DOCKET SECTION

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



POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97–1

ERRATA TO TESTIMONY AND EXHIBITS OF WITNESS CRUM

The United States Postal Service hereby files errata to the testimony and exhibits of witness Crum. Revised pages incorporated these minor changes are provided, with each change shown in the attached table. The changes result from the errata to USPS–T–29 filed on October 1, 1997.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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Detailed Crosswalk for Errata Filed 10/6/97

| Page | Line | Change |
|---|---|---|
| 4 | 6 | 10.8 to 10.7 |
| 4 | 11 | 10.8 to 10.7 |
| 4 | 16 | 57.7 to 57.6 |
| 5 | 24 | 27.3 to 27.5 |
| 5 | 25 | .8 to .7 |
| 6 | 1 | .281 to .282 |
| 6 | 5 | 31.3 to 31.4 |
| 6 | 17 | 31.3 to 31.4 |
| 7 | 18 | 29.2 to 29.4 |
| 7 | 19 | 44.7 to 45.2 |
| 7 | 20 | .364 to .3688 |
| 7 | 22 | 16.5 to 16.6 |
| 7 | 23 | 16.5 to 16.6 |
| 7 | 26 | 45.7 to 46.0 |
| 8 | 4 | 45.7 to 46.0 |
| 8 | 25 | .140 to .139 & .123 to .125 |
| 9 | 4 | 14.0 to 13.9 & 12.3 to 12.5 |
| Exhibit D | OSCF ld | .049 to .050 & .030 to .031 |
| Exhibit D | OBMC | .187 to .184 & .146 to .143 |
| Exhibit D | DBMC un | .024 to .025 & 0 to .001 |
| Exhibit D | DBMC st | .097 to .098 & .136 to .137 & .110 to .108 |
| Exhibit D | Total | .266 to .267 & .140 to .139 |
| Exhibit D | OBMC | .248 to .249 & .084 to .085 |
| Exhibit D | DBMC un | .110 to .111 & .016 to .017 & .089 to .091 |
| Exhibit D | Total | .636 to .638 & .123 to .125 |
| Exhibit E | Total mach | .110 to .108 |
| Exhibit E | Total nmo | .089 to .091 |
| Exhibit E | Total bmc | .108 to .107 |
| Exhibit E | Total obmc | .577 to .576 |
| Exhibit F | dump pal | .048 to .049 |
| Exhibit F | dump otr | .046 to .047 |
| Exhibit F | dump owc | .108 to .110 |
| Exhibit F | Tend cl | .055 to .056 & .040 to .041 |
| Exhibit F | Sack/tie | .185 to .189 & .049 to .050 |
| Exhibit F | M Savings | .273 to .275 |
| Exhibit F | NM bdld | .172 to .171 |
| Exhibit F | Total | .292 to .294 |
| Exhibit G | page 3 | .8 to .7 |
| Exhibit J | dump gylrd | .043 to .044 |

These errata are based on the changes to USPS-T-29 filed 10/1/97.

(at least 4 feet high). Pieces are segregated by container type for efficiency of entry into the parcel sorting machine or the manual handling process respectively. Exhibit D shows the BMC presort related savings including those beginning at the origin BMC where qualifying pieces are entered. Weighting the average costs by the Inter-BMC volume proportion of machinable and nonmachinable pieces gives total BMC presort-related savings of 10.7 cents per piece (see Exhibit E).

C. Summary

In Exhibit E, BMC presort related savings of 10.7 cents per piece are combined with the DBMC-related acceptance and mail processing cost savings (9.2 cents per piece for acceptance and 37.7 cents per piece for mail processing (see Section II)) which apply to OBMC mail as well as DBMC mail. On the basis of my cost analysis, then, I conclude that origin BMC dropship by the mailer with mandatory BMC presort saves 57.6 cents per piece, at FY 1998 test year cost levels, compared to non-OBMC inter-BMC parcels.

## IV. DESTINATION SCF PARCEL POST COST SAVINGS

A. Introduction

I studied the potential cost savings for parcel post pieces dropshipped to the destination sectional center facility (DSCF). When parcels bypass the destination BMC, they avoid all the associated handling and sorting costs that would be incurred there. These pieces would also avoid the transportation leg from the BMC to the destination SCF. My testimony describes the mail processing costs saved from the applicable costs for DBMC parcel post if mailers deposit their parcels in bulk at the destination SCF. Witness Hatfield (USPS-T-16) describes the transportation-related savings associated with DSCF dropship.

Because the primary task of the destination BMC is to sort machinable parcels to 5-digit ZIP Code areas, the proposed destination SCF dropship discount includes a mandatory presort requirement. My analysis assumes pieces must be presorted to 5-digits. I also assume machinable parcels are offered by the mailer in sacks with an average of 10 pieces per 5-digit area and nonmachinables are offered in GPMCs (General Purpose Mail Containers) with an average of 25 pieces per 5-digit area. If the presort requirement were removed, pieces would generally have to be shipped back to the BMC for sorting and the benefits of the DSCF dropship would be more than eliminated.

B. Mail Processing Savings

Parcel post that is dropshipped by the mailer to the destination SCF avoids any handlings at the destination BMC in addition to all the other savings associated with DBMC pieces. To be consistent with the DBMC requirements, DSCF parcels must be limited to mailings with at least 50 pieces. Exhibit F describes the destination BMC mail processing costs avoided by parcel post that is dropshipped to the destination SCF. Exhibit G compares the downstream SCF and delivery unit-related costs for parcel post moving in the Postal Service mailstream versus the 5-digit dropshipped DSCF sacks (for machinables) and GPMCs (for nonmachinables) which could qualify for the discount.

Exhibit F shows the total average mail processing costs avoided at BMCs by DSCF-deposited parcel post to be 27.5 cents per machinable piece and 54.4 cents per nonmachinable piece. Exhibit G shows .7 cents per machinable piece and 19.8 cents per nonmachinable piece as the additional downstream savings at SCFs and delivery units. Those Exhibit G results are contingent on the assumption that DSCF will not be allowed at those SCFs that are bypassed by the 12.3 percent of parcel volume that gets direct transportation from the BMC to the delivery unit.

Adding the Exhibit F and Exhibit G results gives savings of $.282 and $.742 respectively for machinables and nonmachinables. Weighting them together by the proportion of DBMC machinable and nonmachinable pieces (.93 and .07 respectively - see Exhibit F) gives my total estimated mail processing savings of 31.4 cents per piece, compared to non-DSCF DBMC mail, at FY 1998 test year cost levels. This result is sensitive to the volume assumptions per 5-digit sack or GPMC. For example, lowering the average per sack quantity to five would drop machinable savings to 22.4 cents while lowering the average per GPMC quantity to 15 would lower nonmachinable savings to 54.1 cents for a total weighted average of 24.6 cents. This simple calculation could be made in Exhibit G by changing the conversion factors and multiplying through for each of the operations.

C. Summary

On the basis of my cost analysis, I estimate that DSCF dropshipped parcel post with machinables in 5-digit sacks and nonmachinables in 5-digit GPMCs will save the Postal Service an average of 31.4 cents per piece at FY 1998 test year cost levels, compared to non-DSCF DBMC mail.

## V. DESTINATION DELIVERY UNIT PARCEL POST COST SAVINGS

A. INTRODUCTION

I studied the potential cost savings for parcel post deposited by the mailer at the destination delivery unit (DDU). When parcels are deposited at the destination delivery unit, they avoid both the destination BMC and the destination SCF. My analysis will estimate the mail processing costs avoided by bypassing these facilities. Witness Hatfield (USPS-T-16) describes the transportation-related savings associated with DDU dropship

B. MAIL PROCESSING SAVINGS

Parcel post that is dropshipped by the mailer to the destination delivery unit avoids all handlings at both the destination BMC and destination SCF in addition to all the other savings associated with DBMC parcels. My analysis will estimate these mail processing cost savings relative to non-DDU DBMC parcels. To be compatible with the assumptions of the DBMC analysis, the pieces must be delivered in bulk with at least the same total minimum volume per mailing as DBMC (currently 50 pieces). Qualifying mailings would be limited to Postal Service designated delivery units to avoid costly rehandling and rerouting that might eliminate the savings.

Exhibit F describes the destination BMC mail processing costs avoided by DDU entered parcel post. Weighting the savings by the DBMC volume of machinable and nonmachinable pieces gives a total savings of 29.4 cents per piece. I use information from the parcel post models presented by witness Daniel (USPS-T-29) to estimate the additional savings at SCFs through unloading at delivery units of DDU-deposited parcels. Page 3 of Appendix V, USPS-T-29 shows the total downstream postal network costs to be 14.4 cents per piece (.1097+.034) for machinable parcels while page 4 shows the nonmachinable costs to be 45.2 cents per piece (.3688+.0828). Weighting these by the DBMC volume share of machinable and nonmachinable pieces (.930 and .070 respectively - see Exhibit F) gives the average modeled postal costs at downstream facilities of 16.6 cents per piece. Since these are the modeled facility costs that DDU mail avoids, 16.6 cents per piece is also my estimate of savings. Adding this to the avoided mail processing costs at BMCs gives the total DDU deposited parcel post mail processing savings of 46.0 cents per piece.

C. SUMMARY

On the basis of my cost analysis, I estimate that DDU-dropshipped parcel post will save the Postal Service an average of 46.0 cents per piece at FY 1998 test year cost levels, compared to non-DDU DBMC mail.

## VI. BMC PRESORT PARCEL POST COST SAVINGS

### A. INTRODUCTION

The Postal Service is proposing a discount for bulk entered Inter-BMC parcel post presorted to the destination BMC. BMC presort parcel post avoids sorting at the origin BMC and can be moved through the facility in bulk and routed to its destination BMC.

### B. MAIL PROCESSING SAVINGS

To qualify for the BMC Presort discount as proposed, mailers can deposit their parcels at any designated facility. My analysis does assume that machinable pieces will be deposited in sufficiently (at least 75 percent) full large cardboard boxes often referred to as "gaylords" and that nonmachinable pieces will be deposited on sufficiently full pallets (at least 4 feet high). I compare the postal network mail processing costs to the costs of qualifying BMC Presort parcels to show the savings for the presorted pieces. Exhibit D shows machinable BMC Presort savings to be $.139 and nonmachinable BMC Presort savings to be $.125.

C. SUMMARY

Based on my analysis and assuming the specifications described above, BMC Presort saves 13.9 cents for machinable pieces and 12.5 cents for nonmachinable pieces at FY 1998 test year cost levels.

## VII. BOUND PRINTED MATTER CARRIER ROUTE PRESORT COST SAVINGS

A. BACKGROUND

In Docket No. R84-1 the Postal Service proposed a discount for bulk Bound Printed Matter presorted to individual carrier routes and box sections based on an analysis by witness Madison (USPS-T-16). Though no new cost studies were completed, the carrier route discount increased in both Docket No. R90-1 and Docket No. R94-1. The current discount is 6.3 cents per piece.

B. MAIL PROCESSING SAVINGS

My analysis uses a similar format and much of the basic data from witness Madison's study. I have updated the wage rates and piggyback factors, adjusted for the postal service volume variability assumptions, and revised the methodology based on operational changes which have occurred. Exhibit H describes the analysis and shows the estimated savings for carrier route presorted Bound Printed Matter to be $.067.

C. SUMMARY

Based on my analysis, I estimate that the mail processing savings of carrier route presorted Bound Printed Matter as compared to Basic Bulk BPM are 6.7 cents at FY 1998 test year cost levels.

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Exhibit D
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# BMC PRESORT PARCEL POST COST SAVINGS

## MACHINABLE PARCEL POST

| Operation | Nonpresorted Cost/piece (1) | BMC Presorted Cost/piece (2) | Difference (Savings) | |
|---|---|---|---|---|
| Origin SCF Load | $ 0.050 | $ 0.019 | $ 0.031 | |
| Origin BMC Unload | $ 0.027 | $ 0.024 | $ 0.003 | |
| Origin BMC | $ 0.184 | $ 0.041 | $ 0.143 | |
| Origin BMC Load | $ 0.022 | $ 0.022 | | |
| DBMC Unload | $ 0.025 | $ 0.024 | $ 0.001 | BMC Savings |
| DBMC Sort | $ 0.098 | $ 0.137 | $ (0.039) | = $ .108 |
| Total | $ 0.406 | $ 0.267 | $ 0.139 | |

## NONMACHINABLE PARCEL POST

| Operation | Nonpresorted Cost/piece | BMC Presorted Cost/piece | Difference (Savings) | |
|---|---|---|---|---|
| Origin SCF Load | $ 0.109 | $ 0.075 | $ 0.034 | |
| Origin BMC Unload | $ 0.068 | $ 0.094 | $ (0.026) | |
| Origin BMC | $ 0.249 | $ 0.164 | $ 0.085 | |
| Origin BMC Load | $ 0.101 | $ 0.086 | $ 0.015 | BMC Savings |
| DBMC Unload | $ 0.111 | $ 0.094 | $ 0.017 | = $ .091 |
| Total | $ 0.638 | $ 0.513 | $ 0.125 | |

1. USPS-T-29, Appendix V, page 3.
2. Exhibit J.

# COSTS AVOIDED BY DEPOSITING INTER-BMC PARCELS AT THE ORIGIN BMC WITH PRESORT TO THE DESTINATION BMC

DBMC Savings

| | | |
|---|---|---|
| I. Mail Processing | (see Section IIC of Testimony) | $ 0.377 |
| II. Acceptance | (see Section IIB of Testimony) | $ 0.092 |

BMC Related Savings

| | | |
|---|---|---|
| A. Total Machinable Savings | $ 0.108 | (1) |
| B. Total Nonmachinable Savings | $ 0.091 | (1) |
| III. Total BMC Presort Related Savings | $ 0.107 | (2) |
| **Total OBMC Mail Processing Savings (I + II + III)** | **$ 0.576** | |

1. Exhibit D
2. Machinable and nonmachinable savings weighted by Inter-BMC volume proportions
   .108*.913 [.913=60,462,052/66,257,981] + .089*.087 [.087=5,795,914/66,257,981] (LR-H-135)

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# DESTINATION BMC MAIL PROCESSING COSTS AVOIDED BY PARCEL POST DEPOSITED AT DESTINATION SCFs OR DELIVERY UNITS

A. MACHINABLE PARCEL POST (Costs for Nonqualifying Mail)

| Operation | Prob. of Handling(1) | * | TY 1998 Cost per Handling(2) | = | Costs(3) |
|---|---|---|---|---|---|
| Unload Bedload | 0.962 | | $ 0.049 | | 0.047 |
| Unload Pallet | 0.003 | | 0.033 | | 0.000 |
| Unload OTR | 0.008 | | 0.019 | | 0.000 |
| Unload Gaylord | 0.026 | | 0.024 | | 0.001 |
| Unload OWC | 0.002 | | 0.044 | | 0.000 |
| Dump Pallet | 0.003 | | 0.049 | | 0.000 |
| Dump OTR | 0.008 | | 0.047 | | 0.000 |
| Dump Gaylord | 0.026 | | 0.043 | | 0.001 |
| Dump OWC | 0.002 | | 0.110 | | 0.000 |
| Label Cost | 1.000 | | 0.005 | | 0.005 |
| Primary Sort | 1.000 | | 0.058 | | 0.058 |
| Secondary Sort | 0.830 | | 0.036 | | 0.030 |
| Tend CL | 0.733 | | 0.056 | | 0.041 |
| Sack and Tie | 0.267 | | 0.189 | | 0.050 |
| Load OTRs - loose | 0.603 | | 0.037 | | 0.022 |
| Load OTRs w/ sacks | 0.029 | | 0.031 | | 0.001 |
| Load OWC | 0.130 | | 0.087 | | 0.011 |
| Bedload Sacks | 0.238 | | 0.029 | | 0.007 |
| Savings | | | | | $ 0.275 |

B. NONMACHINABLE PARCEL POST (Costs for Nonqualifying Mail)

| Operation | Prob. of Handling(1) | * | Cost per Handling(2) | = | Costs(3) |
|---|---|---|---|---|---|
| Unload Bedload | 0.986 | | 0.188 | | 0.185 |
| Unload NMOs on Pallet | 0.008 | | 0.111 | | 0.001 |
| Unload NMOs in OTR | 0.007 | | 0.047 | | 0.000 |
| Sort | 1.000 | | 0.249 | | 0.249 |
| Bedload from IHC | 0.129 | | 0.171 | | 0.022 |
| Load NMOs in OTR | 0.536 | | 0.094 | | 0.051 |
| Load NMOs on Pallet | 0.310 | | 0.101 | | 0.031 |
| Load NMOs in OWC | 0.025 | | 0.222 | | 0.006 |
| Savings | | | | | $ 0.544 |

**Total Mail Processing Savings at BMCs** **$ 0.294** (4)

1. Probability that an average piece will receive a particular handling. (Library Reference H-131 and USPS-T-29)
2. Estimated test year attributable costs of complete handling for particular piece. (USPS-T-29, Appendix V, pages 3 & 4.)
3. Avoided costs of the average piece. (2*3)
4. Machinable and nonmachinable savings weighted by DBMC volume proportions .275*.930 [.930=89,624,307/96,381,277] + .544*.070 [.070=6,756,973/96,381,277] (LR-H-135)

III. POSTAL NETWORK COSTS MINUS CANDIDATE MAIL COSTS

Machinable parcel post: $.159 - $.152 = $.007 **= .7 cents**
Nonmachinable parcel post: $.498 - $.300 = $.198 **= 19.8 cents**

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Exhibit J
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## BMC PRESORTED PARCEL POST COST PER PIECE

**Machinable BMC Presort Cost Summary**

| | # of hand. | (2) units/hr | (3) conv. fact. | (4) PB fact. | (5) $ per op. | Cost |
|---|---|---|---|---|---|---|
| **Origin SCF** | | | | | | |
| Load Gaylord | 1.0000 | 23.9 | 104.5 | 1.84 | 0.019 | 0.019 |
| **Origin BMC** | | | | | | |
| Unload Gaylord | 1.0000 | 21.9 | 104.5 | 2.13 | 0.024 | 0.024 |
| Crsdk Gaylord | 1.0000 | 12.6 | 104.5 | 2.13 | 0.041 | 0.041 |
| Load Gaylord | 1.0000 | 23.9 | 104.5 | 2.13 | 0.022 | 0.022 |
| **Destination BMC** | | | | | | |
| Unload Gaylord | 1.0000 | 21.9 | 104.5 | 2.13 | 0.024 | 0.024 |
| Dump Gaylord | 1.0000 | 11.7 | 104.5 | 2.13 | 0.044 | 0.044 |
| D. Primary (Key) | 1.0000 | 895.6 | 1.0 | 2.03 | 0.058 | 0.058 |
| Label | 1.0000 | | | | 0.005 | 0.005 |
| Secondary (scan) | 0.8300 | 1433.3 | 1.0 | 2.03 | 0.036 | 0.030 |

1. Test Year 1998 Wage Rate (LR-H-146) = $ 25.445
2. Productivity. USPS-T-29, Appendix V, page 15.
3. Conversion Factor. USPS-T-29, Appendix V, page 15.
4. Piggyback Factor. USPS-T-29, Appendix V, page 16.
5. Wage rate * piggyback factor / (producitivity * conversion factor).

## CERTIFICATE OF SERVICE

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

Scott L. Reiter

475 L'Enfant Plaza West, S.W.
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October 6, 1997