	61.692	5.894
133	7346	0.438	0.0096	45.746	6.301
134	7418	0.423	0.0099	42.931	6.423
135	7422	0.351	0.0109	32.241	6.795
136	7444	0.367	0.0100	36.853	6.647
137	7450	0.493	0.0085	57.900	6.046
138	7463	0.655	0.0074	88.442	5.249
139	7480	0.739	0.0075	98.329	4.903
140	7564	0.748	0.0074	101.328	4.845
141	7583	0.506	0.0094	53.902	6.060
142	7603	0.615	0.0080	77.316	5.477
143	7655	0.228	0.0118	19.363	7.312
144	7689	0.481	0.0088	54.619	6.083
145	7791	0.712	0.0067	105.563	5.003
146	7897	0.257	0.0114	22.604	7.172
147	7914	0.750	0.0079	94.895	4.894
148	8112	0.840	0.0071	118.242	4.372
149	8153	0.924	0.0076	122.243	4.013
150	8169	0.963	0.0081	119.021	3.877
151	8195	0.364	0.0100	36.331	6.664
152	8239	0.079	0.0142	5.600	8.016
153	8289	0.220	0.0119	18.537	7.349
154	8315	0.645	0.0084	77.246	5.396
155	8333	0.404	0.0096	41.851	6.476
156	8334	0.775	0.0073	106.341	4.709
157	8342	0.482	0.0086	55.840	6.099
158	8378	0.343	0.0107	31.933	6.806
159	8421	0.162	0.0131	12.383	7.594
160	8535	0.790	0.0068	115.372	4.605
161	8554	0.698	0.0089	78.766	5.119
162	8579	0.541	0.0083	65.241	5.801
163	8722	0.880	0.0081	108.349	4.264
164	8743	0.218	0.0121	18.011	7.362
165	8806	0.545	0.0080	68.172	5.799
166	8909	0.825	0.0065	127.127	4.454
167	8941	0.813	0.0078	104.215	4.592
168	8942	0.857	0.0074	116.094	4.331
169	8964	0.623	0.0073	85.255	5.425
170	8965	0.706	0.0068	103.500	5.013
171	9056	0.678	0.0074	91.867	5.144
172	9090	0.856	0.0080	107.148	4.380
173	9098	0.813	0.0090	90.329	4.561
174	9110	0.847	0.0064	132.181	4.354
175	9114	0.412	0.0094	43.694	6.434
176	9210	0.170	0.0126	13.499	7.590
177	9221	0.827	0.0080	103.667	4.522
178	9240	0.289	0.0113	25.623	7.008

179	9242	0.858	0.0073	118.402	4.317
180	9263	0.732	0.0074	99.017	4.915
181	9270	0.834	0.0071	117.490	4.401
182	9303	0.315	0.0106	29.586	6.899
183	9486	0.334	0.0104	32.219	6.803
184	9522	0.650	0.0075	86.268	5.282
185	9524	0.121	0.0133	9.129	7.823
186	9562	0.911	0.0085	107.255	4.109
187	9589	0.016	0.0148	1.117	8.322
188	9607	0.791	0.0073	108.435	4.637
189	9656	1.008	0.0085	118.384	3.656
190	9696	0.677	0.0087	77.918	5.226
191	9698	0.790	0.0085	92.712	4.681
192	9749	0.974	0.0076	127.704	3.739
193	9779	0.728	0.0066	110.407	4.927
194	9807	0.268	0.0114	23.509	7.123
195	9809	0.826	0.0068	120.985	4.400
196	9863	0.784	0.0078	101.193	4.732
197	9865	0.892	0.0081	110.805	4.209
198	9875	0.883	0.0088	100.111	4.235
199	9879	0.332	0.0104	31.941	6.814
200	9917	0.718	0.0089	80.835	5.017
201	9961	0.633	0.0078	80.716	5.391

SPBS Non-Priority

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	120	0.555	0.0142	39.049	6.656
2	242	0.506	0.0152	33.382	6.899
3	415	0.510	0.0148	34.401	6.836
4	686	0.355	0.0182	19.461	7.629
5	1245	0.391	0.0169	23.112	7.218
6	1485	0.454	0.0161	28.215	7.140
7	1803	0.521	0.0148	35.105	6.820
8	1872	0.575	0.0137	41.833	6.528
9	2007	0.528	0.0184	28.747	7.062
10	2444	0.375	0.0182	20.666	7.558
11	2823	0.485	0.0156	31.075	7.005
12	3304	0.451	0.0158	28.618	6.917
13	3364	0.218	0.0220	9.949	8.333
14	3394	0.550	0.0147	37.339	6.382
15	3411	0.463	0.0161	28.835	7.113
16	3709	0.545	0.0141	38.536	6.650
17	3725	0.584	0.0150	39.001	6.638
18	3753	0.508	0.0148	34.387	6.830
19	4270	0.463	0.0155	29.855	6.859
20	4453	0.551	0.0150	36.618	6.364
21	4537	0.484	0.0152	31.918	6.751
22	4538	0.548	0.0153	35.852	6.367
23	4756	0.511	0.0145	35.188	6.671
24	5057	0.465	0.0153	30.361	6.948
25	5096	0.368	0.0183	20.174	7.589
26	5182	0.562	0.0141	39.858	6.623
27	5204	0.483	0.0156	30.901	7.013
28	5284	0.523	0.0148	35.478	6.801
29	5296	0.509	0.0151	33.782	6.879
30	5507	0.550	0.0152	36.152	6.771
31	5590	0.462	0.0161	28.755	7.117
32	5697	0.555	0.0142	39.173	6.644
33	5837	0.563	0.0141	40.041	6.612
34	6078	0.399	0.0168	23.737	7.345
35	8104	0.532	0.0147	36.258	6.772
36	8266	0.545	0.0144	37.805	6.706
37	6643	0.486	0.0155	31.287	6.994
38	6755	0.384	0.0175	21.863	7.482
39	6994	0.573	0.0137	41.958	6.508
40	7271	0.631	0.0129	48.775	6.285
41	7314	0.490	0.0174	28.145	7.133
42	7346	0.576	0.0151	38.265	6.227
43	7450	0.532	0.0164	32.391	6.919

44	7655	0.275	0.0192	14.363	7.728
45	7689	0.393	0.0169	23.254	7.205
46	7897	0.543	0.0152	35.688	6.396
47	8195	0.468	0.0161	29.161	6.768
48	8342	0.654	0.0126	51.922	6.155
49	8378	0.364	0.0177	20.610	7.281
50	8384	0.729	0.0146	48.982	5.471
51	8421	0.687	0.0122	56.173	6.037
52	8743	0.386	0.0176	21.989	7.477
53	8909	0.580	0.0147	39.556	6.224
54	9112	0.313	0.0186	16.837	7.606
55	9114	0.442	0.0165	26.833	7.214
56	9210	0.404	0.0172	23.441	7.396
57	9240	0.302	0.0187	16.165	7.716
58	9303	0.566	0.0140	40.418	6.596
59	9486	0.335	0.0186	17.984	7.721
60	9524	0.666	0.0124	53.805	6.043
61	9589	0.313	0.0195	16.078	7.857
62	9807	0.552	0.0140	39.350	6.618
63	9879	0.266	0.0205	12.946	6.086

SPBS Priority

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	82	0.813	0.0245	33.240	6.201
2	242	0.824	0.0248	33.200	6.189
3	1245	0.796	0.0266	29.967	5.999
4	2169	0.790	0.0256	30.898	6.363
5	2375	0.813	0.0260	31.252	5.870
6	2444	0.837	0.0240	34.941	6.077
7	3304	0.760	0.0303	25.088	6.762
8	3364	0.774	0.0268	28.879	6.510
9	3411	0.906	0.0265	34.257	5.774
10	3725	0.768	0.0289	26.557	6.662
11	3753	0.946	0.0198	47.655	5.154
12	4453	0.754	0.0278	27.161	6.380
13	5096	0.863	0.0303	28.508	6.167
14	5296	0.776	0.0271	28.636	6.525
15	5697	0.850	0.0226	37.589	5.907
16	5837	0.807	0.0258	31.318	5.949
17	6266	0.814	0.0255	31.941	6.274
18	6643	0.940	0.0247	38.013	5.491
19	6755	0.807	0.0243	33.213	6.168
20	7271	0.722	0.0307	23.562	6.842
21	8195	0.751	0.0280	26.833	6.395
22	8239	0.732	0.0309	23.729	6.914
23	8342	0.952	0.0198	48.062	5.202
24	8384	0.718	0.0298	24.148	6.715
25	8421	0.841	0.0308	27.327	6.334
26	9240	0.894	0.0239	37.396	5.792
27	9486	0.711	0.0302	23.527	6.778
28	9524	0.788	0.0261	30.216	6.412
29	9589	0.733	0.0299	24.491	6.724
30	9879	0.785	0.0270	29.038	6.486

Cancel/Mtr. Prep

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.723	0.0081	89.807	7.566
2	26	0.680	0.0089	76.512	8.492
3	104	0.709	0.0081	87.492	7.885
4	120	0.621	0.0109	57.119	9.977
5	164	0.659	0.0098	67.020	8.924
6	341	0.691	0.0086	80.435	8.252
7	401	0.630	0.0106	59.626	9.750
8	415	0.618	0.0110	56.150	10.046
9	503	0.606	0.0115	52.767	10.299
10	507	0.740	0.0081	91.026	7.177
11	523	0.704	0.0082	85.442	7.989
12	614	0.682	0.0089	76.651	8.459

13	621	0.618	0.0112	54.989	9.791
14	659	0.712	0.0080	89.004	7.809
15	686	0.592	0.0121	49.139	10.594
16	754	0.687	0.0085	80.696	8.406
17	779	0.660	0.0094	70.572	9.153
18	862	0.609	0.0114	53.583	10.190
19	877	0.631	0.0105	60.124	9.772
20	916	0.636	0.0103	61.765	9.666
21	952	0.628	0.0106	59.140	9.838
22	1245	0.593	0.0120	49.254	10.584
23	1309	0.683	0.0089	77.219	8.427
24	1364	0.661	0.0096	68.870	8.895
25	1374	0.663	0.0092	71.944	9.080
26	1423	0.692	0.0083	83.399	8.408
27	1485	0.624	0.0108	57.791	9.930
28	1684	0.618	0.0111	55.704	10.078
29	1747	0.668	0.0092	72.801	8.769
30	1749	0.643	0.0100	64.259	9.512
31	1803	0.593	0.0120	49.251	10.584
32	1872	0.630	0.0105	59.878	9.789
33	1913	0.684	0.0092	72.185	9.067
34	2033	0.642	0.0101	63.540	9.526
35	2169	0.620	0.0109	56.803	9.999
36	2173	0.677	0.0087	77.600	8.799
37	2283	0.670	0.0092	72.911	8.718
38	2371	0.665	0.0092	72.529	9.050
39	2375	0.649	0.0098	66.347	9.262
40	2386	0.705	0.0082	85.931	7.964
41	2390	0.716	0.0079	90.491	7.735
42	2444	0.609	0.0114	53.592	10.235
43	2467	0.700	0.0083	83.915	8.068
44	2501	0.690	0.0087	79.783	8.287
45	2587	0.650	0.0098	66.616	9.372
46	2594	0.672	0.0092	73.289	8.674
47	2687	0.632	0.0104	60.605	9.741
48	2696	0.760	0.0062	121.705	6.838
49	2814	0.716	0.0079	90.611	7.729
50	2823	0.634	0.0104	61.010	9.715
51	3033	0.688	0.0087	79.120	8.323
52	3084	0.705	0.0082	85.950	7.963
53	3246	0.691	0.0085	81.128	8.270
54	3304	0.588	0.0122	48.108	10.683
55	3329	0.747	0.0072	104.092	7.075
56	3346	0.656	0.0095	69.057	9.235
57	3358	0.643	0.0100	64.356	9.506
58	3359	0.642	0.0102	62.786	9.311
59	3361	0.674	0.0091	73.836	8.619
60	3364	0.592	0.0121	49.011	10.605
61	3394	0.652	0.0097	67.514	9.321
62	3411	0.634	0.0105	60.637	9.737
63	3437	0.648	0.0100	64.682	9.184
64	3495	0.749	0.0071	105.170	7.023
65	3593	0.696	0.0086	81.131	8.154
66	3606	0.681	0.0085	79.794	8.696
67	3702	0.644	0.0100	64.706	9.485
68	3709	0.660	0.0096	68.916	8.913
69	3725	0.598	0.0118	50.615	10.471
70	3753	0.626	0.0107	58.605	9.874
71	3908	0.639	0.0102	62.886	9.596
72	3921	0.678	0.0088	76.938	8.724
73	3923	0.733	0.0075	98.038	7.367
74	3940	0.712	0.0081	88.068	7.820
75	3972	0.655	0.0098	67.237	9.018
76	4166	0.695	0.0085	81.419	8.169
77	4183	0.667	0.0094	70.937	8.767
78	4255	0.692	0.0086	80.475	8.249
79	4256	0.724	0.0080	90.094	7.550
80	4270	0.615	0.0111	55.373	10.102
81	4278	0.751	0.0066	113.868	7.166
82	4347	0.693	0.0086	81.083	8.217

44	7655	0.275	0.0192	14.363	7.728
45	7689	0.393	0.0169	23.254	7.205
46	7897	0.543	0.0152	35.688	6.396
47	8195	0.468	0.0161	29.161	6.768
48	8342	0.654	0.0126	51.922	6.155
49	8378	0.364	0.0177	20.610	7.281
50	8384	0.729	0.0146	49.982	5.471
51	8421	0.687	0.0122	56.173	6.037
52	8743	0.386	0.0176	21.989	7.477
53	8909	0.580	0.0147	39.556	6.224
54	9112	0.313	0.0186	16.837	7.606
55	9114	0.442	0.0165	26.833	7.214
56	9210	0.404	0.0172	23.441	7.396
57	9240	0.302	0.0187	16.165	7.716
58	9303	0.566	0.0140	40.418	6.596
59	9486	0.335	0.0186	17.984	7.721
60	9524	0.666	0.0124	53.805	6.043
61	9589	0.313	0.0195	16.078	7.857
62	9807	0.552	0.0140	39.350	6.618
63	9879	0.266	0.0205	12.946	8.086

SPBS Priority

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	82	0.813	0.0245	33.240	6.201
2	242	0.824	0.0248	33.200	6.189
3	1245	0.796	0.0266	29.967	5.999
4	2169	0.790	0.0256	30.898	6.363
5	2375	0.813	0.0260	31.252	5.870
6	2444	0.837	0.0240	34.941	6.077
7	3304	0.760	0.0303	25.088	6.762
8	3364	0.774	0.0268	28.879	6.510
9	3411	0.906	0.0265	34.257	5.774
10	3725	0.768	0.0289	26.557	6.662
11	3753	0.946	0.0198	47.655	5.154
12	4453	0.754	0.0278	27.161	6.380
13	5096	0.863	0.0303	28.508	6.167
14	5296	0.776	0.0271	28.636	6.525
15	5697	0.850	0.0226	37.589	5.907
16	5837	0.807	0.0258	31.318	5.949
17	6266	0.814	0.0255	31.941	6.274
18	6643	0.940	0.0247	38.013	5.491
19	6755	0.807	0.0243	33.213	6.168
20	7271	0.722	0.0307	23.562	6.842
21	8195	0.751	0.0280	26.833	6.395
22	8239	0.732	0.0309	23.729	6.914
23	8342	0.952	0.0198	48.062	5.202
24	8384	0.718	0.0298	24.148	6.715
25	8421	0.841	0.0308	27.327	6.334
26	9240	0.894	0.0239	37.396	5.792
27	9486	0.711	0.0302	23.527	6.778
28	9524	0.788	0.0261	30.216	6.412
29	9589	0.733	0.0299	24.491	6.724
30	9879	0.785	0.0270	29.038	6.486

Cancel/Mtr. Prep

Obs #	ID #	Est. Variability	Std. Error	T-statistic	Avg ln(TPH)
1	19	0.723	0.0081	89.807	7.566
2	26	0.680	0.0089	76.512	8.492
3	104	0.709	0.0081	87.492	7.685
4	120	0.621	0.0109	57.119	8.977
5	164	0.659	0.0098	67.020	8.924
6	341	0.691	0.0086	80.435	8.252
7	401	0.630	0.0106	59.626	9.750
8	415	0.618	0.0110	56.150	10.046
9	503	0.606	0.0115	52.787	10.299
10	507	0.740	0.0081	91.026	7.177
11	523	0.704	0.0082	85.442	7.989
12	614	0.682	0.0089	76.651	8.459

13	621	0.618	0.0112	54.989	9.791
14	659	0.712	0.0080	89.004	7.809
15	686	0.592	0.0121	49.139	10.594
16	754	0.687	0.0085	80.696	8.406
17	779	0.660	0.0094	70.572	9.153
18	862	0.609	0.0114	53.583	10.190
19	877	0.631	0.0105	60.124	9.772
20	916	0.636	0.0103	61.765	9.666
21	952	0.628	0.0106	59.140	9.838
22	1245	0.593	0.0120	49.254	10.584
23	1309	0.683	0.0089	77.219	8.427
24	1364	0.661	0.0096	68.870	8.895
25	1374	0.663	0.0092	71.944	9.080
26	1423	0.692	0.0083	83.399	8.408
27	1485	0.624	0.0108	57.791	9.930
28	1684	0.618	0.0111	55.704	10.078
29	1747	0.668	0.0092	72.801	8.769
30	1749	0.643	0.0100	64.259	9.512
31	1803	0.593	0.0120	49.251	10.584
32	1872	0.630	0.0105	59.878	9.789
33	1913	0.664	0.0092	72.185	9.067
34	2033	0.642	0.0101	63.540	9.526
35	2169	0.620	0.0109	56.803	9.999
36	2173	0.677	0.0087	77.600	8.799
37	2283	0.670	0.0092	72.911	8.718
38	2371	0.665	0.0092	72.529	9.050
39	2375	0.649	0.0098	66.347	9.262
40	2386	0.705	0.0082	85.931	7.964
41	2390	0.716	0.0079	90.491	7.735
42	2444	0.609	0.0114	53.592	10.235
43	2467	0.700	0.0083	83.915	8.068
44	2501	0.690	0.0087	78.783	8.287
45	2587	0.650	0.0098	66.616	9.372
46	2594	0.672	0.0092	73.289	8.674
47	2687	0.632	0.0104	60.605	9.741
48	2696	0.760	0.0062	121.705	6.838
49	2814	0.716	0.0079	90.611	7.729
50	2823	0.634	0.0104	61.010	9.715
51	3033	0.688	0.0087	79.120	8.323
52	3084	0.705	0.0082	85.950	7.963
53	3246	0.691	0.0085	81.128	8.270
54	3304	0.588	0.0122	48.108	10.683
55	3329	0.747	0.0072	104.092	7.075
56	3346	0.656	0.0095	69.057	9.235
57	3358	0.643	0.0100	64.356	9.506
58	3359	0.642	0.0102	62.786	9.311
59	3381	0.674	0.0091	73.836	8.619
60	3364	0.592	0.0121	49.011	10.605
61	3394	0.652	0.0097	67.514	9.321
62	3411	0.634	0.0105	60.637	9.737
63	3437	0.648	0.0100	64.682	9.184
64	3495	0.749	0.0071	105.170	7.023
65	3593	0.696	0.0086	81.131	8.154
66	3606	0.681	0.0085	79.794	8.696
67	3702	0.644	0.0100	64.706	9.485
68	3709	0.660	0.0096	68.916	8.913
69	3725	0.598	0.0118	50.615	10.471
70	3753	0.626	0.0107	58.605	9.874
71	3908	0.639	0.0102	62.886	9.596
72	3921	0.678	0.0088	76.938	8.724
73	3923	0.733	0.0075	98.038	7.367
74	3940	0.712	0.0081	88.068	7.820
75	3972	0.655	0.0098	67.237	9.018
76	4166	0.695	0.0085	81.419	8.169
77	4183	0.667	0.0094	70.937	8.767
78	4255	0.692	0.0086	80.475	8.249
79	4256	0.724	0.0080	90.094	7.550
80	4270	0.615	0.0111	55.373	10.102
81	4278	0.751	0.0066	113.868	7.166
82	4347	0.693	0.0086	81.083	8.217

83	4439	0.627	0.0107	58.731	9.865
84	4453	0.633	0.0104	60.884	9.723
85	4483	0.758	0.0070	108.786	6.845
86	4537	0.664	0.0095	70.029	8.845
87	4538	0.676	0.0096	70.302	8.539
88	4542	0.656	0.0095	68.857	9.246
89	4653	0.683	0.0090	76.077	8.785
90	4756	0.626	0.0107	58.596	9.875
91	4818	0.675	0.0095	70.787	8.567
92	4834	0.735	0.0074	99.084	7.317
93	4873	0.696	0.0084	83.165	8.166
94	4920	0.688	0.0087	79.001	8.329
95	4945	0.667	0.0091	73.246	9.013
96	4970	0.668	0.0093	72.214	9.053
97	5057	0.628	0.0106	59.299	9.827
98	5066	0.682	0.0089	76.871	8.446
99	5087	0.616	0.0111	55.510	10.092
100	5096	0.619	0.0110	56.479	10.022
101	5182	0.637	0.0103	61.974	9.653
102	5204	0.632	0.0104	60.533	9.746
103	5279	0.713	0.0076	93.669	8.071
104	5284	0.647	0.0099	65.573	9.433
105	5296	0.610	0.0113	53.777	10.221
106	5341	0.709	0.0079	89.549	7.888
107	5413	0.699	0.0081	86.451	8.265
108	5417	0.741	0.0072	102.591	7.198
109	5438	0.700	0.0083	83.962	8.065
110	5507	0.650	0.0098	66.372	9.311
111	5566	0.695	0.0085	81.404	8.170
112	5590	0.645	0.0099	64.907	9.473
113	5604	0.697	0.0084	82.838	8.124
114	5683	0.707	0.0081	86.905	7.814
115	5697	0.616	0.0111	55.646	10.082
116	5708	0.635	0.0103	61.500	9.683
117	5757	0.706	0.0081	86.919	7.947
118	5837	0.624	0.0108	58.008	9.915
119	5865	0.636	0.0103	61.914	9.657
120	5909	0.654	0.0096	68.065	9.290
121	5921	0.678	0.0087	78.152	8.772
122	5997	0.608	0.0114	53.244	10.262
123	6048	0.731	0.0075	96.839	7.420
124	6063	0.739	0.0074	99.619	7.242
125	6078	0.628	0.0106	59.150	9.780
126	6083	0.709	0.0081	87.709	7.874
127	6088	0.680	0.0090	76.020	8.494
128	6098	0.705	0.0079	89.364	8.135
129	6104	0.622	0.0108	57.466	9.953
130	6218	0.697	0.0084	82.653	8.134
131	6266	0.623	0.0108	57.766	9.932
132	6306	0.657	0.0097	67.602	8.996
133	6332	0.615	0.0111	55.417	10.051
134	6343	0.702	0.0083	84.847	8.020
135	6499	0.714	0.0076	93.946	7.942
136	6543	0.709	0.0081	87.614	7.879
137	6549	0.599	0.0118	50.770	10.458
138	6550	0.735	0.0074	98.725	7.334
139	6556	0.716	0.0079	90.510	7.734
140	6557	0.660	0.0094	70.620	8.949
141	6571	0.661	0.0093	70.858	9.137
142	6594	0.657	0.0095	69.556	9.208
143	6635	0.710	0.0081	87.949	7.862
144	6643	0.628	0.0106	59.482	9.741
145	6655	0.696	0.0085	82.335	8.151
146	6664	0.646	0.0099	65.400	9.443
147	6676	0.680	0.0090	75.936	8.499
148	6737	0.709	0.0081	87.556	7.882
149	6744	0.660	0.0094	70.438	9.160
150	6745	0.646	0.0099	65.148	9.458
151	6755	0.571	0.0128	44.569	10.966
152	6761	0.669	0.0093	72.175	8.738

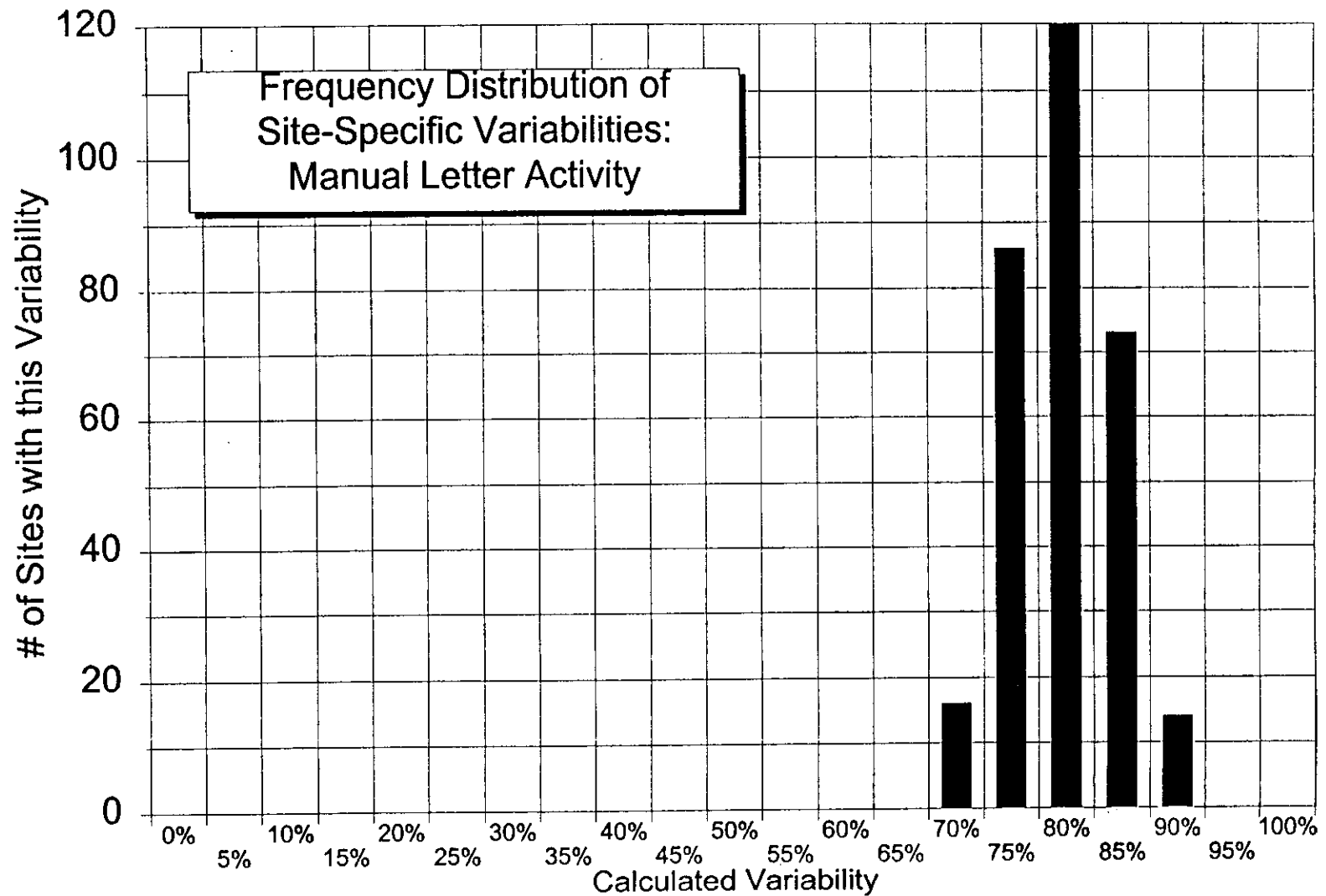
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154	6838	0.639	0.0102	62.640	9.611
155	6989	0.650	0.0098	66.639	9.371
156	6994	0.661	0.0096	69.128	8.900
157	7044	0.706	0.0082	85.605	7.947
158	7049	0.722	0.0078	93.165	7.603
159	7051	0.705	0.0081	87.040	7.873
160	7073	0.624	0.0108	57.863	9.925
161	7093	0.712	0.0080	89.021	7.808
162	7100	0.697	0.0085	82.234	8.125
163	7123	0.656	0.0096	68.662	9.162
164	7126	0.674	0.0092	73.566	8.634
165	7271	0.639	0.0103	61.907	9.653
166	7314	0.620	0.0109	56.849	9.944
167	7346	0.663	0.0093	71.671	8.094
168	7418	0.619	0.0110	56.558	10.017
169	7422	0.638	0.0102	62.290	9.633
170	7444	0.638	0.0102	62.435	9.624
171	7450	0.660	0.0094	70.638	9.149
172	7463	0.670	0.0091	73.605	8.920
173	7480	0.735	0.0074	98.842	7.328
174	7512	0.726	0.0076	95.607	7.526
175	7564	0.662	0.0095	69.630	8.869
176	7583	0.671	0.0092	73.299	8.695
177	7603	0.731	0.0073	99.907	7.417
178	7606	0.688	0.0089	77.161	8.686
179	7637	0.697	0.0084	82.579	8.138
180	7655	0.600	0.0117	51.215	10.422
181	7689	0.629	0.0106	59.506	9.755
182	7791	0.656	0.0095	69.052	9.235
183	7800	0.644	0.0100	64.422	9.502
184	7865	0.694	0.0086	80.876	8.199
185	7897	0.640	0.0101	63.103	9.582
186	7914	0.674	0.0091	74.552	8.625
187	7975	0.697	0.0088	79.720	8.108
188	8004	0.748	0.0071	104.843	7.039
189	8112	0.682	0.0089	76.778	8.452
190	8115	0.679	0.0090	75.719	8.511
191	8145	0.734	0.0075	98.381	7.350
192	8153	0.732	0.0075	97.679	7.384
193	8169	0.686	0.0091	75.156	8.346
194	8195	0.615	0.0111	55.318	10.106
195	8208	0.712	0.0081	88.169	7.815
196	8228	0.734	0.0070	104.670	7.498
197	8239	0.601	0.0117	51.289	10.416
198	8265	0.665	0.0092	72.732	9.039
199	8289	0.590	0.0122	48.503	10.649
200	8315	0.669	0.0093	72.343	8.729
201	8329	0.684	0.0088	77.413	8.416
202	8333	0.610	0.0113	53.840	10.216
203	8334	0.716	0.0079	90.460	7.736
204	8342	0.638	0.0102	62.388	9.627
205	8378	0.616	0.0110	56.111	9.911
206	8421	0.632	0.0105	60.304	9.698
207	8505	0.682	0.0089	76.427	8.775
208	8535	0.673	0.0092	72.968	8.976
209	8554	0.701	0.0083	84.134	8.057
210	8592	0.710	0.0077	91.899	8.029
211	8692	0.697	0.0084	82.538	8.140
212	8722	0.696	0.0084	83.267	8.161
213	8743	0.606	0.0115	52.601	10.312
214	8806	0.657	0.0095	69.303	9.221
215	8909	0.662	0.0093	71.239	9.117
216	8938	0.700	0.0079	88.897	8.306
217	8941	0.688	0.0087	79.064	8.326
218	8942	0.727	0.0080	91.505	7.472
219	8964	0.641	0.0101	63.644	9.549
220	8965	0.695	0.0085	81.773	8.180
221	9056	0.659	0.0096	68.441	8.943
222	9090	0.689	0.0087	79.513	8.301

223	9098	0.690	0.0086	80.017	8.274
224	9110	0.690	0.0082	83.770	8.520
225	9112	0.636	0.0105	60.905	9.425
226	9114	0.593	0.0120	49.316	10.578
227	9210	0.615	0.0112	55.126	10.120
228	9221	0.685	0.0088	77.907	8.389
229	9240	0.602	0.0117	51.585	10.392
230	9242	0.685	0.0089	77.330	8.394
231	9263	0.673	0.0092	73.205	8.655
232	9270	0.676	0.0091	74.327	8.590
233	9303	0.636	0.0103	61.722	9.669
234	9322	0.652	0.0099	66.126	9.090
235	9486	0.586	0.0119	50.121	10.511
236	9522	0.684	0.0088	77.685	8.401
237	9524	0.605	0.0115	52.420	10.326
238	9562	0.723	0.0083	87.623	7.553
239	9589	0.595	0.0119	49.897	10.530
240	9605	0.707	0.0081	86.930	7.913
241	9607	0.723	0.0077	93.503	7.587
242	9696	0.654	0.0097	67.200	9.059
243	9698	0.720	0.0077	92.993	7.650
244	9749	0.733	0.0075	98.039	7.367
245	9775	0.772	0.0072	107.887	6.522
246	9779	0.656	0.0095	69.124	9.231
247	9792	0.695	0.0091	76.805	8.140
248	9807	0.608	0.0114	53.360	10.253
249	9865	0.704	0.0083	85.319	7.995
250	9879	0.628	0.0106	59.244	9.831
251	9882	0.715	0.0080	89.301	7.767
252	9917	0.706	0.0087	81.140	7.904
253	9961	0.656	0.0097	67.419	9.007

Attachment 3 to Response to POIR 7-1
DISTRIBUTION OF THE CALCULATED SITE SPECIFIC VARIABILITIES

ACTIVITY	USPS-T14 TABLE 7	MEAN OF THE SITE SPECIFICS	STD. DEVIATION	LOWER BOUND	UPPER BOUND
MANUAL LETTERS	79.7%	77.2%	4.6%	67.7%	89.8%
MANUAL FLATS	86.6%	85.9%	5.1%	76.3%	98.1%
OCR	78.6%	75.9%	1.7%	71.2%	80.6%
BCS	94.5%	92.3%	2.6%	84.1%	96.8%
LSM	90.5%	91.6%	0.6%	90.6%	93.7%
FSM	91.8%	87.1%	3.4%	77.7%	94.4%
SPBS PRIORITY	80.2%	80.9%	6.7%	71.1%	95.2%
SPBS NON PRIORITY	46.9%	48.5%	10.6%	21.8%	72.9%
MANUAL PRIORITY	44.8%	59.8%	24.8%	1.6%	115.8%
MANUAL PARCELS	39.5%	52.4%	20.4%	-15.4%	100.1%
CANCEL/MTR. PREP	65.4%	66.8%	4.1%	57.1%	77.2%

Attachment 4 to Response to POIR 7-1



Response of United States Postal Service Witness Bradley
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2. In response to POIR No. 4, question 3, pages 9 and 10, witness Bradley assumes that the fixed effects α_i variables in his mail processing models reflect non-volume factors. Witness Bradley also asserts that it is unimportant that α_i may be correlated with volume.
 - a. Please list the estimated fixed effects (α_i) implied by the fixed-effect models for the cost listed in Table 7 of USPS-T-14.
 - b. To help evaluate the assumption that the α_i variables reflect only non-volume effects, for the cost pools in "a.," please perform a linear regression of α_i on a constant term and the mean over time of $\ln(\text{TPH}_{it})$ for facility i .
 - c. If the coefficient of the mean over time of $\ln(\text{TPH}_{it})$ in the regression in "b" is positive please discuss why it is reasonable to assume that the α_i reflects only non-volume factors.

2. Response:

There are a couple of misconceptions in the preamble to these interrogatories that should be cleared up. First, although this may not be immediately obvious, one does not actually assume that the fixed effects are non-volume effects. Rather, this characteristic is guaranteed because it is a mathematical result generated by the structure of the fixed effects regression. Second, I have never suggested that it is unimportant that the site-specific effects may be correlated with volume. Just the opposite. It is quite important that these effects are correlated with volume. In fact, I present statistical evidence in my testimony that demonstrates that the correlation exists. Please see Table 5 on page 46 of my testimony which is entitled "Tests for The Correlation of Site-Specific Effects and

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Right-Hand-Side Variables.” Moreover, as I explain in my response to POIR #4, this correlation is a reason that estimated coefficients from the pooled model are biased upward. It is also important not to forget that correlation does not imply causation. For example, age and the level of education are correlated in young men, but education does not cause age. Similarly here, the fact that the fixed effects and volume are correlated does not imply that volume causes the fixed effects.

- a. Estimating an accurate fixed effects model for variabilities does not require estimation of the 2,369 site-specific coefficients referred to in the question and thus I have not estimated them. Moreover, because the instant request is based upon a misunderstanding of the issue, there is no need to estimate the 2,369 α_i now. As I have already provided evidence that the site-specific effects are correlated with volume, there is no need to estimate those additional 2,369 coefficients now to again demonstrate the same point.
- b. Because I have already established that the site specific effects are correlated with volume it is unnecessary to run this auxiliary regression. Moreover, the existence of a positive, statistically significant coefficient in the proposed auxiliary regression in no way would indicate that the α_i variables would include volume-effects. In fact, this type of auxiliary regression is used to explain why the α_i could not contain

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volume effects. Recall that regression coefficients in a multiple regression are actually partial regression coefficients and thus correspond to partial derivatives. That means that the coefficients are interpreted as the effect of a given right hand side variable on the dependent variable, holding the values of all other right-hand-side variables constant.

This characteristic of multiple regression coefficients can be explained and derived mathematically by use of an auxiliary regression of the type posed in the question.

This is clearly explained in a well known econometrics book:

Consider the three variable multiple regression model

$$Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \varepsilon_i \quad (\text{A4.3})$$

Our task here is to discuss in some detail how one might interpret the partial regression coefficient, say β_2 , in Eq. (A4.3). We argued in the text that β_2 measures the effect of X_2 on Y , with the effect of X_3 controlled or held constant. In theory, it makes sense to hold X_3 constant while increasing X_2 , but how is this concept actually applied when we obtain least-squares estimates for β_2 (as well as β_3)? The answer lies in the realization that the estimated coefficient in the three-variable regression can be calculated by performing two two-variable regressions. (This result generalizes to any multiple regression model.) The first regression adjusts the variable X_2 to "hold X_3 constant," while the second regression estimates the effect of this adjusted variable on Y . The procedure occurs in the following steps.

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Step 1 Regress X_2 on X_3 . When the equation has been estimated, we can calculate the fitted values and residual of the model. To simplify we will work with the data in deviations form, so that the model is

$$x_{2i} = \alpha x_{3i} + \rho_i \quad \text{and} \quad x_{2i} = \hat{x}_{2i} + \rho_i$$

$$\text{where } x_{2i} = \alpha x_{3i} \quad \rho_i = x_{2i} - \alpha x_{3i} = x_{2i} - \hat{x}_{2i}$$

$$\text{and} \quad \alpha = \frac{\sum x_{2i} x_{3i}}{\sum x_{3i}^2}$$

Our interest lies in ρ_i , the residuals, since ρ_i represents the portion of X_2 which is uncorrelated with X_3 . (Recall that the regression residuals are uncorrelated with the right-hand variable. In fact, holding X_3 constant means eliminating from X_2 that component that is correlated with X_3 .)

Step 2 Regress Y on ρ . If we work with the data in deviations form, the model is

$$y_i = \gamma \rho_i + v_i$$

When it is estimated, we find that

$$\hat{\gamma} = \frac{\sum y_i \rho_i}{\sum \rho_i^2}$$

$\hat{\gamma}$ represents the effect of "adjusted X_2 " on Y and according to our argument should measure the effect of X_2 on Y holding X_3

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constant. If we are correct, it must be true that $\hat{\gamma} = \beta_2$. To see this we need only perform a few algebraic calculations. (Emphasis added)⁷.

This mathematical exercise shows that in multiple regression, the individual coefficients are estimated by controlling for the effect of other included variables on the the dependent variable. Thus, because the variability equations include volume (in the form of TPH) it is by mathematical construction that the α_i capture only non-volume effects. Indeed, it is **impossible** for them to capture volume effects in this specification.

The mathematical exercise is precise but a bit technical. An intuitive understanding of this point can be gained by considering the following example.⁸ Suppose one is estimating an econometric regression for incomes of young men and trying to measure the effect of education on income. One could start with a regression of income on education and would expect to find a positive coefficient because higher levels of income are associated with higher levels of education. However, the coefficient on education would be biased because it ignores the non-education

⁷ See, Robert Pindyck and Daniel Rubinfeld, Econometric Models and Economic Forecasts, McGraw Hill, New York, 1981 at 97.

⁸ This example is taken from William Greene, Econometric Analysis, Macmillan, 1993 at 170.

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effect coming from the fact that men earn higher income when they are older, irrespective of their education. Given that age and education are correlated, omitting age from the equation will cause education's coefficient to be biased upward as it is also capturing the age effect. Once one adds age to the regression, however, the bias disappears, the education coefficient captures just the education effect, and the age coefficient captures the "non-education" effect. Please note that despite the fact that they are correlated, education in no way causes age, and age cannot contain "education effects." It is this intuition which helps us understand why omitting the site-specific effects causes a biased regression coefficient for volume variability and why the site-specific effects do not contain any "volume effects" in the regressions in USPS-T-14.

In sum there is no inconsistency between agreeing that the site-specific effects are correlated with volume and recognizing that the site-specific effects in the regressions, the α_i , contain no volume effects.

- c. It is reasonable to "assume" that the α_i contain only non-volume factors because , as shown above, they simply do not contain volume factors. In a fixed effect model, the α_i can be represented as:

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$$\alpha_i = \bar{y}_i - b' \bar{x}_i$$

where the familiar dot subscript notation reflects site-specific values. Note that in the variability equations, the x_i include the volume terms. This equation thus proves mathematically that the α_i cannot include the effects of volume on hours as those effects are subtracted from hours before the α_i are calculated.

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3. The form of the econometric model used to estimate the mail processing variabilities in USPS-T-14, page 36, equation (2) is not a full-form trans log equation in that products involving lagged variables are not included. Please discuss the reasons for not using the full-form of the model.

3. Response:

Equation (2) is known formally in the econometrics literature as an augmented translog. It is common practice to include a vector of control variables without their (cross) products such as the seasonal dummies or lag variables in an otherwise "complete" translog. These control variables do not add any information to the identification of the cost surface, but do add to the accuracy of the estimation of the regression coefficients. They are thus used to augment the basic translog specification.

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4. In USPS-T-14, at page 40, witness Bradley states "in previous work I found that non-volume variations in facility characteristics have an important impact on productivity." The referenced paper is Michael D. Bradley and Donald Baron, "Measuring Performance in A Multi-Product Firm: An Application to the U.S. Postal Service," published in Operations Research, Vol. 41, No. 3., May-June 1993. At page 452, the paper states

This leads to the next step in our analysis: determining *why* some plants are more efficient than others. The answer to this question is also found through regression analysis; but now the regression is attempting to *explain* operating efficiency, not measure it. Operating efficiency is therefore regressed on all variables thought to influence it. **These variables might include factors like mail volumes processed and delivered (to measure scale economies)** [Bold supplied]

On page 454, the referenced paper describes Table 1 as a list of "the primary factors that determine operating efficiencies at individual MPCs [Mail Processing Centers], based on the MPCs' vector of factors." Table 1 lists "total piece handlings" among these factors. The paper estimates that for each ten percent increase in total piece handlings, operating efficiency increases by 2.51 percent.

- a. Does this estimate of the effect of increases in total pieces handled on productivity, in part, "explain why operating efficiency varies across different locations and over time?" See page 453.
- b. If the answer to "a." is yes, is this conclusion consistent with witness Bradley's assumption in USPS-T-14 that the facility-specific effects on costs (represented by the variable α_i) are only non-volume effects?
- c. Please discuss why, or why not, each of the "primary factors that determine operating efficiency at MPCs" listed in Table 1 should, or should not be, included as explanatory variables in the models of mail processing labor variability proposed in USPS T-14.
- d. The referenced paper observes, at page 454, that:

crude labor productivities, like total pieces per labor hour, may be misleading because they ignore important differences in the compositions of mail volumes (letters, flats, parcels) handled

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by different MPCs.

Please discuss why, or why not, facility differences in the composition of mail sorted should, or should not, be included as an explanatory variable in the models of mail processing labor variability proposed in USPS-T-14.

- e. At page 452, the referenced paper lists "[d]etermine the marginal costs of the firm's outputs" as the first step in measuring performance by the operating efficiency approach. At page 453, it observes that sorting the mail is one of the two primary functions performed at an MPC for which marginal cost must be calculated.
 - (1) Was a marginal cost for sorting the mail estimated to support the conclusions in the referenced paper?
 - (2) If the answer to "(1)" above is yes, please provide that estimate.
- f. At page 457, the referenced paper states that complete regression results are available from the authors upon request. Please provide them.

4. Response:

- a. For many mail processing activities, the piece-handling variabilities are less than one. This means that, holding all other factors constant, as volume changes in a mail processing activity, productivity will also change. Thus, if volume is rising for a variety of activities in a facility, its operating efficiency will be influenced. Presumably volume rises and falls through time, so changes in volume would be a factor which causes operating efficiency to change through time.

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- b. Absolutely. As I demonstrated in my answer to question 3 above, the α_i do not contain volume effects. In similar fashion, the other control variables discussed in this paper capture the non-volume effects. That is why the results discussed in the published paper represent the verification of the volume variabilities that the Presiding Officer was requesting. Tr. 11/5577. The published paper contains a pooled model, but that pooled model contains the proper variables to control for the site-specific effects in contrast to the naive and thus biased pooled model presented at Tr. 11/5579 as a cross examination exhibit. When non-volume, site-specific effects are important, they must be accounted for in the regression equation. One approach, which I took in my earlier, published paper, was to estimate a pooled model with variables included to account for non-volume site specific effects. This was appropriate because I was estimating a facility-wide equation for total cost.

In USPS-T-14, I am estimate activity level equations, not facility level equations for labor cost. Therefore, the appropriate way to account for site-specific effects is the alternative approach, through the use of the fixed effects model, or heuristically, the inclusion of the site-specific effects (α_i). It is well known that omission of these dummy variables will lead to biased coefficient estimates. For example, I am attaching a graph from a well known econometric text book that demonstrates why

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it is wrong to simply plot the data and draw a straight line through it.⁹ If it does not account for the dummy variables, that straight line will be biased and erroneous. The graph contains a plot of points which would appear to have a steeply sloped regression line running through them, a regression line that runs through the origin. However, that regression line ignores the fact that the points in the plot are really generated by a much flatter regression line, one that shifts with variations in the values for the dummy variables. Failure to recognize the heterogeneity in the data generating process would cause one to mistakenly overstate the slope of the regression line. This is why the econometrics literature contains strong prohibitions against using simple pooled models in the face of unit-specific effects.¹⁰

Obviously, in these cases, pooled regression ignoring heterogenous intercepts should never be used. (Emphasis added)

⁹ See, G.S. Maddala, Econometrics, McGraw-Hill, New York, 1977, at 139.

¹⁰ See, Cheng Hsiao, Analysis of Panel Data, Cambridge University Press, Cambridge, 1986 at 6.

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- c. Table 1 below contains the factors from Table I of the published article and their disposition in USPS-T-14. Recall that there are four main differences between the analyses. First, the Operations Research article included analysis done at the facility level but USPS-T-14 includes analysis done at the level of the mail processing activity. Second, the Operations Research article included both mail processing costs and delivery costs but USPS-T-14 focuses solely on mail processing costs. Third, the Operations Research article features a pooled equation with appropriate control variables whereas USPS-T-14 features panel data with a fixed effects model. Because the fixed effects in the panel data model serve the same purpose -- controlling for site-specific non-volume effects -- as the control variables in the pooled model, it is not necessary to include control variables in the fixed effects model. Fourth, the Operations Research analysis investigates total costs; USPS-T-14 investigates only labor cost.

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Table 1	
Factor	Disposition in USPS-T-14
Degree of automation	Included in USPS-T-14 through the MANR terms.
Volume of mail	Included in USPS-T-14 through the TPH terms.
Age of facility	Included in USPS-T-14 through the fixed effects and time effects. (All facilities age at the rate of 1 year per year.)
Degree of support costs	Not relevant for USPS-T-14 because it focuses on costs at the activity level.
Space utilization	Not relevant for USPS-T-14 because it focuses only on labor costs.
Degree of flex labor	To the extent this varies across facilities, it would be included in USPS-T-14 in the fixed effects. To the extent it rises or falls through time it would be included in USPS-T-14 in the time trends.
Delivery network	Not relevant for USPS-T-14 because it does not include delivery costs.
Number of locations	Included in USPS-T-14 in the fixed effects.

The factors that are important for an activity level analysis of variability are included in USPS-T-14. These include volume (as measure by TPH), the effect of automation (as measured by MANR), the site specific effects and the time trends.

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- d. Differences in the composition of mail (letters, flats, parcels) should not be included as explanatory variables in USPS-T-14 because the equations are at the activity level not the facility level. In my Operations Research article, the analysis was at the facility level, so a different mix of letters, flats and parcels could imply a different workload for the same number of TPH. In USPS-T-14, the manual letter activity contains only letters, the manual flat activity contains only flats and the manual parcel activity contains only parcels. Variations in the mix of mail are captured directly by virtue of the fact that separate equations are estimated for individual shape/technology mail processing activities. That is, not only are separate equations estimated for letters, flats, and parcels, but separate equations are also estimated different sorting technologies (e.g., manual letter processing, mechanized letter processing, and automated letter processing).
- e.(1) Yes.
- e.(2) The regressions for this article were run some six years ago. Unfortunately, neither of the coauthors can locate them. Thus, the marginal cost estimates are not available.
- f. The regressions for this article were run some six years ago. Unfortunately, neither of the coauthors can locate them. Thus, the results are no longer available.

Attachment 1 to Response to POIR 7-4
Page 1 of 1

DUMMY VARIABLES AND NONLINEARITIES IN MULTIPLE REGRESSION 139

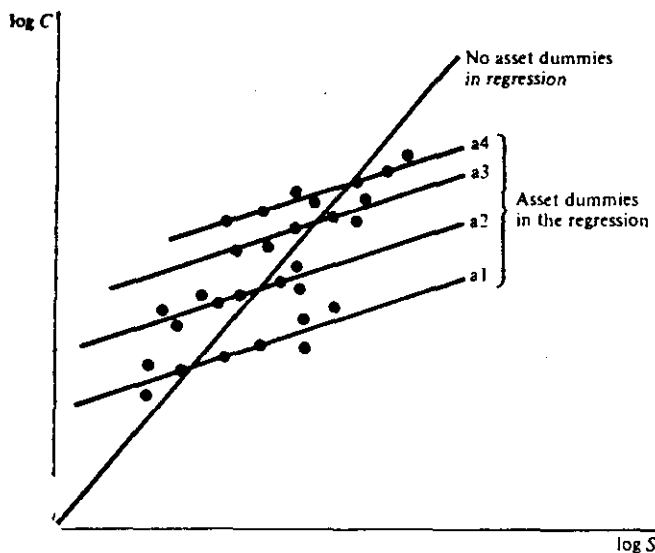


Figure 9-2 Bias due to omission of dummy variables.

and dummy variables. Some further examples of analysis from grouped data will be given later.

As mentioned earlier, dummy variables are not necessarily (0,1) variables. As an illustration, consider the joint estimation of the demand for beef, pork, and chicken on the basis of data presented in Table 7-5. Waugh estimates a set of demand functions of the form

$$\begin{aligned} P_1 &= \alpha_1 + \beta_{11}x_1 + \beta_{12}x_2 + \beta_{13}x_3 + \gamma_1y + u_1 \\ P_2 &= \alpha_2 + \beta_{21}x_1 + \beta_{22}x_2 + \beta_{23}x_3 + \gamma_2y + u_2 \\ P_3 &= \alpha_3 + \beta_{31}x_1 + \beta_{32}x_2 + \beta_{33}x_3 + \gamma_3y + u_3 \end{aligned} \quad (9-6)$$

where P_1 = retail price of beef

P_2 = retail price of pork

P_3 = retail price of chicken

x_1 = consumption of beef per capita

x_2 = consumption of pork per capita

x_3 = consumption of chicken per capita

y = disposable income per capita

x_1 , x_2 , x_3 can be obtained from Table 7-5. The prices in Table 7-5 are, however, retail divided by a consumer price index. Hence we multiplied them by the consumer price index p to get p_1 , p_2 , and p_3 . This index p and disposable income as follows:¹

¹ There appears to be a misprint in the price of beef given in Table 7-5 for the year 1950 (on the basis of other information given in Waugh). We corrected this to 83.3 from 88.3.

Response of United States Postal Service Witness Bradley
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5. In USPS-T-14, at pages 80-84, witness Bradley performs an analysis to demonstrate the likely impact of measurement error in TPH on the estimated variabilities, using a first-difference estimator of equation (2) on page 36. He computes the first-difference estimator only. Differences in equation (2) estimated for longer lengths would also be useful in determining the likely impact of measurement error. For example, differencing equation (2) with its value lagged 13 accounting periods would help confirm the impact of measurement error and eliminate the accounting period dummy variables in the differenced model.

- a. Please compute the ordinary least squares estimate of the 13th difference version of equation (2), including all regressors that are not eliminated by the differencing process, for the cost pools listed in Table 7. As described on page 36, lines 10 through 12, please mean center the data before differencing.
- b. Please compare the variability estimates obtained in "a." with those obtained from the first-difference and fixed-effect model estimates given in Table 7 of USPS-T-14.
- c. Please comment on the degree to which the estimates from "a." confirm those reported in Table 7 and discuss the extent to which divergence between the two sets of estimates can be explained by the presence of measurement errors in TPH.

5. Response:

- a. The requested results are presented in Attachment 1 to this response.
- b. The variability estimates for the 13th differences, like the results for 1st differences, are similar to but a bit lower than the fixed effects presented in Table 7.
- c. The results certainly confirm the result that the variability for the mail processing activities is less than one. I don't think the differences between the two results can

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be explained by measurement error for TPH for two reasons. First, the errors-in-variables analysis presented in my testimony showed that measurement error did not have a big effect in the manual letter and flat activities. Second, measurement error is not an issue for the mechanized and automated activities because the TPH for these activities come directly from machine counts. Nevertheless, the 13th difference variabilities are lower to the same extent for these activities as they are for those activities for which measurement error might be an issue.

Attachment 1 to Response to POIR 7-5

Econometric Results from Estimating the Model on 13th Difference Data

	Manual Letters	Manual Flats	LSM	FSM	OCR	BCS	SPBS Non Priority	SPBS Priority	Manual Parcels	Manual Priority	Cancel & Mtr. Prep
Piece Handlings	0.5226	0.5263	0.8873	0.8266	0.7585	0.8419	0.6505	0.8772	0.3715	0.3469	0.3449
Manual Ratio	-0.1136	0.0245	-0.0347	-0.0220	-0.0056	0.0038	N.A.	N.A.	N.A.	N.A.	N.A.
Time Trend 1	-0.0017	0.0007	-0.0008	0.0005	-0.0030	-0.0021	-0.0017	-0.0107	0.0010	-0.0001	0.0019
Time Trend 2	0.0031	0.0001	0.0006	-0.0003	-0.0044	-0.0027	0.0047	0.0140	-0.0003	0.0005	-0.0024
R2	0.477	0.589	0.929	0.663	0.500	0.621	0.513	0.642	0.248	0.282	0.245
# of Obs.	20,764	20,089	16,627	15,096	15,455	19,006	3,840	1,577	14,303	13,123	16,268
# of Sites	309	300	239	219	234	287	63	30	234	201	253

**Designated Interrogatory Responses
of
Richard L. Patelunas (T15)**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS PATELUNAS
TO
INTERROGATORIES OF THE AMERICAN BUSINESS PRESS
(Revised 10/31/97)

9757

ABP-T15-3

a) Please explain in detail why you project that purchased transportation costs for regular-rate periodicals will increase 11.45% between 1996 and 1998, as compared with the 14.8% increase shown for periodical transportation between 1995-1996.

b) How much did private sector, national long-haul freight (provide separate answers for truck and rail) carriers on average increase their over-the-road rates between 1995 and 1996 for non-postal freight customers?

c) Does USPS compare its annual surface (or air) purchased transportation costs with national transportation industry data to evaluate if its costs are comparable to freight costs for other large national shippers? If it does make this comparison, please provide all studies, reports and analyses covering time periods since January 1988, since the current transportation cost allocation method derives from the decision of the Governors in Docket R87-1.

RESPONSE

a) The 14.8 percent increase is an overstatement of the cost increase from 1995-1996. Additionally, see my response to ABP-T15-1.

With regard to the increase from base year to test year after rates in this docket, please refer to Attachment I to this response. Lines 1 - 10 in columns (1-5) show the cost changes that appear in the rollforward model from Base Year 1996 through Fiscal Year 1997. Lines 12 - 19 in columns (1-5) show the cost changes that appear in the rollforward model from Fiscal Year 1997 through Test Year 1998 After Rates. Line 11 of columns (1-5) is the total change between Base Year 1996 and Fiscal Year 1997 and line 12 of the same columns is the percent change for that period. Line 21 of columns (1-5) is the total change between Fiscal Year 1997 and Test Year 1998 After Rates and line 22 of the same columns is the percent change for that period. Columns (6-10) show the

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RESPONSE continued:

individual impacts in terms of the total change. For example, line 3 of column (6) shows the 1.84% of the total base year to test year change that was the result of the FY 1996 to FY 1997 cost level effect in the rollforward model.

The development of the factors used in the rollforward model to calculate the amounts referenced in Attachment I can be found in USPS Library Reference H-12.

b) I have not studied this matter.

c) It is my understanding the Postal Service does not make this comparison. Also, the current transportation "cost allocation method" does not derive from the decision of the Governors in Docket R87-1. While it is fair to say that our econometric-based volume variability methodology was adopted at that time, and updated and improved in this case, the distribution methodology for Cost Segment 14 was initiated in Docket No. R90-1 with the development and implementation of TRACS. Passenger rail TRACS data were added in Docket No. R94-1, and new air distribution keys were added in this case. The Postal Service's transportation costing improvements are a matter of record in the rate and classification proceedings over the last decade.

		Periodical Regular Rate									
		Absolute Total Change					Percent Change of Total				
Line	Column=>	Air (1)	Highway (2)	Rail (3)	Water (4)	Total (5)	Air (6)	Highway (7)	Rail (8)	Water (9)	Total (10)
1	96MODS	13,515	158,791	72,880	3,108	248,294					
2											
3	CL	896	5,574	867	105	7,442	1.84%	11.43%	1.78%	0.22%	15.27%
4	MV	307	3,497	1,569	68	5,441	0.63%	7.17%	3.22%	0.14%	11.16%
5	NV	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%
6	AD	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%
7	CR	-676	0	0	0	-676	-1.39%	0.00%	0.00%	0.00%	-1.39%
8	OP	1,043	7,044	0	0	8,087	2.14%	14.45%	0.00%	0.00%	16.59%
9											
10	97RCR	15,085	174,906	75,316	3,281	268,588	3.22%	33.06%	5.00%	0.35%	41.63%
11	Change	1,570	16,115	2,436	173	20,294					
12	% Change	11.62%	10.15%	3.34%	5.57%	8.17%					
13											
14	CL	-443	2,449	2,154	94	4,254	-0.91%	5.02%	4.42%	0.19%	8.73%
15	MV	30	365	160	7	562	0.06%	0.75%	0.33%	0.01%	1.15%
16	NV	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%
17	AD	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%
18	CR	-31	-2,393	0	0	-2,424	-0.06%	-4.91%	0.00%	0.00%	-4.97%
19	OP	1,096	4,671	0	0	5,767	2.25%	9.58%	0.00%	0.00%	11.83%
20											
21	98RCB	17,307	196,113	80,066	3,555	297,041	7.78%	76.56%	14.74%	0.92%	100.00%
22											
23	Change	2,222	21,207	4,750	274	28,453					
24	% Change	14.73%	12.12%	6.31%	8.35%	10.59%					

Sources: Cols (1-5) Lines (1-10) USPS-T15 WP-A
 Cols (1-5) Lines (11-20) USPS-T15 WP-F
 Col (5) Lines (1-19) = Sum cols(1-4)
 Cols (1-5) Line 11 = Line 10 - Line 1
 Cols (1-5) Line 12 = Line 11 / Line 1
 Cols (1-5) Line 21 = Line 19 - Line 10
 Cols (1-5) Line 22 = Line 21 / Line 10
 Cols (6-10) = relevant change portion / total change

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Douglas F. Carlson
(Redirected from the United States Postal Service)

9760

DFC/USPS-6

Please refer to Attachment I to Response to DFC/USPS-T5-2(b) and explain why the costs attributable to postal cards are significantly lower than the costs attributable to private single-piece post cards. In the response, please indicate whether witness Patelunas' explanation in Docket No. MC96-3 (OCA/USPS-T5-11; Tr. 2/252) still applies.

DFC/USPS-6

I know of no reason why my speculative reasons discussed in Docket No. MC96-3 (OCA/USPS-T5-11, Tr. 2/252) would no longer apply, but I have not studied the matter.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Douglas F. Carlson
(Redirected from Witness Lion USPS-T-24)

9761

DFC/USPS-T24-1

Are the costs of delivering mail to post-office boxes lower than the costs of carrier or rural delivery? Please explain your answer.

DFC/USPS-T24-1 Response:

Although no similar presentation appears in Docket No. R97-1, I presented an analysis of this topic in Docket No. MC96-3. See my direct testimony, USPS-T-5, Appendix B. In that appendix, I develop the cost differences between post office box delivery and street delivery and under the assumptions in that appendix, the costs of delivering mail to post office boxes was lower than the costs of carrier or rural delivery. I have no reason to doubt the continuing existence of those relationships.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Douglas F. Carlson
(Redirected from Witness Lion USPS-T-24)

9762

DFC/USPS-T24-2

Please identify the mechanism by which the costs of delivery to post-office boxes are reflected in the fees for post-office boxes. In doing so, please direct me to the appropriate portions of the Postal Service's direct case where I would find this information.

DFC/USPS-T24-2 Response:

The "costs of delivery to post office boxes" are not "reflected in the fees for post office boxes." The "costs of delivery to post office boxes" are borne by the classes of mail being delivered to those post office boxes. Specifically, if the "costs of delivery to post office boxes" are defined as "sorting mail to boxes", the costs are a portion of the costs shown in column (3.1), Mail Processing Direct Labor. The costs for Mail Processing Direct Labor (3.1) can be found in the following exhibits:

Fiscal Year 1997	USPS Exhibit-15B
Test Year 1998 Before Rates	USPS Exhibit-15E
Test Year 1998 After Rates	USPS Exhibit-15H.

Response of **United States Postal Service** Witness Patelunas
to Interrogatories of
Major Mailers Association
(Redirected from Witness Alexandrovich USPS-T-5)

9763

MMA/USPS-T5-6

What percent of clerk and mailhandler direct labor costs are overhead costs in the test year 1) under the **Postal Service's** cost methodology and b) under the Commission's cost methodology?

MMA/USPS-T5-6 Response:

- a. There are no clerk and mailhandler direct labor overhead costs in the test year under the Postal Service's cost methodology.
- b. Objection filed August 26, 1997.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Nashua Photo, District Photo, Mystic Color Lab and Seattle Filmworks
(Revised 10/16/97)

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NDMS/USPS-T15-1

Please refer to your response NDMS/USPS-T33-24 (redirected to you from witness Sharkey), and to LR-H-12, page 100, referred to in your answer. The column "Incremental FY 98" shows an entry on the ninth row for \$100,000 thousand described as Priority Redesign (98) and charged to Account 53599/Comp 142. In the same column, on the penultimate row before "Subtotal Trans. Programs" is another entry for \$100,000 thousand, also labeled Priority Redesign and charged to Account 53131/Comp 143. The subtotal for transportation programs, \$252,447 thousand, would appear to include a total of \$200,000 thousand in FY 98 for Priority Mail Redesign.

- a. Are the two \$100,00 thousand entries for "Priority Mail Redesign" duplicative?
- b. What do Account 53599/Comp 142 and Account 53131/Comp 143 stand for? Are they for air or surface transportation? If either component is for air transportation, please explain what it represents; e.g., expansion of the Eagle Network, special "charter" flights not part of the Eagle Network to transport Priority Mail, etc.
- c. Please confirm that the subtotal for Transportation Programs in FY 98 includes \$200,000 thousand for Priority Mail Redesign. If you do not confirm, or if the two figures cited above are not additive, please explain.
- d. Your answer notes that LR-H-12 includes "a cost reduction in air transportation costs due to Priority Mail Redesign." That does not explain the \$50,164 thousand increase in Priority Mail air transportation costs between the Base Year and Test Year Before Rates. In fact, when the cost reduction of \$82 million is taken into account, other unexplained factors are causing an increase of \$132,164 thousand in air transportation costs for Priority Mail, which is an astounding increase of 34.5 percent over base year air transportation costs. Please explain what is causing both the ground and air transport costs for Priority Mail to increase so sharply.

NDMS/USPS-T15-1 Response:

- a. No, one of the \$100,000 is Highway service costs for component 143 and the other \$100,000 is Domestic Air service costs for component 142.
- b. In the Postal Service's cost model, "Comp 142" stands for component 142, which is Domestic Air transportation and "Comp 143" stands for component 143, which is Highway transportation. Component 142 is air and component 143 is surface. These

Response of ~~United~~ States Postal Service Witness Patelunas
to Interrogatories of
Nashua Photo, ~~District~~ Photo, Mystic Color Lab and Seattle Filmworks
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NDMS/USPS-T15-1 Response continued:

costs are further described in **USPS** Library References H-1 (Section 14.1.1) and H-9 (Pages 123-125).

c. Part c. is confirmed.

d. Please refer to Attachment I to this response. Lines 1 - 19 in columns (2-5) show the cost changes that **appear** in the rollforward model from Base Year 1996 through Test Year 1998 ~~Before~~ Rates. Column (1) reflects the correction discussed in my second revised response to **UPS/USPS-T33-36** redirected from Witness Sharkey. Line 21 of columns (1-5) is the **total** change between the base year and the test year. Line 22 of columns (1-5) is the **percentage** change; it is line 21 divided into line 1. Columns (6-10) show the **individual** impacts in terms of the total change. For example, line 3 of column (6) shows the **9.52%** of the total change that was the result of the FY 1996 to FY 1997 cost level effect in the rollforward model.

As can be seen on line 22 of column (1), the total change in Priority Mail Air Transportation costs from the **base** year to the test year is 31.4%. Most of the increase is the result of the other programs in Test Year 1998, of which, \$100,000 is Priority Mail Redesign. Likewise, most of the 104.4% increase for Priority Mail Highway Transportation costs from the **base** year to the test year is the result of Priority Mail Redesign.

Priority Mail Transportation

Absolute Total Change										Percent Change of Total									
Column=>										Column=>									
Line	96MODS	Air	Highway	Rail	Water	Total	(5)	(6)	Air	Highway	Rail	Water	Total	(10)	(9)	(8)	(7)	(6)	(5)
1	383,497	25,426	4,901	33	14	30,374	9.52%	1.84%	0.01%	0.01%	0.02%	0.01%	11.38%						
2																			
3	CL																		
4	MV	53,073	18,757	368	58	72,256	19.88%	7.03%	0.14%	0.00%	0.02%	0.00%	27.06%						
5	NV	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%						
6	AD	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%						
7	CR	-21,218	0	0	0	-21,218	-7.95%	0.00%	0.00%	0.00%	0.00%	0.00%	-7.95%						
8	OP	32,748	6,851	0	0	39,599	12.27%	2.57%	0.00%	0.00%	0.00%	0.00%	14.83%						
9																			
10	97RCR	473,526	170,131	3,207	502	647,366	33.72%	11.43%	0.15%	0.03%	45.32%								
11																			
12	CL	-13,922	2,382	92	14	-11,434	-5.21%	0.89%	0.03%	0.01%	-4.28%								
13	MV	28,143	10,563	202	32	38,940	10.54%	3.96%	0.08%	0.01%	14.58%								
14	NV	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%								
15	AD	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%								
16	CR	-83,843	-2,463	0	0	-86,306	-31.40%	-0.92%	0.00%	0.00%	-32.32%								
17	OP	100,000	104,791	0	0	204,791	37.45%	39.25%	0.00%	0.00%	76.70%								
18																			
19	98RCB	503,904	285,404	3,501	548	793,357	45.10%	54.60%	0.26%	0.04%	100.00%								
20																			
21	Change	120,407	145,782	695	118	267,002													
22	% Change	31.40%	104.41%	24.77%	27.44%	50.73%													

Sources:

Cols (1-4) Lines (1-10) USPS-T15 WP-A

Cols (2-4) Lines (11-20) USPS-T15 WP-F

Col (1) Lines (11-20) reflecting Attachment I, second revised response to UPS/USPS-T33-36 redir. from Witness Sharkey

Col (5) Lines (1-19) = Sum cols(1-4)

Cols (1-5) Line 21 = Line 19 - Line 1

Cols (1-5) Line 22 = Line 21 / Line 3

Cols (6-10) = relevant change portion / total change

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from United States Postal Service)

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OCA/USPS-4. The following interrogatory refers to Postal Service library reference H7, data filename FY96mods.dat. Within the data file FY96mods.dat there are non-numeric characters.

- a. Please confirm that each of the following characters found in the data file converts to a numeric value as follows:

<u>Character</u>	<u>converts to</u>	<u>Numeric Value</u>	<u>Confirmed</u>	<u>Not Confirmed</u>
"{"		0	_____	_____;
"A"		1	_____	_____;
"B"		2	_____	_____;
"C"		3	_____	_____;
"D"		4	_____	_____;
"E"		5	_____	_____;
"F"		6	_____	_____;
"G"		7	_____	_____;
"H"		8	_____	_____;
"I"		9	_____	_____;
"J"		-0	_____	_____;
"K"		-1	_____	_____;
"L"		-2	_____	_____;
"M"		-3	_____	_____;
"N"		-4	_____	_____;
"O"		-5	_____	_____;
"P"		-6	_____	_____;
"Q"		-7	_____	_____;
"R"		-8	_____	_____;
		-9	_____	_____;

and

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from United States Postal Service)

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- b. For each conversion that was not confirmed in part "a" of this interrogatory, please state the correct interpretation of each non-numeric character.

OCA/USPS-4 Response:

a. Not confirmed. It is not correct to think in terms of converting the characters in the first column to the numeric values in the second column. The positive sign associated with the first ten symbols should not be assumed, rather the positive sign should be displayed. For example, "{", is synonymous with "+0". Keeping these two points clearly in mind, the symbols in the first column have the identical meaning as the numeric values in the second column, as shown in part b below.

b. The positive sign should be displayed for the first ten characters, resulting in the following:

"{"	+0
"A"	+1
"B"	+2
"C"	+3
"D"	+4
"E"	+5
"F"	+6
"G"	+7
"H"	+8
"I"	+9
"}"	-0
"J"	-1
"K"	-2
"L"	-3
"M"	-4

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from United States Postal Service)

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OCA/USPS-4 Response continued:

"N"	-5
"O"	-6
"P"	-7
"Q"	-8
"R"	-9

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from United States Postal Service)

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OCA/USPS-5. The following interrogatory refers to the Postal Service's Base Year data file format in USPS library reference H-7.

- a. Please explain why the Postal Service provides base year data (FY96mods.dat) that includes non-numeric data.
- b. Please explain why the Postal Service does not provide a base year data file containing only numeric characters.

OCA/USPS-5 Response:

- a. The fields that contain these characters are not "non-numeric". COBOL defines these fields as "signed numeric".
- b. See the response to part a of this question.

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from United States Postal Service)

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OCA/USPS-6. Please identify the Postal Service library reference that provides the base year data file format specifications and any required character conversion algorithm. Include in your response section identifiers and page numbers as appropriate. If there is no such library reference, please provide one.

OCA/USPS-6 Response:

These base year data file format specifications can be found in Docket No. R94-1, USPS Library Reference G-5, Costs and Revenue Analysis / Roll Forward, Listings of Programs, Job Control Language, and Command Procedures, Section 20, page 4. As explained in the response to OCA/USPS-4, there is no "character conversion algorithm" to be documented because there is no conversion. Nonetheless, in an effort to further explain the representation of the characters, the Postal Service searched its COBOL manuals, but was not able to find documentation of the character definition. These data file format specifications and character meanings are the same that have been filed in previous rate cases in which the base year/rollforward model data files have been filed. The character interpretations described in question 4, part a are common knowledge to any casual user of COBOL and thus further documentation, if such even exists, is not necessary.

Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

OCA/USPS-T5-3. The following interrogatory refers to Postal Service library reference H-6, subdirectory "PS410DOI/FY96MODS" data file "I.DAT", USPS-T-5 workpapers A and B and USPS library reference H-9. In each of the following instances, the data file appears to disagree with the workpapers and the library reference cited in USPS-T-5 workpaper B. Please indicate which information is correct and provide corrected library references, workpapers, and a data file as appropriate. (Trailing zero's have been omitted from the data.)

- a. The Postal Service's library reference H-6, data file I.DAT, indicates that the segment 18, cost component 199, "Repriced Annual Leave" total "other" is "46,427." Both workpaper A at 80 and Postal Service library reference H-9 at 159 indicate that cost component 199 is "47,300." Please indicate what the correct amount is.
- b. The Postal Service's library reference H-6 data file I.DAT, indicates that the segment 18, cost component 200, "Holiday Leave Variance" total "other" is "2,650." Both workpaper A at 80 and Postal Service library reference H-9 at 157 indicate that cost component 200 is "2,700." Please indicate what the correct amount is.
- c. The Postal Service's library reference H-6 data file I.DAT, indicates that the segment 18, cost component 201, "CS Ret Fund Deficit Cur" total "other" is "223,898." Both workpaper A at 80 and Postal Service library reference H-9 at 159 indicate that cost component 201 is "228,108." Please indicate what the correct amount is.
- d. The Postal Service's library reference H-6 data file I.DAT, indicates that the segment 18, cost component 202, "CS Ret Fund Deficit Pri" total "other" is "408,080." Both workpaper A at 80 and Postal Service library reference H-9 at 159 indicate that cost component 202 is "928,521." Please indicate what the correct amount is.
- e. The Postal Service's library reference H-6 data file I.DAT, indicates that the segment 2, cost component 9, "Time & Attend Supervision" total "other" is "61,056." Both workpaper A at 6 and workpaper B-2, worksheet 2.0.1 column 9, line 4, indicate that cost component 9 is "62,231." Please indicate what the correct amount is.

Response of United States Postal Service Witness Patelunas
to
Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

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OCA/USPS-T5-3 Response:

There are two attachments that accompany this response. Attachment I is a list of all the directories, subdirectories and file names found in Library Reference H-6.

OCA/USPS-T5-3 Response continued:

Columns A through E are the subdirectories and Columns F through O are the file names. File name \ps410d01\fy96mods\ contains the base year file i.dat. File name \ps420d01\fy96mods\ contains the base year file names a.dat, b.dat and d.dat. File name \ps460d03\ contains all of the rollforward files.

Attachment II is a flowchart detailing how the files are used from Base Year 1996 to Fiscal Year 1997 Before the Volume and Workyear Mix Adjustments. The Base Year 1996 B Workpapers are the source of the Manual Inputs used in the I File. Distributing the volume variable less PESSA costs produces the A File. The A File is then the input for the B File in which the PESSA costs are distributed and the D Report, which contains the Final Adjustments, follows the B File.

The A File is also the input matrix to the next rollforward year. The C1 through C6 Files are each of the discreet adjustments in the rollforward model. These are then summed into the TY File and it is similar to the A File in the base year. The TY File is used as the input to the B File and the TY File is also the input to the next rollforward year.

A more detailed explanation of these steps can be found in the testimony of Witness Patelunas, USPS-T-15, pages 6-15. The technical explanation is available in

Response of United States Postal Service Witness Patelunas
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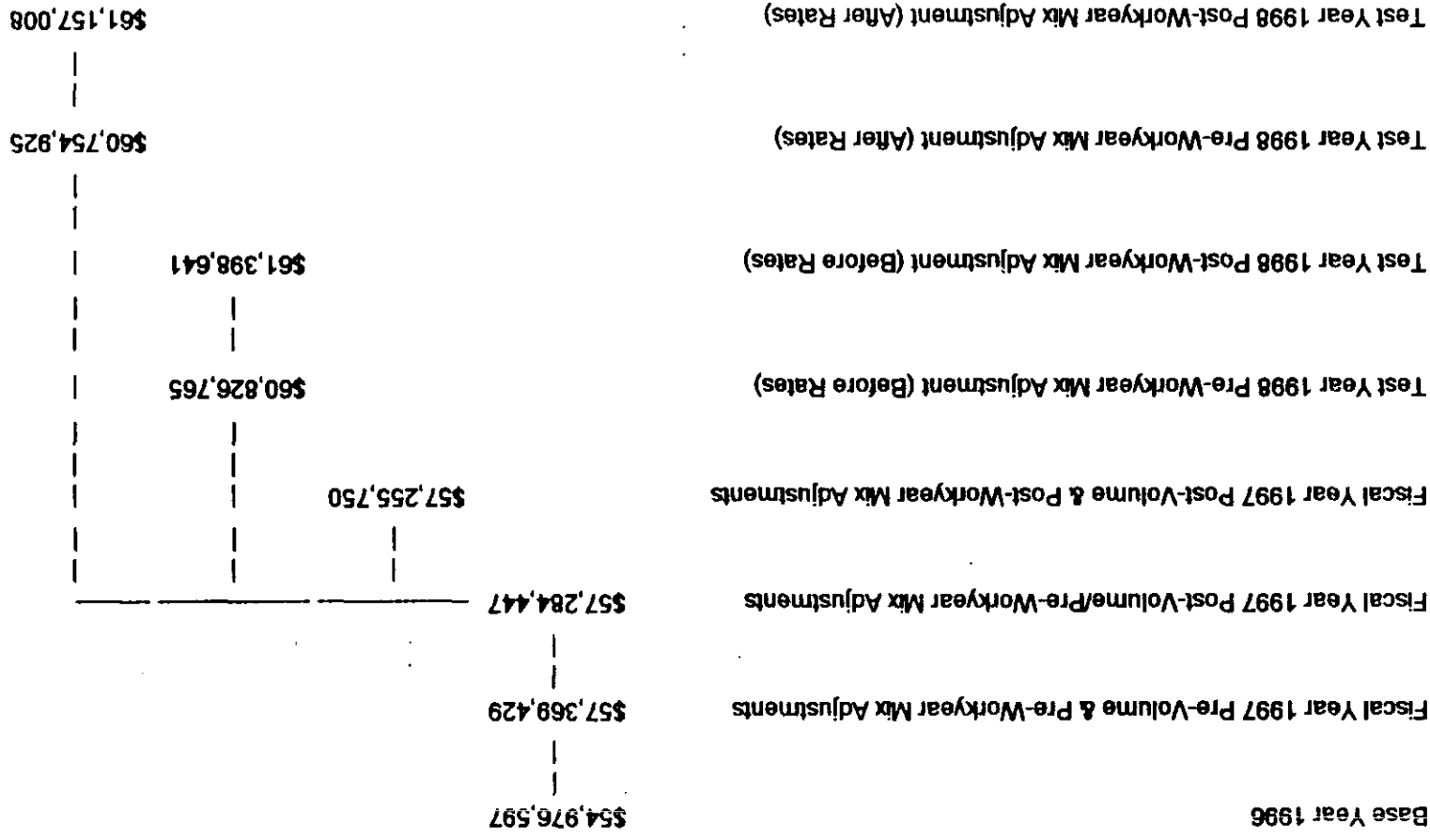
the following library references: Docket No. R94-1, LR-G-5, Costs and Revenue/RollForward, Listings of Programs, Job Control Language, and Command Procedures and Docket No. R97-1, LR-H-5, Cost and Revenue Analysis, Roll Forward, Processing Documentation.

Response a-e:

All of the amounts cited to USPS-T-5, Workpaper A and USPS Library Reference H-9 are correct. All of the amounts cited to USPS Library Reference H-6 cannot be found in file I.DAT. All of the relevant amounts in I.DAT match the Workpaper A and USPS Library Reference H-9 amounts. After browsing the files in an effort to clear-up the confusion, all the amounts cited to I.DAT were found in B.DAT. The original source CD ROM that was provided as USPS Library Reference should be reviewed for the amounts in I.DAT; it is possible that a copy made from the CD ROM has been mislabeled.

At. Agent 1
OCA/USPS-TS-3

Rollforward Flowchart



Response of United States Postal Service Witness Patelunas
to
Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

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OCA/USPS-T5-4. The following interrogatory refers to Postal Service library references H-6 and H-7. Both library references include diskettes. Library Reference H-6 states, "Eight computer tapes contain[] data files used in the Base Year / RollForward To facilitate use of these tapes, printouts of the job control language (JCL) used to create the tapes, and associated processing messages are also provided. " Library Reference H-7 states "This library reference contains one diskette that includes the cost matrices for the following years:..."

- a. Please explain why the data file I.DAT in library reference H-6, subdirectory "PS410DOI/FY96MODS" differs from the data file FY96MODS.DAT provided in library reference H-7. Which data file I.DAT or FY96MODS.DAT is correct? If neither file is totally correct, please submitted a corrected data file.
- b. In library reference H-6, subdirectory "PS420DOI/FY96MODS" there are three data files, A.DAT, B.DAT and C.DAT. Please explain the purpose of each data file.
- c. Please explain the difference between the data file FY97RCC.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS460D03/FY97RCC". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.
- d. Please explain the difference between the data file FY97RCM.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS460D03/FY97RCM". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.
- e. Please explain the difference between the data file FY97RCR.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS460D03/FY97RCR". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.
- f. Please explain the difference between the data file FY98RCA.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS460D03/FY98RCA". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.

Response of United States Postal Service Witness Patelunas
to
Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

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- g. Please explain the difference between the data file FY98RCAM.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS46OD03/FY98RCAM". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.
- h. Please explain the difference between the data file FY98RCB.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS46OD03/FY98RCB". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.
- i. Please explain the difference between the data file FY98RCBM.DAT in library reference H-7 and the data files in library reference H-6, subdirectory "PS46OD03/FY98RCBM". What data file accurately reflects the cost matrix data? If neither library reference contains a data file that accurately reflects the cost matrix data, please provide a corrected data file.

OCA/USPS-T5-4 Response:

For each of these responses, please refer to Attachments I and II to the response to OCA/USPS-T5-3 for further assistance.

- a. The I.DAT in Library Reference H-6 is the I File in Base Year 1996 and the FY96MODS.DAT file is the D File in Base Year 1996. Both files are correct.
- b. There is no C.DAT File; it is assumed that this should be D.DAT. The explanation provided at the beginning of the response to part a of OCA/USPS-T5-3 and the two attachments to that response explain the purpose of each data file.
- c-i. The files found in Library Reference H-7 are the D Files for each of the years listed. The two attachments to the response to OCA/USPS-T5-3 describe the files contained in Library Reference H-6. The two attachments and the explanation at the

Response of United States Postal Service Witness Patelunas
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beginning of ~~that~~ response provide the detail necessary to understand the different files. All the files reflect the cost matrices that they are intended to reflect.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

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OCA/USPS-T5-5. The following interrogatory refers to Postal Service library reference H-6, data file "I.DAT" and your workpaper A-1, base year 1996, manual input requirement.

- a. Can the "I.DAT" data file provided on diskette in Postal Service library reference H-6, subdirectory "PS41OD01 /FY96MODS" be used in the Postal Services CRA roll-forward program to replicate workpaper A-1, manual input requirement for the base year 1996?
- b. If your response to part "a" of this interrogatory is negative, please indicate what Postal Service library reference and data file could be used to replicate the workpaper A-1, manual input requirement for the base year 1996.
- c. If no data file has been submitted on a diskette that could be used to replicate the workpaper A-1, manual input requirement for the base year 1996, please provide one. The file provided on a diskette should be in a format similar to the file format used in the Postal Service library reference H-6 data file "I.DAT."

OCA/USPS-T5-5 Response:

- a. The I.DAT data file provided on CD ROM in Postal Service Library Reference H-6, subdirectory "ps41OdO1/fy96mods" is the same file as USPS-T-5, Workpaper A-1, Manual Input Requirement.
- b. Not Applicable.
- c. Not Applicable .

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

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OCA/USPS-T5-6. The following interrogatory refers to Postal Service library reference at 62. Please confirm that op code 12 takes the sum of components 427 and 21 distributes the total to component 528 on the basis of component 527. If you unable to confirm, please explain fully and include cites.

OCA/USPS-T5-6 Response:

Not confirmed. In addition to Postal Service library reference H-4, please refer to Docket No. R94-1, USPS Library Reference G-5, Costs and Revenue/Roll Forward, Listings of Programs, Job Control Language, and Command Procedures and Docket No. R97-1, Library Reference, H-5 for further explanation.

Briefly, control string 12 (this is not an op code), distributes the total amount of component 29, Supervision of E & LR, on component 527, All Salaries. This amount is stored in component 528. Component 427 is the PESSA portion of the E & LR component that is distributed in the B control strings and this amount is subtracted from component 29 to eliminate double counting. That is why components 427 and 29 can be added together to yield the same total as component 528.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich USPS-T-5)

9782

OCA/USPS-T5-9. Your response to OCA/USPS-T5-1, indicates that Postal Service library reference H-4 at 59-72 is a description. However, the Postal Service library reference H-4 at 59-72 is primarily a series of numbers. For example, the following appears on page 59,

04 CALCULATE SUBTOTAL ALL SALARIES
0525,0080
0680...;

on page 61,

04 CALC TOTAL C/S 16 CUSTODIAL & BUILDING
0297
0176
0177...;

and on page 62,

12 DISTRIBUTE C/S 18 PESSA CSC RETIREMENT CURRENT
0528,0432,0201,0433....

For each line on pages 59-72, please provide an English translation of the program operation. Please explain all mathematical calculations that are being performed.

OCA/USPS-T5-9 Response:

Please refer to Docket No. R94-1, USPS Library Reference G-5, Costs and Revenue/Roll Forward, Listings of Programs, Job Control Language, and Command Procedures for an English explanation of the program operations and the arithmetic involved. Additionally, Docket No. R97-1, Library Reference, H-5 provides further documentation.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich, USPS-T-5)

9783

OCA/USPS-T-5-28. Please list all BY 1996 cost segments and components (other than segment 3) for which the attributable costs are distributed (in whole or in part) to the classes and subclasses according to the distribution of costs for segment 3 totals.

OCA/USPS-T-5-28 Response:

See my response to OCA/USPS-T5-27, redirected from Witness Alexandrovich,
USPS-T-5.

**Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of the Consumer Advocate
(Redirected from Witness Alexandrovich, USPS-T-5)**

9784

OCA/USPS-T-5-29. Please list all BY 1996 cost segments and components (other than segment 3) for which the attributable costs are distributed (in whole or in part) to the classes and subclasses according to the distribution of costs for one of the segment 3 components. In each case, indicate which component is used to distribute the attributable costs.

OCA/USPS-T-5-29 Response:

See my response to OCA/USPS-T5-27, redirected from Witness Alexandrovich, USPS-T-5.

Component	Component Title	Distribution Key	Sources
42	CAG K Clerks	Subclasses distributed on Component 35	WP B W/S 4.1.1
4	Supv. Direct Labor and Overhead	Distributed on Component 35	WP A-2 18.1
7	Supv. Window Services	Distributed on Component 35	WP A-2 18.1
8	Supv. Time & Attendance	Distributed on Component 525 All Salaries Key (exc. CS2 T&A and E&LR, CS3 T&A)	WP A-2 20.1
28	Employee & Labor Relations	Distributed on Component 525 All Salaries Key (exc. CS2 T&A and E&LR, CS3 T&A)	WP A-2 28.1
32	Gen Supv. Collection & Delivery	Distributed on Component 40 and CS 6&7 exc. CAG K	WP A-2 28.1
676	Supv. QC/Rev Protection	Distributed on Component 285	WP A-2 30.1
678	Joint Supv. Clerks & Carriers	Mail Processing and Specific Fixed Total Distributed on CS 3 excluding T&A and CS 6&7 excluding CAG K	WP A-2 30.1
75	Postal Operating Equipment	Distributed on Component 1259 of which 1258 is part Portion of Component 1258 is Component 35	WP A-2 62.1 WP A-3 82.1
188	Replaced Annual Leave	Distributed on Component 526 All Salaries Key	WP A-2 124.1
200	CSRS Current	and Personnel costs from CS 13, 16, 18 and 19 Distributed on Component 526 All Salaries Key	WP A-2 124.1
201	CSRS Prior	and Personnel costs from CS 13, 16, 18 and 19 Distributed on Component 526 All Salaries Key	WP A-2 124.1
204	Workers' Comp	and Personnel costs from CS 13, 16, 18 and 19 Distributed on Component 526 All Salaries Key	WP A-2 126.1
844	Office Factor	Distributed partially on CS 3 Admin, T&A and Other	WP A-3 16.1
947	Employee Facilities Factor	Distributed on All Salaries Key, exc. HQ & Region	WP A-3 16.1
1001	Window Service Space	Distributed on Component 40	WP A-3 28.1
1010	Claims & Inquiry Space	Distributed on Component 66	WP A-3 30.1
1044	Office Space	Distributed on Component 944	WP A-3 42.1
1047	Employee Facilities Space	Distributed on Component 947	WP A-3 42.1
1052	Mail Transport Equip Centers	Distributed on Component 35	WP A-3 46.1
1089	Total Space Key	Sum including comps: 1001, 1010, 1044, 1047 and 1052	WP A-3 46.1
1101	Window Service Rental	Distributed on Component 40	WP A-3 48.1

Component	Component Title	Distribution Key	Sources
1110	Claims & Inquiry Rental	Distributed on Component 66	WP A-3 48.1
1144	Office Space Rental	Distributed on Component 944	WP A-3 62.1
1147	Employee Facilities Rental	Distributed on Component 947	WP A-3 62.1
1152	Mail Transport Equip Centers Rental	Distributed on Component 35	WP A-3 66.1
1199	Total Rental Key	Sum including comps: 1001, 1010, 1044, 1047 and 1052	WP A-3 66.1
1250	Mail Transport Equip Centers	Distributed on Component 35	WP A-3 82.1
1259	Total Key	Includes Component 1250	WP A-3 82.1
1260	Mail Transport Equip Centers	Distributed on Component 35	WP A-3 90.1
1289	Total Key	Includes Component 1280	WP A-3 90.1
428	T & A Supervision	Distributed on Component 527 All Salaries	WP A-4 6.1
427	Employee and Labor Relations	exc. CS 2 T&A and E&LR and CS3 T&A PESSA distributed on Component 527 All Salaries	WP A-4 6.1
429	Employee and Labor Relations	exc. CS 2 T&A and E&LR and CS3 T&A PESSA distributed on Component 527 All Salaries	WP A-4 8.1
74	Cleaning & Protection Personnel	PESSA distributed on Component 1099	WP A-4 10.1
81	Contract Cleaners	PESSA distributed on Component 1099	WP A-4 10.1
79	Plant & Building Equipment	PESSA distributed on Component 1099	WP A-4 10.1
165	Rents	PESSA distributed on Component 1199	WP A-4 12.1
298	Fuel & Utilities	PESSA distributed on Component 1199	WP A-4 12.1
297	Custodial & Building	PESSA distributed on Component 1099	WP A-4 14.1
194	USPS Protection Force	PESSA distributed on Component 1099	WP A-4 16.1
432	CSRS Current	PESSA distributed on Component 433 All Salaries Key	WP A-4 18.1
434	CSRS Prior	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 18.1
435	CSRS Summation	Includes Components 432 and 434 and Personnel costs from CS 13, 16, 18 and 19	WP A-4 18.1
208	Retiree Health Benefits	PESSA distributed on Component 433 All Salaries Key	WP A-4 20.1
71	Annuitant Life Insurance	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 20.1
1435	Annuitant COLA/Principal	PESSA distributed on Component 433 All Salaries Key	WP A-4 20.1

Component	Component Title	Distribution Key	Sources
436	Workers' Comp Current	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 20.1
453	Unemployment Compensation	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 22.1
438	Holiday Leave Variance	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 22.1
440	Repriced Annual Leave	and Personnel costs from CS 13, 16, 18 and 19 PESSA distributed on Component 433 All Salaries Key	WP A-4 22.1
296	Imputed Bldg & Leasehold	Distributed on Component 1199	WP A-4 30.1
420	Adjusted Total Bldg & Leasehold	Includes Component 296	WP A-4 30.1
454	Total Depreciation	Includes Component 296	WP A-4 30.1
587	Interest for Equip, Land/Bldg & Vehicles	Distributed on Component 296	WP A-4 32.1
1436	Retirement Interest	Distributed on Component 433 All Salaries	WP A-4 32.1
283	Adjusted Total Interest	Includes Components 587 and 1436	WP A-4 32.1

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of Consumer Advocate
(Redirected from Witness Tayman USPS-T-9)

9788

OCA/USPS-T-9-21. Please refer to Library Reference H-12, Chapter IIIa, Roll Forward Model Factors and Chapter XII, Rollforward Model Change Reports.

a. Two different line headings, "Interest on Debt, cost component 217," for three periods (FY97, FY98, and FY98 After Rates) in Chapter IIIa and "Imputed Interest Land/Building and Equip., cost component 587," in Chapter XII, Sections a, d, and f are used to refer to identical dollar amounts. Please indicate which designation is correct, where any conforming adjustments are required, and provide revised schedules as appropriate.

b. Please explain why the "Interest on Debt, cost component 217," of \$82,152,000 in the "Roll Forward Model Factors for FY 1998," referenced in a, above, differs from those in a similar table sponsored by witness Patelunas (Exhibit 15A, FY 1998 page 4), which cites to LR H-12 and lists \$113,192,000 as "Interest on Debt, cost component 217." Please indicate which amount is correct, where any adjustments are required, and provide revised schedules as appropriate.

OCA/USPS-T9-21 Response:

a. The component headings "Interest on Debt" and "Imputed Interest Land/Building and Equip." are synonymous and can be used interchangeably. In the CRA/Rollforward model, the proper cost component associated with these headings is 587. Cost component 217 is Total Interest Expense.

b. The \$82,192,000 amount shown in USPS Library Reference H-12, Section XII, part d is correct. Please see my USPS Exhibit-15A, page 4, revised September 2, 1997.

Exhibit USPS-15A Change the following:

Page 4 of 6

Delete "Interest on Debt" line in SEG 20 section – see addition below

Add the following row to the bottom of the page:

			FY 1997	TY 1998BR	TY 1998AR
20	Interest on Debt	587	0	82,192	26,192

OCA/USPS-T24-25. Please refer to your testimony at page 20, line 7, and the following table, which shows the development of attributable costs for the "All Other" category.

DETAIL FOR "ALL OTHER" CATEGORY
TYBR 98

COST SEGMENT	ACCRUED COSTS (\$1,000)	ATTRIBUTABLE TO PO BOXES (\$1,000)
	[1]	[2]
C/S 1	1,714,555 1/	\$3,183 1/
C/S 2	\$3,514,728 1/	\$7,531 1/
C/S 3	\$17,707,467 1/	\$71,527 1/
C/S 4	\$10,053 1/	\$0
C/S 6&7	\$11,987,730 1/	\$353 1/
C/S 8	\$452,791 1/	\$0
C/S 9	\$115,083 2/	\$0
C/S 10	\$3,730,577 2/	\$0
C/S 11	\$1,065,756 3/	\$0
C/S 12	\$648,559 2/	\$0
C/S 13	\$291,673 2/	\$0
C/S 14	\$4,364,702 2/	\$0
C/S 15	\$423,682 4/	\$0
C/S 16	\$2,121,647 5/	\$0
C/S 17	\$57,201 6/	\$0
C/S 18	\$4,235,424 7/	\$14,550 8/
C/S 19	\$38,973 9/	\$0
C/S 20	<u>\$3,211,638</u> 10/	<u>\$7,431</u> 11/
SUBTOTAL	\$55,692,237	\$104,575
TOTAL	ALL C/S \$60,766,222 12/	

NOTES AND SOURCES

- 1/ USPS-T-15. WP E. Table D, at 2.
- 2/ USPS-T-15. WP E. Table D, at 4.
- 3/ USPS-T-15. WP E. Table D, at 36.
- 4/ USPS-T-15. WP E. Table D, at 48.
- 5/ \$2,121,647 = \$3,529,646 - \$1,407,999 USPS-T-15, WP E Table D, at 52 & 54.
- 6/ USPS-T-15. WP E, Table D, at 6.

OCA/USPS-T24-25 continued:

- 7/ \$4,235,424 = \$4,595,701 - \$360,277 USPS-T-15, WP E, Table D, at 56 & 64.
- 8/ \$14,550 = \$21,804 - \$7,254 USPS-T-15, WP E Table D, at 56 & 64.
- 9/ USPS-T-15, WP E, Table D, at B.
- 10/ \$3,211,638 = \$4,155,532 - (\$581,680 + \$362,214)
USPS-T-15, WP E, Table C, at 32, and Table D, at 66 & 68.
- 11/ USPS-T-15, WP E, Table C, at 32.
- 12/ USPS-T-15, WP E, Table D, at 8.

a. Please confirm that the figures in column [1] are correct. If you do not confirm, please explain and provide the correct figures. Please show all calculations and provide citations to any figures used.

b. Please confirm that the figures in column [2] are correct. If you do not confirm, please explain and provide the correct figures. Please show all calculations and provide citations to any figures used.

c. Please refer to the "Notes and Sources." Please confirm that the citations, and calculation of figures based upon those citations, in the "Notes and Sources" accompanying the table above are correct. If you do not confirm, please explain and provide the correct citations and figures. Please show all calculations and provide citations to any figures used.

OCA/USPS-T24-25 Response:

a. Part a is confirmed.

b. Part b is not confirmed. I misunderstood the question when I originally responded. I interpreted the question as asking me to confirm that the amounts accompanied by a footnote could be found on the pages cited in the "Notes and Sources" section and that is what I did. I should have verified that not only could the amounts be found on the cited pages, but also that these were indeed the correct amounts of Post Office Box volume variable costs. There are two amounts in column [2] that are not correct amounts to use in this calculation: C/S 12 should be \$3 and C/S 20 should be \$7,432. As such, these two amounts are not confirmed.

OCA/USPS-T24-25 Response continued:

In an effort to clarify the confusion this has caused, I am providing Attachment I to this response. Attachment I shows the detail and sources of the underlying Space Provision, Space Support and All Other costs for Test Year 1998 for both Before Rates and After Rates. Using the three categories as defined by Witness Lion, USPS-T-24, page 1 displays the detail for the Space Support and Space Provision categories, page 2 displays the detail for the All Other category for Before Rates and page 3 displays the detail for the All Other category for After Rates.

c. Part c is confirmed.

DEVELOPMENT OF TY98 ACCRUED AND VOLUME
VARIABLE COSTS FOR SPACE SUPPORT, SPACE
PROVISION AND ALL OTHER COST CATEGORIES FOR POST
OFFICE BOXES

TYBR98 ACCRUED AND VOLUME VARIABLE COSTS 1/		TYAR98 ACCRUED AND VOLUME VARIABLE COSTS 2/	
COST CATEGORY	COST SEGMENT AND COMPONENT	VOLUME VARIABLE TO POST OFFICE BOXES (\$1,000)	VOLUME VARIABLE TO POST OFFICE BOXES (\$1,000)
SPACE SUPPORT	C/S 11.1.1 CLEANING & PROTECTION	\$802,066	\$802,066
	C/S 11.1.2 CONTRACT CLEANERS	\$53,401	\$53,401
	C/S 11.3 PLANT & BUILDING EQUIP MAINT	\$389,346	\$389,346
	C/S 16.2 BUILDING OCCUPANCY, FUEL & UTILITIES	\$37,919	\$428,602
	C/S 16.3.1 CUSTODIAL & BUILDING	\$124,698	\$1,407,999
SPACE PROVISION	C/S 18.1.2 POSTAL INSPECTION SERVICE	\$360,277	\$360,277
	TOTAL SPACE SUPPORT	\$3,441,690	\$3,441,690
	C/S 16.1 BUILDING OCCUPANCY, RENTS	\$688,501	\$688,501
	C/S 18.2.6 (FY94) C/S 20.6 (FY96) INTEREST EXPENSE - BLDG & LEASEHOLD (COMPONENT 215) 4/	\$362,214	\$306,214
	C/S 20.3 BLDG & LEASEHOLD DEPRECIATION	\$581,680	\$581,680
TOTAL SPACE PROVISION		\$1,632,395	\$1,676,396
TOTAL ALL OTHER 3/		\$55,692,237	\$56,672,136
ALL OTHER	TOTAL	\$60,766,222	\$60,690,121
			\$689,963
			\$91,293
			\$219,839
			\$93,838
			\$14,930
			\$111,071

NOTES AND SOURCES

- 1/ USPS-T-15, Exhibit E, for the cost segments (C/S) listed.
2/ USPS-T-15, Exhibit H, for the cost segments (C/S) listed.
3/ See Sheets "BR AO Detail" and "AR AO Detail" for development of All Other costs in the test year before rates and the test year after rates, respectively.
4/ USPS-T-15, W/P E for Before Rates or W/P G for After Rates, Table C at 32.

**DETAIL FOR "ALL OTHER" CATEGORY
TYBR 98**

COST SEGMENT	TOTAL ACCRUED COSTS (\$1,000)	VOLUME VARIABLE TO PO BOXES (\$1,000)
C/S 1	\$1,714,555 1/	\$3,183 1/
C/S 2	\$3,514,726 1/	\$7,531 1/
C/S 3	\$17,707,467 1/	\$71,527 1/
C/S 4	\$10,053 1/	\$0 1/
C/S 6&7	\$11,987,730 1/	\$353 1/
C/S 8	\$452,791 1/	\$0 1/
C/S 9	\$115,083 2/	\$0 2/
C/S 10	\$3,730,577 2/	\$0 2/
C/S 11	\$1,065,756 3/	\$0 3/
C/S 12	\$648,559 2/	\$3 2/
C/S 13	\$291,673 2/	\$0 2/
C/S 14	\$4,364,702 2/	\$0 2/
C/S 15	\$423,682 4/	\$0 4/
C/S 16	\$2,121,647 5/	\$0 5/
C/S 17	\$57,201 6/	\$0 6/
C/S 18	\$4,235,424 7/	\$14,550 8/
C/S 19	\$38,973 9/	\$0 9/
C/S 20	\$3,211,638 10/	\$7,432 11/
SUBTOTAL	<u>\$55,692,237</u>	<u>\$104,579</u>
TOTAL ALL C/S	\$60,766,222	

NOTES AND SOURCES

1/	USPS-T-15, Exhibit E, at 2.
2/	USPS-T-15, Exhibit E, at 4.
3/	USPS-T-15, Exhibit E, at 36.
4/	USPS-T-15, Exhibit E, at 48.
5/	\$2,121,647 USPS-T-15, Exhibit E, at 52 & 54.
6/	USPS-T-15, Exhibit E, at 6.
7/	\$4,235,424 USPS-T-15, Exhibit E, at 56 & 64.
8/	\$14,550 USPS-T-15, Exhibit E, at 56 & 64.
9/	USPS-T-15, Exhibit E, at 8.
10/	\$3,211,638 USPS-T-15, Exhibit E, at 66 & 68.
11/	\$7,432 USPS-T-15, Exhibit E, at 66 & 68.

DETAIL FOR "ALL OTHER" CATEGORY
TYAR 98

COST SEGMENT	TOTAL ACCRUED COSTS (\$1,000)	VOLUME VARIABLE TO PO BOXES (\$1,000)
C/S 1	\$1,712,615 1/	\$2,721 1/
C/S 2	\$3,517,945 1/	\$6,465 1/
C/S 3	\$17,759,605 1/	\$61,217 1/
C/S 4	\$10,073 1/	\$0 1/
C/S 6&7	\$11,960,532 1/	\$302 1/
C/S 8	\$448,972 1/	\$0 1/
C/S 9	\$114,111 2/	\$0 2/
C/S 10	\$3,721,604 2/	\$0 2/
C/S 11	\$1,070,905 3/	\$0 3/
C/S 12	\$647,994 2/	\$3 2/
C/S 13	\$291,625 2/	\$0 2/
C/S 14	\$4,326,522 2/	\$0 2/
C/S 15	\$423,682 4/	\$0 4/
C/S 16	\$2,123,396 5/	\$0 5/
C/S 17	\$57,201 6/	\$0 6/
C/S 18	\$4,235,424 7/	\$13,625 8/
C/S 19	\$38,973 9/	\$0 9/
C/S 20	\$3,210,957 10/	\$6,960 11/
SUBTOTAL	\$55,672,136	\$91,293
TOTAL ALL C/S	\$60,690,121	

NOTES AND SOURCES

1/ USPS-T-15, Exhibit H, at 2.
2/ USPS-T-15, Exhibit H, at 4.
3/ USPS-T-15, Exhibit H, at 36.
4/ USPS-T-15, Exhibit H, at 48.
5/ \$2,123,396 USPS-T-15, Exhibit H, at 52 & 54.
6/ USPS-T-15, Exhibit H, at 6.
7/ \$4,235,424 USPS-T-15, Exhibit H, at 56 & 64.
8/ \$13,625 USPS-T-15, Exhibit H, at 56 & 64.
9/ USPS-T-15, Exhibit H, at 8.
10/ \$3,210,957 USPS-T-15, Exhibit H, at 66 & 68.
11/ \$6,960 USPS-T-15, Exhibit H, at 66 & 68.

Answer of Richard Patelunas to the Interrogatories of
Office of the Consumer Advocate
to United States Postal Service
(Redirected from Witness Lion USPS-T24)

9796

OCA/USPS-T24-60. Please refer to your testimony at page 20, lines 5-7, concerning the total cost for each of the three cost categories of Space Support, Space Provision and All Other.

a. Please confirm that you assumed there would be no change in total Space Support and total Space Provision costs in the test year associated with the decrease in the total number of post office boxes. If you do not confirm, please explain.

b. Please confirm that only the total of All Other costs will vary with the decrease in the number of post office boxes in the test year. If you do not confirm, please explain.

OCA/USPS-T24-60 Response:

a. See Witness Lion's response.

b. Part b is not confirmed. In the rollforward, in addition to the mail volume effect for the components comprising the "All Other" category, the components that are used to build the distribution keys for the PESSA costs also receive a mail volume effect. As such, the Post Office Box portion (component 903), receives a mail volume effect that causes its portion of the total distribution key to change slightly. For instance, the following changes occurred from Base Year 1996 to Test Year After Rates 1998 for components 1099 (Total Key of Space Components) and 1199 (Total Key of Rental Value Components):

		<u>(1099)</u>	<u>(1199)</u>
BY96	USPS-T-5, WP-A-3, pp. 46 and 66	8.89%	9.67%
TY98AR	USPS-T-15, WP-G, Table B, pp. 46 and 66	8.81%	9.57%

Response of United States Postal Service Witness Patelunas
to Interrogatories of
Office of Consumer Advocate
(Redirected from Witness Lion, USPS-T24)

9797
Revised
9/19/97

OCA/USPS-T24-74. Please refer to your testimony at page 20, line 8.

- a. Please confirm that the cost of post office boxes located in contract stations is not included in the TYBR "Total Volume-Variable Costs" of \$607,734,000. If you do not confirm, please explain.
- b. Please confirm that the cost of post office boxes located in contract stations is treated as an institutional costs. If you do not confirm, please explain.

OCA/USPS-T24-74 Response:

- a. Part a is answered by Witness Lion, USPS-T24.
- b. It is confirmed that the cost of post office boxes located in contract stations is treated as non-volume variable.

Response of United States Postal Service Witness Patelunas
to Interrogatories of
United Parcel Service
(Redirected from Witness Sharkey USPS-T-33)
Revised 12/03/97

9798

UPS/USPS-T33-58

Please provide that portion of the total price to be paid by the Postal Service under the PMPC contract that relates to test year (FY 1998) operations for the PMPC network.

UPS/USPS-T33-58 Response:

My response to UPS/USPS-T33-35, redirected from Witness Sharkey, referred to USPS Library Reference H-12 pages: 98, 100, 122 and 127 as the sources of the of the PMPC Phase I contract costs. For Test Year 1998, the costs are found on pages 100 and 122 of USPS-LR-H-12 and they are (in 000's):

HQ Programs	Segment 16	Component 187	\$101,813	page 122
Air Transportation	Segment 14	Component 142	\$100,000	page 100
Highway Transport	Segment 14	Component 143	\$100,000	page 100.

Summing the amounts shown above yields \$301,813,000 in PMPC Contract costs projected for Test Year 1998 in USPS-LR-H-12.

14. USPS Library References H-2 and H-3 are the FY 1996 Cost and Revenue Analysis report and the Cost Segments and Components report. These reports are the Fiscal Year 1996 equivalent of witness Alexandrovich's Exhibits 5A through 5C. Please provide the following workpapers and backup material that were used to develop the library references, above.

a. Cost Segment workpapers, equivalent to witness Alexandrovich's "B" workpapers. Also, please provide the electronic version of the workpapers as was provided for the Base Year workpapers in USPS LR-H-201.

b. The CRA Manual Input reports, the A report, the B report, and the C report. These are equivalent to witness Alexandrovich's workpapers A-1 through A-4. Please provide an electronic version of the Manual Input report similar to that found in USPS LR-H-6.

14. Response:

a. The hardcopy version of the "B" workpapers is provided in Part I of USPS LR-H-308. The electronic version of the "B" workpapers is provided on the disk found at the end of Part II of USPS LR-H-308.

b. The hardcopy version of the following reports is provided in Part II of USPS LR-H-308: the Manual Input report, the A report, the B report, the F report and the C report. The electronic version of the Manual Input report is provided on the disk found at the end of Part II of USPS LR-H-308.

**Designated Interrogatory Responses
of
Peter D. Hume (T18)**

Response of United States Postal Service Witness Peter Hume
to interrogatory of NNA

NNA/USPS-T18-1

Please explain in your Tables 1-5, line 16 and Tables 6, line 17 what "Publications Service" describes and measures.

Response

The term "Publications Service" was used in my previous testimony, USPS-T-7 of Docket No. MC95-1, to represent the former CRA line item "Second Class Regular Rate" of the former Second Class. See page 32, lines 11-13 of USPS-T-7 and Tables B-1 through B-5 of USPS-T-7B of Docket No. MC95-1. Similarly, "Nonprofit (all categories)" was used in my previous testimony, USPS-T-2 of Docket No. MC96-2, to represent the former CRA line item "Nonprofit Publications" of Second Class. See page 27, lines 4-7 of USPS-T-2 of Docket No. MC96-2. Since I retained the original (MC95-1 and MC96-2) computational formats of all my tables 1-5 in my present testimony, the lines 16 (and line 15 in Table 6) still represent the CRA line items "regular rate publications" or "nonprofit publications" in my Exhibit B tables and Exhibit C tables respectively.

It may be noted that the CCS data collection, which determines cost distributions for city carrier street time and rural carrier components, treats Second Class (periodicals) as a whole without differentiating among the periodicals subclasses.

**Designated Interrogatory Responses
of
Michael A. Nelson (T19)**

**Response of Postal Service Witness Nelson to OCA Interrogatory
Redirected from Witness Alexandrovich**

OCA/USPS-T5-15. Please confirm that the procedure for determining attributable costs for cost component 6.1 (city carriers office activity, direct labor) in the base year is the same as that described on page 6-4 of library reference H-1. If you do not confirm, please describe all deviations from the H-1 methodology.

Response:

Not confirmed. Methodological refinements for cost component 6.1 that were introduced in the base year are described in the following:

- USPS-T-19, section I.A (pages 3-5),
- Exhibit USPS-19A, part 4.d (page 5), and
- USPS-LR-H-161, sections I and II (pages 1-2).

**Designated Interrogatory Responses
of
David E. Treworgy (T22)**

U.S. POSTAL SERVICE WITNESS DAVID E. TREWORGY
RESPONSE TO PRESIDING OFFICER'S RULING NO. R97-1/40

Page 1 of 1

OCA/USPS-T22-12. Please refer to your Worksheet C-1 and C-2, concerning the scanning infrastructure capital and program costs and the distribution key for volume variable costs. Please update your Worksheet C-1 and C-2 to reflect the \$218 million contract awarded to Lockheed Martin.

RESPONSE:

Pursuant to Presiding Officer's Ruling No. R97-1/40, updated Worksheets C-1 and C-2 are attached.

Scanning Infrastructure Capital and Program Costs

(in thousands)

Capital costs		Test year costs ¹		Attribution of costs		Volume variable with respect to delivery confirmation		Distribution of costs	
Information systems	\$14,886.4	Not volume variable						No attributable costs to distribute	\$0.0
Carrier scanners	\$25,763.1	Variable with overall carrier cost system (CS 6, 7, and 10)						Overall carrier cost system (CS 6, 7, and 10)	\$25,763.1
Box section scanners	\$4,099.2	Not volume variable						No attributable costs to distribute	\$0.0
Support for carrier scanners	\$97.9	Variable with overall carrier cost system (CS 6, 7, and 10)						Overall carrier cost system (CS 6, 7, and 10)	\$97.9
Support for box section scanners	\$15.6	Not volume variable						No attributable costs to distribute	\$0.0
Miscellaneous	\$1,058.7	Not volume variable						No attributable costs to distribute	\$0.0
Total capital costs	\$45,920.9								\$25,861.0
Program costs		Test year costs ¹		Attribution of costs		Volume variable with respect to delivery confirmation		Distribution of costs	
Information systems	\$64,723.5	Not volume variable						No attributable costs to distribute	\$0.0
Carrier scanner support and maintenance	\$9,259.7	Variable with overall carrier cost system (CS 6, 7, and 10)						Overall carrier cost system (CS 6, 7, and 10)	\$9,259.7
Box section scanner support and maintenance	\$1,473.3	Not volume variable						No attributable costs to distribute	\$0.0
Call center development	\$183.2	Not volume variable						No attributable costs to distribute	\$0.0
Training	\$22,032.9	Not volume variable						No attributable costs to distribute	\$0.0
Miscellaneous	\$22,558.0	Not volume variable						No attributable costs to distribute	\$0.0
Total program costs	\$120,230.6								\$9,259.7
Total capital and program costs									

Distribution Key for Volume Variable Scanning Infrastructure Capital and Program Costs

(in thousands)

Rate category	CS 6 & 7	CS 10	CS 6, 7, & 10	Total	Distribution key	Distributed amount
First-Class Mail:						
Letters & parcels	1,873,760	296,468	2,170,228	14.63%		\$5,136.6
Presort ltr & parcel	1,018,479	263,567	1,282,046	8.64%		\$3,034.4
Single piece cards	89,369	19,248	108,617	0.73%		\$257.1
Presort prt p cs	36,403	11,053	47,456	0.32%		\$112.3
Total First	3,018,011	590,336	3,608,347	24.32%		\$8,540.4
Priority Mail	107,436	12,979	120,415	0.81%		\$285.0
Express Mail	21,374	4,729	26,103	0.18%		\$61.8
Mailables	166	11	177	0.00%		\$0.4
Second-class mail:						
Within county:	23,499	13,610	37,109	0.25%		\$87.8
Outside county:						
Reg rate pub	223,671	108,288	331,959	2.24%		\$785.7
Nonprofit pub	59,624	34,191	93,815	0.63%		\$222.0
Classroom pub	1,856	913	2,769	0.02%		\$6.6
Total Second	308,650	157,002	465,652	3.14%		\$1,102.1
Third-class mail:						
Single piece rate	25,799	1,149	26,948	0.18%		\$63.8
Bulk rate-reg						
Car presort	716,279	259,640	975,919	6.58%		\$2,309.9
Other	809,641	304,392	1,114,033	7.51%		\$2,636.8
Total regular	1,525,920	564,032	2,089,952	14.08%		\$4,946.6
Bulk rate- nonprof						
Car presort	46,962	13,834	60,796	0.41%		\$143.9
Other	191,940	70,010	261,950	1.77%		\$620.0
Total nonprof	238,902	83,844	322,746	2.18%		\$763.9
Total Third	1,790,621	649,025	2,439,646	16.44%		\$5,774.3

Distribution Key for Volume Variable Scanning Infrastructure Capital and Program Costs

(in thousands)

Rate category	CS 6 & 7	CS 10	Total CS 6, 7, & 10	Distribution key	Distributed amount
Fourth-class mail:					
Parcel zone rate	42,935	9,804	52,739	0.36%	\$124.8
Bound print matter	51,222	10,381	61,603	0.42%	\$145.8
Spc 4th-cl. rate	27,690	5,199	32,889	0.22%	\$77.8
Library rate	4,585	1,243	5,828	0.04%	\$13.8
Total Fourth	126,432	26,627	153,059	1.03%	\$362.3
US Postal Service	13,403	1,537	14,940	0.10%	\$35.4
Free mail	3,222	671	3,893	0.03%	\$9.2
International mail	23,043	2,585	25,628	0.17%	\$60.7
Total All Mail	5,412,358	1,445,502	6,857,860	46.22%	\$16,231.6
Special services:					
Registry	7,042	2,335	9,377	0.06%	\$22.2
Certified	93,596	54,058	147,654	1.00%	\$349.5
Insurance	2,581	2,738	5,319	0.04%	\$12.6
COD	2,799	3,874	6,673	0.04%	\$15.8
Special delivery	644	219	863	0.01%	\$2.0
Money orders	0	1,233	1,233	0.01%	\$2.9
Stamped envelopes	0	0	0	0.00%	\$0.0
Special handling	0	0	0	0.00%	\$0.0
Post office box	329	0	329	0.00%	\$0.8
Other	7,971	26	7,997	0.05%	\$18.9
Total Spc Svcs	114,962	64,483	179,445	1.21%	\$424.7
Attributable	5,527,320	1,509,985	7,037,305	47.43%	\$16,656.3
Other	5,934,155	1,867,077	7,801,232	52.57%	\$18,464.4
Total Costs	11,461,475	3,377,062	14,838,537	100.00%	\$35,120.7

Notes

¹ See USPS-T-5, Worksheet B.

U.S. POSTAL SERVICE WITNESS DAVID E. TREWORGY
RESPONSE TO PRESIDING OFFICER'S RULING NO. R97-1/40

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OCA/USPS-T22-20. At page 18 of your direct testimony, you state: "I have developed certain capital and program costs for the scanner infrastructure program" You also refer to Worksheet C-1, Scanning Infrastructure Capital and Program Costs.

- b. Please provide all documents relating to your development of "certain capital and program costs for the scanner infrastructure program" that you consulted or generated, and that have not previously been submitted to this docket.
- e. When H-247 was first distributed within the Postal Service, were there any attachments to it? If so, please provide them to the extent they have not been submitted to this docket.
- g. Please provide all documents relating to return on investment of the proposed delivery confirmation.

RESPONSE:

- b,e,g. Please see LR-H-299, Materials Responsive to Presiding Officer's Ruling No. R97-1/40 filed under protective conditions, as specified in Presiding Officer's Ruling No. R97-1/40.

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS DAVID E. TREWORY TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 5, QUESTION 17

Page 1 of 1

POIR No. 5, Question 17. USPS-T-22, page 18, states that "worksheet C-1, include costs such as scanning equipment depreciation, information systems hardware and software development, and training." Please identify which of the costs in Table [sic] C-1 are depreciation costs.

RESPONSE:

All costs listed under "Capital costs" in worksheet C-1 are depreciation costs.

U.S. POSTAL SERVICE RESPONSE TO
ORAL CROSS-EXAMINATION OF OFFICE OF THE CONSUMER ADVOCATE TO
WITNESS TREWORY (T-22)

Page 1 of 3

QUESTION:

Tr. 3/1295. Regarding the depreciation method used in USPS-T-22 Worksheet C-1:

- a. Over how many years is the equipment depreciated?
- b. Were any alternative depreciation methods considered?
- c. Why was the chosen method of depreciation appropriate to the equipment used?
- d. Please provide a general description of the depreciation method.

RESPONSE:

- a. All equipment costs are depreciated over three years.
- b. The one alternate method considered was depreciating the equipment over five years instead of three.
- c. Since the actual life of the scanners is unknown, a three year straight-line depreciation schedule is employed, generating a conservatively high estimate thus maximizing confidence that all costs are fully covered.
- d. The general depreciation method which is used is a straight-line method. See LR-H-299, page 1, filed under protective conditions as specified in response to Presiding Officer's Ruling No. R97-1/40, for a more complete description.

U.S. POSTAL SERVICE RESPONSE TO
ORAL CROSS-EXAMINATION OF OFFICE OF THE CONSUMER ADVOCATE TO
WITNESS TREWORY (T-22)

Page 2 of 3

QUESTION:

Tr. 3/1296-98. Regarding the spreadsheet titled "Corporate Call Management Volume Variable Costs" from interrogatory response to OCA/USPS-T22-24:

- a. To what extent are the numbers in this spreadsheet based on completed negotiations, with prices decided, and what percentage would be unresolved at this time?
- b. What is the source of the figures contained in the spreadsheet?
- c. Please show how the contractual services cost element in the spreadsheet was derived.

RESPONSE:

- a. The numbers in this spreadsheet are based in part on actually completed negotiations where prices have been decided and in part on projections. One of the call centers is currently operating, pursuant to a contract, and these costs provide a baseline on which the cost of the other call centers are based. While it has not been determined how many more call centers will be necessary, additional call centers are the subject of ongoing procurements. The currently operating call center makes up approximately 20 percent of call center costs with the remaining 80 percent not negotiated. Since it has not yet been determined how many more call centers will be necessary, there is no way to calculate an exact percentage identifying the extent that numbers in this spreadsheet are based on completed negotiations. The learning centers costs are based on completed negotiations.

U.S. POSTAL SERVICE RESPONSE TO
ORAL CROSS-EXAMINATION OF OFFICE OF THE CONSUMER ADVOCATE TO
WITNESS TREWORGY (T-22)

Page 3 of 3

- b. The figures contained in the spreadsheet are based on the actual amount spent on the currently functional call center and learning centers, in addition to the estimated amount for the remaining call centers. Cost projections for future call centers are based on the known cost of the currently functional call center. All figures were provided by the Postal Service Marketing Department.

- c. The contractual services cost element is made up of fixed start-up costs, fixed management and associated administrators costs and variable customer service agent costs. The customer service agent costs were derived from estimating the number of calls and call duration, and subsequently determining the number of agents needed.

**Designated Interrogatory Responses
of
Paul M. Lion (T24)**

OCA/USPS-T24-96. Please refer to your response to OCA/USPS-T24-87.

- a. Please confirm that the 1.2 [percent] annual growth rate from April 1996 to April 1997 represents a monthly growth rate of 0.0995 percent $((0.012001+1)^{1/12})$. If you do not confirm, please explain and provide the correct figures.
- b. Please confirm that the 1.9 percent growth factor represents the estimated growth for the 18-month period April 1997 to October 1998. If you do not confirm, please explain.
- c. Please confirm that the growth factor, assuming a monthly growth rate of 0.0995 percent for an 18 month period, is 1.8056 percent $(1.000995^{18}-1)$. If you do not confirm, please explain and provide the correct figures.
- d. Please provide the formula and all calculations used to derive the 1.9 percent estimated growth factor from the observed growth rate between April 1996 and April 1997. Please provide citations to any figures used.

RESPONSE:

- a. Confirmed that a monthly rate of .0995 percent, compounded over 12 months is equivalent to 1.2 percent annual growth.
- b. Not confirmed. The 1.9 percent represents the estimated growth from mid-1997 to mid-1998, to provide a box count that is representative of the test year.
- c. Confirmed that a monthly rate of .0995 percent, compounded over 18 months is equivalent to 1.8056 percent sesquiannual growth.
- d. Please see my response to OCA/USPS-T24-22 and the revised response to OCA/USPS-T24-87i.

OCA/USPS-T24-97. Please refer to your response to OCA/USPS-T24-87f, wherein you state, "The growth factor used in the rollforward model is an earlier estimate."

- a. Please explain what is meant by the phrase "an earlier estimate."
- b. Please provide the growth factor for post office boxes used in the rollforward model.

RESPONSE:

Redirected to witness Patelunas.

OCA/USPS-T24-98. Please refer to your response to OCA/USPS-T24-87. Suppose that Tables 3-8 of your testimony were produced from the P/O Box Survey data and the September 97 DSF data contained in LR-H-278, instead of June 97 DSF in LR-H-188, and that the expansion factors of Table 3 are constructed to adjust data to the September 97 DSF. Please confirm that the 1.9 percent estimated growth factor would still apply for Table 8, developed from LR-H-278. If you do not confirm, please explain. If the 1.9 percent estimated growth factor would no longer apply, please provide the appropriate factor and formulas for computing it.

RESPONSE:

Not confirmed. The 1.9 percent provides a representative box count for the test year by estimating the growth from April 1997 to the middle of the test year. One would need to reduce the growth rate to reflect the fact that the growth between April and September 1997 has already been accounted for.

OCA/USPS-T24-99. Please refer to your response to OCA/USPS-T24-96b.

- a. Please give the duration of, and provide the beginning and ending dates for, the period over which you assumed the 1.9 percent growth factor would apply.
- b. Please provide the monthly growth rate associated with the 1.9 percent growth factor.

RESPONSE:

- a. The 1.9 percent growth factor was applied to the April, 1997 box counts (from the Delivery Statistics File) to estimate box counts as of April, 1998, a representative mid-point of the test year.
- b. Assuming that 1.9 percent is an annual growth factor and that growth is steady over the year, the monthly growth rate is .157 percent.

OCA/USPS-T24-100. Please refer to your response to OCA/USPS-T24-96d, which references your response to OCA/USPS-T24-22.

- a. Please provide all studies, reports, analyses or other documents showing how "It was decided to use a more conservative factor of 1.9 percent," if such documents are not already on file with the Commission. Otherwise, please provide page and line citations to documents already on file.
- b. If the decision to use a factor of 1.9 percent was based on discussions with individuals employed by, or under contract with, the Postal Service, please identify those individuals (including position held) and summarize those discussions.

RESPONSE:

- a. The estimate was based on professional judgment and not on any specific studies. It is a reasonable estimate, given the growth rate of 1.2 percent between April 1996 and April 1997 as calculated from the DSF, and the historical growth rate of 3.9 percent (see my response to OCA/USPS-T24-22).
- b. The estimate of 1.9 percent was discussed with pricing specialists in the Marketing Department of the Postal Service and with colleagues at Foster Associates. They concurred that it was reasonable.

OCA/USPS-T24-101. Please refer to your response to OCA/USPS-T24-96b ("the 'implementation date' [] has not been determined"), and your response to OCA/USPS-T24-98, where it states, "If the implementation date were to remain the same, one would need to reduce the growth rate to reflect the fact that the growth between April and September 1997 has already been accounted for."

- a. Please specify the implementation date alluded to in the quoted response to OCA/USPS-T24-98 (or state your assumption with regard to the implementation date).
- b. Please explain how an implementation date that has not been decided can "remain the same."
- c. Please explain the logic of reducing the 1.9 percent growth rate to reflect growth between April and September 1997 if there is no specific assumption as to the implementation date.
- d. Please confirm that, in the absence of a specific assumption as to the implementation date, the 1.9 percent growth factor represents an arbitrary figure. If you do not confirm, please explain.
- e. Please confirm that, in the absence of a specific assumption as to the implementation date, the 1.9 percent growth factor is applicable to a time period of any duration. If you do not confirm, please explain.

RESPONSE:

- a-e. See the revised responses to OCA/USPS-T24-96b and OCA/USPS-T24-98.

QUESTION:

Refer to Attachment 1 to OCA/USPS-T24-42. Please confirm that the 30 data points in Group A represent 30 different ZIP Codes. See Tr. 3/ 1192-1193.

RESPONSE:

Not confirmed. The 30 data points represent 30 facilities, but only 23 distinct

ZIP Codes. They are broken down as follows:

<u>ZIP Codes</u>	<u>Occurrences</u>	<u>Facilities</u>
1	3	3
5	2	10
<u>17</u>	1	<u>17</u>
23		30

**Designated Interrogatory Responses
of
Leslie M. Schenk (T27)**

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS SCHENK
TO THE INTERROGATORIES OF THE OCA

9823

OCA/USPS-T27-1. Please refer to your direct testimony on page 3 where you state that non-advance deposit BRM recipients do not pay the postage due and per-piece fees through an advance deposit account, but may have postage "deducted from a Postage Due account." Please also note the postage due account explanation at DMM S922.3.7.

- a. Please explain all other differences between advance deposit accounts and postage due accounts.
- b. Include in your discussion any differences in administration of the accounts (as administration is explained at page 7 of your direct testimony).
- c. For all differences discussed in response to (a) and (b) herein, explain whether Postal Service costs differ (e.g., different administration costs).

RESPONSE:

- a. Advance deposit accounts are also known as trust accounts. They are accounts that are maintained by the Postal Service for mailers who regularly receive volumes of mail for which postage is due upon receipt. Postage due accounts are a subset of all trust accounts. Postage due accounts can be used for Business Reply Mail for which no accounting fee is paid, as well as for short paid mail (e.g., a utility receives bill payments from a customer which does not have sufficient postage, but the utility agrees to accept the piece and pay the postage due on it). Postage due accounts are established by mail recipients who receive pieces on a non-periodic basis for which postage is due. These accounts receive very low volumes of mail, and on an infrequent basis. Therefore, these accounts are unlikely to be debited on a daily basis.
- b. see my response to part a.
- c. Postal Service costs will differ between advance deposit accounts and postage due accounts, as the workhours per account will differ (because of the differences in the incidence of account administration).

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS SCHENK
TO THE INTERROGATORIES OF THE OCA

9824

OCA/USPS-T27-2. Table 9 in LR H-179 lists "Reject Rate of BRM" on two type of automation sortation operations. Does this comprise the entire reject rate for BRM mail? Please explain. If it does not, please set forth the entire reject rate for BRM mail.

RESPONSE:

Confirmed. To my knowledge, the only two types of automation sortation operation in which BRM are sorted to account or mailer are BRMAS operations and other (non-BRMAS) sortation operations on barcode sorters. Therefore, the reject rates reported in Table 9 in LR H-179 comprise the entire reject rate for BRM.

OCA/USPS-T27-3. Please refer to Appendix A: BRMAS Cost Survey – Data Collection and Processing. You state that a survey of the five sites was conducted in April-May, 1997. When were the tabulation of results and analysis thereof completed?

RESPONSE:

Results were tabulated and analysis done for individual test sites on an ongoing basis as results were received from the sites (they were instructed to fax or mail results in daily). On May 21, 1997 the final survey forms from the last site to complete the survey were sent to us. In the week after those results were received, the final results were tabulated and analysis of the survey results were completed.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS SCHENK
TO THE INTERROGATORIES OF THE OCA

9826

OCA/USPS-T27-4. When did you discover that the Postal Service no longer expected to have a new version of the BRMAS program in place during the test year?

RESPONSE:

I do not recall the exact date on which I was informed by the Postal Service that they no longer expected to have a new version of the BRMAS program in place during the test year, but it was either May 22, 23 or 24, 1997.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS SCHENK
TO THE INTERROGATORIES OF THE OCA

9827

OCA/USPS-T27-5. Is the Postal Service currently surveying and analyzing BRMAS-qualified BRM productivity at a cross-section of postal facilities (or a selection of such facilities have "average" efficiency)?

- a. If not, why not?
- b. How long would such a survey and analysis thereof be expected to take?
- c. Confirm that using average productivity at relatively efficient sites overstates BRMAS productivity. If not confirmed, please explain.
- d. If (c.) is confirmed, please provide an estimate of the magnitude of the overstated productivity, showing derivations for the estimate.

RESPONSE:

No, to my knowledge the Postal Service is not currently conducting a survey or analysis of BRMAS-qualified BRM productivity at a cross-section of postal facilities.

- a. By the time that it was realized that the new BRMAS program would not be available in the test year, there was not enough time to design and conduct a survey at a cross-section of postal facilities so that the data could be available for presentation in my testimony.
- b. The time it takes to conduct a survey and analyze the results depends on the design of the survey, and what questions it is supposed to address. Without more information, I cannot say how long such a survey would take.
- c. Confirmed.
- d. It is not possible to estimate the magnitude of the difference in productivities between the most efficient sites and the "average" efficient site, without data on what the average productivity is. The "average" productivity for BRMAS operation at a cross-section of facilities is not available, so this comparison cannot be done.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS SCHENK
TO THE INTERROGATORIES OF THE OCA

9828

OCA/USPS-T27-6. Please refer to page 8 of your direct testimony where you state: "The cost of BRMAS-qualified BRM was developed in part using the results of another survey done at selected postal facilities." At page 10 you state: "The BRMAS Cost Survey is discussed in more detail in Appendix A." Does the "BRMAS Cost Survey" exist as a separate document? If so, please supply it.

RESPONSE:

The BRMAS Cost Survey does not exist as a separate document. All background information on the survey design and how the survey was conducted are provided in my testimony, in either the main text, Appendix A, or in the accompanying spreadsheets.

**Designated Interrogatory Responses
of
Charles L. Crum (T28)**

RIAA/USPS-T-28-5

Please confirm that the questions and answers attached as Exhibit A were interrogatories put to and answered by you in MC97-2.

- a. Would your answers to those questions be the same today?
- b. If not, please provide the answers that you would give today.

DC1:58116 01

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-1. Please provide (separately stated for carrier route and "other.") the FY1995 IOCS LIOCATT third-class bulk rate regular mail costs, average weight and mail volume for IPPs and parcels by weight in one-ounce increments from one to sixteen ounces with the three ounce interval separately providing the information for pieces weighing 3.3 ounces or less and pieces weighing more than 3.3 ounces in substantially the same format employed in Tables 1 and 2 of the answers to UPS/USPS-7 in MC95-1 (copies of those tables are provided for your ease of reference).

RESPONSE

IOCS LIOCATT costs are not available by tenth-of-ounce increment, so the requested breakdown at 3.3 ounces is not available. The cost data by full ounce increment are attached. The corresponding volume information to determine average costs can be found in LR-PCR-25. The requested average weight information is also attached. It is important to note that the cost data you are requesting here come from the In-Office Cost System (IOCS) only and are, therefore, not directly comparable to the numbers I use in my analysis.

ATTACHMENT TO RESPONSE TO RIAA/USPS-T7-1

FY 1995 IOCS LIOCATT COSTS
STANDARD MAIL (A) IPPS & PARCELS

<u>Weight Increment (oz)</u>	<u>Carrier Route</u>	<u>Other</u>
1	\$ 5,916,267	\$ 8,759,141
2	881,828	6,859,528
3	912,470	7,876,515
4	1,597,738	17,611,589
5	522,216	8,729,425
6	262,814	9,616,726
7	51,659	6,344,287
8	352,318	11,104,637
9	169,676	7,325,453
10	202,929	6,988,116
11	240,309	4,530,676
12	146,069	8,729,796
13	-	5,547,235
14	457,452	9,764,014
15	159,118	7,125,985
16	395,410	4,759,426
Total	12,268,273	131,672,549

ATTACHMENT TO RESPONSE TO RIAA/USPS-T7-1, page 2

FY 1995 Standard Mail (A)
Average Weight by Ounce Increment

Weight Increment (oz)	Flats		IPPs and Parcels	
	Carrier- Route	Other	Carrier- Route	Other
1	0.66	0.71	0.63	0.77
2	1.56	1.52	1.74	1.57
3	2.44	2.54	2.42	2.51
3.3	3.17	3.15	3.28	3.13
4	3.68	3.67	3.47	3.65
5	4.48	4.46	4.35	4.51
6	5.41	5.44	5.45	5.58
7	6.45	6.47	6.40	6.57
8	7.43	7.49	7.54	7.54
9	8.52	8.49	8.62	8.47
10	9.43	9.45	9.31	9.52
11	10.48	10.49	10.48	10.57
12	11.44	11.47	11.54	11.53
13	12.31	12.50	12.53	12.52
14	13.37	13.48	13.44	13.46
15	14.32	14.42	14.56	14.38
16	15.43	15.41	15.24	15.51

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-2. Please provide the information requested in RIAA/USPS-T7-1 for flats.

RESPONSE

Please see my response to RIAA/USPS-T7-1 and the attached information.

ATTACHMENT TO RESPONSE TO RIAA/USPS-T7-2

FY 1995 IOCS LIOCATT COSTS
STANDARD MAIL (A) FLATS

Weight Increment (oz)	Carrier Route	Other
1	\$ 52,410,700	\$ 114,408,377
2	62,785,219	178,961,574
3	47,232,659	127,544,701
4	53,784,139	148,057,592
5	18,671,314	46,241,937
6	9,485,828	30,259,989
7	5,755,988	19,708,748
8	4,515,059	15,855,136
9	3,001,494	10,544,434
10	1,546,606	8,031,826
11	1,138,837	5,685,770
12	1,199,542	4,675,456
13	915,383	2,773,355
14	693,060	4,573,755
15	431,245	2,728,987
16	1,219,293	2,891,374
Total	264,786,366	722,943,011

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-3. Please provide the information contained in Sections 2 (Cost Avoidance \$/lb) and 5 ("Delivery Cost Avoidance \$/pc") in Table 7 of Library Reference PCR-38 by the weight of pieces in one ounce weight increments from one to sixteen ounces separately stating the requested information for flats and parcels.

RESPONSE

The "Cost Avoidance \$/lb" listed in Table 7 applies to all ounce increments. The data are not available to break out the "Delivery Cost Avoidances \$/pc" by ounce increment.

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-4. Please provide the average weight in ounce increments, from one to 16 ounces with the three ounce category divided between pieces that weigh 3.3 ounces or less and those that weigh more than 3.3 ounces of pieces in each of the cells in the Table C-2 "5" ("Appearance/Contents Array") of Library Reference PCR-38 showing the number, average weight and average cube of the pieces in each weight interval.

RESPONSE

The requested information is attached. Please note that this information is not necessarily consistent with the volumes in LR-PCR-25. Refer to my response to DMA/USPS-T7-24(a).

ATTACHMENT TO RELEASE TO RIAA/USPS-T7-4

Weight Incr. (Oz)	Pieces										Total
	CD Box	Video Box	Check Box	Other Box	Other	Film Envelope	Roll/Tube	Clothing Bag	Prescript Drug	Sample	
1	-	-	-	3,754	1,270,640	81,095	-	-	8,643	16,080	# 1,380,212
2	1,538	15,571	219,911	59,821	1,235,431	273,346	-	-	71,709	804,082	# 2,681,409
3	14,042,257	285,820	3,674	901,672	947,627	314,317	46,448	5,279	199,087	524,230	# 17,270,391
3.3	62,995	-	10,673	13,798	1,014,092	147,081	-	4,768	14,292	414	# 1,268,113
4	315,131	-	17,543	980,542	1,555,421	798,383	-	38,579	37,275	1,242,055	# 4,984,929
5	780,478	-	62,296	135,984	725,802	348,276	497	29,678	188,187	232	# 2,271,428
6	2,000,156	25,380	100,758	343,649	686,158	315,820	-	63,552	22,733	3,689	# 3,561,873
7	371,423	50,283	25,394	468,389	473,097	210,423	3,846	107,188	66,958	490	# 1,777,489
8	587,829	107,433	22,310	1,656,414	503,167	181,412	2,270	86,002	23,709	394	# 3,170,940
9	652,335	241,245	4,038	701,584	471,229	211,623	8,150	135,923	19,119	327	# 2,445,553
10	569,799	997,585	37,229	441,696	840,211	101,238	5,196	163,458	3,552	3,740	# 3,163,704
11	155,091	219,328	395,713	521,248	1,111,532	86,533	1,489	141,274	2,725	1,725	# 2,636,658
12	90,947	302,183	1,937,659	379,400	1,066,873	82,662	-	173,360	9,280	1,903	# 4,044,267
13	828,021	120,034	3,143,166	580,141	2,018,286	41,411	-	151,117	2,811	708	# 6,885,695
14	316,420	150,107	2,165,057	602,096	1,930,682	34,756	14,184	154,834	4,991	625	# 5,373,732
15	990	457,073	1,765,067	602,599	1,015,074	42,514	200	90,901	5,156	548	# 3,980,122
16	149,735	305,887	380,285	598,365	498,742	24,748	3,833	35,618	2,149	64	# 1,999,426
	20,925,143	3,277,929	10,290,773	8,991,132	17,364,062	3,295,638	86,093	1,381,531	682,354	2,601,286	68,895,941

ATTACHMENT TO RESPONSE TO RIAA/USPS - T7-4

PAGE 2

Weight Incr. (Oz)	Average Weight (Oz)						Clothing Bag	Prescript Drug	Sample	Total
	CD Box	Video Box	Check Box	Other Box	Other	Film Envelope				
1				0.7	0.4	1.0		1.0	1.0	0.5
2	1.8	1.3	1.3	1.3	1.7	1.8		1.9	1.8	1.7
3	2.5	2.9	2.5	2.9	2.5	2.7	2.9	2.6	2.3	2.5
3.3	3.0		3.1	3.1	3.2	3.2		3.0	3.1	3.2
4	3.4		3.7	3.8	3.8	3.6		3.7	3.7	3.7
5	4.8		4.5	4.5	4.5	4.7	4.2	4.4	4.7	4.7
6	5.4	5.2	5.8	5.4	5.5	5.8		5.6	5.6	5.5
7	6.7	6.6	6.7	6.5	6.5	6.7	6.4	6.5	6.7	6.6
8	7.2	7.5	7.4	7.7	7.6	7.7	7.6	7.4	7.5	7.6
9	8.5	8.6	8.2	8.6	8.4	8.6	8.8	8.5	8.6	8.5
10	9.3	9.8	9.5	9.4	9.6	9.7	9.9	9.5	9.9	9.6
11	10.4	10.6	10.5	10.5	10.5	10.7	10.3	10.5	10.6	10.5
12	11.7	11.5	11.7	11.6	11.6	11.8		11.6	11.8	11.6
13	12.5	12.3	12.5	12.5	12.6	12.6		12.4	12.5	12.5
14	13.6	13.5	13.5	13.6	13.6	13.7	13.8	13.5	13.5	13.5
15	14.3	14.5	14.5	14.5	14.4	14.8	14.2	14.4	14.7	14.5
16	15.7	15.3	15.2	15.3	15.5	15.5	15.5	15.4	15.0	15.4

ATTACHMENT TO RESPONSE TO RIAA/USPS-T7-4

PAGE 3

Weight Incr. (Oz)	Average Cube (IN ³)									Sample	Total
	CD Box	Video Box	Check Box	Other Box	Other	Film Envelope	Roll/Tube	Clothing Bag	Prescript Drug		
1				44	34	77			167	12	37
2	20	337	57	151	53	65			130	17	50
3	31	32	53	73	190	79	24	76	132	446	57
3.3	108		54	145	137	100		215	174	578	131
4	30		38	74	79	96		261	142	78	79
5	49		45	77	128	68	63	262	137	67	89
6	44	36	31	98	212	75		876	166	40	99
7	89	113	37	98	228	77	72	412	143	176	149
8	76	119	118	87	296	87	38	1300	170	172	153
9	66	123	78	167	358	84	75	574	217	284	188
10	67	125	121	203	430	107	65	930	423	113	248
11	87	341	56	212	299	91	74	762	311	183	254
12	30	200	53	271	386	88		660	225	175	199
13	75	374	54	255	265	114		677	423	247	155
14	79	474	53	312	261	115	80	723	231	299	190
15	85	279	54	287	346	101	175	699	335	383	205
16	111	229	54	281	444	110	261	529	277	330	260

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-5. Please separately indicate for the carrier route and "other" categories the number of pieces characterized in Table C-2 Section 5 ("Appearance/Contents") of Library Reference PCR-38 as "All Other" that were specified on the survey sheets (C-21 question 5, C-23, 24 right-most column) as "hazardous medial (sic) materials" (as that term is defined in USPS-T-11 and USPS-LR-PCR-26).

RESPONSE

The raw data responses related to "All Other" were scanned into an electronic format and provided in the CD-ROM version of LR-PCR-38. See my response to RIAA/USPS-T7-6 below. I briefly searched through the approximately 5000 entries where "All Other" data is listed and saw no pieces that I believe could be characterized as "hazardous medical materials". Additionally, I can not imagine a scenario where any items characterized as such would be mailed Bulk Standard Mail (A).

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-6. Does the content of specifications made in conjunction with the "All Other" characterization referred to in Interrogatory RIAA/USPS-T7-5 above exist in electronically stored form? If your answer is in the affirmative, please provide that information.

RESPONSE

Yes. That information has already been provided in the CD-ROM version of LR-PCR-38. Look under ap~00004/data/parcel.txt, column I.

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-7. You characterize data presented at Appendix D of Library Reference PCR-38 as "relatively consistent from year to year" USPS-T-7 at 9. The per piece attributable cost associated with parcels increased by 45% between FY1993 and FY1994 ($(34.4 \div 23.7) - 1$) and decreased by 14.5% between FY1994 and FY1995 ($(29.4 \div 34.4) - 1$). By what standard did you judge volatility at these levels to represent relative consistency?

RESPONSE

Please see my response to DMA/USPS-T7-6(h).

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-8. Table D-3 of Library Reference PCR-38 appears to show an inverse relationship between the annual volume of parcels and annual average attributable cost per piece (higher volume is associated with lower average cost per piece).

- a. Do you know of any other evidence tending to support or detract from the likelihood of the validity of this relationship? If so, please provide copies of all documents relating to such evidence.
- b. Did you examine this possible relationship in your analysis of the three years of data presented in Table D-3? If so, please describe your conclusion or conclusions to the extent that it or they is/are not fully and accurately conveyed in your response to RIAA/USPS-T7-8.

RESPONSE

- a. No.
- b. No.

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-9. Please provide copies of all instructions distributed in conjunction with the study described in Appendix C to Library Reference PCR-38, and all drafts of such instructions including instructions or drafts of instructions associated with any testing of the instruments displayed at pages C-21-24 of that Appendix.

RESPONSE

I have produced Library Reference PCR-53 in response to your question.

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

RIAA/USPS-T7-10. Please provide:

- (a) a detailed functional mail flow for IPPs and parcels, or sub-categories of such mail flows to the extent that different types of IPPs and parcels are handled differently in any processing, transportation, or delivery function; and
- (b) any instructions issued to BMC's or other postal facilities (including delivery offices) regarding the processing, transportation or delivery of IPPs and parcels.

RESPONSE

- a. I did not produce nor do I know of any detailed functional mail flow for Standard Mail (A) IPPs and Parcels.
- b. City carrier instructions are listed in Handbook M-41 (Docket No. MC96-3, LR-SSR-138, particularly pages 25, 58-61, 83-88). Rural carrier instructions are listed in Handbook PO-603 (Docket No. MC96-3, LR-SSR-139, particularly pages 35-36, 42, 65). I am providing Handbook PO-419, Bulk Mail Processing at Bulk Mail Centers - Operator Instruction as Library Reference PCR-54. This is the basic document describing Bulk Mail Center processing and is the most recent version available.

U. S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO INTERROGATORIES OF THE
RECORDING INDUSTRY ASSOCIATION OF AMERICA, INC.

9847

RIAA/USPS-T28-5. Please confirm that the questions and answers attached as Exhibit A were interrogatories put to and answered by you in MC97-2.

- a. Would your answers to those questions be the same today?
- b. If not, please provide the answers that you would give today.

RESPONSE

Confirmed.

a.,b. Yes, except for a small error I noticed in one part of one response. The corrected page of the attachment to the response to RIAA/USPS-T7-1 from Docket No. MC97-2 is attached. Also, please note that questions 1 and 2 to which you refer ask for FY 1995 data while the Base Year for Docket No. R97-1 is 1996.

FY 1995 IOCS LIOCATT COSTS
STANDARD MAIL (A) IPPS & PARCELS

Weight Increment (oz)	Carrier Route	Other
1	\$ 5,871,947	\$ 8,803,461
2	881,828	6,859,528
3	912,470	7,876,515
4	1,533,867	17,675,460
5	522,216	8,729,425
6	262,814	9,616,726
7	51,659	6,344,287
8	81,033	11,375,922
9	169,676	7,325,453
10	202,929	6,988,116
11	115,293	4,655,692
12	146,069	8,729,796
13	-	5,547,235
14	306,918	9,914,548
15	97,731	7,187,372
16	395,410	4,759,426
Total	11,551,860	132,388,962

RESPONSE OF WITNESS CRUM
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 4

9849

8. Alaskan Bypass Mail

c. Avoided Costs

Please confirm that the FY 1996 Parcel Post volume entered upstream of BMC/ASF (112,738,474) on USPS-T-28, Exhibit C, includes the Alaskan Bypass volume.

If confirmed, please explain why the Bypass volume should be included in calculating the outgoing mail processing costs avoided by DBMC parcel post at non-BMC facilities. Also, provide the processing costs incurred by the Bypass mail.

RESPONSE:

Confirmed.

Bypass volume was included to be consistent with past studies that were used by the Commission and to be conservative. If one were to exclude Bypass volumes, my estimate of DBMC mail processing savings would increase by \$.007. Witness Alexandrovich's response to POIR #4, 8(a)(2) suggests that there are no mail processing costs associated with Bypass mail. This implies that the volumes should be excluded as well.

RESPONSE OF WITNESS CRUM TO QUESTIONS POSED AT HEARING
(December 4, 1997)

At Tr. 17/8068, AMMA counsel requested that the Postal Service supply the formula used for calculating cubic volume for the 18 percent of the pieces where only length and girth was recorded in the segment of the parcel characteristics study estimating the density of parcels for use in the analysis described in Table 3 of USPS-T-28. At Tr. 17/8054-57 and 8067, AMMA counsel asked whether the mathematical maximum for a piece with a given length and girth occurs when that piece is cylindrical or "round."

RESPONSE:

The formula is as follows:

$$\text{Cubic Volume} \approx 0.148 * \text{Length} * \text{Girth}^2 / 16$$

For the example discussed in the transcript, the maximum theoretical volume of a piece with a length of 10 inches and a girth of 20 inches occurs when that piece is "round" or cylindrical, resulting in a volume of 318 cubic inches.

Applying the above formula, my analysis would assign a volume of 37 cubic inches to that piece. To determine the implications of the difference between the maximum theoretical volume and the volume derived from the formula, consider the following. For the 82 percent of parcels for which length and width and height were recorded, if the formula instead of the actual measurements had been applied, the estimated cubic volume of the pieces would have been underestimated 99.9 percent of the time.

Carrying this relationship through to the other 18 percent for which volume was estimated by the above formula suggests that the true average cubic volume of parcels is higher than the estimated average cubic volume used in my analysis. If it had been possible to use the true average cubic volume for the 18 percent, one would expect this

RESPONSE OF WITNESS CRUM TO QUESTIONS POSED AT HEARING
(December 4, 1997)

to have resulted in a lower average density for parcels and a larger cost difference between flats and parcels in Standard Mail (A).

Based on the above, I fully stand by my belief that use of the simplifying formula to approximate cubic volume for the 18 percent of parcels for which only length and girth was recorded produces quite conservative results.

**Designated Interrogatory Responses
of
Sharon Daniel (T29)**

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS DANIEL TO
INTERROGATORY OF ADVERTISING MAIL MARKETING ASSOCIATION**

9853

Revised 12/2/97

AMMA/USPS-USPS-1 The response to AMMA/USPS-LR-H-103-3a, states, "There are no results from LR-H-105 used directly or indirectly in USPS-T-29 Appendix I pages 5, 7, or 9." However, LR-H-105 is referenced by Witness Daniel as the source of the mail entry profile (USPS-T-29: page 3 line 23; Appendix I pages 36 and 37). If LR-H-105 is not the source of the "Mix of Handlings" (column [1] of pages 5, 7 and 9 of USPS-T-29 Appendix I) please provide the source of the "Mix of Handlings" including page, line, and column locations and any required derivations.

RESPONSE:

Pages 5, 7 and 9 of Appendix I are cost summaries of Standard (A) Automation 5-Digit, Automation 5-Digit 100% DBCS, and Automation ECR letter mail flows. Because of the high degree of worksharing involved, the mail flows for these mail streams are simple. As a consequence, mail characteristics data are not needed to determine the mailflows for these types of mail. Below, I demonstrate why the initial mix of handlings of each of the three categories on pages 5, 7, and 9 is self-evident.

- *Automation 5-Digit.* Because Automation 5-Digit letters are by definition barcoded and presorted to the 5-Digit level in full trays, they will be processed in an incoming secondary operation either on barcode sorters or manually. As stated on page 4 of USPS-T-29, "[t]he number of pieces entered on automation equipment, *i.e.*, the BCS and OCR, is then usually adjusted by subclass-specific coverage factors¹ (USPS LR-H-128) to reflect the fact that not all sites have automation equipment."
- *Automation 5-Digit 100% DBCS.* Automation 5-Digit 100% DBCS by definition will be processed in an incoming secondary operation on DBCSs and no coverage factors are needed to determine where the mail is entered.
- *Automation ECR.* Automation ECR letters begin processing on CSBCSs or manually based on coverage factors.

The sources of the mix of handlings in the first column appearing on pages 5, 7, and 9 of Appendix I consists of the figures presented in the boxes of the corresponding operation in the mail flow diagrams on pages 6, 8, and 10 of Appendix I.

¹ Coverage factors used are found in Appendix I, pages 38 and 39.

**RESPONSE OF U.S. POSTAL SERVICE WITNESS DANIEL TO
INTERROGATORY OF THE OFFICE OF THE CONSUMER ADVOCATE
REDIRECTED FROM WITNESS DEGEN**

OCA/USPS-T12-43. Please refer to USPS-T-1, Exhibit USPS-1B, page 4, Docket No. MC93-1. In the column captioned "Volume Share," the following proportions were presented for Special Rate Fourth Class:

Intra-BMC	.2639
Inter-BMC	.6396
Inter-BMC, 1 transfer	.0927
Inter-BMC, 2 transfers	.0038

[Sum]	[1.00]
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- a. Is it reasonable to assume that these proportions are substantially the same for BY 1996?
- b. If not, why not? If this assumption is not reasonable, then please update the proportions presented above for BY 1996.
- c. Please present a similar set of proportions (summing to 1.00), by inter-BMC and intra-BMC groupings, for library rate mail for BY 1996.

RESPONSE:

- a. In Docket No. MC93-1, Parcel Post Inter-BMC and Intra-BMC proportions were used as proxies for Special Rate Fourth Class Mail. Since no other special study has been conducted, parcel post proportions are again used as proxies for Special Standard Mail for BY96; however, these proportions are not substantially the same as the ones used in MC93-1.
- b. Transfers, or transhipments, have been eliminated. Please see page 12 of my testimony. The relative proportions of Inter-BMC and Intra-BMC Parcel Post are used as a proxy for the proportion of Inter-BMC (80 percent) and Intra-BMC (20 percent) in the Special Standard Mail Models, as stated in Table 5 of Exhibit USPS-29F.
- c. As is the case for Special Standard Mail, a special study of the proportions by inter-BMC and intra-BMC groupings for Library subclass mail for BY 1996 has not been conducted for this proceeding.

**Designated Interrogatory Responses
of
Donald J. O'Hara (T30)**

ABA&EEI&APM/USPS-T-30-2. For the base year and test year (before and after rates), please provide the following costs for First Class and Standard (A) mail by subclass and by rate category: (a) volume variable; (b) incremental; and accrued (or institutional).

RESPONSE:

For the subclasses requested, base-year volume-variable costs can be found in Exhibit USPS-5B; test-year volume-variable costs can be found in my Exhibits USPS-30A (before rates) and USPS-30B (after rates). Incremental costs are in Exhibit USPS-41B, column 2 (base-year), column 5 (test-year after rates); test-year before-rates incremental costs can be obtained by multiplying the ratio in column 3 of Exhibit USPS-41B by the volume-variable costs in my USPS-30A.

These costs are not available for rate categories. As far as I am aware, the term "accrued costs" is not applied to subclasses, but rather to cost segments, where it is simply the total (volume-variable plus non-volume-variable) cost for a segment.

ABA&EEI&NAPM/USPS-T-30-3. Please explain and, if possible, quantify how the degree of mailer preparation influenced your proposed coverages for the following: (a) First-Class single piece; (b) First-Class automation presort (i) basic, (ii) 3-digit, (iii) 5-digit, and carrier route; and (c) Standard (A) (i) basic, (ii) 3digit, (iii) 5-digit, and enhanced carrier route.

RESPONSE:

I am proposing coverages only for subclasses, not for rate categories. I would note that in my discussion of increased worksharing over time on pages 8-9 of my testimony, I indicate that it is appropriate to assure that increased worksharing in one subclass does not produce unintended consequences for the rates of another.

ABA&EEI&NAPM/USPS-T-30-4. Re your example at 15, l. 10-17. You conclude this paragraph by stating: "This seems to me unfair, given that the two products received equal evaluations on the non-cost criteria."

(a) Does "This" refer to the 2 to 1 ratio or that any difference in the each products contribution to other costs exists? if the latter, would such a result "seem to you unfair" regardless of the difference in each product's contribution to other costs? if neither, please explain.

(b) Eliminating the assumption that the products have the same cost coverage, at what level, if any, would the difference in each product's contribution to other costs be deemed by you to be unfair? Please explain, identifying those factors which would shape your judgment.

RESPONSE:

(a) The latter, although the degree of unfairness would diminish as the difference in contribution diminished.

(b) If the products have different evaluations on the non-cost criteria, then differences in contribution reflecting these evaluations are not unfair.

ABA&EEI&NAPM/USPS-T-30-6. Re Testimony at 30, lines 16-19.

(a) If the coverage from Docket Mo. R94-1 had been used, would the percentage change in rates be approximately 3.8% as opposed to 3.54? (see Exhibit USPS-30D; revised 8/22/97.) If not, what would the percentage increase have been?

(b) Explain what you mean by the phrase "only intensify the problem." Id. at line 19.

RESPONSE:

(a) No; the cited lines say "nine percentage points higher," which implies a rate increase of approximately 12.5% ($=3.5 + 9.0$).

(b) The problem referred to is that of the effect of rate increases on Periodicals mailers; adjustment for the change in system-average coverage would result in rate increases greater than 12.5%, which would intensify the effect of rate increases on Periodicals mailers.

**Designated Interrogatory Responses
of
David R. Fronk (T32)**

RESPONSE OF U.S. POSTAL SERVICE WITNESS FRONK TO
INTERROGATORIES OF THE ABA REDIRECTED FROM WITNESS HATFIELD

9861

ABA/USPS-T25-2. What evidence do you have that private sector worksharing bureaus can cover the additional cost burden that reduced discounts are imposing on them? Do you have any evidence concerning their cost increases since R94-1 that would enable you to conclude that discounts can be cut or frozen and enable these bureaus to still operate profitably?

RESPONSE: In comparison to Docket No. R94-1, the 3-digit discount is increased from 5.6 cents per piece to 6.5 cents in my proposal. Similarly, the 5-digit discount is increased from 6.2 cents to 8.1 cents in my proposal. Please note that 3-digit and 5-digit letters are the largest categories of workshared mail, accounting for about 75 percent of workshared letters in the Test Year. There was no Basic Automation rate following Docket No. R94-1, precluding a comparison. I would think that these increases would enhance the ability of private sector workshare bureaus to operate profitably over that time frame.

I do recognize that our proposal calls for slight reductions in the 3-digit and 5-digit discounts. Nevertheless, this shows the longer term trend of these discounts.

While my proposals are based on Postal Service costs avoided rather than the costs of the worksharing bureaus, given the increase in these discounts since Docket No. R94-1, I am unsure what additional cost burden is being referenced in the question.

ABA/USPS-25-3.

- a. Please confirm that the single piece mailstream that would benefit from the proposed discounts for Prepaid Reply Mail (PRM) and Qualified Business Reply Mail (QBRM) is already mostly barcoded and already generating cost savings.
- b. Please confirm that the 3 cent "incentive" proposed for PRM and QBRM mail is unlikely to result in many more (or any more) barcodes than now exists, being put on household to nonhousehold mail in the form of bill payments and the like.

RESPONSE:

(a) Confirmed.

(b) I agree with this statement for the Test Year. In the future, it is possible that PRM could generate some new mail volume by converting some in-person payments to the mail (see page 38 of my testimony at lines 16-21). Also, it is possible that the new QBRM rate will attract new volume in the future, but this volume is uncertain and I have not attempted to quantify it (see page 47 of my testimony at lines 1-3). Please see my response to ABA/USPS-T25-4 for the rationale underlying the discount.

ABA/USPS-T25-4. Is it your intention that all the 3 cents in your proposed PRM and QBRM rate be passed on to consumers or should the division between consumers and business preparers of these envelopes be divided according to *market principles, much like the current dynamic between worksharing discounts and charges to those using worksharing bureaus?*

RESPONSE: My intention with both of these proposed rates is to permit a broader base of customers to more directly share in the benefits of automation. The proposed PRM rate is also designed to help address the threat of electronic diversion and, at the same time, to provide added convenience for the general public (please see pages 33-37 and 45 of my testimony). How this benefit is divided depends on how a business chooses to fund PRM or QBRM. If a business funds PRM by explicitly billing the consumer for the cost of the postage, then the 3 cents savings would be passed directly on to consumers. If a business treats PRM or QBRM as a cost of doing business and recovers the cost through other product or service prices (similar to current BRM), then the 3 cents could be divided between the business and its consumers.

ABA/USPS-T25-5. The benchmark used for the development of the PRM and QBRM automation discount is the nonpresort single piece while the benchmark used for the development of other automation discounts in First Class is bulk metered mail. If nonpresort single piece letter mail is convertible into (some) automation rate, as implied by the proposed PRM discount, then the supposition underlying the bulk metered benchmark that only the bulk metered mail stream is convertible is false, is it not?

RESPONSE: No. As the Commission stated in Docket No. MC95-1 (paragraph 4302 at page IV-136), "...the single-piece mail most likely to convert to the automation categories is limited to the bulk metered mail component." Also, see my testimony at page 20. As such, I used this benchmark to set the worksharing discounts for bulk automation letters. The benchmark represents a pricing reference point to appropriately identify workshare cost savings; the benchmark is not meant to imply that every piece that converts to worksharing physically comes from a pool of bulk metered pieces. I believe the phrase "most likely" is appropriate and does not convey all inclusiveness.

RESPONSE OF U.S. POSTAL SERVICE WITNESS FRONK TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

9865

POIR NO.5, QUESTION 18. Response to ABA&EEI&NAPM/USPS-T32-6 states that bulk metered mail "has the features commonly associated with First-Class metered mail." Please describe these features.

RESPONSE: The phrase quoted above was included in my response to ABA&EEI&NAPM/USPS-T32-6 because bulk metered mail costs are developed by starting with the costs for First-Class single-piece metered mail as a whole, and then subtracting certain costs avoided when processing bulk metered mail (please see USPS LR-H-106, page II-10). The costs that remain are assumed to apply to all single-piece metered mail, both bulk and nonbulk.

The way the response was phrased, it may suggest that I had in mind a specific set of mail characteristics or features, for example, whether the address is handwritten. While this was not the case, I will try to respond to the question as posed.

Features of First-Class metered mail include an address that is typically not handwritten. According to 1996 ODIS data, 11.1 percent of metered single-piece letters have handwritten addresses while 37.5 percent of nonmetered single-piece letters have handwritten addresses. In addition, single-piece metered mail carries a meter imprint or strip and typically originates from a business. Also, single-piece metered letters typically do not have a FIM; 2.5 percent have a FIM, according to 1996 ODIS data. In general, single-piece metered mail is fairly homogeneous.

RESPONSE OF WITNESS FRONK TO QUESTION POSED AT HEARINGS

Tr. 4/1686-87.

Q: Can you tell me whether any Postal Service equipment at the present time, in particular the facer cancelers that cancel First-Class Mail, whether they can detect pieces that weigh more than one ounce?

Response:

I am informed that the AFCS does not distinguish mail pieces on the basis of weight.

**Designated Interrogatory Responses
of
Thomas M. Sharkey (T33)**

Response of Postal Service Witness Sharkey to Interrogatories of David B. Popkin

DPB/USPS-8[r]: [Referring to the mail processing of Priority Mail as distinct from the processing systems for "Letters and Sealed Parcels" and "Cards":] If so, please explain the details of the system and the differences between it and the system used for other subclasses of mail.

Response:

For a description of First Class mail processing see the testimony of Postal Service witness Pajunas in Docket No. MC95-1 (USPS-T-2). See, for example, section 4 which describes the processing of nonautomation compatible letters and section 7 which describes the processing of nonbarcoded flat mail.

For a description of Priority Mail Processing see witness Sharkey's response to UPS/USPS-T33-1 and witness Moden's responses to UPS/USPS-T4-6, 31 and 32.

DBP/USPS-11 Furthermore, with respect to Express Mail Service Commitments performance goals,

- [a] describe the method that is utilized to establish the extent of the overnight delivery area.
- [b] To what extent are cutoff times made which are earlier than the closing time for window hours at a given office?

Response:

- [a] An analysis is made of available transportation from originating areas to determine overnight delivery areas from originating areas.
- [b] At some post offices Express Mail addressed to certain destination ZIP Codes may have a cutoff time which is earlier than the post office's window closing time in order to meet the best possible delivery commitment to the destination. I do not know the exact extent to which this occurs.

Response of Postal Service Witness Sharkey to Interrogatories of David B. Popkin

DBP/USPS-12 Furthermore, with respect to Express Mail Service Commitments/performance goals

- [a] Will Express Mail be delivered as expeditiously as possible or will it be delivered by the regular carrier so long as it will meet the established delivery time?
- [b] Provide copies of all regulations which describe the method of delivery to be utilized.

Response:

- [a] Express Mail is delivered by the regular carrier as long as the commitment for the Express Mail can be met.
- [b] To my knowledge there are no regulations governing this type of delivery.

20. Please refer to Exhibit USPS-33W (sic) (revised 10/06/97). The "net nontransportation cost" shown on line 8 is found by subtracting line 7 from the "total [adjusted] nontransportation costs" shown on line 3. The figure on line 7, however, appears to have the character of a revenue, since it is found by multiplying the number of postage pounds (line 6) by marked-up cost element (line 5). Accordingly, please explain the meaning and the use of the "cost" figure on line 8.

Response:

The use of the word "cost" on line 8 of Exhibit USPS-33N is unintentionally misleading. In fact, the figure represents the residual costs after subtracting the marked up and contingency adjusted total nontransportation weight related cost. The marked up and contingency adjusted nontransportation weight related cost per pound is added to the marked up and contingency adjusted transportation cost per pound to derive the pound charges by zone shown in USPS-33O, column 14 (USPS-33O, column (12)+ column (13)= column (14)). The figure in USPS-33N, line 8 is then used to develop the marked up and contingency adjusted net nontransportation cost per piece also shown on line 13. USPS-33N, line 8 cost is divided by the test year after rates volumes including new delivery confirmation volume (USPS-33N, line 21), the result, net nontransportation cost per piece is shown on USPS-33N, line 10. This figure, in turn, is adjusted for the markup and contingency factor with the result shown on USPS-33N line 13. The development of this figure is consistent with the development of the marked up and contingency adjusted nontransportation cost per pound shown on USPS-33N Line 5 and included in the pound charge in USPS-33O, column 14.

**Designated Interrogatory Responses
of
Altaf H. Taufique (T34)**

Question 2.

Witness Taufique (USPS-T-34) and Kaneer (USPS-T-35) propose a new approach to developing the pound rate for editorial (defined as non-advertising) matter in Regular, Nonprofit, and Classroom Periodicals. One justification for this new approach focuses on an interest in keeping the implicit cost coverage on editorial matter from being below 100 percent. This coverage, however, is heavily influenced by *both* the editorial pound rate and the editorial per-piece benefit. Accordingly, please discuss the justification for proposing to elevate this coverage by adjusting only the editorial pound rate.

RESPONSE

I agree that the implicit cost coverage on editorial matter is heavily influenced by both the editorial pound rate and the per-piece discount for editorial matter, and would acknowledge that both of these elements eventually may need to be adjusted to achieve a 100 percent implicit cost coverage for editorial matter. The proposed rate design change in the calculation of the editorial pound rate results not only in a straightforward methodology to eventually achieve 100 percent implicit cost coverage for editorial pounds, but also provides a better allocation of distance related transportation cost to the zones. This methodology avoids the additive scalar of the residual distance-related transportation cost as was done in the past rate design for Periodicals.

Given the relatively low cost coverage proposed for Periodicals, and a desire to avoid large increases in any rate cells, the Postal Service decided to propose an editorial pound rate that is 90 percent of the calculated pound rate needed to achieve the 100 percent implicit cost coverage for editorial pounds.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS TAUFIQUE
TO PRESIDING OFFICER INFORMATION REQUEST NUMBER 6

9874

Question 2 Continued. Page 2 of 2

The Postal Service also proposes to increase the editorial per-piece discount at the rate of the overall increase for the class. The alternative would be a smaller increase, or no increase at all, in the editorial per-piece discount, which would bring the implicit cost coverage for editorial matter closer to 100 percent. The Postal Service chose to propose a change in the editorial pound rate methodology, but avoided a smaller piece rate adjustment to mitigate the impact on high editorial content pieces. The Postal Service wants to move toward the cost coverage goal for editorial matter but at the same time mitigate the impact of these changes on high editorial content pieces given the relatively low cost coverage proposed for Periodicals in this docket.

Witness Kaneer has read this response and is in agreement with it, as it relates to Nonprofit and Classroom Periodicals.

**Designated Interrogatory Responses
of
Joseph D. Moeller (T36)**

RESPONSE OF U.S. POSTAL SERVICE WITNESS MOELLER
TO QUESTION POSED AT HEARING

9877

Under current preparation requirements, a mailer may prefer option 2, because the required presort for machinable parcels is easier due to the fewer separations required and the fact that machinable parcels are not packaged prior to sacking. Thus, instead of sorting pieces to 5-digit, 3-digit, ADC, and Mixed ADC packages and then placing those packages in 5-digit, 3-digit, ADC, and Mixed ADC sacks, the mailer need only sack mail to 21 BMCs, and place remaining pieces in a Mixed BMC sack. Machinable parcels may also be sorted to 5-digit sacks prior to preparing BMC sacks if the mailer desires to qualify for the 3/5-digit rates. Some mailers find machinable parcel preparation advantageous, because, as stated in the DMA Washington Report for January 1997 (www.the-dma.org/home_pages/home-jan97wr.html), see Tr. 7/3166 and attachment to this response, they can avoid the higher mail preparation costs of flats. This Report also includes the suggestion that mailers can avoid the surcharge by preparing small parcels as flats. It should be noted that the DMA Washington Report was posted on the web in reaction to parcel classification reform and *prior* to the filing of Docket No. R97-1 that contained the clarifying phrase "[or] prepared as a parcel" in the classification language. Given this, it is evident that mailers were apparently anticipating that pieces prepared as machinable parcels (regardless of whether they also met the flat criteria) would be subject to the surcharge.

Since there are pieces which meet the dimensional criteria of a flat, but are prepared and entered as machinable parcels, the scope of the classification language for the residual shape surcharge includes the phrase "is prepared as a parcel" so that any overlapping pieces would be subject to the surcharge if they are entered as parcels, instead of flats. The language as proposed will also simplify administration of acceptance and verification in that all pieces prepared as parcels would be subject to the surcharge, not just the ones that could not also be defined as flats. The language also makes intuitive sense in that a piece prepared as a parcel will be handled similarly to the "nonoverlapping" shaped pieces subject to the surcharge.

Adoption of the requested classification language does not change the options available to mailers of overlapping-shaped pieces. Mailers of such pieces could continue to take advantage of the easier presortation requirements; however, if they do so, such pieces will be subject to the surcharge. If mailers of overlapping shaped pieces wish to avoid the surcharge, they can prepare overlapping shaped pieces as flats. In either event, the customer chooses the option which best suites his or her unique needs.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MOELLER
TO QUESTION POSED AT HEARING

9879

The proposed language is intended to create consistency between rate eligibility and preparation requirements. DMM section C050.4.4³ is similar in purpose in that pieces categorized for rate purposes as flats in order to take advantage of the flat barcode discounts, for example, cannot take advantage of the machinable parcel preparation requirements.

³ DMM C050.4.4 provides that: "Items categorized as flats, irregular parcels, or outside parcels may not be prepared as machinable parcels."

DMA Washington Report

http://www.the-dma.org/home_pages/home-jan97wr.html

dropped slightly for the accounting period (down 2.6% from the same period last year), and it's completely flat for the year. Year-to-date, First-Class mail is only 50% of total mail volume and 58% of total revenue.

Standard (A) mail is up to 41% of total volume and 23% of total revenue for Accounting Period 3, which is an increase over the same period last year but a drop from the year-to-date numbers (43% and 25% respectively). These numbers suggest a future in which Standard mail could be forced to pay an ever-increasing share of postal overhead.

PARCELS RECLASS CASE WILL CREATE SURCHARGE PROBLEM

The Governors of the Postal Service have approved filing the Parcels Reclassification Case, which will include a ten-cent surcharge for all Standard (A) parcels. According to the USPS, parcels under one pound cost the Postal Service .30 more to process per parcel than letters and flats, and the surcharge is intended to offset this differential.

Surcharge May Be Avoidable

Some parcel mailers may, however, be able to avoid the surcharge by mailing their smaller parcels as flats. Small machinable parcels can currently be mailed as flats, but existing physical size requirements are tight. For instance, "Rigid Flats" must be able to negotiate a curved conveyor belt on current flats sorting machines, which means they must fit between two concentric arcs with radii of 15.72 and 16.72 inches: if a parcel is 0.75 inches thick, its length must be less than six inches to fit within the arcs - an impractical requirement.

New Flats Sorters Should Help

However, the FSM-1000 Flats Sorting Machines now being deployed by the USPS reduce the minimum and increase the maximum allowable dimensions of flats and remove turnability and rigidity requirements as well. The new machine will handle pieces from 4" x 4" x 0.007" to 15-3/4" x 12" x 1-1/4"; the maximum weight of a Flat will rise to six pounds. Therefore some pieces now mailed as Standard (A) parcels will more easily qualify as flats.

Avoiding a potential parcel surcharge comes at the price of higher mail preparation costs. Machinable parcels currently need to be sorted only to Bulk Mail Centers; obtaining the 3/5-digit discount requires first preparing all possible five-digit containers. Current flats preparation requires a more complicated 5-digit, 3-digit, AADC, and mixed AADC sort. Consequently savings from avoiding a parcel surcharge may be diminished by increased preparation costs.

Nonetheless, the deployment of FSM-1000 machines, scheduled for completion in August of 1998, is good news for mailers of heavier Standard (A) pieces, especially parcels.

SMALL FLATS TEST RESULTS MOSTLY GOOD

The Postal Service has released preliminary test results, and the results are encouraging for all but slim-jims. The tests have identified a number of

**Designated Interrogatory Responses
of
Virginia J. Mayes (T37)**

DBP/USPS-39. [I] In an effort to avoid the necessity of follow-up interrogatories, please provide the logic behind and the cost data which justifies any variation in the various one pound changes as well as any variation in the changes necessitated by the requirement to keep the parcel post rates less than the Priority Mail rates.

Response:

[I] The increases in rates from one weight increment to the next are not uniform because the increases in costs from one weight increment to the next are not uniform. As can be seen from the testimony of witness Hatfield (USPS-T-16), the transportation costs for Parcel Post are incurred on the basis of cubic feet utilized in the truck, rail van, or other transportation. Because the rate design for Parcel Post is applied on the basis of the weight of the piece, and not the cube of the piece, the transportation costs which were incurred on the basis of cube must be translated into a weight-related pricing structure. The Postal Service has detailed information for Parcel Post which shows that there is not a linear relationship between cube and weight. Thus, this translation from cube-related costs to weight-related rate design is performed by means of regression analyses which show how cube and weight are related. The results of those regressions are shown at page 1 of my workpaper WP I.E.

The cube-weight relationships are used in conjunction with the transportation costs per cubic foot by zone in my workpaper WP I.E., pages 3 through 12 to develop the transportation element of the rate design. As can be seen from

these workpapers, the increase in transportation cost – which represents a large portion of Parcel Post costs – is not smooth from weight increment to weight increment.

The unconstrained rates as developed from the underlying costs and recovery of revenue leakages are shown in my workpaper WP I.K., pages 1 through 6. My workpapers WP I.L. and WP I.M. show the rate cells which were constrained in accordance with the precedent of the Postal Service and the Postal Rate Commission that the machinable inter-BMC Parcel Post rates remain at least 5 cents below the comparable Priority Mail rates.

DBP/USPS-82. Your response to DBP/USPS-47 did not explain why, since there were lower costs for the higher zones, that this did not result in lower rates [rather than no change in rates as is being proposed] for the higher zones.

Response:

DBP/USPS-47 asked, "If the total transportation costs were the same and the reallocation resulted in higher costs for the lower zones, why didn't they result in lower costs for the upper zones?" [Emphasis added.] Witness Hatfield's response correctly indicated that the analysis contained in his testimony did result in lower unit transportation cost estimates for the upper zones. For the reasons that the lower transportation cost estimates for the upper zones did not translate into rate decreases for the upper zones, please refer to my response to UPS/USPS-T37-37(b), and to the transcript at 8/4259-60. Please also refer to my response to your interrogatory DBP/USPS-43[c].

RESPONSE OF POSTAL SERVICE WITNESS MAYES TO OCA INTERROGATORIES

OCA/USPS-T37-1. In Docket No. MC97-2, the Office of the Consumer Advocate ("OCA") submitted a number of interrogatories to which you provided replies. Please indicate the Postal Service's position as to whether the responses you gave to interrogatories 7, 8, 9, 27, 28, 29, 30, 31, 32, 33 in Docket No. MC97-2 are still valid. If not, please explain.

Response:

Redirected in part to the Postal Service.

If you are requesting that I verify that my responses to the listed interrogatories from Docket No. MC97-2 remain the same, then I can verify that the responses to 7, 8, 9, 27, 30, 32 and 33 would be unchanged. The responses to 28 would remain the same, with clarification of the response to part c provided in my response to OCA/USPS-T37-6. The responses to 29 would remain unchanged except as noted in my response to OCA/USPS-T37-7. The responses to 31 would remain unchanged except as noted in my responses to OCA/USPS-T37-8 and OCA/USPS-T37-9. I would note that the quote from the Scherer text that you provided in your original question OCA/USPS-T13-31d misquoted the statement that appears in the textbook. I would also note that the quote that you provided in your original question OCA/USPS-T13-31e appears in the textbook in the context of a discussion regarding the "coordination problem" which occurs as oligopolists coordinate pricing efforts to maximize profits, and that the discussion includes consideration of the homogeneity of the products. It is also

RESPONSE OF POSTAL SERVICE WITNESS MAYES TO OCA INTERROGATORIES

worth noting, especially with respect to the interrogatories 29, 30 and 33, that the Postal Service is not proposing to raise the weight limit for parcels.

13. Please explain why the "Additional Nontransportation Costs of New Volume over 108 Inches" (Line 5, USPS-T-37, Workpaper 1.1, page 2) should have a markup applied while the other adjustments to costs, such as "Prebarcode Cost Savings" (Line 17) do not have a markup applied.

Response:

"Additional Nontransportation Costs of New Volume over 108 Inches" appear not at line (5), but at line (4) of workpaper USPS-T-37, WP 1.1., page 2. Neither the "Additional Nontransportation Costs of New Volume over 108 Inches" nor the "Prebarcode Cost Savings" adjustments to costs, as developed at lines (4) and (17) of workpaper USPS-T-37, WP 1.1., page 2 incorporate a markup. In the event that the question meant to refer to line (5), I would note that there is likewise no markup incorporated into the formula at line (5). The formula associated with line (4) refers to line (27), the per-piece rate element, which does include a markup. However, when line (27) is incorporated into the formula for line (4), it is divided by line (8), which is the markup factor. Thus, the markup is removed from the per-piece rate element, and is not included in the calculation of the "Additional Nontransportation Costs of New Volume over 108 Inches."

Response of Witness Mayes to Presiding Officer's Information Request No. 6

3. Due in part to variations in proposed average rate increases, the base year to test year volume changes are markedly different for each of the three parcel post components, intra-BMC, inter-BMC, and DBMC. As explained in USPS-T-37 (including Workpapers I.O and II.C), Alaskan Bypass is part of the intra-BMC component and the Official Mail Accounting System (OMAS) is part of the inter-BMC and DBMC components. In view of the different volume changes, please explain why the ratios of (a) Alaskan Bypass revenue to total parcel post revenue and of (b) OMAS revenue to total parcel post revenue are each the same in the test year as in the base year. Also, please discuss whether it would be appropriate, as an alternative, to project the revenues of Alaskan Bypass and OMAS as fixed proportions of the parcel post components in which they are included.

Response:

The Alaska Bypass and Official Mail Accounting System (OMAS) volumes do not exhibit the same weight per piece or distance characteristics as other subcategories of Parcel Post. Therefore, the projected revenue accruing from these types of Parcel Post was tied to the total Parcel Post revenue. In the absence of additional information regarding the behavior of these categories of mail, it would not be inappropriate to tie the projected Alaska Bypass revenues to the intra-BMC revenues, and the projected OMAS revenues to the inter-BMC and DBMC revenues proportionally to the shares of inter-BMC and DBMC in OMAS. An examination of the most recent five years of data demonstrated that the Alaska Bypass revenues exhibited slightly higher correlation with the non-Alaska Bypass Intra-BMC revenues (0.939) than with the total Parcel Post revenues (0.921). Inter-BMC OMAS revenues seemed to be more closely tied to total Parcel Post revenues (0.552) than with non-OMAS Inter-BMC revenues (-0.117). DBMC OMAS revenues were highly negatively correlated with both total Parcel Post revenues (-0.953) and non-OMAS DBMC revenues (-0.892).

**Designated Interrogatory Responses
of
Mohammad A. Adra (T38)**

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ADRA
TO POIR NO. 5, QUESTION 12**

9890

12. Final Cost and Revenue Adjustments

Final cost and revenue adjustments for BPM are developed in USPS-T-38, Workpaper BPM31. The unit cost with contingency for unbarcoded volume changes from the TYAR Forecast (\$0.598755) to TYAR Adjusted (\$0.609916). Both include an adjustment for current volume presently barcoded. Two additional adjustments are made in the development of the TYAR adjusted unit cost (Cell L49 on worksheet "Final adjustments:")

- additional barcoded volume; and
- new volume over 10 pounds.

Please justify these two additional adjustments. If the adjustment for new volume over 10 pounds is justified, should an adjustment be made to the unit cost of new volume over 10 pounds (\$1.122256)? If not, why not? If so, please provide the correct adjustment.

If these two adjustments are justified for BPM, please explain why similar adjustments are not included in developing the unit cost of unbarcoded volume for Library Rate (USPS-T-38, Lib 8, page 2).

If the adjustment for the additional barcode volume is justified, please explain why a similar adjustment is not included in the development of the unit cost of unbarcoded volume for Special Standard (USPS-T-38, Workpaper SR7, page 2).

Please provide any revised documentation.

RESPONSE:

The two additional adjustments that you refer to in your question and are made in Cell L49 on worksheet "Final Adjustments:" are not justified. The unit cost with contingency for unbarcoded volume does not change from TYAR Forecast (i.e., Cell K49) to TYAR Adjusted (i.e., Cell L49). The correction has been made in the attached revised workpapers. However, your question led me to revise the estimated unit cost of new volume over 10 pounds (\$1.122256) to include an adjustment for newly barcoded volume. I have also made the same adjustment

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ADRA
TO POIR NO. 5, QUESTION 12**

9891

RESPONSE (continued)

on the revenue side (i.e, the \$1.7204 revenue per piece for new volume over 10 lbs, in Cell L28). All corrections are incorporated in the revised workpapers: WP BPM31, WP BPM32. These corrections impact the cost coverage, thus, I have also attached the revised workpaper WP-BPM1.

The calculations for Special Standard and Library are correct. Thus, no similar adjustments and/or corrections are needed.

**Standard (B) Bound Printed Matter
Financial Summary**

**Revised
17-Nov-97
USPS-T-38
WP BPM1**

	TYBR [1]	Forecast	Final
Volume	567,896,300	561,718,000	574,741,500
Revenue Excluding Fees	\$493,015,052	\$509,001,955	\$524,004,849
Revenue Per Piece - Excluding Fees	\$0.8681	\$0.9062	\$0.9117
Fees	\$427,000	\$0	\$435,000
Revenue Including Fees	\$493,442,052	\$509,001,955	\$524,439,849
Revenue Per Piece - Including Fees	\$0.8689	\$0.9062	\$0.9125
Cost including contingency	\$336,113,860	\$332,590,980	\$339,729,338
Cost Coverage - including fees	146.81%	153.04%	154.37%
Cost coverage - excluding fees	146.68%	153.04%	154.24%

(1) Volume -- BPM8 ; Revenues -- BPM12; Cost -- USPS-T-15, WP-E, Table E
(2) Volume -- BPM26 ; Revenues -- BPM30; Cost -- USPS-T-15, WP-G, Table E
(3) BPM31

TYAR Cost and Revenue per Piece [3]				TYAR Costs [1]	
Weight	Per Piece	Revenue	Cost		
1.5	\$0.5276	\$0.8141	1.54	Cost Segment 14	64,237,333
2	\$0.5567	\$0.8588	1.54	Nontransportation Costs	\$268,353,647
3	\$0.6148	\$0.9482	1.54	Nontransportation Weight-Related Costs	13,711,746
4	\$0.6730	\$1.0375	1.54	Unadjusted Non-Weight Related Costs	\$254,641,901
5	\$0.7312	\$1.1268	1.54	Cost savings due to newly barcoded volume [4]	-\$7,307,906
6	\$0.7893	\$1.2162	1.54	Adjusted Non-Weight Related Costs	\$247,333,995
7	\$0.8475	\$1.3055	1.54	Weight-Related Costs	77,949,079
8	\$0.9057	\$1.3949	1.54	Adjusted Piece-Related Revenue [5]	\$382,041,562
12	\$1.1383	\$1.7522	1.54		
13	\$1.1965	\$1.8416	1.54		
14	\$1.2547	\$1.9309	1.54		
15	\$1.3128	\$2.0203	1.54		
				TYAR Pieces	561,718,000
				TYAR Pounds	1,340,074,352

Calculation of TYAR Nontransportation Weight-Related Costs [2]						
Single piece		Factor	\$/lb.	Pounds	Vol. Adj.	Nontransp. Per Lb. Costs
Bulk	Local	0.75	\$0.02	1,929,864	1.0000	\$28,948
	Non-Local	1	0.02	80,568,396	1.0000	1,611,368
Bulk	Local	0.375	0.02	201,732,399	1.0000	1,512,993
	Non-Local	0.5	0.02	1,055,843,692	1.0000	10,558,437
Total				1,340,074,352		\$13,711,746

Notes:

- [1]: Total costs from USPS-T-15, WP-G, Table E.
 Transportation costs - same % as in TYBR
 Non-transportation weight-related costs from [2]
 Revenues - BPM30
 TYAR Pieces - BPM26
 TYAR Pounds - BPM27

[2]:

Assumes 2 cents per lb for weight-related nontransportation cost

[3]:

Cost per piece: (non-weight related cost / TYAR pieces) + weight * (weight related cost / TYAR pounds)
 Revenue Per piece: (piece related revenue / TYAR pieces) + weight * (pound related revenues/TYAR pounds)

[4]:

Cost savings = Newly barcoded volume * barcode cost savings per piece
 Total volume 561,718,000
 Percent of New barcode 32.20%
 Newly Barcoded Volume 180,888,757
 Barcode cost savings per piece with contingency 0.0404
 Cost savings due to newly barcoded volume \$7,307,906

[5]:

Unadjusted Piece-Related Revenue \$389,277,113
 Newly Barcoded Volume 180,888,757
 Barcode Discount -0.04
 Barcode Adjustment -\$7,235,550
 Adjusted Piece-Related Revenue \$382,041,562

CALCULATION OF BOUND PRINTED MATTER FINAL ADJUSTMENTS

REVISED
17-Nov-97
USPS-T-38
WP BPM31
Page 1 of 3

Volume		Volume		
		TYBR	Forecast	Adjusted
Unbarcoded Volume		474,286,178	469,126,289	288,237,532
Currently Barcoded Volume		93,610,122	92,591,711	92,591,711
Additional Volume Barcoded from Market Research		na	na	180,888,757
New Volume from Delivery Confirmation		na	na	0
New Volume over 10 Pounds		na	na	13,023,500
Total		567,896,300	561,718,000	574,741,500

Revenue Impact		Revenue per Piece		
		TYBR	Forecast	Adjusted
Unbarcoded Volume		\$0.868143	\$0.912746	\$0.912746
Currently Barcoded Volume		0.868143	0.872746	0.872746
Additional Volume Barcoded from Market Research		na	na	0.872746
New Volume from Delivery Confirmation		na	na	na
New Volume Over 10 Pounds		na	na	1.707563
Total		0.868143	0.906152	0.911723

Revenue		Revenue		
		TYBR	Forecast	Adjusted
Unbarcoded Volume		\$411,748,104	\$428,192,948	\$263,087,534
Currently Barcoded Volume		81,266,948	80,809,007	80,809,007
Additional Volume Barcoded from Market Research		na	na	157,869,863
New Volume from Delivery Confirmation		na	na	0
New Volume (Pounds)		na	na	22,238,445
Total		493,015,052	509,001,955	524,004,849

Cost Impact

		Cost per Piece with contingency		
		TYBR	Forecast	Adjusted
Unbarcoded Volume		\$0.598517	\$0.598755	\$0.598755
Currently Barcoded Volume		0.558117	0.558355	\$0.558355
Additional Volume Barcoded from Market Research		na	na	\$0.558355
New Volume from Delivery Confirmation		na	na	na
New Volume over 10 Pounds		na	na	\$1.109246
Total		0.591858	0.592096	0.591099

		Cost with contingency		
		TYBR	Forecast	Adjusted
Unbarcoded Volume		\$283,868,440	\$280,891,898	\$172,583,778
Currently Barcoded Volume		52,245,420	51,699,082	\$51,699,082
Additional Volume Barcoded from Market Research		na	na	\$101,000,214
New Volume from Delivery Confirmation		na	na	na
New Volume over 10 Pounds		na	na	\$14,446,264
Total		336,113,860	332,590,980	339,729,338

**Designated Interrogatory Responses
of
Susan W. Needham (T39)**

**RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORY OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)**

DBP/USPS-16 (a) Confirm that the United States Postal Service issued in May 1997 a card with a 20-cent Bugs Bunny stamp on the front and a picture of Bugs Bunny on the reverse. (b) Confirm that these were supplied in a cellophane wrapped book of ten cards. (c) Confirm that the price tag on the back of the package states, "BUGS BUNNY POSTAL CARD BOOK / 10 POSTAL CARDS / ITEM NO. 8982 / PRICE: \$5.95. (d) Confirm that there is a gold seal on the front of the package that states, READY-TO-MAIL / POSTAL CARDS.

RESPONSE:

- a) Confirmed.
- b) Confirmed.
- c) Confirmed.
- d) Confirmed.

**RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)**

DBP/USPS-21. (m) Confirm, or explain if you are unable to do so, that the maximum proposed cost for a Priority Mail parcel weighing ten pounds or less will be \$14.85 and that the fee for Special Handling for parcels weighing ten pounds or less will be \$17.25. (n) Confirm, or explain if you are unable to do so, that a Priority Mail parcel weighing ten pounds or less will always cost less than the Special Handling parcel of the same characteristics and destination. (o) Confirm, or explain if you are unable to do so, that the fee for Special Handling for parcels over ten pounds will be \$24.00. (p) Confirm, or explain if you are unable to do so, that when the Special Handling fee is added to the Inter-BMC Standard Mail rates that Priority Mail will be less expensive than the Standard Mail rate for all but the following cells: Zones 1 and 2, over 63 pounds; Zone 3, none; Zone 4, over 48 pounds; Zone 5, over 49 pounds; Zone 6, over 44 pounds; Zone 7, over 46 pounds; and Zone 8, over 44 pounds. (r) Confirm, or explain if you are unable to do so, that when the Special Handling fee is added to the Intra-BMC Standard Mail rates that Priority Mail will be less expensive than the Standard Mail rate for all but the following cells: Local, over 60 pounds; Zones 1 and 2, over 61 pounds; Zone 3, over 67 pounds; Zone 4, over 43 pounds; and Zone 5, over 46 pounds. (v) If you are unable to confirm subpart u, provide those categories and weight cells where Special Handling would be less expensive than Priority Mail. (y) Confirm, or explain if you are unable to do so, that the maximum weight for Bound Printed Matter will be 15 pounds and that the maximum postage for a 15 pound Priority Mail parcel will be \$21.05. (z) Confirm, or explain if you are unable to do so, that a Priority Mail parcel will always cost less than a Bound Printed Matter parcel sent by Special Handling. (aa) Confirm, or explain if you are unable to do so, that when the Special Handling fee is added to the Special Standard Mail rates that Priority Mail will be less expensive than the Standard Mail rate for all but the following cells: Zones Local, 1, 2, and 3, none; Zone 4, over 49 pounds; Zone 5, over 44 pounds; Zone 6, over 34 pounds; Zone 7, over 30 pounds; and Zone 8, over 23 pounds. (cc) Confirm, or explain if you are unable to do so, that when the Special Handling fee is added to the Library rates that Priority Mail will be less expensive than the Standard Mail rate for all but the following cells: Zones Local, 1, 2, and 3, none; Zone 4, over 53 pounds; Zone 5, over 47 pounds; Zone 6, over 36 pounds; Zone 7, over 32 pounds; and Zone 8, over 25 pounds.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-21 (Continued)

RESPONSE:

- m. Confirmed.
- n. Confirmed that a Priority Mail parcel weighing ten pounds or less will always cost less than a parcel with special handling to the same destination from the same origination. However, not confirmed that Priority Mail and special handling have the same characteristics.
- o. Confirmed that the proposed fee for special handling for over 10 pounds is \$24.00.
- p. Not confirmed. There are additional cells in which the rate for Priority Mail will exceed the inter-BMC rate plus the special handling fee. An example of this is a Zone 2 parcel weighing 63 pounds.
- r. Not confirmed. There are additional cells in which the rate for Priority Mail will exceed the intra-BMC rate plus the special handling fee. An example of this is a local parcel weighing 60 pounds.
- v. See my response to DBP/USPS-21(r).
- y. Confirmed that this is the Postal Service proposed rate.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-21 (Continued)

RESPONSE:

z. Confirmed.

aa. Not confirmed. There are additional cells in which the rate for Priority Mail will exceed the Special Standard Mail B rate plus the special handling fee.

An example of this is a Zone 4 parcel weighing 49 pounds.

cc. Not confirmed. There are additional cells in which the rate for Priority Mail will exceed the Library rate plus the special handling fee. An example of this is a Zone 4 parcel weighing 51 pounds.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 [a] Confirm, or explain if you are unable to do so, that prior to Docket MC96-3 a mailer desiring Registered Mail service for an article with a declared value of up to \$25,000 could mail the article both with or without postal insurance. [b] Confirm, or explain if you are unable to do so, that as a result of Docket MC96-3, the maximum value for making the choice of purchasing postal insurance or not was reduced to \$100. [c] Confirm, or explain if you are unable to do so, that in this Docket, it is proposed to reduce that amount to \$0, namely, for an article having a declared value of one cent or more, it is required to purchase postal insurance [I understand that the maximum insurance liability is limited to \$25,000]. [d] In the preparation for Docket MC96-3 was it the intention of dropping the limit from \$25,000 to \$100 only because the Postal Service wanted to eliminate non-postal insurance in two steps rather than doing it all at once? [e] Confirm, or explain if you are unable to do so, that with respect to the Registered Mail service that there are some costs which are independent of the value of the article, there are some costs which are only slightly related to the value of the article, and those costs which are directly related to the declared value. [f] Confirm, or explain if you are unable to do so as well as provide any other additional items, that the following costs are the same regardless of the declared value of the article: preparation, storage, and utilization of forms; training of employees, publicity of the service, acceptance of the article, and processing [not the payment of] any inquiries and claims. [g] Confirm, or explain if you are unable to do so as well as provide any other additional items, that the following costs are only slightly related to the declared value of the article: security and transportation of the article from the time it is accepted until it is delivered to the addressee. [h] Confirm, or explain if you are unable to do so as well as provide any other additional items, that the following costs are directly related to the declared value of the article: payment of any claims for damage or loss. [i] Provide the cost per article for all of the items that are listed in response to subpart f. [j] Provide the cost per article for all of the items that are listed in response to subpart g. This should be shown for each of the 27 or 28 rate categories. [k] Provide the cost per article for all of the items that are listed in response to subpart h. This should be shown for each of the 27 or 28 rate categories. [l] Provide a table over a period of a recent 12-month period showing the number of articles mailed in each of the 27 rate categories, the number of claims that were filed in each of the 27 rate categories, and the average value paid out per claim in each of the 27 categories. [m] Confirm, or explain if you are unable to do so, the requirement, and provide the appropriate reference, that a mailer must declare the full value of an article for which registration is desired. [n] Confirm, or explain if you are unable to do so, that

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 Continued

the mailer will communicate the declared value to the acceptance clerk at the time of mailing the article. [o] Confirm, or explain if you are unable to do so, that for any other postal employee to know the declared value of an article, that information must be specifically communicated to them from the original acceptance clerk. [p] Confirm, or explain if you are unable to do so, that if this communication chain between any two postal employees is broken, it will not be possible to accurately determine the declared value of the article. [q] Confirm, or explain and provide specific information if you are unable to do so, that no record of the declared value is transmitted as a matter of course as the article moves through the mail system. [r] Confirm, or explain if you are unable to do so, that it is not possible to accurately determine the declared value of an article by just looking at the article. Note: This may be due to the overpayment of postage or part or all of the postage falling off. [s] Confirm, or explain if you are unable to do so, that the likelihood of any given postal employee looking at a registered mail article, determining the postage paid on the article, and calculating the registry fee by weighing the article and subtracting the postage for that weight along with the fees for any other services, such as Return Receipt or restricted delivery, and then converting that registry fee just to determine the declared value will be extremely small. [t] Confirm, or explain if you are unable to do so, that for articles with a declared value of \$25,000 or less that it will be unlikely that the value of the article will be specifically communicated from employee to employee. [u] If you are unable to confirm subpart t, are there any regulations or directives indicating a specific value for which the communication of the declared value of the article must be communicated between employees. If so, specify the value, provide copies of the directive or regulation, and enumerate the way the communication will take place. [v] If there are no regulations or directives in your response to subpart t, provide the values at which you believe 25%, 50%, 75%, and 100% of the employees will resort to communicating the declared value as the article moves through the system and the method that will be utilized to pass such information. [w] In light of your responses to subparts n through v, explain how it is possible to justify any higher costs for the transportation and security of articles with a declared value of \$25,000 or less and provide a breakdown between the costs for each of the 27 or 28 different value steps. [x] Confirm, or explain if you are unable to do so, that Registered Mail may only be utilized for First-Class Mail. [y] Confirm, or explain if you are unable to do so, that First-Class Mail is sealed against postal

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 Continued

inspection. [z] If a mailer does not file a claim for loss or damage, how will it be possible for the Postal Service to know the contents or actual value of an article which is registered? [aa] If a mailer does not file a claim for loss or damage, what sanctions can be applied to the mailer for failing to declare the full value? [bb] How will it be possible for the Postal Service to determine the existence of such a condition? [cc] Isn't such a rule unenforceable with respect to articles for which the mailer is not interested in obtaining postal insurance. [dd] If not, explain. [ee] Because of the inability to enforce this rule, doesn't it fall into the same category as the Postal Service's change of the rule with respect to Return Receipt for Merchandise where the use of First-Class Mail under 11 ounces was no longer authorized as of Docket MC96-3 because of the inability of the Postal Service to determine that the article actually contained merchandise. [ff] If not, explain. [gg] Confirm, or explain if you are unable to do so, that there are customers who, for whatever reason they may have, do not want to purchase postal insurance for their registered articles. [hh] Confirm, or explain if you are unable to do so, that some of the reasons a mailer might not want to purchase postal insurance would be: they already have their own insurance, they are only interested in obtaining the secure handling that registered mail provides, or the cost vs. value ratio was low enough to assume the risk. [ii] Provide any other reasons in addition to those in subpart hh. [jj] What is the logic for requiring a mailer to purchase a service that do not want or need? [kk] Is postal insurance primary or secondary to any other insurance that a mailer may have? [ll] If it is secondary, then explain why a mailer should be required to purchase it. [mm] Confirm, or explain if you are unable to do so, that the only article for which no postal insurance is required is one which has a value of \$0.00 [as opposed to one which has a value of \$0.01 for which postal insurance must be purchased]. [nn] If a registered article is completely lost, may the claim include not only the value of the contents but any or all of the following: the value of the container or envelope that the contents were in, the postage paid for mailing the article [not including any fees], the registration fee, the postage paid for any other special services such as Return Receipt or restricted delivery? Indicate which, if any, of the items are covered and provide a copy of the regulation supporting your responses. [oo] If any of the items

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 Continued

specified in subpart nn are covered, wouldn't that automatically provide a value, albeit only perhaps a penny, which would preclude declaring a value of \$0.00. [pp] If not, explain. [qq] Refer to POM Section 811.22 and confirm, or explain if you are unable to do so, that if I purchase stock at a cost of \$1,000 and at the time of mailing it has a market value of \$5,000, and if I mail the stock certificate endorsed in blank, I must pay for a declared value of \$5,000. [rr] Same as subpart qq, except that if I purchase jewelry for \$1,000 and it now has a market value of \$5,000, I would be permitted to pay for a declared value of only \$1,000. [ss] If you confirm both subparts qq and rr, explain why the two articles are treated differently. [tt] Refer to POM Section 811.22 and confirm, or explain if you are unable to do so, that if I mail a negotiable instrument, such as a bearer bond, I must declare a value which is the replacement value of that article, which just happens to be its market value. [uu] Same as subpart tt, except that if I mail a nonnegotiable instrument, I am given the option of whether or not I want to declare a value equal to its replacement cost or to declare no value even if there is a replacement cost. [vv] If you confirm both subparts tt and uu, explain why the two articles are treated differently. [ww] Refer to POM Section 811.22 and confirm, or explain if you are unable to do so, that any of the articles listed under nonnegotiable instruments or nonvaluables will, in fact, have at least a minimal intrinsic value, albeit perhaps only a penny for the intrinsic value for a sheet of paper. [xx] If you are able to confirm subpart ww, explain why these categories are treated differently than those under other categories which it is required to declare the market value or cost. [yy] Are there any articles which are normally being registered that have an intrinsic value of \$0.00 as opposed to \$0.01 or more? [zz] If so, specify examples. [aaa] Refer to POM Section 811.24 and explain where the authority comes from to inquire about the contents of First-Class Mail.

RESPONSE:

a) Confirmed.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 Continued

- b) Confirmed that the maximum level for uninsured registered mail was decreased from \$25,000 to \$100 as a result of Docket No. MC96-3.
- c) Confirmed that the proposal in this docket is to reduce the maximum level for uninsured registered mail from \$100 to \$0.00.
- d) In the preparation of Docket No. MC96-3 the Postal Service only considered proposing the reduction of the maximum value level for uninsured registered mail from \$25,000 to \$100, and did not consider any further decrease.
- e) Not confirmed. There are costs both independent of the declared value and related to the declared value, but not necessary only slightly related to the declared value.
- f) Not confirmed. Registered items with very high declared values could require additional training of employees, particularly for those items requiring special circumstances to handle.
- g) Not confirmed. Registered items with extremely high declared values frequently require added security and alternative transportation, the costs of which are directly related to the declared value.
- h) Confirmed, to the best of my knowledge.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued

- i) This information is not available in the breakdown you request.
- j) See response to DBP/USPS-37(i).
- k) See response to DBP/USPS-37(i).
- l) See the registered mail billing determinants in USPS LR H-145 for the number of registered articles mailed in each of the 27 fee categories for 1997. Claims information will be provided later.
- m) See DMM S911.2.1 and my response to DBP/USPS-38(e).
- n) Confirmed.
- o) Not confirmed. A registered mail article's declared value can be determined by postal employees through calculating the postage and subtracting it and any ancillary service fees from the total amount paid to get the registered mail fee. Even if an exact calculation is not made, a general estimate of the item's value can be made from the total postage and fees.
- p) Not confirmed. See the response to DBP/USPS-37(o).
- q) Confirmed.
- r) Not confirmed. In the majority of situations, postage has not fallen off or postage has been neither underpaid nor overpaid. Consequently, it would be

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued

r) Continued

very possible to accurately determine the declared value of an article by looking at the article.

s) Not confirmed. No data exists on the number of times postal employees would calculate or estimate the declared value of a registered article based on the affixed postage and fees.

t) Not confirmed. Postal employees are required to do what is necessary for the safe and secure transport of all registered mail; communicating the declared value of articles under \$25,000 can be one way of ensuring this safety and security.

u) I know of no regulations or directives, but I am aware that there may be certain circumstances in which communicating the declared value of articles under \$25,000 may be necessary for safety and security and that this would be done on an individual basis. See response to DBP/USPS-37(t).

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued)

- v) Since communication of the declared value would be done on an individual basis depending upon the circumstances, I could not begin to hazard a guess as to the percentage of the total number of registered mailings it would be done.
- w) The higher the declared value of registered articles, the higher the costs for security and accountability. The requested breakdown of costs is not available.
- x) Confirmed that registered mail may only be used for articles paying First-Class Mail rates.
- y) Confirmed.
- z) The Postal Service relies upon the declared value given by the mailer to determine the amount of security during the dispatch, processing, and delivery functions of the registered mailpiece.
- aa)-dd) It generally would not be possible. I am unaware of any attempt to impose penalties on mailers in the circumstances you describe. The primary reasons for a mailer to declare full value are to enable the Postal Service to provide the proper level of security, and to protect himself or herself should the registered item be lost or damaged. To some extent, however, the Postal Service relies on the integrity of its customer^s to declare full value when

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued

aa)-dd) requested to do so.

ee)-ff) No. See my testimony, USPS-T-8, in Docket No. MC96-3 for the reasons for the return receipt for merchandise classification change.

gg) Confirmed that some customers have chosen not to purchase insured registered mail.

hh) Not confirmed. The Postal Service does not have information as to why some registered mail customers would choose not to use postal insurance.

ii) Not applicable.

jj) There is no logic in providing a service that is not frequently used, as was demonstrated in the Docket No. MC96-3 Recommended Decision which eliminated the service offerings and fee categories for uninsured registered mail from \$100.01 to \$25,000. Further, with respect to this docket, see my testimony at pages 77-78.

kk) Primary.

ll) Not applicable.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued

mm) Not confirmed. A customer may choose uninsured registered mail up to \$100 in declared value.

nn) If a special or custom-made container were used (such as for shipping birds, etc.), the Postal Service would *consider* its cost in processing a claim. We do not refund the registration fee itself. We do automatically include postage in a claims payment. Other fees are refunded as deemed appropriate. For example, if the customer actually received his return receipt, we would not refund that fee. If he did not receive his return receipt, we would make such a refund.

oo)-pp) No. The declared value is not the same as the actual or fair-market value used for determining claims, and declaring value does not automatically give an item actual value.

qq) Yes.

rr) Yes.

ss) Unlike stock, a wholesaler would place one value on jewelry (wholesale cost), while his customer would place a higher value (retail price).

tt) No. Market value still applies. The replacement cost is not necessarily the market value of the bond.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37. Continued

uu) Yes.

vv) The issuer of a negotiable instrument probably would be reluctant to proffer a replacement, with the original remaining in circulation and subject to being cashed. Conversely, the issuer of a nonnegotiable instrument has no apparent risk in providing a replacement at minimal cost.

ww) Please refer to my responses to part⁵_A oo) and pp) above.

xx) See ww

yy) Regulations require that a customer must truthfully declare only the full or actual value. An item's intrinsic value would come into play only in adjudication.

zz) See the response to DBP/USPS-37(yy).

aaa) It is my understanding that the fact that mail is sealed against inspection does not preclude asking the mailer about the contents.

SUPPLEMENTAL RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORY OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-37 [I] Provide a table over a period of a recent 12-month period showing the number of articles mailed in each of the 27 rate categories, the number of claims that were filed in each of the 27 rate categories, and the average value paid out per claim in each of the 27 categories.

RESPONSE:

I) For the requested claims information, please see the attached.

ATTACHMENT TO RESPONSE TO
INTERROGATORY DBP/USPS-37 (1)REGISTERED CLAIMS
FY 1996

Value Level	Total Claims	Paid Claims	Amount Paid	Average Paid Per Claim (Col 3/Col 1)	Average Paid Per Claim Paid (Col 3/Col 2)
	(1)	(2)	(3)	(4)	(5)
\$0.00 TO \$100.00	634	96	\$7,574	\$11.95	\$78.90
\$100.01 TO \$500.00	738	292	\$80,386	\$108.92	\$275.29
\$500.01 TO \$1000.00	695	378	\$226,311	\$325.63	\$598.71
\$1000.01 TO \$2000.00	593	355	\$345,915	\$583.33	\$974.41
\$2000.01 TO \$3000.00	254	155	\$279,314	\$1,099.66	\$1,802.03
\$3000.01 TO \$4000.00	119	65	\$145,967	\$1,226.61	\$2,245.64
\$4000.01 TO \$5000.00	105	69	\$184,075	\$1,848.33	\$2,812.68
\$5000.01 TO \$6000.00	50	28	\$105,166	\$2,103.32	\$3,755.93
\$6000.01 TO \$7000.00	35	15	\$61,457	\$1,755.93	\$4,097.16
\$7000.01 TO \$8000.00	38	21	\$98,283	\$2,586.38	\$4,680.12
\$8000.01 TO \$9000.00	13	8	\$52,439	\$4,033.80	\$6,554.93
\$9000.01 TO \$10000.00	47	27	\$142,089	\$3,023.16	\$5,262.54
\$10000.01 TO \$11000.00	15	6	\$35,295	\$2,353.03	\$5,882.58
\$11000.01 TO \$12000.00	15	8	\$59,167	\$3,944.46	\$7,395.87
\$12000.01 TO \$13000.00	11	5	\$48,957	\$4,450.62	\$9,791.36
\$13000.01 TO \$14000.00	10	4	\$50,360	\$5,035.95	\$12,589.88
\$14000.01 TO \$15000.00	13	10	\$59,542	\$4,580.13	\$5,954.17
\$15000.01 TO \$16000.00	5	3	\$15,948	\$3,189.54	\$5,315.90
\$16000.01 TO \$17000.00	5	2	\$32,910	\$6,581.99	\$16,454.97
\$17000.01 TO \$18000.00	2	2	\$13,808	\$6,904.13	\$6,904.13
\$18000.01 TO \$19000.00	8	6	\$44,856	\$5,607.05	\$7,476.07
\$19000.01 TO \$20000.00	17	10	\$137,223	\$8,071.93	\$13,722.27
\$20000.01 TO \$21000.00	6	5	\$43,809	\$7,301.47	\$8,761.77
\$21000.01 TO \$22000.00	2	1	\$22,004	\$11,002.00	\$22,004.00
\$22000.01 TO \$23000.00	4	4	\$91,726	\$22,931.52	\$22,931.52
\$23000.01 TO \$24000.00	3	3	\$49,044	\$16,347.97	\$16,347.97
\$24000.01 TO \$25000.00	38	24	\$366,531	\$9,645.55	\$15,272.11
\$25000.01 AND UP	18	1	\$24,999	\$1,388.85	\$24,999.21
TOTAL	3,493	1,603	\$2,835,154	\$811.67	\$1,768.66

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DBP/USPS-54 [a] A rate is being proposed 500 banded stamped envelopes which costs 50 cents to \$1.00 more than the rate for 500 plain stamped envelopes. What are banded stamped envelopes? [b] What value does a purchaser of banded stamped envelopes obtain for their added 50 cents to \$1.00 cost? [c] What is the added cost for the Postal Service to provide 500 banded stamped envelopes over 500 plain stamped envelopes? [d] Confirm, or explain if you are unable to do so, that plain hologram stamped envelopes will only be available in single sales. [e] Confirm, or explain if you are unable to do so, that printed hologram stamped envelopes will not be available in the 6-3/4 size. [f] Confirm, or explain if you are unable to do so, that for 500 stamped envelopes of the 6-3/4 size, the difference between the plain and printed versions is \$14.00 less \$8.50 or a difference of \$5.50 which represents the cost of printing. [g] Confirm, or explain if you are unable to do so, that for 500 stamped envelopes of greater than the 6-3/4 size, the difference between the plain and printed versions is \$15.00 less \$11.50 or a difference of \$3.50 which represents the cost of printing. [h] Provide the cost data for printing both the 6-3/4 size as well as the larger than 6-3/4 size envelopes. [i] Explain why the printing cost for the 6-3/4 size stamped envelopes is 57 percent more than the printing cost of the larger envelope. [j] Confirm, or explain if you are unable to do so, that the item in Fee Schedule 961, "Multi-Color Printing (500) " refers to price for those plain [as opposed to printed] stamped envelopes which are printed in two or more colors or which are precancelled for the regular or non-profit Standard Mail rates. [k] Confirm, or explain if you are unable to do so, that the stamped envelopes which meet the criteria specified in subpart j may not be purchased with a printed return address. [l] Confirm, or explain if you are unable to do so, that for 500 stamped envelopes of the 6-3/4 size, the difference between the plain one-color and plain multi-color versions is \$14.00 less \$8.50 or a difference of \$5.50 which represents the cost of the added color printing of the stamp design. [m] Confirm, or explain if you are unable to do so, that for 500 stamped envelopes of greater than the 6-3/4 size, the difference between the plain one color and plain multi-color versions is \$15.00 less \$11.50 or a difference of \$3.50 which represents the cost of the added color printing of the stamp design. [n] Provide the cost data for printing the multi-color designs, both the 6-3/4 size as well as the larger than 6-3/4 size envelopes. [o] Explain why the printing cost for the 6-3/4 size stamped envelopes is 57 percent more than the printing cost of the larger envelope since the stamp design is the same for both envelopes. [p] Confirm, or explain if you are unable to do so, that the current 32 cent stamped envelope which was issued for regular use [as opposed to a commemorative, limited issue] is printed in two colors. [q] For each of the

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DBP/USPS-54 Continued

regular issue, First-Class Mail rate stamped envelopes that have been issued since 1971, provide a listing of the face value of the stamp, the description of the design, and the number of colors utilized in the printing. [r] Provide a similar listing for all precancelled stamped envelopes. [s] Provide a similar listing for all other stamped envelopes, such as commemorative and special issues. [t] If the proposed rate is implemented, will all post offices stock single color stamped envelopes for sale to the public? [u] If not, explain why the public will be forced to buy the multi-color version at the higher price. [v] What is the justification for charging the higher multi-color rate for precancelled envelopes automatically even if they should be printed in one color only? [w] Confirm, or explain if you are unable to do so, that savings bond stamped envelopes will only be available in the printed version and will not be available in the plain version. [x] Confirm, or explain if you are unable to do so, that the household (50) rates relate to printed stamped envelopes. [y] Confirm, or explain if you are unable to do so, that the added cost for a hologram stamped envelope as compared to a non-hologram stamped envelope will be one cent for a single sale, one-half cent for the household fifty purchase [\$3.50 vs. \$3.25 for 50 envelopes], and eight-tenths of a cent for the 500 printed envelopes [\$19.00 vs. \$15.00]. [z] Why is the added per envelope charge for fifty envelopes less than for 500 envelopes? [aa] Will the stamped envelope design which utilizes a multi-colored picture pasted on the inside of the envelope and showing through a square/rectangular cutout in the envelope, as has been utilized on a number of previous issues, be categorized as a multi-color version or as a hologram version? [bb] Confirm, or explain if you are unable to do so, that the single sale price of seven cents will apply to all plain stamped envelope sales of less than five hundred envelopes, including sales of precancelled envelopes for philatelic purposes, regardless of the type or design [other than those that have an actual hologram as part of the design for which the price will be eight cents]. [cc] Confirm, or explain if you are unable to do so, that the selling price for a single stamped envelope will be seven or eight cents per envelope when sold in lots of 1 to 499 stamped envelopes and will be only 1.7 cents to 2.3 cents when sold in a lot of 500 envelopes. [dd] What are the added costs that accrue when stamped envelopes are sold in lots of 1 to 499 envelopes? [ee] Are there any costs other than the apparent extra window sales time? [ff] If so, enumerate and quantify the cost. [gg] Confirm, or explain if you are unable to do so, that the cost for 32

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cent stamps is 32 cents each, whether a mailer purchases one stamp or a million stamps or any number in between. [hh] Explain the logic and justification behind selling single stamped envelopes at a price which is greater than the multiple price when the same is not justified for the sale of stamps. [ii] Is one reason, that 18 USC 1721 will permit it for stamped envelopes but not for stamps? [jj] Confirm, or explain if you are unable to do so, that a mailer desiring between 501 and 999 stamped envelopes would pay a fee of \$8.50 or \$11.50 for the first 500 envelopes and seven or eight cents for each of the envelopes above 500. [kk] Confirm, or explain if you are unable to do so, that printed stamped envelopes are available from one source only and that there is a charge by that single source over and above that which appears in the Fee Schedule. [ll] What is that single source for printed stamped envelopes? [mm] What is the added charge required in ordering printed stamped envelopes? [nn] What is the justification for charging this added fee when it does not appear in the Fee Schedule and has not been approved by the Postal Rate Commission? [oo] Will an added fee be required under the proposed rates? [pp] If so, quantify and explain. [qq] Are there any other services for which the United States Postal Service is proposing in this Docket which will not be available at the rate shown in the various rate and fee schedules? [rr] If so, quantify and explain. [ss] Are refunds available for those that have paid this added fee which was not approved by the Postal Rate Commission. [tt] If not, explain why not. [uu] Confirm, or explain if you are unable to do so, that if this docket is approved the price of a single First-Class Mail stamped envelope will go from 38 cents to 40 cents. [vv] Confirm, or explain if you are unable to do so, that the rate increase for both the First-Class Mail postage and the stamped envelope will go into effect at the same time. [ww] Confirm, or explain if you are unable to do so, that it has been the practice of the Postal Service to release the new valued stamped envelope prior to the effective date of the rate increase. [xx] Confirm, or explain if you are unable to do so, that if this policy is continued that the selling price for a 33 cent stamped envelope purchased between the issue date of it and the effective date of the new rates would be 39 cents [33 cents postage plus the 6 cent stamped envelope fee in effect at that time]. [yy] Confirm, or explain if you are unable to do so, that in a similar manner, the sale of stamped cards would be 21 cents during the period of time between the issue date and the effective date of the proposed 2 cent fee. [zz] Will post offices be advised of the requirement of subparts xx and yy so that the proper rate may be charged? [aaa] If not, why not? [bbb] One of the rates being proposed is for a fee of

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2 cents for a stamped card. Was any consideration given to having a bulk rate for them similar to the one in place and being proposed for stamped envelopes? [ccc] If so, why wasn't it implemented? [ddd] If not, why not?

RESPONSE:

- a) Banded stamped envelopes are stamped envelopes sold in packs of five with a band around them. Banded stamped envelopes can come in 6 ¾ and 10 inch sizes and are always regular (not window) plain stamped envelopes.
- b) The question is not entirely clear. Are you referring to the "cost" as exhibited in USPS LR H-107, page 55 or the proposed fees in USPS-T-39 WP-15? The cost for 500 6 ¾ inch banded stamped envelopes in USPS LR H-107 is \$10.27, while the cost for 500 6 ¾ inch aggregated stamped envelopes is \$8.97, for a difference of \$1.30. The cost for 500 10 inch banded stamped envelopes in USPS LR H-107 is \$12.26, while the cost for 500 10 inch aggregated stamped envelopes is \$11.41, for a difference of \$0.85. The proposed fee for 500 6 ¾ inch banded stamped envelopes is \$9.50, \$1.30 higher than the current fee, yet \$0.77 lower than the cost. The proposed fee for 500 10 inch banded stamped envelopes is \$12.00, \$1.00 lower than the

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DBP/USPS-54 Continued

b) Continued

current fee, and \$0.26 lower than the cost. For the higher fees, customers get stamped envelopes which are banded into packs, and which cost more to produce.

c) See the response to DBP/USPS-54 (b).

d) Not confirmed. See USPS-T-39, page 96, lines 4-13.

e) Confirmed. Hologram stamped envelopes have only been available in the 10 inch size since they were issued.

f) Confirmed only that the proposed fees for 6 ¾ inch stamped envelopes are \$5.50 higher than the plain for the printed envelopes. Not confirmed that this \$5.50 difference represents the printing cost.

g) Confirmed only that the proposed fees for 10 inch stamped envelopes are \$3.50 higher than the plain for the printed envelopes. Not confirmed that this \$3.50 difference represents the printing cost.

h) See USPS LR H-107, pages 45-50.

i) See my testimony at page 95, lines 6-21, and page 96, lines 1-13, for a discussion of the development of the stamped envelope fees.

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DBP/USPS-54 Continued

- j) Not confirmed. Multi-color printing refers to the envelope you describe in part aa.
- k) Not confirmed. Printing is available for all stamped envelopes.
- l) Confirmed.
- m) Confirmed.
- n) See USPS LR H-107, pages 45-50.
- o) See response to DBP/USPS-54(i).
- p) Confirmed that the Liberty Bell is green and the "USA 32" is blue. However, these envelopes are not considered 'multi-color' for purposes of the multi-color fee. See my response to j.
- q) See attached list for all stamped envelopes available from the Stamped Envelope Agency since 1965.
- r) See the response to DBP/USPS-54(q).
- s) See the response to DBP/USPS-54(q).
- t) All post offices that offer stamped envelopes will offer at least one type not subject to multi-color fee.
- u) Not applicable.

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- v) Customers are not charged the multi-color fee for precancelled envelopes.
- w) Not confirmed. Savings bond stamped envelopes have been discontinued.
- x) Confirmed that the household stamped envelope fees are for printed stamped envelopes.
- y) Confirmed only that the proposed fee of a single hologram is one-cent more than the proposed fee for a single non-hologram stamped envelope, the proposed fee for household hologram envelopes is \$0.25 than the proposed fee for non-hologram household envelopes, and the proposed fee for hologram 500 box lots is \$4.00 higher than the proposed fee for the non-hologram 500 box lots.
- z) See response to DBP/USPS-54(i).
- aa) Multi-color. The space station stamped envelope is the only hologram stamped envelope currently offered.
- bb) Confirmed with respect to non-philatelic sales of stamped envelopes.
- cc) Confirmed, although if a customer wished to purchase 999 stamped envelopes, for example, two box lots of 500 would be the wise choice, as opposed to one box of 500 and 499 single sale envelopes.

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- dd) See USPS LR H-107, pp 47-48, for the single sale costs versus the box lot costs.
- ee) No.
- ff) Not Applicable.
- gg) Confirmed, assuming by 'cost' you mean 'rate'.
- hh) In both cases the price of postage is the same regardless of the quantity purchased. Stamped envelopes, unlike stamps have a special service fee, which does vary based on the quantity purchased.
- ii) No.
- jj) See response to DBP/USPS-54(cc).
- kk-tt) Objection filed September 29, 1997.
- uu) Confirmed only for the total price of non-hologram stamped envelopes.
- vv) To the best of my knowledge all rates and fees would be implemented at the same time.
- ww) Not confirmed. Post offices may receive one of each type of advance stamped envelope with the new postage rate prior to the implementation date, for display purposes.

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xx) There is no such policy.

yy) Not confirmed. Post offices may receive one of each type of advance stamped card with the new postage rate prior to the implementation date, for display purposes.

zz) Not applicable.

aaa) Not applicable.

bbb) No.

ccc) Not applicable.

ddd) The Postal Service first needs to see if a fee for stamped cards will be approved before deciding whether bulk fees are appropriate.

	NAME	ITEM NUMBERS	DATE	LOCATION	DENOM.	INK COLOR, PMS NUMBER
EMBOSSSED STAMPED ENVELOPES MANUFACTURED AT WILLIAMSBURG PA						
1	American Eagle 'Head'	151-152-651-652	1/5/65	Williamsburg PA	5	Purple (254)
2	Liberty Bell 'Auth Non-Profit'	113-613	1/6/65	Springfield MA	1.25	Brown (464)
3	Old Ironsides '3rd Class'	141-142-641-642	1/6/65	Springfield MA	4	Blue
4	Delta Wing Jet 'Airmail'	184-684	1/7/65	Chicago IL	8	Red
5	Statue of Liberty 'Head'	161-162-661-662	1/4/68	New York NY	6	Green
6	Delta Wing Jet 'Airmail'	104-604	1/8/68	Chicago IL	10	Red
7	Liberty Bell 'Auth Non-Profit'	123-623	3/26/68	Springfield MA	1.4	Brown
8	Liberty Bell 'Auth Non-Profit'	133-633	6/16/69	Washington DC	1.6	Orange
9	Herman Melville (Moby Dick) Commemorative	665	3/7/70	New Bedford MA	6	Blue
10	White House Conference on Youth Comm	666	2/24/71	Washington DC	6	Blue
11	Eagle	181-182-681-682	5/6/71	Williamsburg PA	8	Blue
12	Three Circles 'Airmail'	114-614	5/6/71	Williamsburg PA	11	Red, Blue
13	Liberty Bell 'Auth Non-Profit'	173-673	5/10/71	Baltimore MD	1.7	Purple (254)
14	White House Conf on Youth Revalued		5/16/71	Washington DC	8	Blue
15	Statue of Liberty 'Head' Revalued	181-182-681-682	5/16/71	Washington DC	8	Green
16	Bowling Commemorative	187-687	8/21/71	Milwaukee WI	8	Red
17	White House Conference on Aging Comm	688	11/15/71	Washington DC	8	Blue (299)
18	First US International Transportation Exposition - "Transpo '72" Commemorative	689	5/2/72	Washington DC	8	Red
19	Symbolic Bird in Flight 'Airmail'	134-634	12/1/73	Memphis TN	13	Red
20	Liberty Bell '1st Class'	101-102-601-602	12/5/73	Philadelphia PA	10	Green (354)
21	Volunteer Yourself 'Auth Non-Profit'	183-683	8/23/74	Cincinnati OH	1.8	Blue (326)
22	Tennis-100 Years-1874-1974 Commemorative	151-152-651-652	8/31/74	Forest Hills NY	10	Blue, Yellow
23	The Bicentennial Era: The Seafaring Tradition Commemorative	161-661	10/13/75	Minneapolis MN	10	Blue (300)
24	Liberty Tree	131-132-631-632	11/8/75	Memphis TN	13	Brown (471)
25	The Bicentennial Era: The American Homemaker Commemorative	171-671	2/2/76	Biloxi MS	13	Green (569)
26	The Bicentennial Era: The American Farmer Commemorative	181-681	3/16/76	New Orleans LA	13	Green (356)
27	The Bicentennial Era: The American Doctor Commemorative	191-691	6/30/76	Dallas TX	13	Orange (151)
28	The Bicentennial Era: The American Craftsman Commemorative	111-611	8/6/76	Hancock MA	13	Red (186)
29	Star 'Auth Non Profit'	123-643	9/10/76	Hempstead NY	2	Red (Warm)
30	The Centennial Commemorative	141-641	10/15/76	Los Angeles CA	13	Green (355)

ATTACHMENT
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	NAME	ITEM NUMBERS	DATE	LOCATION	DENOM.	INK COLOR PMS NUMBER
31	Golf Commemorative	161-162-661-662	4/7/77	Augusta GA	13	Blue, Black, Green
32	Octagon 'Auth Non-Profit'	153-653	6/3/77	Houston TX	2.1	Green (369)
33	Energy Conservation (Special Issue) Comm	164-165-664-665	10/20/77	Ridley Park PA	13	Yellow, Black, Red(184)
34	Energy Development (Special Issue) Comm	174-175-674-675	10/20/77	Ridley Park PA	13	Yellow, Black, Red(184)
35	Eagle 'A'	1A1-1A2-6A1-6A2	5/22/78	Memphis TN	A(15)	Orange (151)
36	Uncle Sam	141-142-641-642	6/3/78	Williamsburg PA	15	Red (185)
37	'Auth Non-Profit' Rectangle	173-673	7/5/78	Raleigh NC	2.7	Green (348)
38	16 Cent USA Revalued	101-102-601-602	7/28/78	Williamsburg PA	15	Blue
39	Auto Racing Commemorative	194-694	9/2/78	Ontario CA	15	Black, Red(185), Blue(300)
40	Liberty Tree 13 Cent Revalued	1R1-1R2-6R1-6R2	11/28/78	Williamsburg PA	15	Brown
41	'Auth Non-Profit' Rectangle w/rounded corners	106-107-606-607	5/18/79	Denver CO	3.1	Blue (300)
42	Veterinary Medicine Commemorative	154-155-654-655	7/24/79	Seattle WA	15	Gray(404), Black, Brown(154)
43	Olympic - Soccer Commemorative	164-664	12/10/79	East Rutherford NJ	15	Red, Black, Green(361)
44	Bicycle Commemorative	174-674	5/16/80	Baltimore MD	15	Maroon (201) Blue (301)
45	Violin 'Auth Non-Profit'	156-157-656-657	6/23/80	Williamsburg PA	3.5	Purple (254)
46	America's Cup Commemorative	104-604	9/15/80	Newport RI	15	Red (199) Blue (301)
47	Honeybee Commemorative	114-614	10/10/80	Paris IL	15	Yellow(109)Gr(364)Brn (471)
48	Eagle 'B'	161-162-661-662	3/15/81	Memphis TN	B(18)	Purple (258)
49	New Star	171-172-671-672	4/2/81	Star City IN	18	Blue (301)
50	Blinded Veteran Commemorative	124-624	8/13/81	Arlington VA	18	Red (200), Blue (301)
51	Eagle 'C'	131-132-631-632	10/11/81	Memphis TN	C(20)	Brown (471)
52	Capitol Dome	101-102-601-602	11/13/81	Los Angeles CA	20	Purple (215)
53	'Auth Non-Profit'	166-167-666-667	2/17/82	Wheeling WV	5.9	Brown (470)
54	Great Seal Commemorative	134-634	6/15/82	Washington DC	20	Blue(293)Red(200)Black
55	Purple Heart Commemorative	154-654	8/6/82	Washington DC	20	Purple (266) Black
56	Official Mail	151-162	1/12/83	Washington DC	20	Blue (293)
57	'Auth Non-Profit'	176-177-676-677	3/21/83	Memphis TN	5.2	Orange (151)
58	Paralyzed Veterans Commemorative	104-604	8/3/83	Portland OR	20	Red(185)Blue(287)Black
59	Small Business Comm (not embossed)	174-674	5/7/84	Washington DC	20	Blue(286)Purple(265)Red(186)
60	Eagle 'D'	141-142-641-642	2/1/85	Los Angeles CA	D(22)	Green (334)
61	Bison	131-132-631-632	2/25/85	Bison SD	22	Brown (504)
62	Official Mail	111-122	2/26/85	Washington DC	22	Blue (293)
63	Old Ironsides 'Auth Non-Profit'	166-167-666-667	5/3/85	Boston MA	6	Aqua (320)
64	Precancelled Bison (Sub 20 Unwatermarked for Reader's Digest)	133	10/31/86	(No Ceremony)	22	Brown (504)
65	Mayflower 'Auth Non-Profit'	146-147-646-647	12/4/86	Plymouth MA	8.5	Process Black
66	Treasury Bond (Official Mail Stamp) (Sub 20 Unwatermarked - Not embossed)	115(Pln)116(Prt)	3/21/87	Washington DC	22	Blue (293)
67	'E' Savings Bond (not embossed)	2117-2118	3/22/88	Washington DC	E(25)	Blue, Black
68	Thirteen Star - HH Thirteen Star - 500	2161-2162-2661-2662 2151-2152-2651-2652	3/26/88	Star MS	25	Blue, Red

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	NAME	ITEM NUMBERS	DATE	LOCATION	DENOM.	INK COLOR PMS NUMB.
69	Penalty Mail (Official Mail)	2110-2112	4/11/88	Washington DC	25	Blue, Black
70	Savings Bond (not embossed) plain top flap	2108(Pln)-2109(Prtd)	4/11/88	Washington DC	25	Blue, Black
71	Constellation 'Auth Non-Profit'	2166-2167-2666-2667	4/12/88	Baltimore MD	8.4	Dark Gray (B25), Blue
72	Thirteen Star Double Window - Plain	2153	8/18/88	Star ID	25	Blue, Red
73	Holiday Snowflake	2171-HH2173	9/8/88	Snowflake AZ	25	Red (185), Green
74	Savings Bond (not embossed) prtd top flap	2108(Pln)-2109(Prtd)	11/28/88	Washington DC	25	Blue, Black
75	Inaugural Envelope (13 Star) Set of 6	2651	1/20/89	(See Next Line)	25	Blue, Red
Postmarked with 1st Day Cities: Greenwich CT - Huntington IN - Indianapolis IN - Kennebunkport ME - Milton MA - Houston TX						
76	13 Star Philatelic Commemorative #9	2121-HH2120	3/10/89	Cleveland OH	25	Blue, Red
77	DOD 13 Star Envelope	2164(Pln)-2165(Prtd)	6/14/89	(No Ceremony)	25	Blue (288) Red (186)
78	13 Star Security #9	2154 HH2155 Reg	7/10/89	Washington DC	25	Blue, Red
79	Love #9	2168 HH2169	9/22/89	McLean VA	25	Blue, Red
80	VA State Lottery 13-Star 2nd Chance Drawing (one-time manufacturing of 3,000,000 envelopes produced off-line)	(Used 2151)	5-10/13/89	(No Ceremony)	25	Blue, Red
81	AZ Security #9 (special window)	2158	11/28/89	(Avail thru PFSC)	25	Blue (288)
82	Space Station Hologram #9	2156 HH2157	12/3/89	Washington DC	25	Blue (293)
83	13 Star Security #9	2159 Win	12/29/89	Washington DC	25	Blue, Red
84	Passport	2144	3/17/90	Washington DC	45	Blue (293) Black
85	Passport	2145	3/17/90	Washington DC	65	Blue (293) Black
86	Passport Peel & Seal	2148	7/4/90	Washington DC	45	Blue (293) Black
87	Passport Peel & Seal	2149	7/4/90	Washington DC	65	Blue (293) Black
88	Football Hologram (Lombardi Trophy)	2174 HH2172	9/9/90	Green Bay WI	25	Hologram Patch
89	Single Star/USA - HH	2141-2142-2641-2642				
	Single Star/USE - 500	2131-2132-2621-2622	1/22/91	Washington DC	29	Blue (293) Red (185)
90	'F' Savings Bond (not embossed)	2106 (Pln) 2107(Prtd)	1/22/91	Washington DC	F(29)	Blue (293) Black (999)
91	Penalty Mail (Official Mail)	2111-2117	4/6/91	Oklahoma City OK	29	Blue (293) Black (999)
92	DOD Single Star (Regular)	2136(Pln) 2137(Prtd)	4/6/91	(No Ceremony)	29	Blue (293) Red (185)
93	Savings Bond (not embossed)	2118(Pln) 2119(Prtd)	4/17/91	Washington DC	29	Blue (293) Black (999)
94	Birds On A Wire 'Auth Non-Profit'	2146-2147-2646-2647	5/3/91	Boxborough MA	11.1	Blue (300) Red (186)
95	Love - HH	2179-2699				Carmine Rose (213) Purple (259)
	Love - 500	2178-2668	5/9/91	Honolulu HI	29	Env - Aqualope Blue
96	Single Star Security #9 - HH	2184-2185				
	Single Star Security #9 - 500	2181-2182	7/20/91	Washington DC	29	Blue (288) Red (186)
97	Arizona Security (Special window envelope)	2183	8/16/91	(Avail. thru PFSC)	29	Blue (288) Red (186)
98	DOD Single Star (Window)	2138 (Pln) 2139(Prtd)	9/30/91	(No Ceremony)	29	Blue (293) Red (185)
99	Magazine Industry	2175 - HH2186	10/6/91	Naples FL	29	Black Yellow Blue Red Green
100	Country Geese (#6-3/4)	2674 - HH2675	11/8/91	Virginia Beach VA	29	Blue (549) Yellow (122)
101	Country Geese (#10)	2192 - HH2193	1/21/92	Virginia Beach VA	29	Blue (549) Yellow (122)
102	Space Station Hologram	2176 - HH2177	1/21/92	Virginia Beach VA	29	Green (369-denom)
103	Western Americana	2123 - HH2124	4/10/92	Dodge City KS	29	Lettering (reddish Br) Patch
104	Protect the Environment (Hillebrandia flower-HI)	2189 - HH2188	4/22/92	Chicago IL	29	Yellow Magenta Cyan Gr Black

ATTACHMENT TO
TO DGP/USPS-54g, PAGE 3

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Provide a listing for each of the following services indicate (sic), 1. the rate being proposed; 2. the cost for providing the service for the proposed rate, 3. the cost coverage percentage for the proposed rate, 4. the present rate, 5. the cost of providing the service for the present rate, and 6. the cost coverage percentage related to the existing rate: [a] Fee Group C - PO Box size 1, [b] size 2, [c] size 3, [d] size 4, [e] size 5, [f] Fee Group C - Caller Service, [g] Certified Mail [also provide data for pre-MC96-3 rate], [h] Return Receipt, [i] Return Receipt for Merchandise, [j] Return Receipt issued after mailing, [k] individual Certificate of Mailing, [l] Special Handling, [m] Single Stamped Envelope, [n] Single Hologram Stamped Envelope, [o] Plain box of 500 stamped 6-3/4 size envelopes, [p] size 10 envelope, [q] processing and handling a stamped card, [r] processing and handling a post card, and [s] fee for the stamped card itself.

RESPONSE:

In all but parts g, l, and s, I am providing information related to implicit cost coverages, rather than a cost coverage, which applies to an entire special service or subclass of mail.

- a) 1) See USPS-T-39, page 59.
- 2) See response to DFC/USPS-T39-1.
- 3) See response to DBP/USPS-62(a)(2).
- 4) See response to DBP/USPS-62(a)(1).
- 5) See response to DBP/USPS-62(a)(2).
- 6) See response to DBP/USPS-62(a)(2).
- b) 1) See response to DBP/USPS-62(a)(1).

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

b) Continued

- 2) See response to DBP/USPS-62(a)(2).
- 3) See response to DBP/USPS-62(a)(2).
- 4) See response to DBP/USPS-62(a)(1).
- 5) See response to DBP/USPS-62(a)(2).
- 6) See response to DBP/USPS-62(a)(2).

c) 1) See response to DBP/USPS-62(a)(1).

- 2) See response to DBP/USPS-62(a)(2).
- 3) See response to DBP/USPS-62(a)(2).
- 4) See response to DBP/USPS-62(a)(1).
- 5) See response to DBP/USPS-62(a)(2).
- 6) See response to DBP/USPS-62(a)(2).

d) 1) See response to DBP/USPS-62(a)(1).

- 2) See response to DBP/USPS-62(a)(2).
- 3) See response to DBP/USPS-62(a)(2).
- 4) See response to DBP/USPS-62(a)(1).
- 5) See response to DBP/USPS-62(a)(2).
- 6) See response to DBP/USPS-62(a)(2).

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

- e) 1) See response to DBP/USPS-62(a)(1).
- 2) See response to DBP/USPS-62(a)(2).
- 3) See response to DBP/USPS-62(a)(2).
- 4) See response to DBP/USPS-62(a)(1).
- 5) See response to DBP/USPS-62(a)(2).
- 6) See response to DBP/USPS-62(a)(2).
- f) 1) See USPS-T-39, page 59.
- 2) See LR H-107, page 11.
- 3) 181 percent
- 4) See response to DBP/USPS-62(f)(1).
- 5) Assuming the same cost from USPS LR H-107, the current cost would be \$304.50 per year.
- 6) Assuming the same cost from USPS LR H-107, the current cost coverage would be 148 percent.
- g) For the pre-MC96-3 fee, see Docket No. MC96-3, USPS-T-8, p. 58.
- 1) See USPS-T-39, page 26, Table 5.

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

g) Continued

- 2) See USPS-T-39 WP-17 (revised August 22, 1997), page 1, column 3.
- 3) See USPS-T-39 WP-17 (revised August 22, 1997), page 1, column 5.
- 4) See response to DBP/USPS-62(g)(1).
- 5) For the Test Year Before Rates the cost is 338,734,000
- 6) For the Test Year Before Rates the cost coverage is 121 percent.

h-k) Answered by witness Plunkett.

l 1) See USPS-T-39, page 81, Table 14.

- 2) See USPS-T-39, WP-17, page 4, column 3.
- 3) See USPS-T-39, WP-17, page 4, column 5.
- 4) See response to DBP/USPS-62(l)(1).
- 5) For the Test Year Before Rates the cost is 1,272,000.
- 6) For the Test Year Before Rates the cost coverage is 34.7 percent.

m) 1) See USPS-T-39, page 92, Table 16.

- 2) See USPS LR H-107, page 55.
- 3) See response to DFC/USPS-T39-19.
- 4) See response to DBP/USPS-62(m)(1).

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

m) Continued

5) Assuming the same cost in USPS LR H-107, see response to DBP/USPS-62(m)(2).

6) Assuming the same cost in USPS LR H-107, see response to DBP/USPS-62(m)(3).

n) 1) See response to DBP/USPS-62(m)(1).

2) See response to DBP/USPS-62(m)(2).

3) See response to DBP/USPS-62(m)(3).

4) See response to DBP/USPS-62(m)(1).

5) Assuming the same cost in USPS LR H-107, see response to DBP/USPS-62(m)(2).

6) Assuming the same cost in USPS LR H-107, see response to DBP/USPS-62(m)(3).

o) 1) See response to DBP/USPS-62(m)(1).

2) See response to DBP/USPS-62(m)(2).

3) 95 percent

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

o) Continued

4) See response to DBP/USPS-62(m)(1).

5) Assuming the same cost as presented in USPS LR H-107, see USPS LR H-107, page 55.

6) Assuming the same cost as presented in USPS LR H-107, 91 percent.

p) The answers to these subparts were answered going under the assumption that you were referring to a plain box of 500 regular stamped 10 inch size envelopes:

1) See response to DBP/USPS-62(m)(1).

2) See response to DBP/USPS-62(m)(2).

3) 101 percent

4) See response to DBP/USPS-62(m)(1).

5) See response to DPB/USPS-62(o)(5).

6) Assuming the same cost as presented in USPS LR H-107, 105 percent.

q) 1) See USPS-T-32.

2) See Exhibits USPS-30A&B.

3) See response to DBP/USPS-62(q)(2).

RESPONSE OF WITNESS NEEDHAM TO
INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-62 Continued

q) Continued

4) See response to DBP/USPS-62(q)(1).

5) See response to DBP/USPS-62(q)(2).

6) See response to DBP/USPS-62(q)(2).

r) 1) See response to DBP/USPS-62(q)(1).

2) See response to DBP/USPS-62(q)(2).

3) See response to DBP/USPS-62(q)(2).

4) See response to DBP/USPS-62(q)(1).

5) See response to DBP/USPS-62(q)(2).

6) See response to DBP/USPS-62(q)(2).

s) 1) See USPS-T-39, page 87, Table 15.

2) See USPS-T-39, WP-17, page 4, column 3.

3) See USPS-T-39, WP-17, page 4, column 5.

4) See response to DBP/USPS-62(s)(1).

5) Assuming the same cost as presented in USPS LR H-107, see response
to DBP/USPS-62(s)(2).

6) Not applicable, since there is presently no fee revenue.

RESPONSE OF WITNESS NEEDHAM TO
FOLLOW-UP INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-80 Clarify your response to DBP/USPS-38 subpart e. (a) Is there any appropriate security provided for insured mail which can have an insurance value of \$5,000? (b) If so, explain the nature of it.

RESPONSE:

a&b) Given the context of DBP/USPS-38, I assume you are referring to registered mail with a value of \$5,000. The security can vary by office, and might be greater for a registered item with a \$5,000 value compared to one of a lesser value. See Tr. 3/708-713.

RESPONSE OF WITNESS NEEDHAM TO
FOLLOW-UP INTERROGATORIES OF DAVID B. POPKIN
(REDIRECTED FROM THE UNITED STATES POSTAL SERVICE)

DBP/USPS-84 Your response to DBP/USPS-60 subpart e requires clarification. Provide examples of the security measures that may be utilized and also any reference to regulations or Headquarters memoranda [provide copies] on the topic.

RESPONSE:

Please see the attached institutional response to an interrogatory from Docket No. MC96-3.

RECEIVED 9938

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

Nov 4 4 46 PM '96

POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

SPECIAL SERVICES REFORM, 1996

Docket No. MC96-3

RESPONSE OF UNITED STATES POSTAL SERVICE
TO PRESIDING OFFICER'S RULING MC96-3/22
AND INSTITUTIONAL RESPONSE TO INTERROGATORY
DBP/USPS-T3-19 SUBPARTS (e) THROUGH (i)
AND (q) THROUGH (w)
(November 4, 1996)

Presiding Officer's Ruling MC96-3/22, issued on October 25, 1996, denied three motions and partially granted the fourth. This responds to the partial grant of the motion to compel responses to interrogatories DBP/USPS-T3-19 parts (e) through (i) and (q) through (w). Specifically, the Postal Service was ordered to respond "to the extent described in the body of this ruling." Ruling at 9.

The body of the Ruling more specifically states, at pages 6-7:

Accordingly, the Postal Service is directed to provide an institutional response to Mr. Popkin's request for copies of any general guidelines that govern the decisions of local postmasters to set hours for access to box sections, or to provide box holders with keys to postal lobbies. To minimize the burden on the Postal Service, it is directed to examine administrative manuals that have nationwide applicability to postmasters for such guidelines. It is also directed to ask the postal manager most directly responsible for national box rental policy and programs to identify any such guidelines of which he or she is aware. Finally it is directed to ask the Postal Inspection Service official most directly responsible for security policy and programs for postal lobbies nationwide to identify any such guidelines of which he or she is aware.

Counsel for the Postal Service discussed this matter with the identified managers and other appropriate personnel, and also conducted additional research. Only two regulations responsive to the ruling have been identified, and they are quoted in their respective entireties below.

- 2 -

Both regulations appear in the *Postal Operations Manual* (POM).¹ The most recent issue is dated August 1, 1996, although the distribution pipeline apparently is not well filled so copies are not yet widely available.²

POM section 124.2, *Admission to Postal Property*, has subsection 124.22, *Identification*, which provides in pertinent part:

Except as otherwise ordered, properties must be closed to the public after normal business hours end.

POM section 126.4, *Retail Hours*, contains subsection 126.44, *Lobby Hours*, which provides in pertinent part:

As a minimum, customers must have access to their post office boxes during all retail service counter hours. Normally, separate post office box lobbies should remain open when someone is on duty in the postal unit. At the postmaster's discretion, when no one is on duty, lobbies may remain open to allow customers access to post office boxes and self-service equipment, provided that customer safety, security provisions, and police protection are deemed adequate by the Inspection Service.

These sections are consistent with the Postal Service's previous statements to the effect that hours of operation of postal lobbies are inherently a local matter.

¹ The re-issued POM was the culmination of several years of effort begun by the re-writing of the Domestic Mail Manual (DMM) effective with Issue 46. Some regulations were moved into the Domestic Mail Manual Transition Book, with the expectation that they would emerge in the new POM (the next most recent version of which dates from 1984). The new POM thus completes the initiatives begun when the DMM was reorganized. It is available from Materiel Distribution Centers.

² Copies have been ordered, but not yet received. This response is based upon a review of the single copy now available in the Postal Service library.

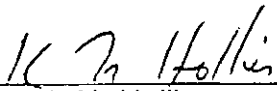
- 3 -

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

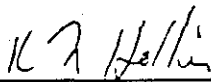
Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking



Kenneth N. Hollies

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.



Kenneth N. Hollies

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-3083; Fax -5402
November 4, 1996

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
INTERROGATORY OF DAVID B. POPKIN (REDIRECTED FROM THE UNITED
STATES POSTAL SERVICE)

9941

DBP/USPS-101: Refer to your response to subpart I of DBP/USPS-37. [a] It appears that only 46% of those claims [3493 divided by 1603] that were filed have been paid by the Postal Service. [a] What were the reasons that the remaining 54% of the claims were not paid? [b] Provide a revised table showing the addition of the following column, "Total Amount Claimed". [c] With respect to a dollar amount of claims requested, what percentage were paid?

RESPONSE:

a. Reasons for rejection of Registered Mail claims include:

- Addressee acknowledges receipt
- Airline charges - some charges payable
- Article delivered as addressed
- Article delivered on return
- Article received/no exception
- Claim 1000 returned to customer
- Claim canceled per information submitted
- Claim filed after 1 year
- Claim previously paid
- Damage claim filed late
- Delivered on return to sender
- Delivered to authorized agent: business
- Formal letter created
- Inquiry only/original claim sent to Post Office
- Lost personal check/stop pay charges
- Lost securities/reissue charges
- Money order issued: variables
- No cooperation of the addressee
- No cooperation of the mailer
- No damage - customer retrieved article
- No damage without carton damage
- Official 30 day letter - no cooperation
- Official mailing - Not insured
- Properly delivered
- Properly delivered/variable
- Registered uninsured
- Replace postal money order
- Rifled/damaged article not inspected
- Wrapper and carton not examined

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
INTERROGATORY OF DAVID B. POPKIN (REDIRECTED FROM THE UNITED
STATES POSTAL SERVICE)

9942

b-c. The Postal Service does not retain data on the amount claimed once the claim has been resolved.

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE
(REDIRECTED FROM WITNESS LION)

OCA/USPS-T24-88. Please refer to Docket No. MC96-3, rebuttal testimony of witness Taufique (USPS-RT-2), at page 14.

- a. Witness Taufique states, "The Postal Service acknowledges that a 'one price fits all' approach may not be the most efficient method of pricing post office boxes." Please confirm that this statement continues to reflect the views of the Postal Service. If you do not confirm, please explain.
- b. In Docket No. R97-1, please explain how the Postal Service has reduced its reliance on a "one price fits all" approach in developing fees for post office boxes.
- c. In Docket No. R97-1, please explain how the post office box fee proposal has taken differences in costs and demand into account.

RESPONSE:

Please see my response to OCA/USPS-T39-19.

**RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE
(REDIRECTED FROM WITNESS LION)**

OCA/USPS-T24-89. Please refer to Docket No. MC96-3, rebuttal testimony of witness Taufique (USPS-RT-2), at page 14. Witness Taufique states,

A comprehensive consideration of the demand, supply, and cost difference of post office boxes could evolve into local adjustments to prices at each facility depending upon market factors.

- a. If "local adjustments to prices at each facility" would present administrative burdens to the Postal Service, what options short of local adjustments would reduce Postal Service reliance on a "one price fits all" approach to pricing post office boxes.
- b. For any options identified in response to part a. above, please explain whether and how those options were addressed in the Postal Service's post office box fee proposal in Docket No. R97-1.

RESPONSE:

Please see my response to OCA/USPS-T39-20.

**RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
INTERROGATORY OF THE OFFICE OF THE CONSUMER ADVOCATE
(REDIRECTED FROM WITNESS LION)**

OCA/USPS-T24-92. Please refer to the supplement to LR-H-188, Workbook "Cost98.xls," Sheet "Unit Costs."

- b. Please confirm that the post office box fee for all box sizes in Fee Group E is \$0. If you do not confirm, please explain.
- c. Assuming the same cost coverage for post office boxes in the TYBR, please confirm that post office box fees in Fee Groups A, B, C and D are higher than they otherwise would be in order to cover the attributable allocated costs of Fee Group E. If you do not confirm, please explain.
- d. Please confirm that boxholders paying Fee Group E fees, i.e., \$0, are generating costs which are paid for by boxholders paying Fee Group A, B, C and D fees. If you do not confirm, please explain.
- f. Would it be more consistent with the policy that mailers pay the delivery costs of carrier delivery (rather than recipients) if Fee Group E costs were paid for by all mailers and not other boxholders alone? Please explain fully.

RESPONSE:

b. Confirmed.

c-d) Not confirmed. The fact that a fraction of the boxes are free is taken into account when the appropriate cost coverage proposal is determined. I consider the proposed cost coverage to be low. The cost coverage without the Group E costs included would still be low:

$$(683,362,079 / (595,853,540 - 33,269,251)) = 121.5 \text{ percent}$$

- f. The Postal Service believes it is indirectly making mailers, rather than recipients, pay Group E box costs by holding down the cost coverage for post office box and caller service below what it would be absent these costs. See my response to OCA/USPS-T24-92 (c-d).

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

2. Please reconcile the FY 1996 volume for Certified Mail (269,730,120 transactions) listed in USPS LR-H-145, "FY 1996 Billing Determinants," Section K, Table 1, with the FY 1996 volume for Certified Mail (270,832,000 transactions) listed in FY 1996 RPW (revised 4/18/97).

RESPONSE:

The FY 1996 billing determinant volume for certified mail includes incoming certified pieces (260,108,209), incoming certified agency pieces (7,706,567), incoming certified congressional franked pieces (0), and certified USPS pieces (1,915,344), equaling 269,730,120. The FY 1996 RPW Report does not include the USPS pieces, but does include return receipt for merchandise volume (3,017,237).

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

3. Please identify the source of the FY 1996 COD transactions shown in column 1, WP-5, USPS LR-H-206, "Diskettes of Witness Needham's (USPS-T-39) Testimony and Workpapers."

RESPONSE:

The "FY 1996 C.O.D. transactions" in WP-5 are from the FY 1993 C.O.D. billing determinants. Please see the attached revised workpaper which uses the FY 1996 billing determinants.

USPS-T-39 WP-5 REVISED 11/20/97									
Attachment to response to POIR No. 5, Question 3									
9948									
VALUE:									
TRANSACTIONS (000)									
TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR TEST YEAR									
BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES									
(1) (2) (3) (4) (5) (6) (7) (8)									
FEEES (\$)									
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BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES BEFORE RATES									
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5 100 200 300 400 500 600									
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RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

4. Refer to USPS LR-H-206, "Diskettes of Witness Needham's (USPS-T-39) Testimony and Workpapers," WP-15, "Stamped Envelopes Test Year Volumes and Revenues."
 - a. Please explain why the TYAR volume (25,605,102 envelopes) for Printed 6 $\frac{3}{4}$ Regular, Window, Precanceled Regular and Precanceled [sic] Window [sic] is different from the TYBR volume (26,033,975 envelopes).
 - b. Refer to column 4. Please explain why the number of Test Year box lots for Plain 6 $\frac{3}{4}$ banded (62,713 boxes) and Plain 10 banded (87,699 boxes) envelopes are calculated by dividing the number of total envelopes by 50, rather than 500.
 - c. Refer to column 1, which lists FY 1996 total envelope sales adjusted to account for the difference between GFY 1996 and PFY 1996 workdays. Please explain why Plain 10 inch Hologram FY 1996 total envelope sales (11,889,500 envelopes) is the only number in this column that has not been multiplied by the ratio of GFY 1996 workdays to PFY 1996 workdays.

RESPONSE:

- a. The test year after rates volume was incorrectly calculated by multiplying the test year before rates volume by the before rates volume factor (test year before rates volume divided by the base year volume). The calculation should have been the base year volume multiplied by the test year after rates volume factor (test year after rates volume divided by the base year volume). The resulting test year before rates volume and test year after rates volume are the same, as presented in the attached revised workpaper.

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

4. Continued

- b. The total number of banded stamped envelopes for the 6 $\frac{3}{4}$ inch and 10 inch sizes should have been divided by 500 instead of 50 to calculate the number of box lots. The attached revised workpaper reflects the corrections.
- c. When the plain hologram volume was extracted for purposes of a proposed separate fee, the adjustment from PFY to GFY was inadvertently omitted. The correct volume is 12,363,357, as presented in the attached revised workpaper.

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

5. Refer to USPS LR-H-206, "Diskettes of Witness Needham's (USPS-T-39) Testimony and Workpapers, "WP 9, "Parcel Airlift Test Year Volumes and Revenues," column 5. Please explain why the Library Rate TYAR volume (28,728 units) is excluded from the total TYAR volume for Primary Services (1,009,913 units) used to forecast Parcel Airlift Mail TYAR volumes.

RESPONSE:

The test year after rates Standard Mail B volumes used in calculating the test year after rates parcel airlift volume were entered into WP-9 one line below where they should have been entered. Since the library rate volume is the last entry in this group of volumes, the addition of this volume was omitted in the equation for the total Standard Mail B volume. The revised total Standard Mail B volume is 1038.64053 which represents the 1009.91296 total without the library rate volume plus the 28.728 library rate volume. With respect to parcel airlift, the Standard Mail B volume revisions result in a new total test year after rates parcel airlift volume of 73,283 and a revised corresponding revenue of \$76,447, as shown in the attached revised workpaper WP 9.

response to PULK NO. 5,

1/ Denotes the percentage change from the current fee to the proposed fee, or (Column 7 - Column 6)/Column 6.

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

6. Refer to USPS LR-H-206, "Diskettes of Witness Needham's (USPS-T-39) Testimony and Workpapers, "WP 8, "On-Site Meter Settings Test Year Volumes and Revenues." Please show, step-by-step, the calculation of the number (0.52932) entered in the cell named "RATIO" which is located at AO38 on the spreadsheet "onsmeter.wk3."

RESPONSE:

No calculation of this number is available. The number 0.52932 was first used in Docket No. R90-1 and was an adjustment based on an anticipated overall volume decline given the introduction of first and additional meter fees, as opposed to one fee for meter company settings. Given the available data, the meter setting volumes were adjusted by the same factor in Dockets No. R94-1 and R97-1.

RESPONSE OF POSTAL SERVICE WITNESS NEEDHAM TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

7. Refer to USPS LR-H-206, "Diskettes of Witness Needham's (USPS-T-39) Testimony and Workpapers, "WP 13, "Special Handling." Please identify the source of the FY 1996 Primary Services volumes for Special Rate (190,072 pieces) and Library Rate (30,191 pieces).

RESPONSE:

The source of the FY 1996 volumes for special rate and library rate underlying the special handling workpaper, as filed, is an early version of the FY 1996 volumes. The special rate and library rate volumes in this workpaper were not updated to reflect the final numbers. I am now correcting the special rate volume from 190,072 to 189,793 pieces and the library rate volume from 30,191 to 30,133 pieces, to reflect the billing determinants (LR-H-145 at H-4, H-5). The resulting total test year before rates special handling volume is corrected from 74,598 to 74,625, and the total test year after rates special handling volume is corrected from 68,899 to 68,926. The total test year before rates revenue is corrected from \$441,631 to \$441,784 and the total test year after rates revenue is corrected from \$1,309,676 to \$1,310,158. A revised workpaper WP 13 is attached. A revised summary workpaper, WP 17 (pages 1, 2, and 4) reflecting the changes discussed in my responses to questions 3, 4, 5, and 7, is also attached.

4) Column 4.

SPECIAL SERVICES COST COVERAGES AND PERCENTAGE INCREASES

Attachment to PO Request	Service	Address Changes to Election Boards															Address Correction - Manual															Address Correction - Automated															Business Reply Mail															Qualified Prebarcoded															Other															Nonadvance															Accounting Fee															Permit Fee															Total Business Reply Mail															Carrier Sequencing of Address Cards															Certified Mail															Collect On Delivery															\$0.01 to \$50															50.01 to 100															100.01 to 200															200.01 to 300															300.01 to 400															400.01 to 500															500.01 to 600															Notice of NonDelivery															Alteration of charges															Registered C.O.D.															Total C.O.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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SPECIAL SERVICES COST COVERAGES AND PERCENTAGE INCREASES

Attachment to PO Request	Service	Money Orders										On-Site Meter Setting										Parcel Alrith Mail										Post Office Boxes (semi-annual)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		\$0.01 to \$700		A/P - \$0.01 to \$700		International		Inquiry Fee		Total Money Orders		Single Meter		Emergency		Additional Meter		Meter Checked In or Out of Service		Total On-Site Meter Setting		0 - 2 lbs.		2 - 3 lbs.		3 - 4 lbs.		Over 4 lbs.		Total Parcel Alrith Mail		Group A - Size 1		Group A - Size 2		Group A - Size 3		Group A - Size 4		Group A - Size 5		Group B - Size 1		Group B - Size 2		Group B - Size 3		Group B - Size 4		Group B - Size 5		Group C - Size 1		Group C - Size 2		Group C - Size 3		Group C - Size 4		Group C - Size 5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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SPECIAL SERVICES COST COVERAGES AND PERCENTAGE INCREASES

Service	Registered Mail (Continued)									
	After Rates Volume 1/ After Rates	Cost Per Piece 2/ (\$)	Total Cost 3/ Total	After Rates Revenue 1/ After Rates	Cost Coverage (Col 4/Col 3)	After Rates Revenue Per Piece (Col 4/Col 1)	Before Rates Revenue 1/ Before Rates	Before Rates Volume 1/ Before Rates	Before Rates Revenue Per Piece (Col 7/Col 6)	After Rates Percentage Increase (Col 6/Col 9)
Not Covered By Postal Insurance \$0.00 to \$100 Total Registry	3,113,000	5.37	76,784,240	22,724,000	159.7%	7,299711	17,113,000	3,528,000	4.850624	50.5%
	14,291,000			122,605,000		8,579176	91,929,000	16,196,000	5.676031	51.1%
Special Handling Under 10 pounds Over 10 pounds Total Special Handling	60,972			879,263		17,249922	303,176	66,146	6.399868	219.6%
	17,963			430,896		24,001281	138,609	18,481	7.600081	220.0%
Stamped Cards	583,005,000	0.01	4,585,400	11,660,000	254.3%	0.020000	0	594,894,000	0.000000	0.0%
	460,000,000	0.03	12,308,000	14,668,712	118.3%	0.031646	14,749,716	460,000,000	0.032066	-1.3%
ZIP Coding of Mailing Lists	788	59.35	46,768	55,132	117.9%	69.964467	47,256	788	59.869543	16.7%

1/ From USPS-T-39 Workpapers 1-16.

2/ From LR-H-107, USPS-T-27, or the total cost in Column 3 divided by the total volume in Column 1.

3/ From the total cost reported in USPS-T-15 or the cost per piece in Column 2 multiplied by the volume in Column 1.

4/ Includes money order international commissions, float, and outstanding money orders taken into revenue.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS NEEDHAM
TO PRESIDING OFFICER'S INFORMATION REQUEST NO.7 QUESTION 19

POIR No. 7 Question 19. Have there been any changes in the number of post office box renewals since the implementation of MC96-3 fees? If so, please provide the data disaggregated to the finest level possible.

RESPONSE:

No data on box renewals are available.

RESPONSE OF THE POSTAL SERVICE TO QUESTION OF DAVID B. POPKIN
POSED AT THE OCTOBER 7, 1997 HEARING

Question (paraphrased from Tr. 3/697-699):

Would a Standard Mail package with special handling service move cross-country using air transportation?

RESPONSE:

Generally a Standard Mail package with special handling service would not receive air transportation when moving cross-country.

**Designated Interrogatory Responses
of
Michael K. Plunkett (T40)**

DBP/USPS-29 [a] Confirm, or explain if you are unable to do so, that Section 822.112 of the Postal Operations Manual requires that the clearing clerk must evaluate all return receipts that have been turned in to ensure that they are properly completed. [b] Would it be reasonable to expect the clearing clerk to check to ensure that the Return Receipt has been properly signed? [c] Would it be reasonable to expect the clearing clerk to check to ensure that the Return Receipt has the name of the addressee printed in addition to the signature? [d] Would it be reasonable to expect the clearing clerk to check to ensure that the Return Receipt has the correct date of delivery entered on it? [e] If there are any instances where the return receipt is not given to the clearing clerk on the date of delivery, explain how the clearing clerk would be aware of the date of delivery? [f] Would it be reasonable to expect the clearing clerk to check to ensure that any requirements for restricted delivery have been complied with? [g] Would it be reasonable to expect the clearing clerk to check to ensure that any requirements for notifying the sender of a new address have been complied with? [h] Would it be reasonable to expect the clearing clerk to check to ensure that any requirements for notifying the sender that there is no new address [namely, the box has been checked to show this] have been complied with? [i] What corrective action should the clearing clerk take if in evaluating a return receipt it is noticed that 1. the card is not properly signed, 2. the name of the person signing has not been properly printed, 3. the correct date of delivery has not been shown, 4. the restricted delivery requirements have not been complied with, 5. a new address has not been provided when there is one, or 6. the box has not been checked when there is no new address. [j] Confirm, or explain if you are unable to do so, that all return receipts must be mailed [namely, placed into the mail stream for processing and transporting and delivery to the sender] no later than the first workday after delivery. [k] Explain why POM Section 822.112 does not require that the clearing clerk mail the return receipt card on the date of delivery rather than allowing it to be held until the next workday. [l] Confirm, or explain if you are unable to do so, that the requirements specified in subparts b through j will apply in all instances regardless of the type of addressee or the number of return receipts involved. [m] Confirm, or explain if you are unable to do so, that the clearing clerk referenced in POM Section 822.11 is an employee of the United States Postal Service.

DBP/USPS-29 Response:

- a. Not confirmed. POM § 822.112 states: "The clearing clerk must check all return receipts to make sure that they are properly signed and dated."
- b. In general, yes.
- c. This checking would go beyond what's required by POM § 822.112.
- d. In general, yes.

REVISED RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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DBP/USPS-29, p. 2

- e. The clearing employee could be informed by the delivering employee in such cases.
- f. In general, yes.
- g. In general, this checking would go beyond what's required by POM § 822.112.
- h. In general, this checking would go beyond what's required by POM § 822.112.
- i. For subparts **1,2,3,5 and 6**, the clearing clerk should notify the delivering employee.
For subpart 4, as indicated in POM § 822.112, a corrected return receipt should be obtained from the addressee.
- j. Confirmed, based on POM § 822.112.
- k. In some cases, carriers may be cleared of their accountable items after the final dispatch of outgoing mail has left the delivery unit. In addition, the return receipt might require corrective action.
- l. Not confirmed. Please see my responses to parts b through j. The POM does not provide any special procedures for different types of addresses or different numbers of return receipts.
- m. Confirmed, to the best of my knowledge.

DBP/USPS-73 The response to DBP./USPS-24 subparts a, c, g, and i, indicates that Restricted Delivery, Return Receipt after mailing, and the ability to mail at other than a post office or with a rural carrier are not available for Return Receipt for Merchandise. [a] What is the logic of permitting Restricted Delivery for all types of accountable mail other than Return Receipt for Merchandise? [b] Since a record of delivery is made when the Return Receipt for Merchandise is delivered, what is the logic for not providing the Return Receipt for Merchandise after mailing? [c] Is a duplicate Return Receipt available for the Return Receipt for Merchandise service? [d] If not, what does a mailer do if the return receipt is not received or is received without being properly completed? [e] What is the logic for requiring Return Receipt for Merchandise to be mailed at a post office or with a rural carrier?

DBP/USPS-73 Response:

- a. Return receipt for merchandise has a feature, the sender's option of waiving the customer's signature, that is unique among special services, and which is inconsistent with provision of restricted delivery service.
- b. Return receipts are available after mailing to serve the needs of customers that did not anticipate the need for a return receipt at the time of mailing. Thus, a necessary element of return receipt after mailing is the presence of a delivery record independent of return receipt service. When a return receipt for merchandise is not purchased at the time of mailing, no delivery record is created, so providing a return receipt after mailing would be impossible. See also response to subpart c.
- c. Yes.
- d. Not applicable.
- e. Form 3804, which is used for return receipt for merchandise service, allows the mailer to waive the signature requirement for the return receipt, and provides the sender with a mailing receipt. Conferral of the mailing receipt requires acceptance either at a retail window or through a rural carrier.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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DBP/USPS-74 Please clarify your response to DBP/USPS-28 subpart u in light of the last sentence of POM 822.111. I am interested in the transaction between the delivering employee and the clearing clerk as opposed to the time that the clearing clerk must put the return receipt in the mail.

DBP/USPS-74 Response:

Carriers are required to give all return receipts to the clearing clerk daily. :

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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DBP/USPS-75 In your response to DBP/USPS-29 subpart a, [a] explain the difference between "check all return receipts to make sure that they are properly signed and dated" vs. "evaluate all return receipts ... to ensure that they are properly completed". [b] If there are any checks or evaluations which are not made by the clearing clerk, indicate what effort the Postal Service makes to ensure that the particular item on the return receipt is properly completed. [c] Who is responsible for ensuring that the requirements that are referred to in subparts c, g, and h have been properly followed? [d] Explain your use of the words "In general" in your responses to subparts b, d, and f.

DBP/USPS-75 Response:

- a. The first phrase is limited to the signature and date, while the second phrase might include checking other elements of the return receipt.
- b. The employee delivering the letter bearing the return receipt, and the clearing clerk share responsibility for the proper completion of a return receipt.
- c. See response to subpart b.
- d. In each instance "in general" is used as a qualifier. While I am agreeing that each of the premises presented in these questions is reasonable, I am allowing for the fact that, among the millions of return receipt transactions that take place in a given year, there may be some set of circumstances, however rare, that preclude an unqualified affirmative response.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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DBP/USPS-76 In your response to DBP/USPS-31 subpart b, you were unable to confirm my statement. [a] Are there any situations where a delivery office may have an arrangement which allows for the return receipt to be signed for at a "later", more convenient time? [b] Are there any situations where a delivery office may not have the return receipts signed for at the time of delivery? [c] Explain and elaborate any positive response to subparts a and b.

DBP/USPS-76 Response:

- a. While agreements of this kind would appear to be contrary to the letter referred to in DBP/USPS-31, in some cases they may exist, especially for large recipients of return receipt mail. The aforementioned letter was intended to call the attention of all district managers to the expectations of return receipt customers. Follow up to the letter has focused on correcting specific situations that have come to the attention of headquarters delivery operations in which return receipts used to be signed for after the time of delivery. See also my response to DBP/USPS-77.
- b. Though the letter referred to in DBP/USPS-31 does not identify any situations of this kind, they may exist, especially for large recipients of return receipt mail. See also my response to DBP/USPS-77.
- c. See the responses to parts a and b.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

9969

DBP/USPS-77 In your response to DBP/USPS-32 subparts a and b, you indicate that it is a goal to achieve the signing for all accountable mail and the associated return receipt at the time of delivery regardless of the type of addressee or the number of articles involved. [a] Elaborate what you mean by a goal. [b] Does this goal have the support of management? [c] Does this goal apply to all delivery offices? [d] Do you agree that this goal should be attempted to be met by all delivery offices? [e] Explain any negative response to subparts b through d. [f] Are there any instances existing anywhere within the Postal Service where the signing for the accountable mail and the associated return receipt are, by default or by design, not completed at the time of delivery? [g] Provide details of any affirmative response to subpart f including the authority for and the method of delivery. [h] Elaborate on your response to the statement in reply to subpart b, "In some cases it is possible that the signature takes place after delivery." [i] In your response to subpart e, you indicated that it would be relatively rare for multiple pieces of articles requesting return receipts to be addressed to a single recipient. Does this apply to various government agencies, such as IRS and the state tax departments, as well as other government agencies and large commercial organizations? [j] Confirm, or explain if you are unable to do so, that DMM Section D042.1.7b would place the requirement for obtaining the signature at the time of delivery from that of being a goal to that of being a regulation. [k] Does DMM Section D042.1.7 apply to all addressees within the service area of the United States Postal Service? [l] If not, provide a listing of any exceptions and the authority for doing so.

DBP/USPS-77 Response:

- a. The use of the term goal was meant to distinguish from the word requirement used in DBP/USPS-32 as there is no mention of a time requirement in the referenced POM sections, other than to specify that return receipts must be mailed no later than the next workday following delivery of the attached article. See also Tr. 3/987.
- b. Yes.
- c. Yes. The POM applies to all delivery offices.
- d. Such is the nature of organizational goals.
- e. Not applicable.
- f. See response to DBP/USPS-76.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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- g. See my response to DBP/USPS-76. In addressing the issue of authority, it should be remembered that, though bound by the same set of procedures throughout the country, field managers exercise a considerable degree of autonomy in managing their operations to meet the demands of local conditions. As a result, there may be isolated instances where deviations from existing policy occur. My understanding is that when such instances arise, they are dealt with on a case by case basis. In some cases, this has led to the creation of detached mail units for the processing of high volumes of return receipts. Such situations may also lead to refinements in official policies or procedures where warranted.
- h. This phrase is used as a qualifier in this instance. While I am agreeing that the Postal Service's goal is to obtain the required information at the time of delivery, I am allowing for the fact that, among the millions of return receipt transactions that take place in a given year, there may be some set of circumstances that precludes an unqualified affirmative response.
- i. Relatively rare does not mean impossible; the instances you cite may be the rare instances to which I refer.
- j. The heading for DMM § D042.1 uses the term "standards". My understanding is that the DMM is incorporated by reference into Title 39 of the Code of Federal Regulations.
- k. The DMM applies to all Postal Service installations.
- l. Not applicable.

DBP/USPS-78 In your response to DBP/USPS-34 subpart i, [a] explain why a mailer should be required to pay for a return receipt when it was not an independent proof of delivery but had been completed at a point after the time of delivery. [b] Clarify your response to subpart o. My interrogatory related to the fact that if I am often required to obtain a duplicate return receipt just to get the information that I was supposed to be provided with in the first place, would the service appear to be less valuable to me because of the inconvenience caused.

DBP/USPS-78 Response:

- a. DMM § 915.1.1 describes return receipt as a service that “provides a mailer with evidence of delivery”, which the customer would have received in this instance.
- b. By way of clarification, I believe you are using the word value where I would use the word satisfaction. To paraphrase, your interrogatory posed a hypothetical situation in which a customer has a negative experience with return receipt, and asked if that customer would then value the service less. In my view, and I attempted to convey this in my response, it would depend on the value that the hypothetical customer placed on the service prior to his/her negative experience. If the sender understood all of the terms and conditions that apply to return receipt service, and believed that there was some possibility that she/he would have to obtain a duplicate to receive the desired level of service, then the value that they perceive in return receipt service may be undiminished. In my opinion, the hypothetical customer would be unsatisfied with the outcome of the transaction, but this does not necessarily indicate that the customer values the service less. Hence my conditional response to your original interrogatory. Indeed the growth of

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

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return receipt volume over the last ten years, indicates that customers, in general, regard return receipt service as a very good value.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

9973

DBP/USPS-83 Your response to DBP/USPS-53 subpart m, r, and s requires clarification. [a] If I were to compare two separate services and for each of the categories chosen to evaluate, one of the services was always equal to or better than the other service, why would a knowledgeable mailer choose to use the service which was always below or equal to the other service? [b] Please respond to my original subparts m, r, and s. [c] Subparts bb and cc refer to the rates being proposed in this Docket. The always be greater or equal refers to the price being proposed in this Docket. Please respond to the original interrogatories.

DBP/USPS-83 Response:

See hearing transcript 3/979-984.

- a. In this case I can not think of any reason, but this example is different from the example in DBP/USPS-53 subparts m, r, and s.
- b. I have no reason to change my responses; see transcript 3/979-984.
- c. Proposed rates for Priority and Express Mail are contained in the testimony of witness Sharkey. My understanding is that Express Mail provides a level of service that is at least equal to that of Priority Mail.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN

9974

DBP/USPS-85 In your response to DBP/USPS-62, you indicate the words "excluding contingency" a number of times. Explain the significance of that.

DBP/USPS-85 Response:

The revenue requirement that the Postal Service presented in Docket No. R97-1 contains a contingency equal to 1 percent of total test year costs to allow for unanticipated, extraordinary expenses. The unit cost estimates I provided were taken directly from special services cost studies and did not include this 1 percent contingency.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN REDIRECTED FROM THE
POSTAL SERVICE

DBP/USPS-86 In your response to DBP/USPS-73, confirm, or explain if you are unable to do so, that the sender's option of waiving the customer's signature also applies to Express Mail.

DBP/USPS-86 Response:

See Tr. 3/967.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN REDIRECTED FROM THE
POSTAL SERVICE

DBP/USPS-87 *In your response to DBP/USPS-77 - subpart g, confirm, or explain if you are unable to do so, that a detached mail unit is an activity which is operated by Postal employees at the addressee's location.*

DBP/USPS-87 Response:

Detached mail units (DMU) are units that are located "off-site" i.e. not on the premises of Postal Service facilities. For the instant case, the DMU is operated by Postal employees at the addressee's location, though DMUs are often located in mailers' facilities.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORIES OF DAVID B. POPKIN REDIRECTED FROM THE
POSTAL SERVICE

DBP/USPS-90 Please respond to my original interrogatory DBP/USPS-80.

Insured mail which can have an insurance value of \$5,000 refers to insured mail
and not to registered mail as offered by the witness.

DBP/USPS-90 Response:

See Tr. 3/980-982, which applies to insured mail with a value of \$5,000.

RESPONSE OF U.S. POSTAL SERVICE WITNESS PLUNKETT TO
INTERROGATORY OF THE OFFICE OF THE CONSUMER ADVOCATE

9978

OCA/USPS-T40-40. Please refer to Response of United States Postal Service Witness Plunkett to Questions Posed at October 7, 1997 Hearing, filed October 15, 1997. In response to OCA's question concerning the number of insurance claims made in FY 1996, you replied: "In FY 96, 65,996 insurance claims were filed." However, Table 1 in your direct testimony (see page 6) indicates that in FY 1996 a total of 50,037 "lost" claims were paid and 50,768 "damaged" claims were paid. Please clarify and reconcile this data.

OCA/USPS-T40-40 Response:

See my revised response to question (at Tr. 3/1047) posed at hearing on October 7, 1997. The original response related to "lost" claims only.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

8. Refer to USPS LR-H-207, "Diskette of Witness Plunkett's (USPS-T-40) Testimony and Workpapers," WP 2, "Insurance," columns 2 and 3. Please provide the source of TYBR (18,000) and TYAR (17,000) transactions for indemnity of \$2,000.01 - \$5,000.

8. Response:

In Docket No. MC96-3 (see Commission's Decision, Appendix D Schedule 3, p. 8), the Commission based its recommended decision on a projection of 17,274 transactions in this indemnity range. Having no actual base year volumes I used this number as a starting point and projected the TYBR and TYAR numbers therefrom using my own judgement. Because the projected transaction volume in this range is too small to have any significant impact on cost coverage I used rounded numbers for the sake of simplicity.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

9. Refer to USPS LR-H-207, "Diskette of Witness Plunkett's (USPS-T-40) Testimony and Workpapers," WP 3, "Restricted Delivery," and WP 4, "Return Receipts." Please identify the source of the Primary Service TYAR volume (289,956 pieces) for Certified Mail.

9. Response:

The TYAR Certified Mail volume used in my workpapers is the TYAR volume of 293.118 million pieces (Ex. USPS-6A, p.7) adjusted by -3.469 million and 0.307 million for Delivery Confirmation and Packaging Service respectively. For the reason explained in the response to question 11, the adjustment for Packaging Service should have been 0.004 million, which would result in TYAR Certified volume of 289.653 million pieces. Revised workpapers WP 3 and WP 4 are attached.

1/ Denotes the percentage change from the current fee to the proposed fee, or (Column 5 - Column 4)/Column 4.

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SPECIAL SERVICES
RETURN RECEIPTSREVISED 11/20/97
USPS-T-40
WP-4

TRANSACTIONS (000)				FEES (\$)		REVENUES (\$000)			
	BEFORE FY 1996 RATES	AFTER RATES	CURRENT	PROPOSED	BEFORE RATES CURRENT FEE	AFTER RATES CURRENT FEE	PROPOSED VOLUME PROPOSED FEE	FEE CHANGE 1/ CHARGE 1/	
REQUESTED AT TIME OF MAILING									
TO WHOM, WHEN & WHERE (IF DIFFERENT) DELIVERED:									
REGISTRY	3,129	2,721	2,401	1.10	1.45	2,994	2,641	3,481	
CERTIFIED	224,532	252,156	240,135	1.10	1.45	277,372	264,148	348,196	
INSURANCE	778	852	829	1.10	1.45	937	912	1,202	
MERCHANDISE	3,017	3,565	3,253	1.20	1.70	4,278	3,904	5,531	
TOTAL	231,457	259,294	246,618			285,580	271,606	358,410	
REQUESTED AFTER MAILING									
TO WHOM, WHEN & WHERE (IF DIFFERENT) DELIVERED:									
REGISTRY	0	0	0	6.60	7.00	0	0	0	
CERTIFIED	517	581	553	6.60	7.00	3,831	3,649	3,870	
INSURANCE	0	0	0	6.60	7.00	0	0	0	
TOTAL	517	581	553			3,831	3,649	3,870	
GRAND TOTAL									
REGISTRY	3,129	2,721	2,401			2,994	2,641	3,481	
CERTIFIED	225,049	252,737	240,688			281,203	267,797	352,065	
INSURANCE	778	852	829			937	912	1,202	
MERCHANDISE	3,017	3,565	3,253			4,278	3,904	5,531	
TOTAL	231,974	259,875	247,171			289,411	275,254	362,280	
DELIVERY CONFIRMATION ADJUSTMENT									
CERTIFIED	0	0	(2,914)	1.10	1.45	0	(3,205)	(4,225)	
PACKAGING SERVICE ADJUSTMENTS 2/									
INSURANCE	0	0	11	1.10	1.45	0	11,596	15,285	
MERCHANDISE	0	0	6	1.20	1.70	0	7,530	10,667	
REVISED GRAND TOTAL	231,974	259,875	244,274			289,411	272,068	358,081	

1/ Denotes the percentage change from the current fee to the proposed fee, or (Column 5 - Column 4)/Column 4.
 2/ Includes new volume from packaging service based on estimates to be presented in a separate Commission filing.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

10. Refer to USPS LR-H-207, "Diskette of Witness Plunkett's (USPS-T-40) Testimony and Workpapers," WP-4, "Return Receipts," columns 2 and 3.
 - a. Please explain why the TYBR and TYAR transactions for Registry with Return Receipt are forecast using Insurance volume, instead of Registry volume.
 - b. Also, please explain why the TYBR and TYAR transactions for Insurance with Return Receipt are forecast using COD volume, instead of Insurance volume.

10 Response:

The cell references for these forecasts are incorrect and should be corrected as follows.

In worksheet WP 4 "Return Receipts" cells AG17, AI17, and AK17 should be changed to refer to X48, Z48, and AB48 respectively, and cells AG21, AI21, and AK21 should be changed to refer to X49, Z49, and AB49 respectively. A revised workpaper WP 4 is attached to my response to question 9.

RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 5

11. Refer to USPS LR-H-207, "Diskette of Witness Plunkett's (USPS-T-40) Testimony and Workpapers." Please identify the source of the adjustments for Packaging Service in the following workpapers: WP 1, "Certificate of Mailing" (2,457 transactions); WP 2, "Insurance" (427,034 transactions); and WP 4, "Return Receipts" (8,598 insurance and 5,118 merchandise transactions).

11 Response:

These adjustments were inadvertently copied from an earlier discarded version of the worksheets used to develop Exhibit USPS-3D in Docket No. MC97-5, USPS-T-3. The adjustments should have been as follows: WP 1, "Certificate of Mailing" (3,012 transactions); WP 2, "Insurance" (523,569 transactions); and WP 4, "Return Receipts" (10,542 insurance and 6,275 merchandise transactions). As noted in my response to question 9, this resulted in an incorrect adjustment to TYAR certified mail volumes which were used as inputs to WP 3 and WP 4. Revised workpapers WP 1 and WP 2 are attached, and revised workpaper WP 4 is attached to my response to question 9. As a result of these changes, workpapers WP 13 and WP 15, which summarize special services and adjust insurance costs respectively, have been revised and are attached.

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MAIL CLASS TYPE	FIRST CLASS	TRANSACTIONS										REVENUES													
		TEST YEAR		TEST YEAR		AFTER RATES		CURRENT		CURRENT		BEFORE RATES		AFTER RATES		VOLUME		PROPOSED FEE		PERCENT		PERCENT		CHANGE 4/	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)															
BASIC 2/		2,912,924	3,013,120	2,997,686	\$0.55	\$0.60	1,657,216	1,798,612	9.09%	8.53%															
FIRM BOOK MAILING		6,950,190	7,189,256	7,152,431	\$0.20	\$0.25	1,437,851	1,788,108	25.00%	24.36%															
BULK: First 1,000 pcs 3/		79,822	82,568	82,145	\$2.75	\$3.00	227,062	246,435	9.09%	8.53%															
Each add'l 1,000 pcs		878,045	908,247	903,595	\$0.35	\$0.40	317,887	361,438	14.29%	13.70%															
TOTAL		10,820,981	11,193,191	11,135,857			3,640,015	4,194,592		15.24%															
PRIORITY																									
BASIC 2/		462,435	554,444	568,581	\$0.55	\$0.60	304,944	341,148	9.09%	11.87%															
FIRM BOOK MAILING		190	228	234	\$0.20	\$0.25	46	58	25.00%	28.19%															
BULK: First 1,000 pcs 3/		144	173	177	\$2.75	\$3.00	475	531	9.09%	11.87%															
Each add'l 1,000 pcs		1,585	1,900	1,949	\$0.35	\$0.40	665	780	14.29%	17.20%															
TOTAL		464,354	556,745	570,940			306,130	342,518		11.89%															
STANDARD (A)																									
BASIC 2/		19,031	21,627	0	\$0.55	\$0.60	11,895	0	9.09%	-100.00%															
FIRM BOOK MAILING		0	0	0	\$0.20	\$0.25	0	0	25.00%	0.00%															
BULK: First 1,000 pcs 3/		80	90	89	\$2.75	\$3.00	248	268	9.09%	8.27%															
Each add'l 1,000 pcs		885	990	983	\$0.35	\$0.40	347	393	14.29%	13.43%															
TOTAL		19,996	22,707	1,072			12,489	661		-94.71%															
STANDARD (B)																									
BASIC 2/		62,291	68,293	68,184	\$0.55	\$0.60	37,561	40,911	9.09%	8.92%															
FIRM BOOK MAILING		28,560	31,312	31,262	\$0.20	\$0.25	6,262	7,816	25.00%	24.80%															
TOTAL		90,851	99,606	99,447			43,824	48,726		11.19%															
INTERNATIONAL																									
BASIC 2/		15,929	15,508	15,227	\$0.55	\$0.60	8,530	9,136	9.09%	7.12%															
FIRM BOOK MAILING		0	0	0	\$0.20	\$0.25	0	0	25.00%	0.00%															
BULK: First 1,000 pcs 3/		320	311	306	\$2.75	\$3.00	856	917	9.09%	7.12%															
Each add'l 1,000 pcs		3,518	3,425	3,363	\$0.35	\$0.40	1,199	1,345	14.29%	12.22%															
TOTAL		19,767	19,245	18,897			10,585	11,399		7.69%															
TOTAL ALL	SEES																								

SPECIAL SERVICES
CERTIFICATE OF MAILINGREVISED 11/20/97
USPS-T-40 WP-1
1 of 2

REVISÉD 11/20/97
USPS-T-40 WP-1
2 of 2

1/ Denotes the percentage change from the current fee to the proposed fee, or (Column 5 - Column 4)
2/ Includes duplicates.
3/ Assumes no volume shifts, (Column 5 - Column 4)/(Column 4)
4/ Denotes the percentage change from the revenue of the before rates volume at the current fee to the revenue of the after rates volume at the proposed fee, or (Column 7 - Column 6)/Column 6.

SPECIAL SERVICES
 INSURANCE

TRANSACTIONS (000)									
TEST YEAR	BEFORE RATES	AFTER RATES	FEES (\$)		CURRENT PROPOSED	CURRENT PROPOSED	BEFORE RATES	AFTER RATES	VOLUME PROPOSED FEE
			(4)	(5)					
TEST YEAR	TEST YEAR	TEST YEAR	(3)	(2)	(1)	(6)	(7)	(8)	PERCENT CHANGE 4/
13,315	8,882	13,182	\$0.75	\$0.95	\$9,986	\$12,522	26.67%	16,706	18.75%
4,063	8,408	8,793	1.60	1.90	14,211	11,665	16.00%	5,730	14.71%
1,484	3,846	1,469	3.40	3.90	5,046	2,646	13.95%	3,992	13.46%
545	1,011	540	4.30	4.90	2,345	3,756	13.11%	15,230	12.06%
560	1,069	544	6.10	6.90	3,364	619	11.49%	15,849	11.92%
600	1,087	677	5.20	5.90	3,554	15,849	205.76%	72,866	
\$600.01 - \$2,000	1,011	1,058	12.85	14.40	13,741	15,230		15,230	
\$2,000.01 - \$5,000	17	17	32.65	36.40	588	619		619	
\$600.01 - \$5,000 5/	1,028	1,075	13.18	14.75	14,329	15,849		15,849	
28,976	30,609	30,301	2.06	2.40	62,982	72,866		72,866	
ADDITIONAL SERVICES 2/									
RETURN RECEIPTS	778,315	822,171	813,948	10,320					
RESTRICTED									
DELIVERY	9,868	10,424	10,320						
TOTAL	788,183	832,595	824,268						
INTERNATIONAL 3/									
CANADA	181	191	189	\$2.29	\$2.29	436	432	0.00%	0.00%
OTHER	605	639	633	2.19	2.19	1,399	1,385		
RETURN RECEIPTS	0	0	0						
TOTAL	785	830	821			1,835	1,816		
GRAND TOTAL									
29,761	31,439	31,123	2.06	2.40	\$64,817	\$74,683			

1/ Source: Appendix D, Schedule 3, Page 8 of 21, Docket No. MC96-3 Recommended Decision.

2/ Transactions from additional services not included in grand total.

3/ Average fees based upon FY 1996 data.

4/ Denotes the percentage change from the current fee to the proposed fee, or (Column 5 - Column 4)/Column 4.

5/ Volume includes insured Express Mail pieces: FY 1996 = 97,390, TYBR = 103,882, TYAR = 101,371

6/ Includes new volume from packaging service based on estimates to be presented in a separate Commission filing.

Attachment to Response No. 5										
Service	After Rates Volume 1/ Volume 1/	Cost Per Piece 2/ (\$)	Total Cost 3/ Cost 3/	After Rates Revenue 1/ Revenue 1/	Cost Coverage (Col 4/Col 3)	After Rates Revenue Per Piece (Col 4/Col 1)	Before Rates Revenue 1/ Revenue 1/	Before Rates Volume 1/ Volume 1/	Before Rates Revenue Per Piece (Col 7/Col 8)	After Rates Percentage Increase (Col 6/Col 9)
CERTIFICATE OF MAILING	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
INSURANCE	11,829,224	0.29	3,480,529	4,599,704	132.2%	0.39	4,013,043	11,891,493	0.337	15.2%
RESTRICTED DELIVERY	31,122,768	1.56	48,549,042	74,452,911	153.4%	2.33	64,817	32,526	1.993	16.8%
RETURN RECEIPTS	4,056,785	1.71	7,006,473	11,156,158	159.2%	2.75	11,754,002	4,274,182	2.750	0.0%
DELIVERY CONFIRMATION	244,274,066	1.00	243,558,272	358,080,557	147.0%	1.47	289,941	260,356	1.114	31.6%
MAILING FEES	66,608,086	0.33	22,139,260	23,563,212	106.4%	0.35	NA	NA	NA	NA
First-Class Presorted Mailing Fee	60,689	87.73	5,377,516	6,068,931	112.9%	100.00	5,183,405	60,981	85.000	17.6%
Periodicals Application Fees	9,764	61.12	596,821	767,249	128.6%	78.58	775,024	9,764	79.372	-1.0%
Standard (A) Bulk Mailing Fee	790,882	87.73	70,077,896	79,088,175	112.9%	100.00	67,790,460	797,535	85.000	17.6%
Standard (B) Special Mail Presort	908	87.73	80,413	90,752	112.9%	100.00	77,159	908	85.000	17.6%
Authorization to Use Permit Imprint	91,966	87.73	8,148,893	9,196,639	112.9%	100.00	7,817,143	91,966	85.000	17.6%
Merchandise Return Permit Fee	1,307	87.73	115,799	130,688	112.9%	100.00	111,085	1,307	85.000	17.6%
Destination Bulk Mail Center Fee	170	87.73	15,086	17025.88	112.9%	100.00	14472.00	170	85.000	17.6%
1/ From the special services worksheets USPS T-40 WP 1-12										
2/ From Special Services Cost Studies LR-H-107, or (3)/(1) for insurance and delivery confirmation										
3/ The cost per piece in Column 2 multiplied by the volume in Column 1 plus 1% Contingency, except insurance (WP-15) and delivery confirmation (WP-5)										

1/ From the special services worksheets USPS T-40 WP 1-12
2/ From Special Services Cost Studies L-R-H-107, or (3)/(1) for insurance and delivery confirmation
3/ The cost per piece in Column 2 multiplied by the volume in Column 1 plus 1% Contingency, except insurance (WP-15) and delivery confirmation (WP-5)

Insurance Cost Adjustment

9989

Indemnity Value (A)	Indemnity Limit (B)	After Rates Volume 1/ (C)	Cost Per Piece			Total Costs		
			Indemnity 2/ (D)	Other Costs 3/ (E)	Total (D+E)	Indemnity (C*D)	Other Costs (C*E)	Total (C*F)
\$0.01 to \$50	50	13,182	0.11	0.56	0.67	1,475.070	7,381.674	8,856.745
50.01 to 100	100	8,793	0.24	1.16	1.40	2,127.421	10,199.620	12,327.041
100.01 to 200	200	4,022	0.61	1.16	1.77	2,455.371	4,665.843	7,121.214
200.01 to 300	300	1,469	1.17	1.16	2.33	1,722.946	1,704.357	3,427.304
300.01 to 400	400	540	2.01	1.16	3.17	1,087.704	626.378	1,714.082
400.01 to 500	500	677	1.89	1.16	3.05	1,281.061	784.814	2,065.874
500.01 to 600	600	544	3.62	1.16	4.78	1,968.501	631.420	2,599.921
600.01 to 700	700	76	3.50	1.16	4.66	264.418	87.636	352.053
700.01 to 800	800	76	4.00	1.16	5.16	302.192	87.636	389.827
800.01 to 900	900	76	4.50	1.16	5.66	339.966	87.636	427.601
900.01 to 1,000	1000	76	5.00	1.16	6.16	377.739	87.636	465.375
1,000.01 to 1,100	1100	76	5.50	1.16	6.66	415.513	87.636	503.149
1,100.01 to 1,200	1200	76	6.00	1.16	7.16	453.287	87.636	540.923
1,200.01 to 1,300	1300	76	6.50	1.16	7.66	491.061	87.636	578.697
1,300.01 to 1,400	1400	76	7.00	1.16	8.16	528.835	87.636	616.471
1,400.01 to 1,500	1500	76	7.50	1.16	8.66	566.609	87.636	654.245
1,500.01 to 1,600	1600	76	8.00	1.16	9.16	604.383	87.636	692.019
1,600.01 to 1,700	1700	76	8.50	1.16	9.66	642.157	87.636	729.793
1,700.01 to 1,800	1800	76	9.00	1.16	10.16	679.931	87.636	767.567
1,800.01 to 1,900	1900	76	9.50	1.16	10.66	717.705	87.636	805.341
1,900.01 to 2,000	2000	76	10.00	1.16	11.16	755.479	87.636	843.115
2,000.01 to 2,100	2100	1	10.50	1.16	11.66	5.950	0.657	6.607
2,100.01 to 2,200	2200	1	11.00	1.16	12.16	6.233	0.657	6.891
2,200.01 to 2,300	2300	1	11.50	1.16	12.66	6.517	0.657	7.174
2,300.01 to 2,400	2400	1	12.00	1.16	13.16	6.800	0.657	7.457
2,400.01 to 2,500	2500	1	12.50	1.16	13.66	7.083	0.657	7.741
2,500.01 to 2,600	2600	1	13.00	1.16	14.16	7.367	0.657	8.024
2,600.01 to 2,700	2700	1	13.50	1.16	14.66	7.650	0.657	8.307
2,700.01 to 2,800	2800	1	14.00	1.16	15.16	7.933	0.657	8.591
2,800.01 to 2,900	2900	1	14.50	1.16	15.66	8.217	0.657	8.874
2,900.01 to 3,000	3000	1	15.00	1.16	16.16	8.500	0.657	9.157
3,000.01 to 3,100	3100	1	15.50	1.16	16.66	8.783	0.657	9.441
3,100.01 to 3,200	3200	1	16.00	1.16	17.16	9.067	0.657	9.724
3,200.01 to 3,300	3300	1	16.50	1.16	17.66	9.350	0.657	10.007
3,300.01 to 3,400	3400	1	17.00	1.16	18.16	9.633	0.657	10.291
3,400.01 to 3,500	3500	1	17.50	1.16	18.66	9.917	0.657	10.574
3,500.01 to 3,600	3600	1	18.00	1.16	19.16	10.200	0.657	10.857
3,600.01 to 3,700	3700	1	18.50	1.16	19.66	10.483	0.657	11.141
3,700.01 to 3,800	3800	1	19.00	1.16	20.16	10.767	0.657	11.424
3,800.01 to 3,900	3900	1	19.50	1.16	20.66	11.050	0.657	11.707
3,900.01 to 4,000	4000	1	20.00	1.16	21.16	11.333	0.657	11.991
4,000.01 to 4,100	4100	1	20.50	1.16	21.66	11.617	0.657	12.274
4,100.01 to 4,200	4200	1	21.00	1.16	22.16	11.900	0.657	12.557
4,200.01 to 4,300	4300	1	21.50	1.16	22.66	12.183	0.657	12.841
4,300.01 to 4,400	4400	1	22.00	1.16	23.16	12.467	0.657	13.124
4,400.01 to 4,500	4500	1	22.50	1.16	23.66	12.750	0.657	13.407
4,500.01 to 4,600	4600	1	23.00	1.16	24.16	13.033	0.657	13.691
4,600.01 to 4,700	4700	1	23.50	1.16	24.66	13.317	0.657	13.974
4,700.01 to 4,800	4800	1	24.00	1.16	25.16	13.600	0.657	14.257
4,800.01 to 4,900	4900	1	24.50	1.16	25.66	13.883	0.657	14.541
4,900.01 to 5,000	5000	1	25.00	1.16	26.16	14.167	0.657	14.824
Total Domestic		30,301				19,559	27,241	46,800
International Insurance		821				530	738	1,269
Totals		31,123				20,089	27,979	48,068
Contingency						201	280	481
Totals Including Contingency						20,290	28,259	48,549
Roll Forward Costs 4/						14,267	26,938	41,205
Adjustment (Totals - Roll Forward Costs)						5,680	772	6,451

1/ Source: Docket No. R97-1, USPS-T-40 WP 2

2/ Indemnity per piece for items valued at \$600 or less from Docket No. R97-1, USPS-t-40, p.6. For other pieces = 0.005*(Col B)

3/ LR H-107

4/ USPS-T-15, Exhibit USPS-15H, p. 8, Exhibit USPS-15I, p.2

RESPONSE OF UNITED STATES POSTAL SERVICE TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

5. Please provide pages II-2 and II-2A of LR H-301.

RESPONSE:

The attachment to this response consists of the requested pages which were printed out from file MPPG98MM.XLS on diskette 2 included in LR H-301.

SUMMARY OF MAIL PROCESSING OPERATION SPECIFIC COSTS

Line	No.	CATEGORY	(\$000)										
			Processing	Admin Ck.	Sq Ft	Imputed	Facility Costs	Imputed	Capital	Maintenance	Supplies	Parts &	Total Cost
			Mail	Superv.	Facility Costs	Imputed	Imputed	Facility Costs	Imputed	Supplies	Parts &	Total Cost	Payback Factor
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
1		COMPUTER FORWARDING SYSTEM	361,215	103,406	22,625	14,560	9,050	16,569	8,496	555,826		1,456,301	
2		BULK MAIL ACCEPTANCE UNIT	37,518	13,493	9,170	503	167		562	71,951		1,817,721	
3		PLATFORM - BMC	126,484	36,947	64,951	33,596	8,167	4,453	3,735	278,333		2,200,537	
4		PLATFORM - NON-BMC	609,145	174,918	304,979	157,870	8,159	3,043	8,132	1,267,047		2,080,040	
5		OPTICAL CHARACTER READERS (OCRs)	369,678	113,935	29,558	19,073	153,730	108,894	16,753	811,421		2,194,944	
6		MAIL PROCESSING BARCODE SORTERS (MPBC)	498,536	144,069	39,221	25,106	43,263	83,666	14,875	846,836		1,705,489	
7		DELIVERY BARCODE SORTERS (DBCSs)	414,316	132,702	70,142	45,049	158,899	144,223	18,302	884,432		2,378,043	
8		CARRIER SEQUENCE BARCODE SORTERS (CSB)	116,274	33,826	17,607	12,951	26,057	14,421	3,795	227,032		1,818,535	
9		LETTER SORTING MACHINE (LSMs)	178,086	60,353	20,147	12,781	5,465	86,846	2,885	367,163		2,050,208	
10		FLAT SORTING MACHINE (FSMs)	783,787	219,068	41,853	27,033	57,446	62,390	14,803	1,216,483		1,532,505	
11		PARCEL SORTING MACHINE & NMO MACHINE	189,044	55,174	28,349	18,718	27,411	29,571	13,841	382,108		1,815,475	
12		FACER/CANCELER - LETTERS	112,252	44,543	24,692	15,727	48,818	97,031	8,772	352,836		3,143,325	
13		FACER/CANCELER - FLATS	40,076	11,043	3,491	2,094	991	2,562	740	60,986		1,522,015	
14		CULMING	29,887	9,379	14,676	9,420	3,462	5,799	581	73,205		2,449,400	
15		SACK SORTING MACHINE (SSMs) - BMC	43,890	13,917	11,938	7,653	11,854	12,770	2,618	104,441		2,378,582	
16		BACK SORTING MACHINE (SSMs) - NON-BMC	31,393	9,816	8,496	5,447	6,729	8,185	1,417	71,485		2,277,080	
17		SMALL PARCEL AND BUNDLE SORTER	316,620	88,540	31,080	19,176	38,933	28,102	12,854	533,303		1,684,303	
18		MULTISLIDE	52,331	14,117	7,440	4,641	701	261	785	80,278		1,533,998	
19		AIR CONTRACT DATA COLLECTION SYSTEM	39,345	10,813	4,163	2,675	867	2,069	1,453	61,384		1,560,164	
20		CENTRAL BANDING OPERATION - LETTERS & FL	63,154	18,887	8,944	5,761	3,656	13,227	2,137	115,788		1,633,091	
21		SORTING TO LETTER CASES	2,856,786	755,189	87,533	60,114	38,264	14,270	42,829	3,854,984		1,348,413	
22		SORTING TO FLAT CASES	1,064,533	283,267	70,940	49,169	14,258	5,318	15,960	1,503,444		1,412,304	
23		SORTING TO HANGING SACKS	326,234	87,589	37,808	24,967	4,370	1,630	4,891	487,488		1,494,291	
24		SORTING TO ROLLING CONTAINERS	854,232	228,773	87,130	60,635	11,442	4,267	12,807	1,259,488		1,474,407	
25		SORTING TO PALLETS	13,391	3,696	3,622	2,108	179	67	201	23,281		1,737,082	
26		OTHER SORTING OPERATIONS	705,668	186,730	25,481	18,121	8,452	3,525	10,579	858,555		1,359,783	
27		TOTAL MISCELLANEOUS MAIL PROCESSING	669,793	178,983	60,187	40,841	8,971	3,346	10,047	872,183		1,451,438	
28		RBCS	1,032,589	277,554	23,421	25,766	64,669	39,937	18,743	1,482,679		1,435,886	
29		POWERED TRANSPORT EQUIPMENT	375,420	103,747	5,807	4,004	28,244	35,208	11,264	561,692		1,496,167	
		TOTAL	12,342,677	3,307,853	1,163,971	730,221	763,367	796,229	256,589	18,985,488		1,538,198	

CATEGORY	DIVISION OF PSM AND NMO COSTS & FSM 881 AND FSM 1000 COSTS											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Mail Processing Labor	Superv., Admin., Clk.	Sq. Ft. Based	Imputed Facility Costs	Imputed Rents	Capital	Equipment	Parts & Supplies	Total Cost	Payback Factors			
PSM	171,192	60,258	28,486	17,486	24,916	28,554	13,212	332,102	1.839844	1.688070	1.815476	
NMO	17,862	4,816	1,864	1,233	2,496	1,017	828	30,006	1.688070	1.632606	1.781876	
TOTAL	189,044	65,174	28,349	18,718	27,411	29,571	13,841	362,108	1.815476	1.632606	1.781876	
FSM 881	746,308	206,488	37,627	24,288	46,733	67,621	14,177	1,130,088	1.618285	1.781876	1.632606	
FSM 1000	48,479	13,603	4,326	2,786	11,714	4,770	727	80,384	1.781876	1.632606	1.781876	
TOTAL	793,787	219,098	41,953	27,033	67,448	72,390	14,903	1,210,483	1.632606	1.632606	1.632606	
Sources:	PAGE II-3	Col. 6	Col. 4	PAGE II-17	Col. 10 & C11	PAGE II-8	Col. 12	Col. 8	Col. 10	Col. 11	SUM C11..C7	C8 / C1

REVISED RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

6. In USPS-LR-H-207 "Diskette of Witness Plunkett's (USPS-T-40) Testimony and Workpapers," WP-6 "Merchandise Return Permits," witness Plunkett forecasts the sale of 1,307 permits for the test year, but does not present any Merchandise Return transactions. Please provide the Merchandise Return transactions and the revenue generated by these transactions for the test year.

6. Response:

In the original response to this question, it was averred that Postal Service volume and revenue measurement systems do not capture Merchandise Return transaction data, or corresponding revenues. Subsequent to providing this response I discovered that transaction data have been captured by the RPW system, beginning in the fourth quarter of FY 94. The attached worksheet shows FY 96 Merchandise Return volumes and revenues, and projects test year before and after rates volumes based on the forecast growth in the mail classes with which Merchandise Return is available. It should be noted that these test year revenues have already been included in the Postal Service's test year revenues along with revenue from other sources (Ex. USPS-30A and B).

SPECIAL SERVICES
MERCHANDISE RETURN

Attachment to
Revised Response to
POIR 6, Question 6

TRANSACTIONS				REVENUES			
MAIL CLASS TYPE	FY 1996	TEST YEAR BEFORE RATES	TEST YEAR AFTER RATES	FEES (\$)	BEFORE RATES VOLUME	PROPOSED FEE VOLUME	PERCENT CHANGE 1/
FIRST CLASS	(1) 163,672	(2) 169,302	(3) 168,435	(4) \$ 0.30	(6) 50,791	(7) 50,530	(8) 0.0%
PRIORITY	207,769	249,108	255,459	\$ 0.30	74,732	76,638	0.0%
STANDARD (A)	326,258	365,025	361,529	\$ 0.30	109,508	108,459	0.0%
STANDARD (B)	3,154,138	3,580,511	3,477,681	\$ 0.30	1,074,153	1,043,304	0.0%
TOTAL	3,851,836	4,363,946	4,263,104		1,309,184	1,278,931	-2.3%

1/ Denotes the percentage change from the current fee to the proposed fee, or (Column 5 - Column 4)/Column 4.
2/ Denotes the percentage change from the revenue of the before rates volume at the current fee
to the revenue of the after rates volume at the proposed fee, or (Column 7 - Column 6)/Column 6.

REVISED RESPONSE OF POSTAL SERVICE WITNESS PLUNKETT TO
QUESTION OF THE OFFICE OF THE CONSUMER ADVOCATE AT THE
HEARING ON OCTOBER 7, 1997

Question (Tr. 3/1047): Will the Postal Service be willing to provide [the number of insurance claims made in FY 96]?

RESPONSE:

In FY 96, 122,753 insurance claims were filed.

**Designated Interrogatory Responses
of
William M. Takis (T41)**

WRITTEN RESPONSE OF POSTAL SERVICE WITNESS TAKIS
TO ORAL QUESTION OF NAA

Q. (Tr. 9/4790) In the workpaper section 4-A-39 that cites the source of the load time equations as the Commission's Opinion and Recommended Decision in Docket No. R90-1, which Opinion and Recommended Decision from that docket was the source?

RESPONSE:

The load time equations come from PRC-LR-9, Docket No. R90-1. That library reference was issued by the Commission on January 22, 1991 ("Further Notice of Additional Workpapers") in conjunction with its first Opinion and Recommended Decision in that docket. I am unaware of any subsequent revisions to PRC-LR-9.

**Designated Interrogatory Responses
of
John V. Currie (T42)**

**RESPONSE OF U.S. POSTAL SERVICE WITNESS CURRIE TO
INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE**

9999

OCA/USPS-T42-2. Please refer to your interrogatory responses to OCA/USPS-T11-1-18 in Docket No. MC97-2.

- a. Please confirm that your responses to the above-referenced interrogatories are true, accurate, and complete for purposes of your testimony in Docket No. R97-1. If you do not confirm, please explain and provide corrections.
- b. Please confirm that you hereby adopt your responses to the above-referenced interrogatories as your testimony in Docket No. R97-1. If you do not confirm, please explain.

RESPONSE:

a-b. Confirmed.

**U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
OF THE OFFICE OF THE CONSUMER ADVOCATE**

OCA/USPS-T11-1. Your testimony at page 1 states that the proposed surcharges for two types of hazardous materials "recognize the special costs of handling these materials, [and] improve the alignment of prices with costs..." Please identify and provide the attributable costs associated with the two types of hazardous materials subject to the surcharge. Please explain.

RESPONSE:

As noted in my testimony at page 16, the Postal Service has not been able to quantify the costs associated with these two types of hazardous materials.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
OF THE OFFICE OF THE CONSUMER ADVOCATE

OCA/USPS-T11-2. Your testimony at page 1 states that the proposed surcharges for two types of hazardous materials "provide a means of improving Postal Service data on these materials."

- a. Assuming the proposed surcharges are recommended by the Commission, please explain how the Postal Service intends to improve Postal Service data for the two types of hazardous material with respect to revenues, volumes, and Postal Service "practices and cost" identified on pages 9-13 of your testimony.
- b. Does the Postal Service intend to develop separate attributable costs for the two types of hazardous materials subject to the surcharge with respect to the Postal Service "practices and cost" identified on pages 9-13 of your testimony? If not, please explain why not.
- c. Does the Postal Service plan to incorporate the revenue, volume and attributable cost information for the two types of hazardous materials in the Postal Service's revenue, volume and cost information systems? If not, please explain why not.

RESPONSE:

a-c. I am informed that the Postal Service intends to require an endorsement on each piece of HMM or OMHM and that the volume and revenue for such materials will be included in the standard RPW information systems. While the endorsements will also be recorded in standard postal cost systems, it is likely that cost information will need to be developed through special studies (as has been the case, for example, for the non-standard surcharge in First-Class Mail).

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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OCA/USPS-T11-3. Your testimony at page 4 indicates that employees engaged in the cleanup of incidental spills and leaks involving mailed hazardous materials must be provided with certain personal protective equipment (PPE) and trained on how to use it.

- a. For those HMM and OMHM materials you propose a mail surcharge, are postal employees currently required to wear protective gear and/or clothing while processing this mail? If not, why not? If so, please identify the protective clothing and/or gear worn. If protective gear is worn, please identify who currently pays for the clothing and how much it costs. If the Postal Service provides the clothing, are the costs of providing the protective clothing attributed to any class or classes of mail? Please identify the class or classes.
- b. Do other industries handling HMM and OMHM type materials for shipment require those employees who process hazardous materials for shipment to wear protective gear and/or clothing? If not, why not? If so, please identify the protective clothing and/or gear worn. If protective gear is worn, please identify who provides the clothing and how much it costs.

RESPONSE:

a. Postal service employees engaged in simply processing mail containing hazardous materials (as opposed to cleaning up incidental spills and leaks) are not required to wear protective gear and/or clothing because the types and quantities of such materials accepted by the Postal Service and the packaging requirements imposed make this unnecessary. Under conditions normally incidental to handling mail, postal employees do not come into contact with hazardous materials

b. Other industries handling HMM and OMHM materials could include shippers who manufacture, fill, package, load, unload and otherwise prepare the type of hazardous materials at issue, as well as carriers who transport those materials. Employers of shippers who process hazardous materials for shipment are sometimes required by regulations of the Department of Labor, Occupational Safety and Health Administration (29 CFR Part 1910, Subpart I), by insurance carriers, or by individual company policy to

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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wear specific protective clothing, gear, or equipment. The level of protection is predicated upon the degree of exposure and the specific hazards of each hazard class. Employees who encounter spills or other uncontrolled releases of materials which are subject to cleanup as hazardous waste are prohibited by regulatory standards of OSHA (29 CFR §1910.120) from performing such activities unless properly trained and equipped with personal protective equipment. The clothing and equipment, and directives for its use, are specified within the emergency response plan for each facility covered by such regulations and are provided by the employer. Costs fluctuate depending on the level of protection required.

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OCA/USPS-T11-4. Your testimony at pages 7 to 9 discusses industry practices and costs of transporting hazardous materials.

- a. Please show the derivation of the \$15.00 per hour training cost per employee and provide copies of all source documents relied upon that have not been previously submitted.
- b. Please show the derivation of the 4 hour average training time per new employee and provide copies of all source documents relied upon that have not been previously submitted.
- c. You indicate that 5 percent of all materials offered for transportation are hazardous materials. Please explain how you derived the 5 percent figure and provide copies of all source documents relied upon that have not been previously submitted.

RESPONSE:

a. All employees who are responsible for safety in the transportation of hazardous materials, including drivers, supervisors, terminal employees who load and unload cargo, and clerical employees who prepare documents, must be trained by the employer in general awareness of and familiarity with hazardous materials at that workplace. Those who perform job functions requiring regulatory compliance must receive function-specific training. Based upon my experience, the \$15-per-hour cost estimate reflects an average hourly rate for employees engaged in transportation-related occupations in the United States as listed above. This hourly rate is conservative because it includes only the employee receiving the training and does not include the costs of paying the worker who replaces the trainee during the training period or the costs of training materials and recordkeeping required to verify such training. I have personally spoken with a training supervisor employed by a major motor carrier in the United States who reported that its total costs for providing the mandated training are approximately \$50 per hour.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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b. For the past 15 years I have personally developed and provided training to employees who prepare, ship, handle, and transport materials regulated as hazardous materials in all modes of transportation. My opinion, as a recognized expert in developing and implementing training which meets the minimum standards of the federal government, is that each employee requires at least four hours of initial training.

c. Based upon statistical data I compiled while in the employment of the New York State Police, I can state with confidence that approximately 5% of all materials offered for transportation at that time were regulated as hazardous materials within the definition at 49 CFR §171.8. Further, through my employment with the American Trucking Associations and my affiliation with the National Academy of Sciences, Transportation Research Board (TRB), I had access to data compiled in a study conducted by the Office of Technology Assessment (OTA) which was consistent with my previously stated experience. Through continuing personal contact with individuals employed by common carriers engaged in the transportation of all cargoes, and based upon consulting, training, and auditing work that I have performed, I know that these percentages have not changed significantly.

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OCA/USPS-T11-5. Your testimony at page 11 discusses an increase in pilots and airlines refusing to carry mail containing hazardous materials. For 1994, 1995 and 1996, please identify each instance USPS mail was refused by an airline or a pilot due to hazardous material content. For each instance reported, include in your response the type of hazardous material involved, the intended destination, the airline refusing transportation, the date refusal occurred, the stated reason of refusal, the mail class and volume of mail pieces refused, the weight of the mail refused, and the final method of transportation.

RESPONSE:

The statement in my testimony reflects a trend I have observed which is true generally of carriers, including the Postal Service, which transport hazardous materials. I understand, however, that the Postal Service does not routinely collect information of the type or in the form requested. But the Postal Service has contacted Air Transportation Specialists at many airport dispatch points as a means of providing some insight into the scale of airline/pilot refusals. The results of those contacts are reported in Exhibit 1, which begins on the following page. As summarized on the third page of Exhibit 1, refusal rates range widely, from 0 percent to 100 percent, depending in part upon the mailers and delivery customers served by a particular facility.

AMF/AMC AND OTHER AIRPORT DISPATCH POINTS

(MARCH 11, 1997)

ALPHA CODE	TYPE OF OFFICE	ADDRESS	AIRLINE/PILOT REFUSAL RATE OF HAZARDOUS MATERIALS
ALB	AMF	ALBANY COUNTY AIRPORT ALBANY, NY 12211-9732	approximately 10 pkgs refused per year
BDL	AMF	BRADLEY INT'L. AIRPORT WINDSOR LOCKS, CT 06199-0001	one or two refused pkgs per month
BOS	AMC	LOGAN INT'L. AIRPORT 139 HARBORSIDE DR. EAST BOSTON, MA 02128-9740	once or twice per month refused
BWI	AMC	P.O. BOX 9998 BALTIMORE, MD 21240-9998	four or five times per week refused
CAE	AMF	3501 AIR COMMERCE DR. COLUMBIA, SC 29228-9998	will not attempt air because of high refusal rate; re-route all hazmats to Greensboro AMC.
CID	AMF	2401 WRIGHT BROTHERS BLVD W CEDAR RAPIDS, IA 52404-9063	<1 per month refused
CLE	AMC	5801 POSTAL RD. CLEVELAND, OH 44181-9998	rarely attempt to fly hazmats because of high refusal rate; re-route all hazmats via surface
CMH	AMF	4299 SAWYER ROAD PORT OF COLUMBUS AIRPORT COLUMBUS, OH 43236-9741	average one refusal per week
DAY	AMF	10350 FREIGHT RD. DAYTON, OH 45490-9998	all hazmats via air are refused
DEN	AMC	25630 E. 75 AVE. DENVER, CO 80249-9741	about 10 refused out of 20 per day (50% refusal rate)
DFW	AMC	2300 W. 32ND STREET DALLAS, TX 75261-9741	approximately 99% are refused; re-route all by surface

ALPHA TYPE OF

CODE OFFICE

ADDRESS

AIRLINE/PILOT REFUSAL RATE OF HAZARDOUS MATERIALS

DSM	AMF	6010 FLEUR DRIVE DES MOINES, IA 50321-9741	100% refusal rate; route via surface
DTW	AMC	METRO AIRPORT, BLDG. 515 DETROIT, MI 48242-9741	majority do not accept hazmats, re-route via surface; of few airlines who accept, about 2-3 per week refused
EWR	AMC	345 BREWSTER ROAD NEWARK, NJ 07114-0941	>90% refusal rate
GRR	AMF	5500 44TH ST. SE P.O. BOX 888600 GRAND RAPIDS, MI 49588-8600	usually accept; however 1-2 per month are refused
GSO	AMC	P.O. BOX 27425 GREENSBORO, NC 27425-9419	no problem, airlines are begging for business and will accept all properly processed hazmats
IAD	AMC	DULLES INT'L APT 19 WEST SERVICE RD. DULLES, VA 20102-9998	100% refusal by TWA, AA, UA. All other airlines refuse between 5%-10% of hazmats
IAH	AMC	P.O. BOX 60998 HOUSTON, TX 77205-9998	2-3 per year refused
ICT	AMF	7117 W. HARRY WICHITA, KS 67276-9930	about 5% refusal rate = 10 pieces per week refused
LAX	AMC	5800 CENTURY BLVD. LOS ANGELES, CA 90009-8998	5%-10% refusal rate
MCI	AMC	156 PARIS ST. KANSAS CITY, MO 64195-9998	no longer attempt to fly biomedes due to 100% refusal; 10% refusal rate on all other hazmats
MSP	AMC	TWIN CITIES INT'L AIRPORT ST PAUL, MN 55111-9998	80%-90% refusal rate
OKC	AMF	7100-A AIR CARGO RD. P.O. BOX 25998 OKLAHOMA CITY, OK 73125-9741	10% refusal rate

ALPHA TYPE OF

CODE OFFICE ADDRESS AIRLINE/PILOT REFUSAL RATE OF HAZARDOUS MATERIALS

ORD	AMC	11600 W. IRVING PARK RD. CHICAGO, IL 60666-9998	75% refusal rate
PDX	AMF	7640 NORTHEAST AIRPORT WAY P.O. BOX 55598 PORTLAND, OR 97238-5598	4%-5% refusal rate = 2-3 pieces per month refused
PHX	AMC	1251 SOUTH 25TH PLACE SUITE 32 PHOENIX, AZ 85034-9998	50% refusal rate
RIC	AMF	5251 AIR EXPRESS RD. RICHMOND, VA 23250-2000	90% refusal rate = 10 pieces per month refused
SEA	AMC	16601 AIR CARGO RD. SEATTLE, WA 98158-9741	5% refusal rate
SLC	AMC	320 NORTH 3700 WEST SALT LAKE CITY, UT 84122-9998	10%-15% refusal rate = 1-2 per day refused
STL	AMC	9855 AIR CARGO RD. ST. LOUIS, MO 63155-9740	90% refusal rate
TUL	AMF	2601 NORTH CARGO ROAD TULSA, OK 74141-0001	very few hazmats, 1-2 per week, none refused

Note: The refusal rate annotated for each facility (AMF/AMC) is an estimate only. Each Air Transportation Specialist was contacted by phone survey and asked for an estimated refusal rate, by airlines/pilots, of properly processed mail pieces containing hazardous materials.

The variance in refusal rate, by airlines/pilots, of properly processed mail pieces containing hazardous materials among facilities, ranges between 0% to 100%. This variance is partly due to the customer market base to which a given USPS facility serves. For example: the Kansas City AMC serves a Bio-Med Tech customer, who mails a greater quantity and/or degree of risk of hazmats than does the dry cell battery company served by another USPS facility. Another contributing factor to this variance is the relative choice of airlines (or lack thereof) available to each USPS facility. Obviously USPS facilities engaged exclusively in air contracts with known refusers of hazmats will experience a 100% refusal rate (e.g.: Columbia, SC).

All facilities re-route hazmats via surface after attempting to ship by air. Some airlines are known to refuse all hazmats as part of their standing policy (e.g.: United Airlines, TWA, American Airlines, Southwest Airlines, Emery Freight); therefore, in some cases the USPS does not attempt to make a request, and automatically routes hazmats via surface. Columbia, SC re-routes all hazmats via surface to Greensboro because Greensboro contracts with air carriers who are "begging for business" and will accept hazmats.

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OCA/USPS-T11-6. Your testimony at 12, footnote 6, indicates that private sector costs of specialized hazardous materiel training has [sic] become substantial over the past 10 years.

- a. For the past 10 years to which you refer, please provide all information you used to determine the private sector costs of specialized training.
- b. Are training costs for the safe handling of hazardous material increasing more rapidly than the training costs for hazardous material clean-up? Please cite all source documents used in preparing your response.
- c. Are the training costs you refer to primarily for specialized hazardous material clean-up?
- d. Are the training costs you refer to primarily for specialized hazardous material handling procedures?

RESPONSE:

a. Private sector costs for training carrier employees who handle hazardous materials have, since 1986, been driven by a proliferation of regulations promulgated by the Department of Labor (DOL), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA). Prior to that year the regulations were vague in identifying those employees who had to be trained, merely stating that "the carrier must train their employees to make the regulations effective" (49 CFR, §177.800, April 5, 1967). In November of 1986, both OSHA and the DOT released rulemakings which extended the application of the "employee right to know" and the "hazard communication in the workplace" requirements to the transportation industry, and required employers in transportation-related industries to provide training to employees who worked in the proximity of hazardous materials. The regulations required that shippers provide a material safety data sheet (MSDS) or its equivalent to users of its products. Carriers were required to maintain the information if it was provided to them and to instruct their employees on the use of such information in the event of a spill or leak. In 1992, the DOT published Docket HM-126F, which required all transportation workers who meet the definition of a "hazmat employee" (defined at 49 CFR, §171.8) and employed after July 1, 1993 to be trained in general awareness and familiarization,

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function-specific regulatory responsibility, and safety in handling and transporting hazardous materials. The initial training was required to be completed by October 1, 1993 or within 90 days of hiring a new employee or assigning an existing employee to a new job with new duties. In addition all employees must receive recurrent training to be provided at least every two years. Due to the significant impact the two year re-training rule had on carrier resources, including financial costs and training resources, DOT subsequently extended the recurrent training requirement in October 1996 to at least every three years (49 CFR, Part 172, Subpart H). The EPA exercises dual jurisdiction with DOT over transportation of hazardous wastes and defines when a material spilled or released during transportation becomes a waste. Title 40 CFR further requires that a specific document be provided (EPA 8700-22) when transporting these wastes following a response to an emergency. In addition Title 29 CFR defines emergency response personnel and requires that these individuals must receive minimum levels of training based upon their response activities, including clean up of spills and leaks (29 CFR, Subpart I, §1910.120). Private sector carriers who transport or store hazardous materials incidental to transportation are required by OSHA to develop written emergency action plans, and emergency response plans and to provide minimum levels of employee training at scheduled intervals to ensure the effectiveness of these plans. Under the Federal Motor Carrier Safety Regulations (FMCSR), amended in 1987 with an effective date of April 1, 1992, drivers of commercial vehicles who transport certain threshold quantities of hazardous materials are required to possess a commercial drivers license (CDL) with an endorsement authorizing them to transport hazardous materials (FMCSR, 49 CFR, Part 383). Carriers are required to monitor their drivers to ensure compliance, and many also provide company-specific training to these drivers in order that they may pass the knowledge and skill examinations required for such a CDL with the endorsement. In addition to the minimum training requirements of 49 CFR §177.800, applicable to all hazmat employees of motor carriers, §177.816 has, since May 15, 1992, required that carriers train drivers

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regarding the regulations in 49 CFR Parts 390 through 397 of the FMCSR. All of these regulations which have developed over the past ten years, with subsequent amendments to meet industry changes, have resulted in substantial increases in the cost of employee training.

The costs experienced in the private sector in association with this training are also borne by the USPS. Management Instructions (MI) have been issued by the USPS Human Resources Department to provide guidance on compliance with these requirements (see, e.g., MI-EL-810-96-1). These MIs address Response to Hazardous Materials Releases and include USPS initiatives for preventing accidents and cleaning up hazardous materials spills including standard operating procedures (SOPs), emergency action plans (EAPs) and emergency response plans (ERPs). Specific instructions are provided for responding to injuries or exposures resulting from OMHM or HMM. The type of training which is required for each employee of the USPS and the materials which are to be used for providing this training are included in the MI. All employees must receive periodic training on the facility EAP. Acceptance personnel must receive annual training on hazardous materials mailability standards in the DMM and Pub 52. Mail handlers, supervisors, and other employees who frequently handle HMM or OMHM must receive HAZWOPER First Responder Awareness Level training. Maintenance or custodial staff and their supervisors who manage and clean up spills must receive HAZWOPER First Responder Operations Level training. Safety and health personnel receive Hazardous Materials Specialist level training and police personnel must receive First Responder Awareness training with annual refreshers. The regulations require that each facility maintain records to verify compliance with the training rules.

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b-d. Due to increased requirements for employee training, the training costs have increased. The level of required training varies throughout the transportation industry based on the type and quantity of hazardous materials encountered in each workplace. Employees who handle any and all hazard classes of hazardous materials are required to receive training as a condition of employment. There are more employees who would be subject to the safe handling training than the clean-up training since, in most cases, only specified individuals are authorized to conduct clean-up activities as a designated emergency responder. Although fewer employees are qualified to conduct clean-up activities, their training is more comprehensive. I am not able to determine if the costs associated with one type of training have increased more rapidly than another, or if some types of training costs have increased more rapidly than others.

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OCA/USPS-T11-7. Your testimony at 14 indicates that the National Motor Freight Classification Conference of the American Trucking Association is conducting research on establishing "a unique classification and rate which would be recommended for hazardous materials and would reflect these additional transportation expenses."

- a. Please provide any materials, data, published articles that identify the type of research they are conducting. Include in your response any recommendations, status reports or other information they have written or presented on the topic.
- b. When was the research begun?
- c. When is the research expected to be concluded?
- d. When are the research results expected to be published?

RESPONSE:

a.-d. This testimony is based upon oral communications with employees of National Motor Freight Traffic Association (NMFTA), American Trucking Associations (ATA), National Tank Truck Carriers Conference (NTTC), and various common carriers. The research has been ongoing since shortly after the accidental release of methyl isocyanate in Bhopal, India. Following this accidental release, DOT amended the hazard communication requirements, the packaging authorizations, and the financial responsibility requirements for carriers transporting certain high-hazard materials or environmentally hazardous substances. The increase in handling costs, including the insurance premiums paid by carriers, generated consensus that rates should be adjusted to enable carriers to recoup some of the additional costs. In 1981 the Interstate Commerce Commission (ICC) deregulated the trucking industry, and many of the rate tariffs (although still published) are not followed by carriers, which are now free to discount their rates to customers. Although many carriers initiated surcharges for hazardous materials, the competitive and proprietary discounting programs of these carriers since deregulation has made it difficult for NMFTA to prepare reliable rate and surcharge data. NMFTA still expects to be able to recommend a unique classification

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for shipments of hazardous materials with an accompanying rate that reflects the additional costs, although no specific action date has been set.

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OCA/USPS-T11-8. In your autobiographical sketch, you indicate that you served as Corporate Manager of Hazardous Materials Transportation for Digital Equipment Corporation (hereafter, Digital).

- a. During your tenure as manager, were hazardous materials shipped to Digital via the Postal Service? If so, approximately what percentage of hazardous materials received by Digital were shipped to them via the Postal Service?
- b. During your tenure as manager, were hazardous materials shipped to Digital via United Parcel Service? If so, approximately what percentage of the hazardous materials received by Digital were shipped to them via United Parcel Service?
- c. During your tenure as manager, were hazardous materials shipped to Digital via Federal Express? If so, approximately what percentage of the hazardous materials received by Digital were shipped to them via Federal Express?
- d. During your tenure as manager, were hazardous materials shipped to Digital via hazardous material vendors? If so, approximately what percentage of the hazardous materials received by Digital were shipped to them via the vendors?

RESPONSE:

Based upon contractual restrictions and ethical constraints, I am unable to provide confidential statistical data underlying the unique business operations of my former employer, Digital Equipment Corporation. I can however, make the following statements which reflect the general management position I fostered while employed as Corporate Manager of Hazardous Materials Transportation. The majority of hazardous materials within the scope of my management were purchased from various vendors and were received at manufacturing and distribution facilities operated by Digital or its subsidiaries. Some materials were received in bulk in cargo tanks and transferred to bulk holding tanks for use at a particular facility. Other materials were received in cylinders, drums, and small packages. All hazardous materials were immediately placed in a limited-access, locked storage area provided at each facility (called the "red label room") to enhance safe storage. Packaged hazardous materials received from vendors in bulk purchase quantities were accepted and stored in the "red label room" at several distribution centers strategically located throughout the world.

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These materials then were requisitioned and distributed to various manufacturing or research facilities as needed. Shipping and receiving personnel were trained to identify regulated materials and to ensure regulatory compliance when offering such materials for transportation. All packages shipped in commerce were required to be taken to shipping and receiving personnel for preparation for transportation and for selecting the most efficient carrier. Small packages containing hazardous materials sometimes were shipped via courier services if shipping and receiving personnel determined that to be the most efficient means of transport. Use of the postal system of the United States or other countries for the purpose of distributing regulated hazardous materials was discouraged because access to the mail created an undesirable means of avoiding the oversight and control of shipping departments. The policies outlined here were instituted at my direction.

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OCA/USPS-T11-9. Your testimony at page 18 and 20 indicates that the current volumes of First-Class clinical diagnostic specimens may be 10 million pieces annually, with perhaps another 500 thousand pieces of Priority mail containing medical materials. Please show the derivation of each figure and provide copies of all source documents relied upon that have not been previously submitted.

RESPONSE:

I am informed that these volume estimates were generated judgmentally, based on knowledge of mailers and recipients of diagnostic specimens and other medical materials.

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OCA/USPS-T11-10. Your testimony at page 20 indicates that the Postal Service has assumed a price elasticity of -0.8 for HMM. Please explain the considerations that entered into the determination of an elasticity of -0.8 for HMM. Specifically, what features of hazardous medical material are most like Priority Mail that would justify a determination of -0.8 as the most appropriate elasticity to use?

RESPONSE:

I am informed that the Postal Service assumed a "round-number" elasticity close to that of Priority Mail because, although most HMM volume is expected to be First-Class Mail, HMM is significantly different from the overwhelming majority of First-Class pieces, which are letters weighing less than an ounce. Priority Mail appeared to provide the closest available match to the shape, weight, and service characteristics of HMM mail.

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OCA/USPS-T11-11. *Your testimony at page 21 indicates that the Postal Service has assumed a price elasticity of -1.0 for OMHM. Please explain the considerations that entered into the determination of an elasticity of -1.0 for OMHM.*

RESPONSE:

As also noted on page 21, this elasticity is roughly equal to that of Parcel Post; I am informed that the Postal Service made this assumption because most OMHM is expected to be mailed as Parcel Post.

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OCA/USPS-T11-12. Refer to your testimony at page 20, line 24 and page 21, line 23 which states "Volume ratio=price ratio^elasticity." Please show the derivation of, and provide assumptions for, this relationship.

RESPONSE:

I am informed that this is simply a representation of a standard constant-elasticity demand function. The character "^" is used in spreadsheets to indicate "raised to the power," so that quoted phrase simply indicates that the volume response (new volume/initial volume) to a change in price is equal to the price ratio (new price/initial price) raised to the power of the price elasticity.

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OCA/USPS-T11-13. Your testimony at page 14 states that "the Postal Service is the only [major carrier] that does not currently charge extra for processing these [hazardous] items."

- a. Please identify other major carriers, or carriers of any size, that transport and deliver hazardous materials in small parcels, other than USPS and Federal Express.
- b. Please provide the surcharges associated with the transport of hazardous materials for any of the carriers identified in a. above.

RESPONSE:

a. Carriers other than UPS and Federal Express that I am aware of which transport and deliver hazardous materials in small parcels include Roadway Package Service (RPS), Airborne Express, DHL, Burlington Air Express, and Emery Worldwide.

b. The carriers listed in response to subpart a have implemented the following surcharges and/or restrictions on small packages containing hazardous materials:

According to a current accessorial schedule, RPS charges an additional fee of \$10.00 per shipment, regardless of the hazard class.

Airborne Express imposes a hazardous materials surcharge of \$12.00 per shipment -- \$17.00 if the shipment is packed in dry ice. Diagnostic specimens or infectious substances in Class 6.2 are required to be packaged properly, then placed in a Lab Pack, an outer packaging available for \$0.75 from Airborne Express.

DHL will not accept hazardous materials unless prior authorization has been granted by DHL headquarters. Hazardous materials are only accepted when offered by an

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approved account and in pre-approved packaging. Additional charges are based upon any additional handling required.

Burlington Air Express imposes a surcharge of \$0.10 per pound for hazardous materials, with a minimum surcharge of \$30 per shipment. Diagnostic specimens are only accepted if they are shipped as hazard class 6.2 infectious substances, even if they do not contain any such substance.

Emery Worldwide imposes a \$50.00-per-shipment hazardous materials surcharge, *regardless of the size of the package. All packages must be prepared for air transportation.* Infectious substances are subject to the same surcharge as other hazards. Diagnostic specimens not known to contain any infectious substance must be packaged in special packaging approved by Emery Worldwide to avoid the surcharge. Emery Worldwide only accepts diagnostic specimens under the terms of contractual agreements with pre-approved accounts.

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OCA/USPS-T11-14. Your testimony at page 14 states that UPS and Federal Express impose surcharges of \$10 or more for the transport of hazardous materials.

- a. Please explain the consideration given to the hazardous material surcharges imposed by UPS and Federal Express in the Postal Service's determination to use an elasticity of -0.8 for HMM and -1.0 for OMHM.
- b. In light of the surcharges imposed by UPS and Federal Express, please explain why there would be any decline in the estimated volume of HMM and OMHM handled by the Postal Service as a result of the proposed surcharge.

RESPONSE:

a.-b. I am informed that there was no explicit consideration of other carriers' hazardous materials surcharges in selecting the elasticity assumptions for HMM and OMHM. As with any goods or services, a price increase (or surcharge) may lead to a reduction in the use of the goods or service, not just a shift to alternative suppliers.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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OCA/USPS-T11-15. Your testimony at page 20 indicates postage for HMM at a First-Class 8 ounces rate and a Priority Mail rate of 5 pounds. Please explain how you determined these postage weights were the most appropriate weights to use.

RESPONSE:

I am informed that these weights are believed to be representative of HMM in First-Class and Priority Mail. They are used only in calculating the pre-surcharge postage rate paid by such mail in order to calculate the price-ratio (or percentage price increase) resulting from the surcharge.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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OCA/USPS-T11-16. Your testimony at page 21 indicates postage for an estimated parcel volume of 1.1 million pieces subject to the OMHM surcharge.

- a. Please explain the considerations that entered into the Postal Service's determination that about 0.5 percent of Parcel Post volume would be subject to the surcharge.
- b. Please explain how you determined that two-pound and ten-pound pieces constituted the mailing weights for OMHM.
- c. Please explain how you determined the volume split between two-pound and ten-pound pieces.
- d. Please explain how you determined that the postage based upon the Zone 3 Inter-BMC plus the non-machinable surcharge was the most appropriate postage to use.

RESPONSE:

a-d. As noted on page 21, these are judgmental assumptions. The 2-pound and 10-pound weights are believed to be representative of OMHM, as is the pre-surcharge postage level; no detailed information, however, is available. The assumptions are used only in calculating the pre-surcharge postage rate paid by such mail in order to calculate the price-ratio (or percentage price increase) resulting from the surcharge.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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OCA/USPS-T11-17. Refer to your testimony at page 20 and 21 concerning the development of hazardous mail volumes. Please provide any information about the mailers subject to the proposed surcharge or recipients of hazardous materials, including whether such mailers are individuals, businesses or nonprofits; if business or nonprofit mailers, are such mailers large or small; the general business activity of businesses and nonprofits mailing and receiving such hazardous materials; the geographic location or concentration of individual, business or nonprofit mailers or recipients, etc.

RESPONSE:

As noted in my testimony at page 18, the Postal Service does not have detailed information on hazardous materials mail volumes. Please refer to LR-PCR-34, Section VI, pp. 402-450.

U. S. POSTAL SERVICE WITNESS CURRIE RESPONSE TO INTERROGATORIES
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OCA/USPS-T11-18. Refer to your testimony at pages 20 and 21 concerning volumes for HMM and OMHM after imposition of the surcharge.

- a. Please confirm that the Postal Service is estimating a decrease in HMM First-Class and Priority Mail volume of 1,683,112 and 31,014, respectively. If you do not confirm, please explain.
- b. Please confirm that the Postal Service is estimating a decrease in two-pound and ten-pound pieces of 144,404 and 43,668, respectively. If you do not confirm, please explain.
- c. If the surcharge for HMM and OMHM were increased to \$0.60 and \$1.20, respectively, please confirm that the after rates volumes for HMM and OMHM would be 8,516,140 and 881,833, respectively. If you do not confirm, please provide the correct volumes and show their derivation.

RESPONSE:

a-c. Confirmed.

DECLARATION

I, John V. Currie, declare under penalty of perjury that my response to interrogatory OCA/USPS-T42-2, which confirms my adoption of the answers to interrogatories OCA/USPS-T11-1-18 (Docket No. MC97-2) as my testimony in Docket No. R97-1, is true and correct to the best of my knowledge, information and belief, and that were I to testify orally, my testimony would be the same.



John V. Currie

Date: 12/11/97

**Designated Interrogatory Responses
of
Michael R. McGrane (ST44)**

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MCGRANE
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

10031

POIR No. 7, Question 15. Please provide the source (worksheet, column, line number) in LR H-106 for Exhibit 44A, Table 1, column, on pages 4, 5, 6, and 7, variable mail processing costs.

RESPONSE:

Column 6 on pages 4, 5, 6, and 7 of Exhibit USPS-44A is the product of the adjusted cost from LR H-106, the premium pay factor from LR H-106, and the piggyback factor from LR H-106. For pages 5 and 7, non-letter shape mail for commercial ECR and Nonprofit ECR, the columns are the sum of these calculations for flat and parcel mail.

The following table contains the sheet and cell references used from LR-H-106. Please note that the "Adj. Letter" sheet and the "Adj. Flatcst" sheet are missing the row for the "MAILGRAM" costpool which appears in the "Adj. Parcelcst" sheet and the "Pigbkfctrs" sheet.

Page in Exhibit 44A	Source of Adjusted Costs	Source of Premium Pay Factor	Source of Piggyback Factors
Page 4, Comm. ECR Letters	Sheet "Adj. Letter", Column K	Sheet "PremPay", Cell K14	Sheet "Pigbkfctrs", Column H
Page 5, Comm. ECR Flats	Sheet "Adj. Flatcst", Column K	Sheet "PremPay", Cell K14	Sheet "Pigbkfctrs", Column H
Page 5, Comm. ECR Parcels	Sheet "Adj. Parcelcst", Column H	Sheet "PremPay", Cell K14	Sheet "Pigbkfctrs", Column H
Page 6, Nonprofit ECR Letters	Sheet "Adj. Letter", Column I	Sheet "PremPay", Cell I14	Sheet "Pigbkfctrs", Column H
Page 7, Nonprofit ECR Flats	Sheet "Adj. Flatcst", Column I	Sheet "PremPay", Cell I14	Sheet "Pigbkfctrs", Column H
Page 7, Nonprofit ECR Parcels	Sheet "Adj. Parcelcst", Column J	Sheet "PremPay", Cell I14	Sheet "Pigbkfctrs", Column H

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MCGRANE
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

10032

POIR No. 7, Question 18. Exhibit 44A, shows the separation of mail processing cost for enhanced carrier route (ECR) and nonprofit enhanced carrier route (NPECR) between walk-sequence direct tally cost and nonwalk-sequence direct tally cost. Why didn't the Postal Service further separate the walk-sequence tally cost between high density and saturation which would have provided a basis for computing mail processing cost for each rate category in ECR and NPECR?

RESPONSE:

Until the implementation of Classification Reform on July 1st of 1996, the endorsements for high density and saturation mail were the same, so the separation of costs between high density and saturation could not be made for all of FY 1996.

**Designated Interrogatory Responses
of
Marc A. Smith (ST45)**

**RESPONSE OF U.S.POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7**

9. Please provide the detailed calculations and sources used to derive the figure shown at LR H-106, page VI-8, column 6, for the line entitled "1st Pr. -NCarr-Rt & Car. Rt. The amount shown is 1,999,683. Please also confirm that this is in thousands of dollars.

Response:

I confirm that 1,999,683 is in thousands of dollars. This is the total test year mail processing costs for First-Class presort letters, flats and parcels; (presort and carrier route presort) computed using the unit costs from pages II-5, III-5, and IV-5 prior to the application of the reconciliation factor (which is contained in column 7 of page VI-8). This calculation is shown in Table 1 below. This amount differs from the test year before rates mail processing costs based on witness Patelunas testimony, USPS-T-15, which is \$1,982,973 (in thousands) as shown in column 5 of page VI-8. This difference is reconciled by the application of the reconciliation factor which is $1,982,973/1,999,683 = .99164$ as shown in column 7 of page VI-8 for this category. All the results contained on pages II-5, III-5, and IV-5 for the columns for "1st Pr. Carr-Rt" and "1st Pr. NCarr-Rt" have been multiplied by the factor .99164, consequently the mail processing costs for all shapes for these two columns sum to the test year costs of \$1,982,973 (in thousands) as shown in Table 2 below.

The calculation of \$1,999,683 is based on the unit costs on pages II-5, III-5, and IV-5 prior to the application of the factor .99164. The unit costs prior to the application of the reconciliation factor are obtained from the spreadsheet "CSTSHAPE.XLS" by going to the spreadsheet page "PremPay" and setting the cell E25 to 1. Multiplying the

**RESPONSE OF U.S.POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7**

(response to question 9 continued)

resulting unit costs times the test year before rates volumes leads to \$1,999,683, as shown below.

Table 1: Total First-Class Presort Costs With Unreconciled Unit Costs

	Unit Costs Prior to Reconciliation (cents/piece)	Test Year Before Rates Volumes (in thousands)	Total Costs (in thousands)
1st Pr.NCarr-Rt.			
Letters	4.637335	39,297,407	1,822,352
Flats	20.91005	630,595	131,858
Parcels	38.212386	26,432	10,100
1st Pr.Carr-Rt.			
Letters	2.27829	1,552,574	35,372
Total			1,999,683

Table 2: Total First-Class Presort Costs With Reconciled Unit Costs

	Unit Costs After Reconciliation (cents/piece)	Test Year Before Rates Volumes (in thousands)	Total Costs (in thousands)
1st Pr.NCarr-Rt.			
Letters	4.598585	39,297,407	1,807,125
Flats	20.735323	630,595	130,756
Parcels	37.893077	26,432	10,016
1st Pr.Carr-Rt.			
Letters	2.259257	1,552,574	35,077
Total			1,982,973

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

10. LR-H-106, page VI-2, column 1, spbs Oth, shows a figure of 20,237. This amount comes from LR H-77, page 194, column 4, line 17. According to the electronic spreadsheet version, the amount is calculated as follows: $20,237 = 192,529 \text{ times } [(194.5/176) - 1]$.

- a. Please provide an explanation for what the numbers, 194.5 and 176, represent.
- b. Please provide the source for these numbers.
- c. Please discuss the rationale for the calculation. Interestingly, the 20,237 is the only number in column 4 of page 194 that is based on column 3. All the other cost reduction amounts and other program costs come from USPS-T-15, Appendix A, page 6 for FY 1997 and page 10 for FY 1998. Please be sure to include in your discussion of the rationale an explanation for the different treatment accorded spbs Oth.

Response:

- a. The figures 194.5 and 176 are the mid-year number of Small Parcel and Bundle Sorters (SPBS) for the fiscal years 1997 and 1996 respectively.
- b. These figures are calculated as shown at page V-5 of LR-H-127, based on information from Engineering and Operations.
- c. The rationale is to reflect the additional labor costs associated with the SPBS, given the additional deployments of SPBS. The \$20.237 million is the estimated additional costs for SPBS staffing.

The difference in treatment for the "SPBS Oth" cost pool is necessary to obtain the total changes in the costs for this cost pool and the cost pools 1OPbulk and 1OPpref as discussed in response to questions 12 and 13. The savings from the SPBS deployments of \$27.274 million as shown at LR-H-77 page 195 line 5 (as per witness Patelunas, USPS-T-15, Appendix A) is the net savings. It is the net of the

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

(response to question 10 continued)

increased staffing costs for SPBS and the savings in opening units (or "Sorting to Rolling Containers") which perform manual bundle and parcel sorting. If staffing costs grow for the SPBS by \$20.237 million, then the savings in opening units (or "Sorting to Rolling Containers") due to the additional SPBS which is consistent with the net savings of \$27.274 million is the sum of these two figures: \$20.237 plus \$27.274 equals \$47.511 million. In this case, as well as for FSM & FSM 1000 programs (see pages 195-196 of LR-H-77), it was necessary to estimate the additional costs and corresponding savings that would be associated with the budgeted net savings provided by witness Patelunas.

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

11. The 192,529 referenced in question 10 is calculated as follows. First, calculate mail processing overhead factors for each mods group, each BMC group, and the nonmods offices. Second, for each mods, BMC, and nonmods group, multiply the FY 1996 volume variable mail processing cost for small parcel and bundle sorting (SPBS) by the overhead factors from the first step. The SPBS costs come from LR H-146, pages VII-17 to VI-19 for the column with the heading "17 SM PCL BNDL SRT." Third, sum the results from the second step yielding 176,195. Fourth, adjust the 176,195 to include the lump sum costs resulting in 176,645. Fifth, multiply the step four amount by the combined wage and volume growth factors for FY 1997 and FY 1998 producing 192,529.

According to LR H-77, page II-4, the lump sum adjustment above uses the volume variable lump sum costs from USPS-T-5, WP-B, W/S 3.1.1, page 4, column 8, line 50. In contrast, when making the same adjustment to the mail processing costs by shape earlier in LR H-106, page VI-1, line 3, which sources the same worksheet, the costs reflect the accrued level not the volume variable level. Both lump sum adjustment factors are used in LR H-106 to derive test year volume variable mail processing cost by shape. Please discuss the rationale for using different lump sum adjustment methods within this cost study.

Response:

The two lump sum adjustments calculations which are cited are virtually identical. The two lump sum factors are .0025601446 from LR-H-77, page 197 and .002559941 from LR-H-106, page VI-1. These differ by .0000002036. The ratio of lump sum payment to total salaries excluding lump sum is the same for both volume variable costs and total accrued costs since the lump sum payments are distributed proportionately to labor cost. The observed difference probably stems from rounding.

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TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

12. The 20,237, referenced in question 10, is also used as a cost reduction amount in LR H-77 at page 194, column 4, line 24, i.e., 20,237 is used in the calculation to derive (56,634), the amount in column 4, line 24. Please provide a rationale for this calculation.

Response:

The savings for "Sorting to Rolling Containers" of \$56.634 million is the sum of the savings of \$47.511 from the SPBS deployment plus \$9.122 million savings due to the Tray Management System (see page 195, line 10 of LR-H-77). The calculation of the \$47.511 million savings is discussed in response to question 10. As indicated in response to question 10, \$20.237 million is my estimate of both the costs associated with additional staffing for SPBS and the corresponding additional SPBS program savings in the activity "Sorting to Rolling Containers" in addition to the net savings of \$27.274 million for SPBS (see LR-H-77 at page 195, line 5).

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13. The amount in LR H-77 at page 194, column 4, line 24, (56,634), is subsequently used to derive the cost reduction amounts shown in LR H-106, page VI-2, column 1, 1OPbulk and 1OPpref. The (56,634) is multiplied by 0.5 yielding (28,317). This amount is used both for 1OPbulk and 1OPpref. Please provide the rationale for this calculation.

Response:

"Sorting to Rolling Containers" costs are included in both the 1OPbulk and 1OPpref cost pools. I have assumed that half of the total savings of \$56.634 million for "Sorting to Rolling Containers" shown in LR-H-77 at page 194, column 4, line 24 would go to each of these cost pools as shown in LR-H-106 at page VI-2, column 1.

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

14. This question concerns the escalation factor used to update base year level cost to the test year level. In Docket No. MC95-1, LR MCR-10, the Postal Service updated unit costs by shape using the ratio of TYAR Direct Mail Processing unit cost (excluding mail processing overhead) to Base Year Mail Processing unit cost. The Test Year costs reflected the CRA level. The Base Year cost reflected LIOCATT level cost divided by volume, i.e., mail processing cost without Workpaper B adjustments, without overhead, and without premium pay. (See MC95-1, LR MCR-10, Table C, page 2, L.8; Table D, page 2; Table E, page 2, and Table F, page 2.)

In Docket No. R97-1, the Postal Service uses the same type of test year/ base year ratio, but the underlying numbers reflect a different level of cost than in Docket No. MC95-1. The Base Year unit costs reflect mail processing overhead, the Workpaper B adjustments, premium pay, the savings from cost reductions in FY 1997 and FY 1998, and the cost of other programs for FY 1997 and FY 1998. The Test Year unit cost reflects CRA level mail processing costs including overhead. (See LR H-106, pages II-4, III-4, IV-4, VI-2, and VI-8.)

Please discuss the rationale for including FY 1997/FY 1998 cost reductions and other program cost in the base year cost prior to the TYAR escalation factor.

Response:

The two escalation factors which you describe differ in part because of the prior inclusion of the cost reductions and other programs adjustment ratio from LR-H-106 at page VI-2. In addition, witness Degen's development of mail processing costs doesn't rely on LIOCATT and does not have the same treatment of mail processing overhead costs as discussed in his testimony, USPS-T-12.

The costs shown at pages II-4, III-4 and IV-4 aren't base year costs, per se, but rather just an intermediate step toward getting test year costs. Applying the cost reductions and other programs adjustment ratio prior to the test year escalation as opposed to after the escalation shouldn't lead to a difference in the results due to the reconciliation to test year labor and piggybacked costs as done at page VI-8, columns 5-7.

RESPONSE OF U.S.POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

(response to question 14 continued)

An important point to note in comparing the two approaches is that the overall reconciliation is the same. That is the benchmark costs or mail processing costs by shape for a given category are adjusted to have the same weighted average as the test year average mail processing costs. In Docket No. MC95-1, LR MCR-10 the reconciliation targets are computed in Table I and the reconciliation factor is computed in Table H. In LR-H-106, the reconciliation target is computed at page VI-8, column 5 in the same way as done in LR MCR-10 in Table I. The reconciliation ratio is applied in the same way on page VI-8, column 7. The form of the calculations is different but the process and the result is the same, with the benchmark costs by shape totaling to the test year mail processing cost as per witness Patelunas (both labor and piggybacked costs).

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

16. What is the purpose of the mail mix adjustment in LR H-106?

Response:

The mail mix adjustment is provided in LR-H-126. This library reference provides the changes in volume variable mail processing labor costs (component grouping 3.1) in First-Class Mail and in Standard A categories stemming from reclassification reform and other mail volume mix changes occurring between FY96 and FY97. This adjustment reflects the changes in unit costs that would stem from the changes such as the growth in prebarcoding for letters and flats which occurred between FY96 and FY97.

The shape/presort adjustment is done to reflect the mail mix adjustment (see pages VI-3 to VI-7 of LR-H-106). The shape/presort adjustment reapportions the test year costs by shape and presort level to reflect the changes occurring between the base year and test year, which are accounted for by the mail mix adjustment (see pages VI-3 to VI-7 of LR-H-106).¹

¹ An example of this adjustment is the reduction in costs for First-Class carrier route presort letters. The base year labor costs for this category is \$30,111,000 as indicated at page II-1 of LR-H-106, while the FY 1997 projection of the cost for this category is \$18,220,000 see page II-5 of LR-H-126. The decline in costs reflects the decline in volumes for First-Class carrier route presort letters due to the non-eligibility of automation carrier presort in 5-digit Zip Codes in which DPS is performed by DBCS. The factor , .595, from revised page VI-3 of LR-H-106, is multiplied times the First-Class carrier route presort letter costs in page II-4 (as part of the calculations in page II-5 to obtain test year costs) to reflect the anticipated cost change.

RESPONSE OF U.S.POSTAL SERVICE WITNESS SMITH
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 7

17. The mail mix costs in LR H-106 on pages VI-3 to VI-7 reference LR H-126. On page III-3 of LR H-126, the model unit cost for a nonprofit automation basic letter is 2.5175 cents per piece. The referenced source for this cost is LR H-126, Part VI, Section 6, page 1; but, the cost there is 0.3012 cents. Please provide the source for the 2.5175 cents. If the source does not show the derivation of this figure please provide it.

Response:

The total model cost of .3012 shown in LR-H-126, Part VI, Section VI, page 1 is incorrect. Summing the "Weighted Costs" of column 8 results in the 2.5175 cents per piece, which is relied on at page III-3. Replacement pages for LR-H-126, Part VI, Section VI, page 1 and revised spreadsheets containing this page are being filed.

**Designated Interrogatory Responses
of
Marc A. Smith (ST46)**

RESPONSE OF U.S.POSTAL SERVICE WITNESS SMITH TO
INTERROGATORIES OF NDMS, REDIRECTED FROM WITNESS CRUM

NDMS/USPS-T28-38.

d. Please confirm that:

- (i) the Postal Service's costs of transporting mail to the DDU was computed by dividing total test year adjusted Standard Mail (A) transportation costs by total test year Standard Mail (A) pounds;
- (ii) in that division, pounds are used as a proxy for cube; and
- (iii) using pounds as a proxy for cube assumes, implicitly, that all Standard A Mail has the same density. If you fail to confirm any of the preceding, please explain fully.

Response:

- (i) Confirmed.
- (ii) Confirmed.
- (iii) Confirmed, this assumes that all Standard Mail (A) categories will have the same average density. Individual mailings will of course differ.

RESPONSE OF U.S. POSTAL SERVICE WITNESS SMITH TO
INTERROGATORIES OF NDMS, REDIRECTED FROM WITNESS CRUM

NDMS/USPS-T28-41.

In LR-H-111, both the transportation and nontransportation costs avoided from dropshipment are presented on a per pound basis. They are presented this way because the drop ship discount is figured on a per pound basis and converted to a per-piece basis for pieces under the breakpoint that do not have weight as part of the rate design. At the same time, it is well established that the underlying driver of highway transportation costs is cube. That is, highway transportation costs are incurred and distributed to the classes of mail on the basis of cube. Rates, however, are set on the basis of pieces and pounds, not cube. With respect to highway transportation costs avoided, it is thus clear that pounds serve as a proxy for cube. Nontransportation costs avoided from dropshipment relate to dock handling expenses, such as loading and unloading trucks, moving containers around on the dock and staging them for loading, etc.

- (i) Please confirm that this explanation concerning transportation costs is accurate. Please explain any nonconfirmation.

Response:

- (i) Confirmed, with respect to your statements on highway transportation costs. It is my understanding that Highway costs are incurred on the basis of cubic foot-miles.