

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

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POSTAL RATE AND FEE CHANGES, 2000

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Docket No. R2000-1

RESPONSES OF MAGAZINE PUBLISHERS OF AMERICA, INC.  
WITNESS CROWDER TO INTERROGATORIES OF THE  
UNITED PARCEL SERVICE (UPS/MPA-T5-1-3)

(July 3, 2000)

The Magazine Publishers of America hereby submits the responses of witness Crowder to interrogatories UPS/MPA-T5-1-3, filed on June 19, 2000. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

  
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**UPS/MPA-T5-1.**

(a) Confirm that your evaluation of Mr. Raymond's work is performed in comparison to the Postal Service's 1986 Street Time Survey (STS). That is, if the Commission follows your advice to "reject the use of the ES data for ratemaking purposes" (MPA-T-5, page 5) the only alternative will be to use the 1986 STS data in its place.

(b) Confirm that the 1986 STS data do not necessarily accurately represent BY1998 city carrier costs, nor is it necessarily more accurate than ES.

**RESPONSE:**

(a) Only partially confirmed. I would categorize my testimony as a "due diligence" analysis on the USPS support for the ES activity sampling proportions of accrued out-of-office time, and their use with the LTV, FAT, and CAT variabilities. I cannot begin to completely explain all the problems with the ES results or all the data and analyses that have been presented by the Postal Service, but, when all of it is reviewed together, the evidence does not support the results, and instead indicates that the results include an excessive amount of load time.

Accordingly, the Postal Rate Commission is faced with choosing among three alternatives:

- (1) Use of an old, previously-determined reliable set of time proportions that are relatively consistent with the USPS proposed variabilities;
- (2) Use of a new but clearly biased set of time proportions with the USPS proposed variabilities, when the latter are clearly inconsistent with the new proportions; or
- (3) Use of a new but clearly biased set of time proportions with a load time variability derived from the ES data that is consistent with the new load time proportions.

None of these choices is completely satisfactory. My first recommendation is to use the STS set of time proportions with the LTV variabilities, for two reasons:

- (1) PRC acceptance of the biased ES proportions would likely create a disincentive for the Postal Service to provide anything better for the future, when better analysis and data are clearly needed and should be undertaken. This would "lock in" to the costing system an erroneous set of time proportions that would skew costs for perhaps the next ten years or even much longer.

- (2) The results from the ES data are biased and inconsistent with some if not all of the USPS associated variabilities, and the consequent disruption among subclass cost/rate relationships caused by their use is too high a price to pay simply to replace "old" data with "new" data.

My alternate recommendation is that if the Commission decides to use the ES activity sampling time proportions, then it should also use the preferred load time variability developed from the ES load time data. Otherwise, the overstatement of load time in the ES data would be compounded and would result in a substantial overstatement of true variable load time costs. I have explained these reasons in my testimony (pages 4, 45-46) and in response to USPS/MPA-T5-4.

- (b) Confirmed. Please see my response to (a) above.

**UPS/MPA-T5-2.** At page 6 of your testimony (MPA-T-5, page 6) you state that "Mr. Raymond's work sampling study was not designed for ratemaking costing purposes and was conducted prior to any thought that it be used in ratemaking. While this, standing alone, does not automatically invalidate use of the data for costing, it does raise a warning flag." (footnote omitted)

- (a) Are you aware of any other Postal Service data systems that were not designed for ratemaking costing purposes but are used for those purposes? If so, please identify them.
- (b) Are you aware that data from the Management Operations Data System (MODS) was not designed for "ratemaking costing purposes?"
- (c) Witness Bradley (USPS-T-18) makes use of the Highway Contract Support System (HCSS) for costing purposes. He describes the database as "an electronic database system to manage [the Postal Service's] purchased highway transportation contracts." USPS-T-18, at page 12. Would you agree that this system was not "designed for ratemaking costing purposes?"

**RESPONSE:**

(a) Yes. The MODS and HCSS data systems cited in parts (b) and (c) are examples of systems that, although not initially intended for costing purposes, nevertheless meet most or all of the criteria described in my testimony (at pages 6-7) and Dr. Hay's testimony (MPA-T-4 at 5-6 and 12ff) for potential use for costing purposes. The contrasts between these data systems and the ES work sampling data are described in my responses to parts (b) and (c) below.

(b) In contrast to the ES work sampling, the Management Operations Data System (MODS) is an example of a system that, although not originally intended for ratemaking costing purposes, is comparatively well suited for that purpose. The differences between MODS and the ES work sampling are striking.

First, the MODS system has been used as a management tool for a number of years, dating back at least to the 1980s. It had been in place for at least a decade prior to its first being used in the Docket R97-1 rate case; it has been refined over the

years; and it is now a national database of postal operations. MODS is a time-tested system that is currently used by the Postal Service as a management tool. The ES work sampling study, by contrast, is not an existing carrier management tool. In fact, the Engineered Standards/Delivery Redesign project, of which the work sampling was only a part, is not used as a carrier management tool, was apparently deployed at only a very few "test implementation" sites, and according to the Postal Service may never be implemented as a nationwide carrier management system. See USPS Opposition to UPS to Compel Interrogatories Directed to Witness Raymond, March 6, 2000 at 5.

Second, unlike the ES work sampling, MODS is not a "study" at all. It is an ongoing data system that continually records information on postal operations, and is an integral part of Postal Service operations management.

Third, unlike the ES work sampling, MODS is not a "sample" but represents a complete survey of all workhours and piece handlings at MODS sites. Thus, there are no issues about whether the sites or observations are representative, or whether the data constitute a "representative sample."

Fourth, unlike the ES work sampling, the MODS system is well documented. The comprehensive MODS Handbook (see, e.g., LR-H-147, Docket R97-1) provides detailed written definitions of terms and data collection procedures. This written documentation, together with the fact that MODS had been in operation for many years prior to its use for costing purposes, provides a far higher degree of data consistency and reliability than the ES work sampling which had no written definitions or instructions, and which relied on word-of-mouth oral instructions through on-the-job training.

(c) In contrast to the ES work sampling, the Highway Contract Support System (HCSS) is an example of a system that, although not originally intended for

ratemaking costing purposes, is comparatively well suited for that purpose. The differences between the HCSS and the ES work sampling are striking.

First, the HCSS is an ongoing, continuously updated USPS management system. As USPS witness Bradley stated, "HCSS is a live data system in the sense that it changes as the contracts themselves change." USPS-T-13 at 14, Docket R97-1.

Second, unlike the ES work sampling, the HCSS is a complete survey of all highway contracts in force. It is not a "sample." The importance of this point was emphasized by witness Bradley. "Second, because we have data on virtually all contracts, we do not have to be concerned about the possibility of drawing an unrepresentative sample." Id. at 13, Docket R97-1. The deficiencies in the ES sample design, or lack thereof, are described in my testimony.

Third, by its nature, the "data collection" in the HCSS is relatively straightforward. The data are taken straight from underlying transportation contract information. Unlike the ES work sampling, the HCSS does not require data collectors to make instantaneous judgmental assessments of ill-defined terms and activities.

Fourth, at the time he filed his testimony in Docket R97-1, Bradley provided the entire HCSS database, and he identified and presented analyses of "unusual observations." USPS-T-13 at 46ff and USPS-LR-H-181. Thus, the parties at the outset had the full dataset and the opportunity to assess and test his criteria. By contrast, we were not aware until shortly before the May hearings that the work sampling data in LR-I-163 represented only a part of the full data collected. Moreover, the explanations given by Mr. Raymond for exclusion of observed route days, received within just the last two weeks, raise additional questions. (See Response of USPS Witness Raymond to Questions Posed at Hearing, June 7, 2000 and Response of USPS Witness Raymond to Information Request Made at Hearing, June 14, 2000). For example, a number of route-days were excluded by Mr. Raymond as either "partial

route less than 8 hours," "partial scans," or "multiple carriers on route." But, we are not told why many of those route days actually appear to be relatively full or even greater than eight-hour route days, or why Mr. Raymond believed they should be excluded for ratemaking costing purposes. Also see my response to NAA/MPA-T5-7.

**UPS/MPA-T5-3.** At page 20 of your testimony, in reference to the Postal Service's selection of cities and routes to include in activity samplings, you state that "Although [ad hoc sampling] may be appropriate for industrial engineering projects, it does not meet ratemaking costing standards." Is it your testimony that the data that are used to create workload standards are or can be of lower quality than data that are used for "ratemaking costing"?

**RESPONSE:**

First, I assume that the term "workload standards" is intended to mean "work time standards," such as those developed by Mr. Raymond's group for the Standard Operating Procedures in USPS-LR-242. In contrast, workload, to me, means the amount of work to be performed (i.e., number of actual deliveries, number of paces walked or miles driven, amount of delivered and collected mail volume, etc.) and I do not believe Mr. Raymond directly developed standards related to workload.

Second, as the context of my statement makes clear, I am not saying that the lack of a sample design "is appropriate" for industrial engineering projects. Rather, even though it "may be appropriate" for such projects, it does not meet ratemaking standards.

Third, your question presupposes that the work sampling data were "used to create workload standards." However, the work sampling played only a minor role in the development of time standards. Mr. Raymond testified that the only information from the work sampling that was needed as a direct input in developing the time standards was a "delay factor." Tr. 8052-53. In determining the sample size for his project, Mr. Raymond focused on the number of time studies needed, rather than on the size of the work sampling.

Fourth, it is important to distinguish between work time standards and ratemaking costing estimates. Work time standards are based on measurements of the time it takes to perform discrete tasks, such as walking 20 paces or casing a letter into a letter case, and are just that -- standards, not necessarily actual field conditions.



Mr. Raymond developed these not from the work sampling, but from the time studies, videotape analyses, and ultimately from a "predetermined" set of time standards. On the other hand, for ratemaking costing purposes (to replace the STS proportions), we are interested in work sampling data that describe in a reliable and representative manner the actual work performed by letter carriers through the year and throughout the system (see page 28 of my testimony for examples of the type of diverse conditions that should be adequately reflected in a ratemaking cost estimate).

Time measurements for discrete (time and motion) tasks may be subject to less variation and sampling bias than are actual working conditions throughout the year, on the diversity of routes with a diversity of carrier characteristics within the USPS system of letter routes. Thus, the quality of time study data from a non-random data collection may be adequate for time standards purposes, whereas the quality of the ES work sampling data is not adequate for ratemaking costing, in describing in a representative manner the actual work performed throughout the year and throughout the system of letter routes.

CERTIFICATE OF SERVICE

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

  
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Thomas W. McLaughlin

July 3, 2000