

MPA et al.-RT-2

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, DC 20268-0001

Postal Rate and Fee Changes,
2006

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Docket No. R2006-1

**REBUTTAL TESTIMONY OF STUART W. ELLIOTT
ON BEHALF OF
MAGAZINE PUBLISHERS OF AMERICA, INC.,
ALLIANCE OF NONPROFIT MAILERS,
AMERICAN BUSINESS MEDIA,
DOW JONES & CO.,
THE McGRAW-HILL COMPANIES, INC.,
AND NATIONAL NEWSPAPER ASSOCIATION**

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testimony to:

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TABLE OF CONTENTS

	Page
I. INTRODUCTION AND SUMMARY	1
A. Autobiographical Sketch	1
B. Purpose of testimony	1
II. IN THE CURRENT CASE, THE POSTAL SERVICE HAS PROVIDED A RESPONSE TO THE COMMISSION'S REQUEST IN DOCKET NO. R2000-1 FOR MORE EMPIRICAL INFORMATION ON SETUP AND TAKEDOWN TIME IN OPERATIONS.	2
III. IMPROVED INFORMATION ABOUT MAIL PROCESSING OPERATIONS ON THE RECORD CAN BE USED TO AUGMENT THE COMMISSION'S METHOD OF ESTIMATING THE VOLUME VARIABILITY OF MAIL PROCESSING TO REFLECT SETUP AND TAKEDOWN TIME.....	4
IV. AN AUGMENTED VERSION OF THE COMMISSION'S APPROACH TO ESTIMATING THE VARIABILITY OF MAIL PROCESSING THAT REFLECTS SETUP AND TAKEDOWN TIME SHOWS THAT WITNESS NEELS' ECONOMETRIC ESTIMATES OF VOLUME VARIABILITY AREN'T CONSISTENT WITH OPERATIONAL REALITIES IN MAIL PROCESSING.	7
V. AN AUGMENTED VERSION OF THE COMMISSION'S APPROACH TO ESTIMATING THE VARIABILITY OF MAIL PROCESSING THAT REFLECTS SETUP AND TAKEDOWN TIME SHOWS THAT WITNESS ROBERTS' ECONOMETRIC ESTIMATE OF VOLUME VARIABILITY FOR LETTERS ISN'T CONSISTENT WITH OPERATIONAL REALITIES IN MAIL PROCESSING.	8
VI. WITNESS MCCRERY'S RESPONSES TO VALPAK'S INTERROGATORIES ARE INCONSISTENT WITH WITNESS HALDI'S ASSERTION THAT MAIL PROCESSING IS OFTEN EXCLUSIVELY FOR A SINGLE CLASS OR SUBCLASS OF MAIL.....	9

1 and Haldi. Bozzo Direct (USPS-T-12); Robert Direct (OCA-T-1); Neels Direct
2 (UPS-T-1); Haldi Direct (VP-T-2).

3 The purpose of my testimony is to note some apparent inconsistencies
4 between the testimony of witnesses Roberts, Neels, and Haldi about the
5 variability and distribution of mail processing costs and some new evidence that
6 has been placed on the record about setup and takedown costs. This testimony
7 is restricted to a discussion of these inconsistencies, and does not discuss the
8 econometric modeling and data quality issues that are the focus of much of the
9 testimony of witnesses Roberts and Neels or the other areas of concern of
10 witness Haldi.

11 **II. IN THE CURRENT CASE, THE POSTAL SERVICE HAS PROVIDED A**
12 **RESPONSE TO THE COMMISSION'S REQUEST IN DOCKET NO.**
13 **R2000-1 FOR MORE EMPIRICAL INFORMATION ON SETUP AND**
14 **TAKEDOWN TIME IN OPERATIONS.**

15 The Commission's existing methodology for estimating the volume
16 variability of mail processing implicitly treats setup and takedown time as volume
17 variable. In Docket No. R2000-1, however, the Commission acknowledged that
18 USPS witness Degen's argument that "scheme changes, not volumes, drive the
19 number of setups and takedowns, particularly in secondary operations," could be
20 "partly valid." The Commission noted, in particular, that "higher volume will
21 sometimes lengthen runs within a scheme without multiplying set-up and tear-
22 down cycles." R2000-1 Op. & Rec. Decis., App. F, at 18-19.

23 The Commission raised the possibility, however, that "[n]arrow processing
24 windows can severely restrict the opportunity to lengthen runs for a given
25 scheme" and that "higher volumes are likely to cause the same scheme to be
26 replicated." *Id.* The Commission ultimately concluded that the record was "not

1 developed well enough to support definitive findings on what the ratio of fixed
2 set-up and tear-down time to runtime is in any of the operations modeled by
3 witness Bozzo.” *Id.* at 19. The Commission asked that “[s]ome attempt to
4 quantify the amount of fixed setup/shutdown time ... be provided in future
5 proceedings.” R2000-1 Op. & Rec. Decis. ¶ 3033.

6 The record in the current case provides a response to the Commission’s
7 request in Docket No. R2000-1 for more empirical information on setup and
8 takedown time. In response to an interrogatory by MPA and ANM, USPS
9 operational witness McCrery has provided a nationwide snapshot of the sort
10 schemes running at five different times of day on May 18, 2006, on the Postal
11 Service’s DBCS and AFSM 100 machines. The snapshot shows that the
12 majority of schemes are run on a single machine for all types of sorts. For
13 incoming secondary sorts—the majority of sort schemes—essentially all
14 schemes are run on a single machine. 11 Tr. 2896-97 (response of USPS
15 witness McCrery to MPA/USPS-T42-22(e)).

16 Witness McCrery confirms that most sort schemes are incoming
17 secondaries, which are almost always run on a single machine at a facility. 11
18 Tr. 2896 (response of USPS witness McCrery to MPA/USPS-T42-22(c), (d)). For
19 letters, of which 79 percent of the incoming secondary volume is sorted to DPS,
20 the DPS sorting procedure requires that each sort scheme be run on only a
21 single machine. McCrery Direct (USPS-T-42) at 12, n. 10; *id.* at 36, lines 15-18.
22 Even non-DPS incoming secondary sort schemes are almost always run on only
23 a single machine. 11 Tr. 2896 (response of USPS witness McCrery to
24 MPA/USPS-T42-22(d)).

1 Witness McCrery's testimony shows that the structure of Postal Service
2 sorting operations is such that the number of sort schemes run—and therefore
3 the time spent in setup and takedown—are better characterized as fixed rather
4 than variable with respect to volume changes. This is particularly true for the
5 incoming secondary schemes—i.e., the majority of schemes—because they are
6 rarely run on multiple machines.

7 **III. IMPROVED INFORMATION ABOUT MAIL PROCESSING**
8 **OPERATIONS ON THE RECORD CAN BE USED TO AUGMENT THE**
9 **COMMISSION'S METHOD OF ESTIMATING THE VOLUME**
10 **VARIABILITY OF MAIL PROCESSING TO REFLECT SETUP AND**
11 **TAKEDOWN TIME.**

12 The Commission's method of estimating variable costs in mail processing
13 rests on an operational analysis that classifies activities as either "fixed" or
14 "variable" based on operational considerations, and then uses operational data
15 from IOCS tallies to calculate the proportion of costs in the "variable" cost
16 categories. The Commission identifies a specific set of activity codes as fixed, in
17 contrast to the larger category of mail processing activities that are defined to be
18 variable. See R97-1 Op. & Rec. Decis. ¶¶ 3010-3012; R97-1 USPS-LR-H-1;
19 USPS-LR-L-100, file PRCACTV.rtf.

20 The IOCS redesign offers the opportunity to refine the Commission's
21 variability estimates with new information about time spent on setup and
22 takedown activities. McCrery Direct (USPS-T-42) at 36, lines 27-28. The extra
23 information in the redesigned IOCS enables the set of activities defined as fixed

1 in the Commission's approach to be augmented to incorporate setup and
2 takedown time.¹

3 Witness Bozzo's responses to MPA and ANM interrogatories provide
4 information about the costs associated with setup and takedown time for all mail
5 processing cost pools for which the redesigned IOCS provides appropriate
6 codes. 10 Tr. 2508-2526 (response of USPS witness Bozzo to MPA/USPS-T12-
7 1); 10 Tr. 2545-2546 (response of USPS witness Bozzo to MPA/USPS-T12-4,
8 MPA-ANM-4.xls, worksheet "data").

9 Table 1 shows the derivation of an augmented PRC approach that
10 incorporates setup and takedown time as an activity characterized as fixed with
11 respect to volume changes. This derivation is closely related to the bookkeeping
12 analysis presented by Witness McCrery, but relies on witness Van-Ty-Smith's
13 presentation of the results of the PRC method and witness Bozzo's interrogatory
14 response showing the tally costs associated with these cost pools. USPS-T-42
15 (McCrery Direct) at 34-40; USPS-T-11 (Van-Ty-Smith Direct) at 49; USPS-T-12
16 (Bozzo Direct) at 26-27; 10 Tr. 2508-2526 (response of USPS witness Bozzo to
17 MPA/USPS-T12-1).

¹ By excluding any consideration of container handlings and other activities which may be neither 100 percent volume variable nor totally fixed, this augmented version of the PRC approach may still provide a conservatively low estimation of the portion of mail processing costs that are not volume variable.

Table 1
Derivation of an Augmented PRC Variability Factor
that Incorporates Setup and Takedown Time
for the Econometrically-Estimated Cost Pools

Cost Pool	PRC Mail Proc Pool Costs (exclude migrated) (\$000)	PRC Mail Proc Vol. Var Costs (i.e. exclude fixed) (\$000)	Setup/ Takedown Costs (\$000)	Pool Costs Excluded Migrated, Fixed, Setup/ Takedown (\$000)	Augmented PRC Variability Factor
	[1]	[2]	[3]	[4]	[5]
D/BCS	1,475,153	1,457,174	120,921	1,336,253	90.6%
OCR/	200,470	197,724	13,844	183,880	91.7%
AFSM100	536,221	528,061	40,857	487,204	90.9%
FSM/1000	217,558	215,197	13,901	201,296	92.5%
SPBS OTH	408,619	396,934	25,755	371,179	90.8%
SPBSPRIO	144,729	139,953	8,429	131,524	90.9%
MANF	237,106	231,757	10,598	221,159	93.3%
MANL	906,346	889,652	25,950	863,702	95.3%
MANP	82,249	78,948	3,970	74,978	91.2%
PRIORITY	314,637	305,489	13,741	291,748	92.7%
1CANCEL	304,291	299,173	12,459	286,714	94.2%
Total	4,827,379	4,740,062	290,426	4,449,636	92.2%

[1] USPS-T-11 at 49 (Van-Ty-Smith Direct), Table 5

[2] USPS-T-11 at 49 (Van-Ty-Smith Direct), Table 5

[3] 10 Tr. 2508-2526 (response of USPS witness Bozzo to MPA/USPS-T12-1)

[4] = [2] – [3]

[5] = [4] / [1]

1 Table 1 covers only the cost pools examined econometrically by witness
2 Bozzo, but can be expanded to other mail processing cost pools in an analogous
3 manner. In response to an interrogatory, witness Bozzo provided information

1 derived from IOCS showing setup and takedown costs in other mail processing
2 cost pools totaling \$149 million, in addition to the \$290 million shown in Table 1
3 for the econometrically-estimated cost pools. See 10 Tr. 2545-2546 (Response
4 of witness Bozzo to MPA/USPS-T12-4, MPA-ANM-4-xls, worksheet "data").
5 Exhibit 1 summarizes the information for the other mail processing cost pools
6 with non-zero setup and takedown costs.

7 **IV. AN AUGMENTED VERSION OF THE COMMISSION'S APPROACH TO**
8 **ESTIMATING THE VARIABILITY OF MAIL PROCESSING THAT**
9 **REFLECTS SETUP AND TAKEDOWN TIME SHOWS THAT WITNESS**
10 **NEELS' ECONOMETRIC ESTIMATES OF VOLUME VARIABILITY**
11 **AREN'T CONSISTENT WITH OPERATIONAL REALITIES IN MAIL**
12 **PROCESSING.**

13 Witness Neels develops an econometric estimate of the volume variability
14 of mail processing at the plant level that aggregates over the sorting operations
15 where witness Bozzo has provided data. Witness Neels produces plant-level
16 volume variability estimates based on two different methods for screening the
17 MODS observations. The "strict" quality approach results in a variability estimate
18 of 114 percent, with a 95 percent confidence interval from 101 to 126 percent.
19 The "looser" quality approach results in a variability estimate of 103 percent, with
20 a 95 percent confidence interval from 96 to 110 percent. UPS-T-1 (Neels Direct)
21 at 54, Table 23.

22 Table 1 shows that witness Neels' plant-level estimates of the volume
23 variability of mail processing are inconsistent with the evidence presented in this
24 case about setup and takedown costs and the other operationally identified fixed
25 costs of mail processing. The last row of Table 1 provides an aggregate estimate
26 of variability that includes all the cost pools investigated by witness Bozzo. The
27 table shows that an augmented Commission estimate that reflects setup and

1 takedown time results in an aggregated variability factor of 92.2 percent, which
2 falls below the range of estimated plant-level volume variabilities derived by
3 witness Neels.

4 **V. AN AUGMENTED VERSION OF THE COMMISSION'S APPROACH TO**
5 **ESTIMATING THE VARIABILITY OF MAIL PROCESSING THAT**
6 **REFLECTS SETUP AND TAKEDOWN TIME SHOWS THAT WITNESS**
7 **ROBERTS' ECONOMETRIC ESTIMATE OF VOLUME VARIABILITY**
8 **FOR LETTERS ISN'T CONSISTENT WITH OPERATIONAL REALITIES**
9 **IN MAIL PROCESSING.**

10 Witness Roberts develops econometric estimates of the volume variability
11 of mail processing, disaggregated by shape. For letters, his recommended
12 estimate of variability is 127.6 percent with a standard error of 6.1 percentage
13 points. 23 Tr. 8300-8301 (response of OCA witness Roberts to USPS/OCA-T1-
14 8(b)). These estimates produce a 95 percent confidence interval from 115.6 to
15 139.6 percent.²

16 To see whether witness Roberts' estimates of the volume variability of
17 mail processing for letters are consistent with the operational realities in mail
18 processing, one can compare his estimates to augmented Commission estimates
19 of variability in the letter cost pools. Summing over the three letter rows in Table
20 1 (D/BCS, OCR/, and MANL) produces an augmented Commission volume
21 variability estimate for letters of 92.3 percent, which falls below the range of
22 estimates provided by witness Roberts. This comparison suggests that the
23 letter-shape econometric estimate provided by witness Roberts is inconsistent

² Roberts provides several estimates for the variability of flats but does not recommend that any of them be used for allocating postal costs because of their sensitivity to the data sample chosen and the imprecision of the estimates. OCA-T-1 at 44-50, especially at p. 50, lines 5-18.

1 with the evidence presented in this case about setup and takedown costs and the
2 other operationally identified fixed costs of mail processing.

3 **VI. WITNESS MCCRERY'S RESPONSES TO VALPAK'S**
4 **INTERROGATORIES ARE INCONSISTENT WITH WITNESS HALDI'S**
5 **ASSERTION THAT MAIL PROCESSING IS OFTEN EXCLUSIVELY FOR**
6 **A SINGLE CLASS OR SUBCLASS OF MAIL.**

7 Witness Haldi states that "mail processing within shape-related MODS
8 cost pools is often exclusively or primarily for a single class or subclass of mail."
9 VP-T-2 (Haldi Direct) at 43. To support this argument, Haldi cites responses of
10 USPS witness McCrery to ValPak interrogatories concerning instances in which
11 individual classes or subclasses of mail are sorted alone. However, a review of
12 the complete set of interrogatory responses provided by witness McCrery
13 indicates that mail processing within shape-related cost pools more typically
14 mixes multiple classes or subclasses of mail.

15 As noted above, witness McCrery has confirmed that incoming secondary
16 sortations form the majority of sort schemes and therefore the majority of the
17 fixed costs of setup and takedown. Witness McCrery's responses to ValPak
18 interrogatories show clearly that the three major mail classes are generally
19 merged for incoming secondary sorts for both letters and flats:

- 20 • "[B]arcoded Periodicals letters are merged with First-Class Mail letters
21 during both incoming primary and secondary sortation." 11 Tr. 3113
22 (Response of witness McCrery to VP/USPS-T42-12(a)).
- 23 • "In general, Standard Regular letters are merged with First-Class Mail
24 letters during incoming secondary sortation." 11 Tr. 3113 (Response
25 of witness McCrery to VP/USPS-T42-12(c)).

1 • “Barcoded machinable Periodicals flats are routinely merged with First-
2 Class Mail flats at incoming secondary sortation scheme on the AFSM
3 100.” 11 Tr. 3114 (Response of witness McCrery to VP/USPS-T42-
4 13(a)).

5 • “If the operational window allows, barcoded machinable Standard
6 Regular flats are routinely merged with First-Class Mail flats during
7 incoming secondary sortation on the AFSM 100.” 11 Tr. 3115
8 (Response of witness McCrery to VP/USPS-T42-13(c)).

9 The primary exception to the merging of subclasses during incoming
10 secondary sortation seems to be that Standard flats may be processed
11 separately if the operational window does not allow them to be merged with First
12 and Periodicals flats. However, as witness Haldi notes, this will no longer be
13 possible with the coming move to the flat sequence sorter (“FSS”). VP-T-2 (Haldi
14 Direct) at 47.

15 For the other types of sorts—the minority of sort schemes—the different
16 classes of flats are sometimes but not always processed together, whereas First-
17 Class and Standard letters are generally processed separately when possible:

18 • “Generally, outgoing Periodicals flat-shaped mail is kept separate from
19 First-Class Mail on the AFSM 100. However, recent operational and
20 mail preparation changes will merge the processing of outgoing
21 Periodicals flat mail with First-Class Mail flats at origin plants for
22 destinations that are linked by surface transportation ... Furthermore,
23 the balance of Periodicals flats requiring outgoing sortation is on
24 occasion merged with Standard flats, though in these cases the

- 1 merged product is treated as Periodicals.” 11 Tr. 3110 (Response of
2 witness McCrery to VP/USPS-T42-10(c)).
- 3 • “Standard Regular flats receiving outgoing primary sortation should not
4 be merged with First-Class Mail flats, though on limited occasions it
5 does occur.” 11 Tr. 3111 (Response of witness McCrery to VP/USPS-
6 T42-10(e)).
 - 7 • “Standard Regular flats receiving outgoing secondary sortation should
8 not be merged with First-Class Mail flats, though on limited occasions it
9 does occur.” 11 Tr. 3114 (Response of witness McCrery to VP/USPS-
10 T42-11(e)).
 - 11 • “Certain plants occasionally merge barcoded machinable Periodicals
12 flats with First-Class Mail flats during incoming primary sortation
13 scheme, while other plants routinely do so.” 11 Tr. 3114 (Response of
14 witness McCrery to VP/USPS-T42-13(a)).
 - 15 • “Certain plants occasionally merge barcoded machinable Standard
16 Regular flats with either First-Class Mail or Periodicals flats during
17 incoming primary sortation while other plants routinely do so.” 11 Tr.
18 3115 (Response of witness McCrery to VP/USPS-T42-13(c)).
 - 19 • “Since volume of Periodicals letter-shaped mail requiring outgoing
20 primary sortation is so small, it may be merged with First-Class Mail.”
21 11 Tr. 3108 (Response of witness McCrery to VP/USPS-T42-8(c)).
 - 22 • “In general, Standard Regular letter mail processing is kept separate
23 from other mail classes on outgoing primary sortation. On limited
24 occasions, Standard Regular letter mail is merged with First-Class

1 mail, for example, if there is insufficient volume of Standard Regular
2 letter mail to justify setting up a separate sortation scheme.” 11 Tr.
3 3108 (Response of witness McCrery to VP/USPS-T42-8(e)).

4 • “Since volume of Periodicals letter-shaped mail requiring outgoing
5 secondary sortation is so small, it may be merged with First-Class
6 Mail.” 11 Tr. 3109 (Response of witness McCrery to VP/USPS-T42-
7 9(c)).

8 • “In general, Standard Regular letter mail processing is kept separate
9 from other mail classes on outgoing secondary sortation. On limited
10 occasions, Standard Regular letter mail is merged with First-Class
11 Mail, for example, if there is insufficient volume of Standard Regular
12 letter mail to justify setting up a separate sortation scheme.” 11 Tr.
13 3109 (Response of witness McCrery to VP/USPS-T42-9(d)).

14 • “[B]arcoded Periodicals letters are merged with First-Class Mail letters
15 during both incoming primary and secondary sortation.” 11 Tr. 3113
16 (Response of witness McCrery to VP/USPS-T42-12(a)).

17 • “On limited occasions, Standard Regular letters are merged with First
18 Class letters on incoming primary, for example, if there is not enough
19 volume of Standard Regular letters to justify setting up separate
20 sortation schemes.” 11 Tr. 3113 (Response of witness McCrery to
21 VP/USPS-T42-12(c)).

22 Thus, the evidence presented in this case suggests that single-class
23 sortation runs occur only for a minority of sort schemes, and primarily for letter-
24 shaped mail.

Exhibit 1
Derivation of an Augmented PRC Variability Factor
that Incorporates Setup and Takedown Time
for non-Econometrically-Estimated Cost Pools
with Non-Zero Setup and Takedown Costs

Cost Pool	PRC Mail Proc Pool Costs (exclude migrated) (\$000)	PRC Mail Proc Vol. Var Costs (i.e. exclude fixed) (\$000)	Setup/Takedown Costs (\$000)	Pool Costs Excluded Migrated, Fixed, Setup/Takedown (\$000)	Augmented PRC Variability Factor
	[1]	[2]	[3]	[4]	[5]
MECPARC	5,031	4,674	191	4,483	89.1%
1SACKS_M	24,449	22,476	703	21,773	89.1%
1TRAYSRT	159,440	150,371	5,387	144,984	90.9%
1DSPATCH	221,820	218,180	21,516	196,664	88.7%
1FLATPRP	298,200	295,624	12,172	283,452	95.1%
1MTRPREP	29,536	28,687	1,852	26,835	90.9%
1OPBULK	225,563	222,798	9,586	213,212	94.5%
1OPPREF	526,808	517,192	17,517	499,675	94.8%
1PLATFRM	1,510,017	1,389,543	7,336	1,382,207	91.5%
1POUCHNG	129,571	126,322	9,088	117,234	90.5%
1PRESORT	33,924	32,736	689	32,047	94.5%
1SACKS_H	118,671	115,134	7,848	107,286	90.4%
NMO	39,763	35,839	597	35,243	88.6%
OTH	225,428	213,992	3,758	210,233	93.3%
PSM	124,053	120,226	2,508	117,719	94.9%
SPB	56,223	54,213	1,037	53,175	94.6%
SSM	40,480	37,577	134	37,443	92.5%
N_Allied	372,115	361,035	4,484	356,552	95.8%
N_Auto	200,461	198,391	14,221	184,170	91.9%
N_Man_F	580,938	576,673	6,596	570,076	98.1%
N_Man_L	760,341	749,106	11,538	737,568	97.0%
N_Man_P	296,285	294,203	10,176	284,027	95.9%
Total	5,979,118	5,764,991	148,933	5,616,058	93.9%

[1] USPS-T-11 (Van-Ty-Smith Direct) at 49-50, Table 5

[2] USPS-T-11 (Van-Ty-Smith Direct) at 49-50, Table 5

[3] 10 Tr. 2545-2546 (response of witness Bozzo to MPA/USPS-T12-4, MPA-ANM-4-xls, worksheet "data")

[4] = [2] - [3]

[5] = [4] / [1]