

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

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POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

POSTAL RATE AND FEE CHANGES, 2000

Docket No. R2000-1

RESPONSE OF THE UNITED STATES POSTAL SERVICE
WITH RESPECT TO DMC REQUEST FOR IMPACT OF
ALTERNATIVE ANALYSIS BY WITNESS CRUM
(April 28, 2000)

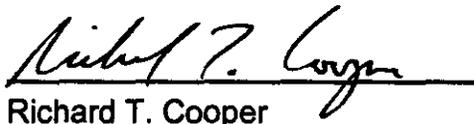
Consistent with its April 21, 2000 status report regarding inquiries posed at hearings by counsel for District Photo, Mystic Color Lab, and Cox Sampling (DMC) concerning the impact of the change in proposed mail processing variabilities between Docket Nos. R97-1 and R2000-1 on the analysis presented by witness Crum, (See Tr. 8/3476-79), the Postal Service hereby provides the results of an alternative analysis intended to produce an approximation of the information sought. The request of counsel is summarized, followed by the response of witness Crum.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking


Richard T. Cooper

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2993 Fax -5402
April 28, 2000

**U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO QUESTION POSED AT HEARINGS**

At hearings on April 19, 2000, counsel for DMC requested (starting at Tr. 8/3476) that witness Crum provide unit costs based on explicit econometric-based volume variability factors as referenced on page 8, lines 7-13 of his testimony. Counsel for RIAA supported that request. On April 21, 2000, Postal Service counsel explained that a shortcut estimate could be provided within a week.

RESPONSE

The attached pages show Attachment F, Tables 3 through 3.6 of my testimony (USPS-T-27) adjusted as requested. Costs by shape corresponding to those provided by witness Smith in LR-I-81 were modified and fed into my analysis in the Mail Processing line of my tables. The modification to LR-I-81 simply substitutes the volume variabilities presented in witness Degen's testimony (USPS-T-12, Table 4) in Docket No. R97-1 into the Docket No. R2000-1 cost pools where no explicit variabilities are estimated. This is a shortcut approach in that neither the base year nor the piggyback factors are being updated. We expect the results would be similar to the much more complicated, time consuming, and technically correct approach that would require a re-run of the base year. We do, however, expect that the piggyback factors underlying the results presented here are most likely low because the Docket No. R97-1 test year piggyback factors (see LR-H-77, pages 231-232) are higher than the Docket No. R2000-1 test year piggyback factors (see USPS-T-21, Attachment 14) due to the lower labor variabilities presented in Docket No. R97-1. In addition, the reconciliation process described in the testimony of witness Smith (USPS-T-21, page 30) can not be done since there are no corresponding base year costs to reconcile with.

**U.S. POSTAL SERVICE WITNESS CHARLES L. CRUM
RESPONSE TO QUESTION POSED AT HEARINGS**

It is important to note that the attached results from the adjusted Tables 3 through 3.6 of Attachment F should not be taken out of context. Just as the letter unit costs are impacted along with the parcel and flat unit costs in bulk Standard Mail (A), many other subclasses and rate categories (particularly those that receive handlings on the platform or travel through BMCs) might have significant cost changes if the Docket No. R97-1 variabilities were used in this case. Using only these costs while ignoring other potential impacts would be inappropriate. With those caveats, the bottom line estimated change to Figure 2 on page 10 of my testimony is presented below.

Cost Per Piece (cents)

Parcels	67.7
Flats	12.1
Difference	55.6

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

Table 3

FY 1998 Bulk Standard Mail (A)
Costs by Shape (\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1a Mail Processing Variable w/ Pigbk	3,815,758	1,728,636	1,751,159	335,963	Sum of Tables 3.1 - 3.4
3.1b Remote Encoding Costs	-	-	-	-	
3.1 Total	3,815,758	1,728,636	1,751,159	335,963	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	43,014	24,964	16,096	1,954	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor	-	-	-	-	
3.2c Piggybacked Costs	19,353	11,232	7,242	879	=sum(3.2a)*(3.2b - 1)
3.2 Total	62,367	36,196	23,337	2,833	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	1,115,913	528,427	555,075	32,411	C.S. 6 CRA total
7.1 Route	66,043	33,970	31,380	694	= CS total from CRA dist. to shape by Volume
7.2 Access	54,434	26,409	27,562	463	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	739,143	330,963	340,169	68,011	= CS total from CRA dist. to shape by ElemLoad
7.5 Street Support	325,665	151,389	157,628	16,647	= CS total from CRA dist. to shape by 6 - 7.4
6&7 Subtotal	2,301,198	1,071,157	1,111,815	118,226	= sum of 6 through 7.5
6&7 Piggyback Factors	-	-	-	-	
6&7 Piggybacked Costs	818,043	379,998	396,289	41,756	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	3,119,241	1,451,156	1,508,103	159,982	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	94,879	15,556	69,018	10,306	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors	-	-	-	-	
8c Piggybacked Costs	51,606	8,458	37,542	5,606	= 8a * (8b -1)
8 Total	146,485	24,014	106,559	15,911	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	760,264	328,952	417,095	14,216	= CS total from CRA dist. to shape by RuralDel

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

Table 3
FY 1998 Bulk Standard Mail (A)
Costs by Shape (\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
10b Piggyback Factors					
10c Piggybacked Costs	183,984	79,606	100,937	3,440	= 9a * (9b -1)
10 Total	944,248	408,558	518,033	17,657	=sum(9a, 9c)
C.S 14 Transportation					
14.1a Domestic Air	22,788	7,407	13,590	1,791	C.S. Total dist to shape by Weight
14.1b Highway	297,502	58,745	187,761	50,996	C.S. Total dist to shape by Cube
14.1c Railroad	91,572	18,399	56,482	16,691	C.S. Total dist to shape by Cube
14.1d Domestic Water	7,913	2,197	5,116	600	C.S. Total dist to shape by Weight
14.2 International Transportation	-	-	-	-	C.S. Total dist to shape by Weight
14 Total	419,775	86,747	262,950	70,078	= sum of 14.1a through 14.2
All Other Costs					
A. CRA Total for Rate Category	9,070,037				CRA total attributable for rate category
B. Sum of C.S. Totals from above	8,507,873				Sum of C.S. totals above
C. Difference	562,164				= A - B
Total All Other	562,164	334,210	218,231	9,722	= C dist. to shape by Volume
Total Attributable	9,070,037	4,069,517 44.87%	4,388,372 48.38%	612,147 6.75%	
Attributable Cost per Piece (Dollars)	0.110	0.090	0.121	0.677	
Distribution Keys					
1 Volume of Mail (000)	82,357,865	45,174,555	36,279,220	904,090	Table 1 & 2
2 Weight of Mail (000)	10,348,752	2,309,766	7,563,919	475,067	Table 1 & 2
4 Cube of Mail (000)	506,070	81,273	366,291	58,506	= Weight / Density

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Enhanced Carrier Route

**Table 3.1
Costs by Shape (\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1 Mail Processing Variable w/ PB, etc.	395,725	177,298	207,815	10,612	* Special Run *
3.1 Total	395,725	177,298	207,815	10,612	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	7,896	3,366	4,520	10	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor		1.450	1.450	1.450	USPS-T-21, Attachment 10
3.2c Piggybacked Costs		1,515	2,034	5	=sum(3.2a)*(3.2b - 1)
3.2 Total	11,449	4,881	6,554	15	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	339,053	133,951	196,816	8,286	C.S. 6 CRA total
7.1 Route	33,239	12,975	20,217	47	= CS total from CRA dist. to shape by Volume
7.2 Access	32,931	12,855	20,030	46	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	352,282	120,833	226,059	5,390	= CS total from CRA dist. to shape by ElemLoa
sum 6 - 7.3	757,505	280,614	463,122	13,769	
7.4 Street Support	126,519	46,868	77,351	2,300	= CS total from CRA dist. to shape by CS 6 - 7.
6&7 Subtotal	884,024	327,482	540,473	16,069	= sum of 6 through 7.4
6&7 Piggyback Factors		1.361	1.361	1.361	USPS-T-21, Attachment 10
6&7 Piggybacked Costs	319,133	118,221	195,111	5,801	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	1,203,157	445,703	735,583	21,870	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	44,490	4,728	39,535	228	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1.544	1.544	1.544	USPS-T-21, Attachment 10
8c Piggybacked Costs	24,203	2,572	21,507	124	= 8a * (8b -1)
8 Total	68,693	7,299	61,041	352	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	326,363	121,766	204,499	98	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1.242	1.242	1.242	USPS-T-21, Attachment 10
10c Piggybacked Costs	78,980	29,467	49,489	24	= 9a * (9b -1)

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Enhanced Carrier Route

Table 3.1
Costs by Shape (\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation	
10 Total	405,343	151,233	253,988	122	=sum(9a, 9c)	
C.S 14 Transportation						
14.1a Domestic Air	390	55	334	1	C.S. Total dist to shape by Weight	
14.1b Highway	46,707	4,963	41,505	239	C.S. Total dist to shape by Cube	
14.1c Railroad	9,995	1,062	8,882	51	C.S. Total dist to shape by Cube	
14.1d Domestic Water	955	135	818	2	C.S. Total dist to shape by Weight	
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight	
14 Total	58,047	6,215	51,539	293	= sum of 14.1a through 14.2	
All Other Costs						
A. CRA Total for Subclass	2,234,488				BY CRA total vol. var. for subclass	
B. Sum of C.S. Totals from above	2,142,413				Sum of C.S. totals above	
C. Difference	92,075				= A - B	
Total All Other	92,075	35,942	56,003	130	= C dist. to shape by Volume	
Total Attributable	2,234,488	828,572	1,372,523	33,393		
		37.08%	61.42%	1.49%		
Attributable Cost per Piece (Dollars)	0.066	0.062	0.066	0.694		
Distribution Keys						
					Key Name Source	
1	Volume of Mail (000)	34,059,127	13,295,273	20,715,771	48,083	Table 1
2	Weight of Mail (000)	4,872,081	687,184	4,175,440	9,457	Table 1
3	Density of Mail (pounds / cubic feet)	21.41	28.42	20.65	8.12	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	227,545	24,180	202,200	1,165	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	39.04%	60.82%	0.14%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	14.10%	85.70%	0.19%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	10.63%	88.86%	0.51%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	34.30%	64.17%	1.53%	Elem Load LR-I-95, Devel of Deliv Costs
10	Rural Delivery Key	100.00%	37.31%	62.66%	0.03%	Rural ccs LR-I-95, Devel of Deliv Costs
	Carrier In-Office Key	100.00%	39.51%	58.05%	2.44%	City Carrier I/o USPS-T-11, Report ALA860p13
	Window Service Key	100.00%	42.63%	57.24%	0.13%	WindowB LR-I-99, Window Cost Data

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Regular

**Table 3.2
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1 Mail Processing Variable w/ PB, etc.	2,767,217	1,120,454	1,347,141	299,622	* Special Run *
3.1 Total	2,767,217	1,120,454	1,347,141	299,622	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	25,690	15,034	8,827	1,829	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor		1,450	1,450	1,450	USPS-T-21, Attachment 10
3.2c Piggybacked Costs		6,765	3,972	823	=sum(3.2a)*(3.2b - 1)
3.2 Total	37,251	21,799	12,799	2,652	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	626,130	291,339	312,427	22,364	C.S. 6 CRA total
7.1 Route	27,123	16,407	10,089	627	= CS total from CRA dist. to shape by Volume
7.2 Access	17,661	10,683	6,569	409	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	297,595	143,024	95,082	59,489	= CS total from CRA dist. to shape by ElemLoad
sum 6 - 7.3	968,509	461,453	424,167	82,889	
7.4 Street Support	158,229	75,389	69,298	13,542	= CS total from CRA dist. to shape by CS 6 - 7.4
6&7 Subtotal	1,126,738	536,842	493,465	96,431	= sum of 6 through 7.4
6&7 Piggyback Factors		1,352	1,352	1,352	USPS-T-21, Attachment 10
6&7 Piggybacked Costs	396,612	188,968	173,700	33,944	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	1,523,350	725,811	667,164	130,375	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	41,844	6,896	25,322	9,626	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1,544	1,544	1,544	USPS-T-21, Attachment 10
8c Piggybacked Costs	22,763	3,752	13,775	5,236	= 8a * (8b -1)
8 Total	64,607	10,648	39,097	14,862	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	350,762	149,179	188,008	13,574	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1,242	1,242	1,242	USPS-T-21, Attachment 10
10c Piggybacked Costs	84,884	36,101	45,498	3,285	= 9a * (9b -1)

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Regular

**Table 3.2
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation	
10 Total	435,646	185,280	233,506	16,860	=sum(9a, 9c)	
C.S 14 Transportation						
14.1a Domestic Air	17,047	4,192	11,184	1,672	C.S. Total dist to shape by Weight	
14.1b Highway	210,499	34,692	127,383	48,424	C.S. Total dist to shape by Cube	
14.1c Railroad	69,128	11,393	41,833	15,902	C.S. Total dist to shape by Cube	
14.1d Domestic Water	5,879	1,446	3,857	577	C.S. Total dist to shape by Weight	
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight	
14 Total	302,553	51,722	184,257	66,574	= sum of 14.1a through 14.2	
All Other Costs						
A. CRA Total for Subclass	5,535,166				BY CRA total vol. var. for subclass	
B. Sum of C.S. Totals from above	5,130,624				Sum of C.S. totals above	
C. Difference	404,542				= A - B	
Total All Other	404,542	244,705	150,480	9,357	= C dist. to shape by Volume	
Total Attributable	5,535,166	2,360,419	2,634,444	540,302		
		42.64%	47.59%	9.76%		
Attributable Cost per Piece (Dollars)	0.158	0.111	0.202	0.666		
Distribution Keys						
					Key Name Source	
1	Volume of Mail (000)	35,087,014	21,223,935	13,051,486	811,593	Table 1
2	Weight of Mail (000)	4,582,347	1,126,778	3,006,204	449,365	Table 1
3	Density of Mail (pounds / cubic feet)	19.05	28.42	20.65	8.12	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	240,567	39,647	145,579	55,341	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	60.49%	37.20%	2.31%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	24.59%	65.60%	9.81%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	16.48%	60.51%	23.00%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	48.06%	31.95%	19.99%	Elem Load LR-I-95, Devel of Deliv Costs
10	Rural Delivery Key	100.00%	42.53%	53.60%	3.87%	Rural ccs LR-I-95, Devel of Deliv Costs
	Carrier In-Office Key	100.00%	46.53%	49.90%	3.57%	City Carrier I/o USPS-T-11, Report ALA860p13
	Window Service Key	100.00%	58.52%	34.36%	7.12%	WindowB LR-I-99, Window Cost Data

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Nonprofit ECR

Table 3.3
Costs by Shape(\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1 Mail Processing Variable w/ PB, etc.	64,503	41,264	20,536	2,703	* Special Run *
3.1 Total	64,503	41,264	20,536	2,703	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	610	351	254	4	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor		1.444	1.444	1.444	USPS-T-21, Attachment 10
3.2c Piggybacked Costs		156	113	2	=sum(3.2a)*(3.2b - 1)
3.2 Total	881	507	367	6	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	23,815	13,712	9,928	175	C.S. 6 CRA total
7.1 Route	1,099	746	352	1	= CS total from 0.1923
7.2 Access	2,197	1,491	704	2	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	16,495	9,857	6,591	46	= CS total from CRA dist. to shape by ElemLoac
sum 6 - 7.3	43,606	25,806	17,576	224	
7.4 Street Support	7,210	4,267	2,906	37	= CS total from CRA dist. to shape by CS 6 - 7.4
6&7 Subtotal	50,816	30,073	20,482	261	= sum of 6 through 7.4
6&7 Piggyback Factors		1.358	1.358	1.358	USPS-T-21, Attachment 10
6&7 Piggybacked Costs	18,192	10,766	7,333	93	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	69,008	40,839	27,815	354	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	1,870	645	1,205	20	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1.543	1.543	1.543	USPS-T-21, Attachment 10
8c Piggybacked Costs	1,015	350	655	11	= 8a * (8b -1)
8 Total	2,885	995	1,860	30	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	13,918	9,352	4,562	4	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1.242	1.242	1.242	USPS-T-21, Attachment 10
10c Piggybacked Costs	3,368	2,263	1,104	1	= 9a * (9b -1)

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Nonprofit ECR

Table 3.3
Costs by Shape(\$000)

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation	
10 Total	17,286	11,615	5,666	5	=sum(9a, 9c)	
C.S 14 Transportation						
14.1a Domestic Air	24	10	14	0	C.S. Total dist to shape by Weight	
14.1b Highway	5,097	1,758	3,286	54	C.S. Total dist to shape by Cube	
14.1c Railroad	1,262	435	813	13	C.S. Total dist to shape by Cube	
14.1d Domestic Water	128	54	73	0	C.S. Total dist to shape by Weight	
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight	
14 Total	6,511	2,257	4,186	68	= sum of 14.1a through 14.2	
All Other Costs						
A. CRA Total for Subclass	169,833				BY CRA total vol. var. for subclass	
B. Sum of C.S. Totals from above	161,075				Sum of C.S. totals above	
C. Difference	8,758				= A - B	
Total All Other	8,758	5,945	2,807	6	= C dist. to shape by Volume	
Total Attributable	169,833	103,422	63,238	3,173		
		60.90%	37.24%	1.87%		
Attributable Cost per Piece (Dollars)	0.064	0.058	0.075	1.658		
Distribution Keys						
					Key Name Source	
1	Volume of Mail (000)	2,647,088	1,796,701	848,473	1,914	Table 2
2	Weight of Mail (000)	195,751	82,704	112,325	722	Table 2
3	Density of Mail (pounds / cubic feet)	23.20	28.42	20.65	8.12	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	8,438	2,910	5,439	89	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	67.87%	32.05%	0.07%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	42.25%	57.38%	0.37%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	34.49%	64.46%	1.05%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	59.76%	39.96%	0.28%	Elem Load LR-I-95, Devel of Deliv Costs
10	Rural Delivery Key	100.00%	67.19%	32.78%	0.03%	Rural ccs LR-I-95, Devel of Deliv Costs
	Carrier In-Office Key	100.00%	57.58%	41.69%	0.74%	City Carrier I/o USPS-T-11, Report ALA860p13
	Window Service Key	100.00%	73.26%	26.68%	0.06%	WindowB LR-I-99, Window Cost Data

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 20

FY 1998 Bulk Standard Mail (A) Nonprofit

**Table 3.4
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1 Mail Processing Variable w/ PB, etc.	588,313	389,620	175,667	23,026	* Special Run *
3.1 Total	588,313	389,620	175,667	23,026	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	8,818	6,213	2,495	110	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor		1,450	1,450	1,450	USPS-T-21, Attachment 10
3.2c Piggybacked Costs		2,796	1,123	50	=sum(3.2a)*(3.2b - 1)
3.2 Total	12,786	9,009	3,617	160	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	126,915	89,424	35,904	1,586	C.S. 6 CRA total
7.1 Route	4,582	3,842	721	18	= CS total from 0.1923
7.2 Access	1,645	1,379	259	7	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	72,771	57,249	12,437	3,085	= CS total from CRA dist. to shape by ElemLoac
sum 6 - 7.3	205,913	151,895	49,321	4,697	
7.4 Street Support	33,707	24,864	8,074	769	= CS total from CRA dist. to shape by CS 6 - 7.4
6&7 Subtotal	239,620	176,759	57,395	5,466	= sum of 6 through 7.4
6&7 Piggyback Factors		1,351	1,351	1,351	USPS-T-21, Attachment 10
6&7 Piggybacked Costs	84,107	62,043	20,146	1,918	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	323,727	238,802	77,541	7,384	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	6,675	3,287	2,956	432	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors		1,543	1,543	1,543	USPS-T-21, Attachment 10
8c Piggybacked Costs	3,625	1,785	1,605	235	= 8a * (8b -1)
8 Total	10,300	5,071	4,561	667	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	69,221	48,655	20,026	540	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors		1,242	1,242	1,242	USPS-T-21, Attachment 10
10c Piggybacked Costs	16,751	11,775	4,846	131	= 9a * (9b -1)

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) Nonprofit

**Table 3.4
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation	
10 Total	85,972	60,430	24,872	671	=sum(9a, 9c)	
C.S 14 Transportation						
14.1a Domestic Air	5,327	3,150	2,059	118	C.S. Total dist to shape by Weight	
14.1b Highway	35,199	17,332	15,588	2,279	C.S. Total dist to shape by Cube	
14.1c Railroad	11,187	5,508	4,954	724	C.S. Total dist to shape by Cube	
14.1d Domestic Water	951	562	367	21	C.S. Total dist to shape by Weight	
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight	
14 Total	52,664	26,553	22,968	3,143	= sum of 14.1a through 14.2	
All Other Costs						
A. CRA Total for Subclass	1,130,550				BY CRA total vol. var. for subclass	
B. Sum of C.S. Totals from above	1,073,762				Sum of C.S. totals above	
C. Difference	56,788				= A - B	
Total All Other	56,788	47,618	8,942	228	= C dist. to shape by Volume	
Total Attributable	1,130,550	777,103	318,167	35,279		
		68.74%	28.14%	3.12%		
Attibutable Cost per Piece (Dollars)	0.107	0.088	0.191	0.830		
Distribution Keys						
					Key Name Source	
1	Volume of Mail (000)	10,564,636	8,858,646	1,663,490	42,500	Table 2
2	Weight of Mail (000)	698,573	413,100	269,950	15,523	Table 2
3	Density of Mail (pounds / cubic feet)	23.66	28.42	20.65	8.12	LR-MCR-13, LR-PCR-38
4	Cube of Mail (000)	29,520	14,536	13,073	1,912	= Weight / Density
5	Key - Volume of Mail (percent by shape)	100.00%	83.85%	15.75%	0.40%	Volume Share of (1) by shape
6	Key - Weight of Mail (percent by shape)	100.00%	59.13%	38.64%	2.22%	Weight Share of (2) by shape
7	Key - Cube of Mail (percent by shape)	100.00%	49.24%	44.28%	6.48%	Cube Share of (4) by shape
8						
9	Elemental Load Key	100.00%	78.67%	17.09%	4.24%	Elem Load LR-I-95, Devel of Deliv Costs
10	Rural Delivery Key	100.00%	70.29%	28.93%	0.78%	Rural ccs LR-I-95, Devel of Deliv Costs
	Carrier In-Office Key	100.00%	70.46%	28.29%	1.25%	City Carrier I/o USPS-T-11, Report ALA860p13
	Window Service Key	100.00%	78.18%	18.33%	3.49%	WindowB LR-I-99, Window Cost Data

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) carrier route - Total

**Table 3.5
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1a Mail Processing Variable w/ Pigbk	460,228	218,562	228,351	13,315	Sum of Tables 3.1 & 3.3
3.1b Remote Encoding Costs	0	0			
3.1 Total	460,228	218,562	228,351	13,315	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	8,506	3,717	4,774	15	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor					
3.2c Piggybacked Costs	3,824	1,671	2,147	7	=sum(3.2a)*(3.2b - 1)
3.2 Total	12,330	5,388	6,921	21	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Locatt In-Office	362,868	147,663	206,744	8,461	C.S. 6 CRA total
7.1 Route	34,338	13,721	20,569	48	= CS total from CRA dist. to shape by Volume
7.2 Access	35,128	14,346	20,734	48	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	368,777	130,690	232,651	5,436	= CS total from CRA dist. to shape by ElemLoad
7.5 Street Support	133,729	51,135	80,257	2,337	= CS total from CRA dist. to shape by 6 - 7.4
6&7 Subtotal	934,840	357,556	560,955	16,330	= sum of 6 through 7.5
6&7 Piggyback Factors					
6&7 Piggybacked Costs		128987	202443	5894	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	1,272,165	486,543	763,398	22,224	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	46,360	5,373	40,740	247	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors					
8c Piggybacked Costs	25,218	2,922	22,161	135	= 8a * (8b -1)
8 Total	71,578	8,295	62,901	382	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	340,281	131,118	209,061	102	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors					

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) carrier route - Total

**Table 3.5
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
10c Piggybacked Costs	82,348	31,730	50,593	25	= 9a * (9b -1)
10 Total	422,629	162,848	259,654	127	=sum(9a, 9c)
C.S 14 Transportation					
14.1a Domestic Air	414	65	348	1	C.S. Total dist to shape by Weight
14.1b Highway	51,804	6,721	44,790	293	C.S. Total dist to shape by Cube
14.1c Railroad	11,257	1,497	9,695	64	C.S. Total dist to shape by Cube
14.1d Domestic Water	1,083	189	892	2	C.S. Total dist to shape by Weight
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight
14 Total	64,558	8,472	55,725	360	= sum of 14.1a through 14.2
All Other Costs					
A. CRA Total for Rate Category	2,404,321				CRA total attributable for rate category
B. Sum of C.S. Totals from above	2,303,488				Sum of C.S. totals above
C. Difference	100,833				= A - B
Total All Other	100,833	41,887	58,810	136	= C dist. to shape by Volume
Total Attributable	2,404,321	931,994	1,435,761	36,566	
		38.76%	59.72%	1.52%	
Attributable Cost per Piece (Dollars)	0.066	0.062	0.067	0.731	
Distribution Keys					
1 Volume of Mail (000)	36,706,215	15,091,974	21,564,244	49,997	Key Name
2 Weight of Mail (000)	5,067,832	769,888	4,287,765	10,179	Source
3 Cube of Mail (000)	235,983	27,090	207,640	1,254	Tables 1 and 2
					Tables 1 and 2
					Sum of ECR and Nonprofit ECR

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

FY 1998 Bulk Standard Mail (A) non-carrier route - Total

**Table 3.6
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
C.S. 3.1 Mail Processing					
3.1a Mail Processing Variable w/ Pigbk	3,355,530	1,510,074	1,522,808	322,648	Sum of Tables 3.2 & 3.4
3.1b Remote Encoding Costs	0	0			
3.1 Total	3,355,530	1,510,074	1,522,808	322,648	=sum(3.1a,3.1b)
C.S. 3.2 Window Service					
3.2a CRA Window Service Total	34,508	21,247	11,322	1,939	C.S. 3.2 Total from CRA
3.2b Window Service Piggyback Factor					
3.2c Piggybacked Costs	15,529	9,561	5,095	873	=sum(3.2a)*(3.2b - 1)
3.2 Total	50,037	30,808	16,416	2,812	=sum(3.2a,3.2c)
C.S. 6 & 7 City Delivery Carriers					
6 Liocatt In-Office	753,045	380,764	348,331	23,950	C.S. 6 CRA total
7.1 Route	31,705	20,249	10,811	646	= CS total from CRA dist. to shape by Volume
7.2 Access	19,306	12,062	6,828	415	= CS total from CRA dist. to shape by Volume
7.3 Elemental Load	370,366	200,273	107,518	62,575	= CS total from CRA dist. to shape by ElemLoad
7.5 Street Support	191,936	100,254	77,371	14,311	= CS total from CRA dist. to shape by 6 - 7.4
6&7 Subtotal	1,366,358	713,602	550,860	101,897	= sum of 6 through 7.5
6&7 Piggyback Factors					
6&7 Piggybacked Costs		251011	193845	35862	= 6&7 subtotal *(6&7 pig. fact. - 1)
6&7 Total	1,847,076	964613	744705	137759	= sum(6&7 subtotal, 6&7 piggybacked costs)
C.S. 8 Vehicle Service Drivers					
8a Vehicle Service Drivers	48,519	10,183	28,278	10,058	= CS total from CRA dist. to shape by Cube
8b Piggyback Factors					
8c Piggybacked Costs	26,388	5,536	15,380	5,471	= 8a * (8b -1)
8 Total	74,907	15,719	43,658	15,529	=sum(8a, 8c)
C.S. 10 Rural Delivery Carriers					
10a Rural Delivery Carriers	419,983	197,835	208,034	14,114	= CS total from CRA dist. to shape by RuralDel
10b Piggyback Factors					

ATTACHMENT TO RESPONSE OF WITNESS CRUM TO QUESTION POSED AT HEARINGS APRIL 19, 2000

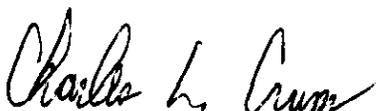
FY 1998 Bulk Standard Mail (A) non-carrier route - Total

**Table 3.6
Costs by Shape(\$000)**

Cost Category	Sum over Shapes	Letters	Flats	IPPs & Parcels	Source / Derivation
10c Piggybacked Costs	101,636	47,876	50,344	3,416	= 9a * (9b -1)
10 Total	521,619	245,710	258,378	17,530	=sum(9a, 9c)
C.S 14 Transportation					
14.1a Domestic Air	22,374	7,342	13,242	1,790	C.S. Total dist to shape by Weight
14.1b Highway	245,698	52,024	142,971	50,703	C.S. Total dist to shape by Cube
14.1c Railroad	80,315	16,901	46,787	16,627	C.S. Total dist to shape by Cube
14.1d Domestic Water	6,830	2,008	4,224	598	C.S. Total dist to shape by Weight
14.2 International Transportation	0	0	0	0	C.S. Total dist to shape by Weight
14 Total	355,217	78,275	207,224	69,718	= sum of 14.1a through 14.2
All Other Costs					
A. CRA Total for Rate Category	6,865,716				CRA total attributable for rate category
B. Sum of C.S. Totals from above	6,204,386				Sum of C.S. totals above
C. Difference	461,330				= A - B
Total All Other	461,330	292,323	159,421	9,586	= C dist. to shape by Volume
Total Attributable	6,865,716	3,137,523	2,952,611	575,582	
		47.07%	44.30%	8.63%	
Attributable Cost per Piece (Dollars)	0.146	0.104	0.201	0.674	
Distribution Keys					Key Name Source
1 Volume of Mail (000)	45,651,650	30,082,581	14,714,976	854,093	Tables 1 and 2
2 Weight of Mail (000)	5,280,920	1,539,878	3,276,154	464,888	Tables 1 and 2
3 Cube of Mail (000)	270,087	54,183	158,652	57,252	Sum of Regular and Nonprofit

DECLARATION

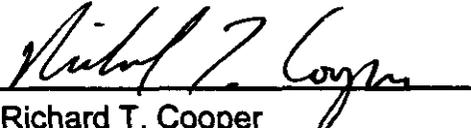
I, Charles L. Crum, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.


CHARLES L. CRUM

Dated: 28 APRIL 2000

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.


Richard T. Cooper

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2992 Fax -5402
April 28, 2000