

**BEFORE THE
POSTAL RATE COMMISSION**

POSTAL RATE AND FEE CHANGES, 2006

DOCKET NO. R2006-1

**RESPONSES OF UNITED PARCEL SERVICE WITNESS NEELS
TO FOLLOW-UP INTERROGATORIES OF UNITED STATES POSTAL SERVICE
(USPS/UPS-T1-35 through 39)
(October 20, 2006)**

Pursuant to the Commission's Rules of Practice, United Parcel Service hereby files the responses of UPS witness Kevin Neels to the following follow-up interrogatories of the United States Postal Service: USPS/UPS-T1-35 through 39.

Respectfully submitted,

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USPS/UPS-T1-35. Please refer to your responses to USPS/UPS-T1-6(d)-(e).

a. Please confirm that to correspond to Dr. Bozzo's MODS operation groups, you should have included MPBCS equipment in the the act_mods_group '0 D/BCS.' If you do not confirm, please explain.

b. Please confirm that to correspond to Dr. Bozzo's MODS operation groups, you should have included LIPS equipment in the the act_mods_group '67 SPBS.' If you do not confirm, please explain.

RESPONSE:

a. Confirmed.

b. Confirmed.

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USPS/UPS-T1-36. Please refer to your responses to USPS/UPS-T1-7(d). Please assume that the FHP conversion error is symmetrically distributed and answer the hypothetical to which you did not respond in USPS/UPS-T1-7(d).

RESPONSE:

This follow-up interrogatory still fails to provide enough information to permit me to answer the question posed. However, in an effort to be responsive, I will attempt to fill in the missing pieces, and will answer accordingly.

I stated in my response to USPS/UPS-T1-7(d) that I interpreted the assumption that the FHP conversion factors are on average correct to mean that the difference between true FHP and FHP calculated by weighing batches of mail and applying the conversion factor will tend toward zero as the number of batches of mail increases. This follow-up interrogatory asks me to assume also that the FHP conversion error is symmetrically distributed. I interpret this assumption to mean that the estimated FHP will exceed the true FHP for half of all mail batches, and will fall short of true FHP for half of all mail batches.

Interrogatory USPS/UPS-T1-7(d) does not ask about batches of mail. Instead, it asks about "observations." This term is not defined within Interrogatory USPS/UPS-T1-7(d). However, in interrogatory USPS/UPS-T1-8, the term clearly refers to individual observations within the dataset Dr. Bozzo uses in his econometric analysis. The number of batches of mail included within such an observation will vary. For this reason, even given the assumption of symmetric conversion errors, the answer to

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Interrogatory USPS/UPS-T1-7(d) depends upon how these conversion errors are distributed across observations.

Suppose, for example, that mail tends to be heavier than average during high volume seasons of the year and lighter than average during low volume seasons. This tendency would lead to a situation in which instances when application of the conversion factors produces overestimates of true FHP are concentrated in a small number of high volume observations, while instances of underestimation are distributed across a large number of smaller volume observations. In such a case, less than half of all observations would show an estimated FHP that was greater than true FHP (and hence also, under the assumptions of USPS/UPS-T1-7(d), TPH). If mail processed during high volume seasons were lighter than average, one would observe the reverse.

Another situation that might affect the number of observations in which FHP is greater than TPH under the stated assumptions would involve trends over time. Suppose mail volumes are increasing over time, and that this increase is reflected in growth in the number of mail batches weighed per observation to produce FHP estimates. Suppose that average weight per piece is also increasing over time. In these circumstances, later observations would contain more batches of mail than earlier observations, and would also contain a disproportionate share of batches for which estimated FHP exceeded actual FHP; estimated FHP would exceed true FHP (and hence also, under the assumptions of USPS/UPS-T1-7(d), TPH) for less than half of all observations.

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If, in addition to the assumptions specified above, I assume that the tendency for estimated FHP to exceed true FHP is independent of the number of batches of mail included in an observation, estimated FHP will exceed true FHP (and hence also, under the assumptions of USPS/UPS-T1-7(d), TPH) half the time, excluding the presumably small number of instances in which estimated FHP and TPH match exactly. This assumption of independence is a convenient assumption, in that, in combination with the assumptions set forth above, it permits me to provide a definitive answer to the question posed in USPS/UPS-T1-7(d).

I am aware of no evidence, however, that the assumption of independence is empirically justified. In fact, the evidence that exists suggests the contrary. The table shown below presents data on volumes and weight per piece, by class, for 1999 and 2005, the base years for the Docket Nos. R2000-1 and R2006-1 rate cases. Consider, for example, the case of First Class Mail. Volume has declined over time, while weight per piece has increased. If the conversion factor for First Class Mail is correct on average over this period, if measurement errors are symmetrically distributed, and if the number of batches of mail weighed remains roughly proportional to mail volume, these trends would imply that the number of batches of mail per observation is higher in the earlier period than in the later period. In addition, instances in which application of conversion factors produces FHP estimates that are less than true TPH would be disproportionately concentrated in the earlier periods. Under these circumstances, one would expect that estimated FHP would exceed TPH for more than 50 percent of the observations.

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Attachment to Kevin Neels (UPS-T-1) Response to USPS/UPS-T1-36

**Change in Volume and Weight per Piece by
Mail Class**

Volume in thousands of pieces

Weight in ounces

	Volume			Weight per Piece		
	1999 [a]	2005 [b]	% Change [c]	1999 [d]	2005 [e]	% Change [f]
First Class	101,936,454	98,066,034	(4%)	0.67	0.71	6%
Priority	1,189,469	887,462	(25%)	28.82	30.48	6%
Express	68,673	55,475	(19%)	18.25	14.92	(18%)
Mailgram	4,087	1,896	(54%)	0.00	0.00	0%
Periodicals	10,273,827	9,070,003	(12%)	6.98	7.10	2%
Standard	85,661,710	100,942,091	18%	1.99	1.85	(7%)
Parcel Post	318,982	387,800	22%	97.16	79.04	(19%)
Other Package Services	724,143	777,729	7%	35.27	35.89	2%
Total Package Services	1,043,125	1,165,530	12%	54.19	50.24	(7%)
USPS Mail	382,283	621,283	63%	4.29	2.85	(34%)
Free Mail	53,227	81,306	53%	7.99	6.81	(15%)
Total Domestic Mail	200,612,855	210,891,080	5%	2.02	1.94	(4%)
International Mail	963,425	852,267	(12%)	4.07	4.54	12%
All mail	201,576,280	211,743,347	5%	2.03	1.95	(4%)

Sources:

[a] and [d] - Docket R2000-1, USPS-LR-I-275, FY99CRA.xls (Cost and Revenue Analysis ('CRA'), Fiscal Year 1999)

[b] and [e] - Docket R2006-1, USPS-LR-L-2, FY05CRA.XLS (Cost and Revenue Analysis, Fiscal Year 2005)

[c] = ([b] - [a]) / [a]

[f] = ([e] - [d]) / [d]

Notes:

The source data have been rounded for ease of presentation in this chart.

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USPS/UPS-T1-37. Please refer to your response to USPS/UPS-T1-10(e). Please also refer to your testimony at page 26, lines 12-13. Please confirm that you did not conduct any analysis of the effects of the screening levels on the sample composition. If you do not confirm, please explain your original testimony, provide a description of the analysis you performed, and provide all supporting documentation.

RESPONSE:

Aside from estimation on both the “strict” and the “loose” samples of the plant-level model discussed in section 6 of my testimony, I conducted no analysis of the effects of screening levels on sample composition.

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USPS/UPS-T1-38. Please refer to your response to USPS/UPS-T1-11(f). Please also refer to your Docket No. R2000-1 testimony, UPS-T-1, at page 58, lines 14-16 (Docket No. R2000-1, Tr. 27/12830), where in explaining differences between the results of your analysis and the Postal Service models, you stated:

This pattern is likely explained by the elimination of gross errors in data reporting across the two parcel sorting operations.

- a. Please confirm that you did claim to have eliminated some (not all) data errors in your Docket No. R2000-1 analysis, as cited above. If you do not confirm, please explain.

- b. Please confirm that the “elimination of gross errors” you claimed to have achieved in the referenced Docket No. R2000-1 analysis was due to an aggregation of data such as in USPS/UPS-T1-11(e)—i.e., certain offsetting errors you felt were in the component data were cancelled out in the aggregate data. If you do not confirm, please explain.

RESPONSE:

- a. Confirmed. See response to USPS/UPS-T1-11(f).

- b. Confirmed.

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USPS/UPS-T1-39. Please refer to your response to USPS/UPS-T1-8(b) and USPS/UPS-T1-9(a), where you indicate that you carried out your screening at an “operation level” finer, at least in some cases, than the Postal Service cost pools.

a. Did you also employ operation-level screens for the model you present in Section 6 of UPS-T-1?

b. Where you screened at finer levels than the cost pools, did you analyze the quantitative significance of the operation-level anomalies at the cost pool level and/or at the level of aggregation you employed in your Section 6 model? If so, please describe your methods in detail. If not, why not?

RESPONSE:

a. Yes.

b. No. While I recognized the possibility that certain types of errors could potentially be cured by aggregation (specifically, instances in which hours or volume that should have been recorded under operation A are mistakenly recorded under related operation B), it was also clear that errors of this type represented only one among many types of errors infecting the MODS data. I considered the possibility that an observation might fail a particular test at a fine level of disaggregation while passing that same test at a higher level of aggregation. However, there was no logical reason to conclude that such instances necessarily represented cases of offsetting errors that were appropriately cured by aggregation. Such instances could also arise if other types of errors were masked by the aggregation process. For these reasons, I felt generally that tests conducted at a lower level of aggregation would be more accurate and more revealing.

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In addition, the identification of errors must necessarily precede any effort to evaluate the quantitative significance of those errors. The task of cataloging the errors contained in the MODS data proved itself to be a very substantial task.

Finally, once this cataloging process was complete, I was confronted with an enormous inventory of errors of many different types infecting many different operations and many different time periods. It was by no means clear at that point where a process attempting to separate quantitatively significant from quantitatively insignificant errors should logically begin. In the end, I decided to focus my sensitivity testing on the effects of carrying out productivity and threshold tests at finer levels of temporal aggregation.