Docket No. R2001-1

USPS-LR-J-100

Pallet Cost Analysis

Introduction

This library reference provides the supporting documentation and analyses used to estimate the test year cost differential between mail prepared on pallets and mail prepared in sacks for Periodicals flat-shaped mail. This is a Category 2 Library Reference associated with the testimony of witness Schenk (USPS-T-43). The methodology used in this analysis is described below.

This library reference relies on other witnesses' library references and testimony in this docket and in previous dockets. The following sources are used:

- USPS-LR-J-52: piggybacks and other cost factors.
- USPS-LR-J-125, Table 125-1: test year before rates Periodicals volumes.
- USPS-LR-J-114: pieces per sack and pieces per pallet for Periodicals flats.
- USPS-LR-H-111/R97-1: sacks per other wheeled container conversion factor.
- USPS-T-26 and USPS-T-27 in Docket No. R2000-1, and the Planning Guidelines: operations productivities.

Witness Taufique (USPS-T-34) uses the results of this cost differential estimate in the rate design for Periodicals mail.

Organization

This library reference consists of three spreadsheets in the Excel Workbook 'LR-J-100.xls.' The spreadsheet 'Parameters' contains the parameters used in the cost analysis. The spreadsheet 'Variability' contains the calculation of the composite volume variability factor for bundle distribution. The spreadsheet 'Table 1' contains the cost calculations. Table 1, which provides the major results used by witness Taufique, is provided below. An electronic copy of the workbook is provided on the accompanying diskette.

Table 1: Pallet Cost Analysis

		Productivity			Conversion			Wage Rate			Piggyback		Premium Pay			Cost ($)	
	Activity	Key	Value	Units	Key	Value	Units	Key	Value	Description	Value	Description	Key	Value	Description	Per Container	Per Piece
Sacks	Unload OWC	13	23.144	OWC/Hr	3	26.5000	Sacks per OWC	1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.0783	$0.0026
	Move OWC to Bundle Sort Operation	14	24.800	OWC/Hr	3	26.5000	Sacks per OWC	1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.0731	$0.0024
	Dump Sacks at Bundle Sort	15	124.845	Sacks/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.3846	$0.0126
	Empty Sack Handling	16	183.289	Sacks/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.2620	$0.0086
	Empty OWC Handling	17	24.800	OWC/Hr	3	26.5000	Sacks per OWC	1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.0731	$0.0024
																$0.8710	$0.0285 Total -- Sacks
Pallets	Unload Pallet	9	13.622	Pallets/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$3.5248	$0.0020
	Move Pallet to Bundle Sort Operation	10	10.867	Pallets/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$4.5014	$0.0026
	Dump Pallet	11	9.712	Pallets/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$4.9438	$0.0029
	Empty Pallet Handling	12	183.289	Pallets/Hr	6	1.0000		1	30.840	Wage Rate (other mail processing; hourly)	0.5380	Mail Processing Piggyback	2	1.0189	Premium Pay factor (periodicals)	$0.2620	$0.0002
																$13.2320	$0.0077 Total -- Pallets
																	$0.0209 Cost Difference

	Key	Parameter	Value	Source	
wages, premium pay	1	Wage Rate (other mail processing; hourly)	30.84	USPS-LR-J-52	
	2	Premium Pay factor (periodicals)	1.0189	USPS-LR-J-52	
conversions	3	Sacks per OWC	26.5	USPS-LR-H-111/R97-1, Appendix F	
	4	Pieces per sack	30.5	USPS-LR-J-114, Table 1	
	5	Pieces per pallet	1728.9	USPS-LR-J-114, Table 1	
	6	Tautology	1.0	Tautology	
	7				
	8		[1]	[2]	[3]
productivities	9	Unload Pallet	13.62	USPS-T-27/R2000-1	12.26
	10	Move Pallet to bundle sort operation	10.67	USPS-T-27/R2000-1	9.6
	11	Dump Pallet	9.71	USPS-T-26/R2000-1	6.41
	12	Empty Pallet Handling	183.29	PGLs	164.96
	13	Unload OWC	23.14	USPS-T-26/R2000-1	20.83
	14	Move OWC to Bundle Sort Operation	24.80	USPS-T-27/R2000-1	22.32
	15	Dump Sacks at Bundle Sort	124.84	USPS-T-26/R2000-1	110.94
	16	Empty Sack Handling	183.29	PGLs	164.96
	17	Empty OWC Handling	24.80	USPS-T-27/R2000-1	22.32
	18				
piggyback factor	19	Periodicals Mail Processing Piggyback	1.54	USPS-LR-J-52	
	20				
variabilities	21	MODS/BMC Bundle Distribution	0.89		
	22	MODS Platform	0.90		
	23	SPBS Other	0.66		

[1] [3] / variability
[2] Source for [3]
[3] Productivities (not adjusted for volume variability)

CRA Inputs **PIGGYBACKS BY MODELED COST POOL**

TY Volume 9,036,832,098 [11]

	Office Type	[1] Cost Pool	[2] LDC	[3] TY Piggyback's	[4] Weighted Piggyback	[5] Variability	[6] Weighted Variability	[7] TY Unit Costs	[8] TY Volume Weighted Costs	[9] TY Costs w/o Piggies	[10] Cost Weights
1	MODS 1&2	MECPARC	13	1.500	0.003	0.96	0.0020	0.005	470,132	313,507	0.002
2	MODS 1&2	SPBS OTH	13	1.676	0.369	0.66	0.1454	0.627	56,648,961	33,798,850	0.220
3	MODS 1&2	SPBSPRIO	13	1.647	0.023	0.66	0.0094	0.040	3,586,771	2,177,984	0.014
4	MODS 1&2	1OPBULK	17	1.545	0.227	0.96	0.1409	0.385	34,793,272	22,518,878	0.147
5	MODS 1&2	1OPPREF	17	1.556	0.638	0.96	0.3938	1.083	97,891,015	62,920,760	0.410
6	MODS 1&2	1POUCHNG	17	1.598	0.297	0.95	0.1763	0.503	45,494,692	28,470,809	0.186
7	BMCs	SPBS BMC	13	1.645	0.034	1.00	0.0209	0.058	5,272,276	3,204,255	0.021
8		MODS/BMC Bundle Dist		1.592		0.889		2.702	244,157,119		

[1] cost pools
[2] ldc
[3] source: USPS-LR-J-52
[4] [3] * [10]
[5] source: USPS-LR-J-52
[6] [5] * [10]
[7] source: USPS-LR-J-52
[8] [7] * [11] / 100
[9] [8] / [3]
[10] [9] * sum[9] by modeled pool
[11] source: USPS-LR-J-125, Table 125