

BEFORE THE
POSTAL RATE COMMISSION

POSTAL RATE AND FEE CHANGES, 2000

DOCKET NO. R2000-1

POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

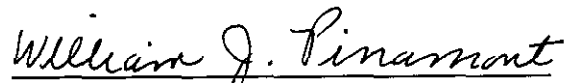
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ANSWERS OF UNITED PARCEL SERVICE WITNESS
STEPHEN E. SELICK TO INTERROGATORIES
OF THE UNITED STATES POSTAL SERVICE
(USPS/UPS-T4-1 through 16)
(June 15, 2000)

Pursuant to the Commission's Rules of Practice, United Parcel Service ("UPS") hereby files and serves the responses of UPS witness Stephen E. Sellick to interrogatories USPS/UPS-T4-1 through 16 of the United States Postal Service.

Respectfully submitted,



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USPS/UPS-T4-1. Refer to your testimony in the Introduction where you describe your educational background and job experience. For the purposes of this question, define the field of statistics to be the presentation, discussion and treatment of the following subject matter: measures of central tendency, measures of dispersion, statistical inference, mathematical statistics, finite population sampling, survey sampling, regression analysis, time series analysis, analysis of variance, design of experiments, and multivariate analysis.

- a. Please list the title of each academic course taken while pursuing your undergraduate and graduate degrees that related to the field of statistics. Briefly discuss, for each course, the course content and how the presentation of the identified statistical concepts were incorporated.
- b. If not mentioned in part (a), list the each [sic] course taken specifically related to finite population sampling and survey sampling. This topic area is best described as the material covered in the following textbooks: Sampling Techniques by William G. Cochran (3rd Edition, 1977, John Wiley & Sons, New York, New York), and Model Assisted Survey Sampling by Sarndal et. al. (1992, Springer-Verlag, New York, New York). Also, if not discussed in part (a), briefly discuss, for each sampling course, the content as it related to treatment of such topics as population, random sampling, ratio estimation, and sources of error in surveys.

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- c. If your background includes any course work subsequent to your two degrees that involves the subject areas identified in the body of this interrogatory or parts (a) and (b), please describe them in the terms prescribed in parts (a) and (b).
- d. Related to your job experiences, please provide, in the format of "Situation-Task-Analysis-Results" (STAR), your role in the review of any data system that involved finite population sampling or a survey of a population. In the STAR approach, describe your contribution and distinguish it from that of the task group.
- e. Related to your job experiences, please provide, using the STAR approach, your contributions, if any, in the review of finite population sampling estimation methodologies, such as stratified random sampling, ratio, and multi-stage estimators (point and variance). Distinguish your contributions from that of the task group.

Response to USPS/UPS-T4-1.

(a) In my undergraduate coursework at the Wharton School of the University of Pennsylvania, I completed two semesters in Statistics. Both were entitled "Introduction to Statistics" (STAT 1A and STAT 1B). The current course listing for these classes includes the following subjects: "Display of data; probability; discrete and continuous random variables; moments and descriptive measures; sampling, statistical inference and estimation; confidence intervals; hypothesis tests, regression and correlation, multiple regression, analysis of variance. Business applications."

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In my graduate coursework at the University of Chicago, I completed two courses in statistics, both of which were entitled "Statistical Methods for Policy Research" (I and II). The current course listing for these classes is reproduced below, in relevant part:

Statistical Methods for Policy Research I

"This course aims to provide a basic understanding of statistical analysis in policy research. Fundamental to understanding and using statistical analysis is the realization that data do not emerge perfect and fully formed from a vacuum. An appreciation of the provenance of the data, the way they were collected, even why they were collected, is necessary for effective analysis. Equally important is an understanding of the nature of the statistical inference being attempted; the course will distinguish between model-based and design-based inference. There will be some emphasis on sampling from finite populations and on data from survey research.

"The emphasis is on the use of statistical methods rather than on the mathematical foundations of statistics [T]he course will make no assumptions about prior knowledge, apart from arithmetic. For students with a strong technical background, the aim of the course is to increase their understanding of the reasoning underlying the methods, and deepen their appreciation of the kinds of substantive problems that can be addressed by the statistical methods being described.

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Statistical Methods for Policy Research II

"[T]his course focuses on the statistical concepts and tools used to study the association between variables. This course will introduce students to regression analysis and explore its uses in policy analysis."

(b) See my response to (a), above.

(c) I have not completed any course work in statistics other than as identified in (a), above. However, in my professional work, I deal on a daily basis with statistical and similar quantitative issues. In the postal context, I have worked extensively with sampling systems, especially the In-Office Cost System ("IOCS"), since the early 1990's, as reflected in the Introduction section of my testimony.

(d)-(e) I am not sure what this interrogatory seeks. In particular, I am not familiar with the format you describe ("Situation-Task-Analysis-Results" or "STAR"), nor are a number of individuals with statistical or sampling backgrounds with whom I checked. However, I am presently involved in several assignments for various clients which include population sampling (stratified and non-stratified) for the purpose of determining, among other things, differences between two sub-populations, the distribution of a variable of interest of several sub-populations, and the accuracy of data previously collected. My role in these assignments is to actively and directly supervise the engagement and work with my staff to develop sample design and evaluation of sample results, among other matters. I focus my efforts on how statistical analysis can

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assist clients, courts, and other decisionmakers in evaluating complex data-intensive issues.

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USPS/UPS-T4-2. Please refer to your testimony on page 2, line 20 where you question Parcel Post volume and revenue estimates.

- a. What is the true volume of Standard Mail (B) permit imprint Parcel Post pieces in the nation in BY1998? Please explain how you arrived at this number.
- b. Please confirm that the BRPW Standard Mail (B) permit imprint Parcel Post pieces provided by witness Hunter in Table 2 of the attachment to UPS/USPS-T5-2 is a statistical estimate with an estimated coefficient of variation of 0.97 (sic) percent. If you do not confirm please explain.
- c. Please confirm that it is your understanding the USPS could compute the number of DRPW Standard Mail (B) permit imprint Parcel Post pieces from the DRPW system for BY 1998.
- d. If you confirm part c, please confirm that this would also be a statistical estimate and that a coefficient of variation could be computed. If you do not confirm, please explain.
- e. Please confirm that Hansen, Hurwitz, and Madow in Sample Survey Methods and Theory (Vol. 1, John Wiley & Sons, New York, New York, 1953) define the bias of a survey estimate to be "difference between the expected value of the estimate and the true value being estimated." (page 17). If you do not confirm, please explain fully.
- f. Using the definition in part (e), please provide an estimate of the bias in the BRPW estimate of Standard Mail (B) permit imprint Parcel Post pieces. If you cannot

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provide, please explain if it would be possible to compute this number, and how it might be computed.

g. Using the definition in part (e) and assuming the Postal Service provided a DRPW estimate of permit imprint Parcel Post pieces, then please provide an estimate of the bias in the DRPW estimate of Standard Mail (B) permit imprint Parcel Post pieces. If you cannot provide, please explain if it would be possible to compute this number, and how it might be computed.

Response to USPS/UPS-T4-2.

(a) I have not made such a calculation, and it is not necessary for my testimony.

(b) Confirmed that the numbers presented by witness Hunter are an estimate and that he presents BRPW Standard Mail (B) permit imprint Parcel Post pieces as having an estimated coefficient of variation of 0.96 percent. See Tr. 2/806. I have not attempted to replicate the Postal Service's calculation, so I am not able to confirm or not confirm it. Of course, a coefficient of variation would not measure any deficiencies in the underlying data.

(c) I believe that the Postal Service could compute an estimate of permit imprint Parcel Post volume for BY1998 that is based on the DRPW sampling system.

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(d) Confirmed that the estimate referred to in (c), above, would be a statistical estimate and that a coefficient of variation could be computed.

(e) While I am not in possession of this specific book, the definition appears to be reasonable. Note that Statistics for Business and Economics, Sixth Edition (1994) McClave and Benson, at pages 1085-86, defines nonsampling errors to include "any phenomena other than sampling errors that cause a difference between an estimate and the true value of the population parameter."

(f) Note that the permit imprint Parcel Post estimate is not based on a sample, and therefore statistical bias as you have defined it is not relevant to it. In any event, I have not made this calculation, and it is not necessary for my testimony.

(g) I am not aware that the Postal Service has to date provided such an estimate, so I am not in a position to calculate an estimate of bias for it. In any event, such a calculation is not necessary for my testimony.

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USPS/UPS-T4-3. Refer to your testimony as it relates to the use of the words reliable, unreliable, and reliability in the following places: page 2, line 19; page 3, line 1; page 18, line 15; page 18, line 19; page 19, line 17; page 24, line 8; page 25, line 1; page 29, line 13, and page 31, line 6.

In formulating your response, please consider the following standard statistical sampling definitions as perhaps first defined by Hansen, Hurwitz and Madow (Sample Survey Methods and Theory, Vol 1., John Wiley & Sons, 1953), where they say:

"The difference between a sample result and the result from a complete count taken under the same conditions is measured by what we will refer to as the *precision* or the *reliability* of the sample result. The difference between the sample result and the true value, we call the *accuracy* of the sample survey" (pg. 10).

Answer the following questions for each identified reference.

- a. Confirm that your use of the word *reliable* is the same as the Hansen et. al. definition of reliability.
- b. If you are unable to confirm part (a), confirm that your use of the word *reliable* is the same as the Hansen et. al. definition of accuracy.
- c. If you are unable to confirm part (b), please define what you mean by reliability in terms of statistical measures that include the true value, sampling error, and bias.

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Response to USPS/UPS-T4-3.

(a)-(c) Not confirmed. My use of the words "reliable," "unreliable," and "reliability" are not meant to be interpreted as references to any statistical definitions or terms. Rather, as the context in which these terms are used in my testimony indicates, I am using them in their ordinary sense, as a dictionary would define them. See, e.g., Merriam Webster's Collegiate Dictionary (10th ed. 1997) at p. 988 ("reliable" -- "suitable or fit to be relied on").

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USPS/UPS-T4-4. Please refer to your testimony on page 11, lines 14-18, where you say that the BRPW estimate may be wrong, in need of adjustment, and controlling to trial balance provides a "check" on the BRPW estimates.

- a. Please confirm that if a random sample is drawn from a population such that every unit in the population has a known, non-zero probability of selection, that an estimate of the population mean and variance can be constructed from the data obtained from that survey. If not confirmed, please explain fully why not, and under what circumstances a sample estimate (point and variance) can be constructed from a population based on a survey of a population.
- b. Please confirm that one can construct a confidence interval around the estimated mean for a sample drawn as described in part (a). If not confirmed please explain why a confidence interval cannot be constructed around an estimate of a sample mean.
- c. Please confirm that the numbers produced from the BRPW system as described by witness Hunter in USPS-LR-I-26 are statistical estimates with point estimator Y_{st} , and variance estimator $V(Y_{st})$. If not confirmed, please explain why these estimators as presented in USPS-LR-I-26 are not accurate, and why the BRPW estimates can not be constructed from these formulae.
- d. Please confirm that your interpretation of the statistical estimator referenced in part (c) is that of a combined ratio estimate. If not confirmed please explain fully.

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- e. Please reconcile the difference between your statement on page 11 that an estimate can be wrong with that of the definition of a point estimate with estimated variance as discussed in parts (a) through (d).
- f. In reference to your use of the term 'wrong', under what circumstances is an estimate from a sample survey 'right'?
- g. Please define your use of the term 'wrong' as it relates to the confidence interval which can be constructed around the BRPW estimate(s).
- h. Please explain how an estimate taken from a sample survey can be 'wrong' given that an estimate taken from a sample survey has an estimated mean and variance.

Response to USPS/UPS-T4-4.

(a)-(b) The BRPW estimate for Parcel Post is not based on a random sample. Thus, these requests have little or no relevance to that estimate. In particular, to speak of a "confidence interval" in the case of a census is meaningless and it does not address the reliability of the underlying data. However, in general terms, I can confirm the statements in (a) and (b).

(c) Note that the discussion of sampling and confidence intervals in USPS-LR-I-26 is of little or no relevance to the BRPW permit imprint Parcel Post estimate

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since that estimate is not based on a sample. However, in a general sense, I confirm this statement.

(d) Confirmed that USPS-LR-I-26 presents a combined ratio estimate of Y where Y is the population revenue, volume, or weight total. For reasons discussed above, the permit imprint Parcel Post estimate is constructed differently than for other mail categories.

(e) If the data from which an estimate has been calculated is unverified and its reliability has been questioned, then the estimate itself is subject to question and may be wrong. In any event, the BRPW permit imprint Parcel Post estimate is not based on a sample.

(f) If, among other things, adequate data collection procedures are in place and the underlying data is checked and verified in a reasonable manner, then an estimate from a sample survey may be "right." Moreover, if the results of that survey are an intermediate step to another result of interest, then the survey must be conducted, and its results interpreted, in a fashion that allow those results to be used as intended. In any event, discussions concerning sample surveys are of little or no relevance to the BRPW permit imprint Parcel Post estimate since that estimate is not based on a sample.

(g) See my response to (e), above.

(h) See my response to (e), above.

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USPS/UPS-T4-5. Refer to your testimony at page 12, lines 16-19, where you state, the DRPW system “. . . continues to be the sole source of revenue . . . for a number of mail categories, including First Class Single Piece Mail, Standard (A) Single Piece Mail, Standard (B) Special Standard Mail, and Standard (B) Library Mail.” Please confirm that the estimates for these categories as described in witness Pafford's testimony in footnote 2, Tables 1, 2 and 3, includes DRPW data and other source data. If you cannot confirm, please explain why you say that the estimates from these categories come exclusively from DRPW, when footnote 2 of these tables clearly indicate the presence of other source data.

Response to USPS/UPS-T4-5.

Footnote 2 to Mr. Pafford's Tables 1, 2, and 3 indicates that the source of the estimates for the identified categories is “DRPW (Includes other source data if any)” (emphasis added). My Table 1 at page 28 shows quite clearly that there is an extremely small, almost insignificant amount of revenue from other sources for First Class Single Piece Mail (0.3%), but that the DRPW system is essentially the sole source of the revenue estimates. The same holds true for Standard (B) Special Standard Mail, where only 0.3% of estimated revenue is derived from a non-DRPW source. See rpwtbles.xls filed by Postal Service witness Hunter, available at www.prc.gov. For Standard (A) Single Piece Mail my Table clearly demonstrates that

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DRPW is the sole source of revenue data. Standard (B) Library Mail estimated revenue is based entirely on DRPW. The point of my statement is in no way diminished by these small amounts derived from other sources, not including the BRPW system.

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USPS/UPS-T4-6. Please refer to your testimony at page 17, lines 1-3, where you claim that there was no investigation as to the discrepancy in the estimates between the methodology that incorporates BRPW estimates and the earlier methodology that did not. Please indicate the basis for your claim, including any statements by the Postal Service to this effect. Please identify specific efforts on your part of [sic] that of UPS (if necessary, check with UPS) to determine what, if any, investigation of this issue was made.

Response to USPS/UPS-T4-6.

My testimony on page 17 at lines 1-3 actually states in relevant part that "There **seems to have been** no investigation of [the] substantial discrepancy" between the DRPW-only estimate and the DRPW/BRPW estimate (emphasis added). In my review of the Postal Service's documents in this case, I found no evidence that an investigation of the substantial discrepancy between the FY1998 estimates produced by the two approaches was ever performed. Had there been such an investigation, I would have expected to see a description of it in the direct testimony of the Postal Service, given the extent of the discrepancy, or in the Postal Service's interrogatory responses, given the attention this matter received in discovery.

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USPS/UPS-T4-7. Please refer to your testimony at page 18, lines 9-10, where you use the term 'scrubbed'.

- a. Define the term 'scrubbed' and provide any authoritative source for your definition in statistical literature.
- b. Explain your understanding of how Mr. Hunter 'scrubbed' the input BRPW data.

Response to USPS/UPS-T4-7.

(a) My use of the word "scrubbed" is meant to indicate that the data was reviewed as part of a process intended to investigate and "resolve" anomalous data. The term has been widely used by the Postal Service and its witnesses both in this proceeding and in Docket No. R97-1.

(b) In his response to UPS/USPS-T5-21 (Tr. 2/831) and in oral cross-examination, among other places, Mr. Hunter described the process by which the BRPW data were reviewed and "flagged" records were "resolved." That description is very general, making it difficult to state with any degree of confidence exactly how the data was scrubbed. It appears that changes were made in PERMIT System data as a result of this process, although the Postal Service has not provided any records of the instances in which PERMIT System data were altered. See Tr. 2/1032-1033.

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USPS/UPS-T4-8. Please refer to your testimony at page 18, line 14-16, where you state that "it is impossible to evaluate with any degree of confidence how reliable the aggregated postage statement data is [sic]."

- a. Define what you mean by the phrase 'degree of confidence'.
- b. Confirm that this phrase (see part (a)) is a statistical term meant as the measure of the confidence interval around sample survey point estimate. If you do not confirm please explain.
- c. Relate the phrase 'degree of confidence' to the word 'reliability' used in this sentence.

Response to USPS/UPS-T4-8.

(a)-(c) As the context in which the term is used indicates, the terms "degree of confidence" and "reliability" as used in the sentence you cite are not used in any statistical sense. Rather, they refer to having an acceptable level of comfort that a result is sufficiently correct to be suitable to be relied upon in making decisions of the importance that the Commission is called upon to make. Since there is no way of knowing how the aggregated BRPW data was changed or how accurate the underlying, disaggregated data is, it is not possible to know whether the Parcel Post BRPW estimate is sufficiently correct to be able to rely on it in setting Parcel Post rates. Complete verification of the process and of the underlying data cannot be determined

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without being able to verify all parts of the data collection and estimation process from the point of obtaining individual postage statement data through the final Job 3 output estimates.

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USPS/UPS-T4-9. Please refer to your testimony at page 20, lines 11-12, where you criticize a supposed lack of adjustment to the Parcel Post estimates to a trial balance, at the same time ignoring the fact that the BRPW estimates are adjusted based on a survey of post offices as documented by witness Hunter in USPS-LR-I-230. The following sequence of questions relies upon a hypothetical survey in time t-1 where the sample size is equal to the population (i.e., a census with no sampling variance), the survey has no non-response, the measurement variable is known with certainty (no measurement error) and is the true value. The survey (census) is done to establish the relationship (ratio) between the revenue in the population and the revenue of a portion of the population. Assume for the purposes of this example that this relationship or ratio is 0.99. That is, the portion of the population represents 99% of the total revenue in the population. Assume further that the count of the population and the revenue in each population member is relatively unchanged in time t.

- a. Confirm that with the goal to have the lowest possible sampling error for the estimated revenue at time t-1, that a census is preferable to a sample. If you do not confirm, please explain.
- b. Confirm that with the goal of having the best possible revenue estimate at time t-1 that a 100 percent response rate is preferable to a response rate of less than 100 percent. If you do not, please explain.

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- c. Confirm that it is preferable to have no measurement error for the variable of interest, in this case revenue at time t-1, than to have measurement error. If you do not, please explain.
- d. Confirm that the portion of the population that represents 99% of the total revenue in the population in time t-1 is a good predictor of the population revenue in time t-1. If you are unable to confirm, provide an example demonstrating poor prediction.
- e. Confirm that if the population members and associated revenue in time t remain relatively unchanged from time t-1 that the portion of the population that represents 99% of the population in time t-1 would also be a good predictor of the population in time t. If you do not confirm please explain fully.

Response to USPS/UPS-T4-9.

I did not "ignor[e] the fact that the BRPW estimates [were] adjusted based on a survey of post offices." On the contrary, UPS sought that survey in discovery, but the Postal Service refused to do more than generally describe it and the "blowup factor" based on it. In any event, that is a different type of "adjustment" than the trial balance adjustment that is applied to other, non-Parcel Post BRPW estimates. In particular, the trial balance adjustment process reconciles an estimate to actual revenues and can result in increasing or decreasing the estimate to accord with actual revenues, whereas

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the survey was intended only to increase the BRPW Parcel Post estimate to reflect permit imprint volume at facilities that are not part of the PERMIT system; in no way does it act as a check on the accuracy of the BRPW estimate.

(a) If a census collects information reliably, with the same level of detail, and is compatible with other information with which it is intended to be combined, then it would be preferable to a sample with the same attributes. The evidence suggests that this is not the case for the Parcel Post BRPW estimate.

(b) Confirmed.

(c) Confirmed.

(d) Confirmed.

(e) Confirmed, subject to the nature and extent of change from time $t-1$ to time t .

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USPS/UPS-T4-10. Please refer to your testimony at page 21, lines 3-9, where you state that the same factor of 0.9414 would have been applied to the BRPW estimate if it were to be book revenue adjusted.

- a. To the best of your understanding please define what you believe to be the inputs or components of the numerator of the Book Revenue Adjustment factor.
- b. To the best of you [sic] understanding please define what you believe to be the inputs or components of the denominator of the Book Revenue Adjustment factor.
- c. Show how that if [sic] the BRPW estimate were not to be treated as a census number, and therefore removed from the numerator of the Book Revenue Adjustment Factor and included in the denominator of said factor, how [sic] the same value would be derived. For the purposes of this request, use PQ 2 FY 1998.
- d. If you cannot show this requested result in part (c) please explain how you can make the statement that revenue would be lowered by \$37 million and pieces by approximately 14 million.

Response to USPS/UPS-T4-10.

The cited testimony does not state that “the same factor of 0.9414 would have been applied to the BRPW estimate.” It states that “[h]ad the BRPW portion of the Parcel Post estimates been adjusted as well [by the Book Revenue Adjustment Factor],

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the Postal Service's own Parcel Post volume and revenue estimates for FY1998 would be lower by approximately 14 million pieces and \$37 million."

(a) The inputs for the numerator of the Book Revenue Adjustment factor are defined in LR-I-30, Appendix H.

(b) The inputs for the denominator of the Book Revenue Adjustment factor are defined in LR-I-30, Appendix H.

(c) The same value would not be derived. Removing the Parcel Post permit imprint revenue estimate from the BRPW side to the DRPW side of the Book Revenue Adjustment Factor would of course change the exact value of the Factor. By my calculation, this would change the PQ 2 FY1998 factor from 0.9213 to 0.9229. The effective Book Revenue Adjustment Factor for GFY1998 would change from 0.9414 to 0.9426.

(d) The cited testimony states that the FY1998 Parcel Post estimates "would be lower by **approximately** 14 million pieces and \$37 million" (emphasis added). The exact reductions would be 13.4 million pieces and \$35.2 million.

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USPS/UPS-T4-11. Please refer to your testimony at page 23, lines 16-17, where you say that . . . "not only does BRPW provide no additional detail, but it in fact provides less detailed information than does DRPW."

- a. Confirm that the USPS rate schedule effective January 10, 1999 for Standard Mail (B) Destination Entry Parcel Post defines three discount rate categories of DDU, DSCF, and DBMC. If you do not confirm, please explain fully.
- b. Please confirm that it is your understanding that the required markings beginning January 10, 1999 for DDU, DSCF, and DBMC mailpieces as described in the USPS Domestic Mail Manual 54, Chapter M, Section 3.0 included Drop Ship (D/S), DBMC Parcel Post, or DBMC PP. If you do not confirm, please explain fully.
- c. If you confirm part (b), please explain how DRPW, beginning January 10, 1999 can provide accurate estimates of DDU, DSCF, and DBMC discount categories.
- d. Confirm that beginning with the new rate schedule effective January 10, 1999, that BRPW can provide estimates at the DDU, DSCF and DBMC level. If you do not confirm, please explain fully.
- e. If you confirm part (d), please explain how the BRPW and DRPW, beginning January 10, 1999 can provide the same level of detail relating to DDU, DSCF, and DBMC discount categories.

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Response to USPS/UPS-T4-11.

(a) Confirmed.

(b) In the case of Parcel Post, § 3.2 of ¶ M012 of Domestic Mail Manual Issue 54 dated January 10, 1999, states that "The required marking 'Drop Ship' or 'D/S' for Parcel Post drop shipment rate mail may be placed in the postage area location specified in 3.1." That provision goes on to state that "Until January 10, 2000, mail qualifying for the DBMC rate may bear the marking 'DBMC Parcel Post' or 'DBMC PP'"

(c) My point in the statement you cite does not refer to rate category information. Rather, as stated in the sentence immediately preceding the one you cite (page 23, lines 14 to 16) and in the paragraph immediately following the sentence you cite (page 24, lines 1 to 6), my point is that the PERMIT system, and thus BRPW, "does not retain data on the volume of mail by weight increment." See the A.T. Kearney Data Quality Study, Summary Report, page 93, § 11.0 (as quoted on page 23 of my testimony at lines 19-22). This "forces the Postal Service to impute volume by weight category." UPS-T-4 at 24, lines 2-3. The DRPW system does provide that data.

(d) I have not reviewed information that would allow me to confirm this.

(e) Not applicable.

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USPS/UPS-T4-12. Please refer to your testimony at page 24, lines 17-18 and page 25, lines 1-2.

- a. Please identify each audit report that is referenced that attempted to provide a national estimate of the bias (bias as defined as the difference between the expected value of the estimate (audit) and the true value) in the postage statement data?
- b. If no audit report can be identified, please provide the basis for your projecting the findings to the national level. Please provide and explain the methodology and assumptions you use to make this projection.

Response to USPS/UPS-T4-12.

(a) The audit reports do not purport to measure "bias" in a statistical sense or on a national basis, nor have I "project[ed] the findings to the national level." Rather, there are 48 separate reports, apparently relating to 48 separate facilities. These reports "contain findings that call into question the reliability of the postage statement data that makes up the withheld PERMIT System data base." UPS-T-4, pp. 24-25 (footnote omitted). For example, here are some of the audit report findings:

1. "Customers were not always completing the Weight of a Single Piece, Total Pieces and Total Weight blocks on the front of the mailing statement. Also not completed were the Mailing Date, Processing Category, and Container Quantities

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blocks." USPS-LR-I-323 at 3, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (January 1998), at 1.

2. "The acceptance employee was not verifying the mailing by determining the single piece weight, total pieces, and total weight." USPS-LR-I-323 at 3, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (January 1998), at 1.

3. "Permit system logon ID codes have not been updated for several years and employees are using access codes that were not issued to them to manipulate data entry. Numerous instances were identified where clerks were using supervisory ID codes to approve system overrides and reversals without supervisory overview." USPS-LR-I-323 at 31, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (August 1998), at 18.

4. "The audit disclosed significant problems in the verification, acceptance and clearance of bulk mail by [redaction] BMEU." USPS-LR-I-323 at 43, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (July 1998), at 1.

5. "Observations made at a large detached mail unit (DMU) located at [redaction] determined not only was support documentation not being presented with each mailing, the mailer was not presenting a consolidated postage statement on the proper edition of Form 3602-PV, for all Plant-Verified Drop Shipment (PVDS) mailings (Section P750.2.7, DMM). Postal acceptance clerks were not reconciling the support

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documentation to postage statements during the acceptance procedures." USPS-LR-I-323 at 45, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (July 1998), at 3.

6. "Review of mailing statements for current mailers at [redaction] revealed that postal employees were completing the forms for the customers but were not always verifying weights and piece counts. For those mailing statements where the customer completed computations, verifications were not always performed." USPS-LR-I-323 at 79, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (August 1998), at 5.

7. "We concluded that the acceptance employee did not know what mail was being loaded on to the vehicle. . . . Postal employees made no attempt, either by counting or estimating, to determine whether the volume of mail matched the amount listed on mailing statements. . . . Residual pieces were not examined or verified to the mailing statements." USPS-LR-I-323 at 110, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (September 1998), at 2.

8. "Our review identified weaknesses in every aspect of bulk mail acceptance including employee training, equipment and manuals, maintenance of trust fund balances, verification and acceptance procedures, and clearance procedures." USPS-LR-1-323 at 195, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (April 1998), at 13.

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9. "The postal acceptance clerk was improperly completing the mailer's section of both the postage statement and the Plant-Verified drop Shipment Verification/Clearance Document (Form 8125). The postal clerk's responsibility should have been to verify the accuracy of the data on these statements, not to generate the information. Omission and errors in the clerk's verifications could go undetected. Numerous other potential problems were also observed. The mailer was not numbering the postage statements as required under their AMS [Alternate Mailing Systems] agreement and a review of the mailer's trust account transaction history identified two double postings of the same postage statements resulting in an overcharge of [redaction] in postage." USPS-LR-1-323 at 219, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (May 1998), at 9.

10. "During the audit, we ran transaction histories for a sample of 50 accounts. We identified inaccuracies in 25 permit imprint mailers' accounts." USPS-LR-1-323 at 253, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (December 1997), at 10.

11. "Of the 1311 First Class, Standard-A and B mailing statements and CASS/MASS Summary Reports reviewed, 69 mailings (5%) were identified that contained various errors." USPS-LR-1-323 at 316, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (July 1998), at 8.

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12. "There were 26 mailings presented during Accounting Period 12. . . .

There was no weigher verification completed on the statements presented. Nine of the statements were not fully completed by the customers, lacking essentials including number of pieces, piece weight, and total weight. Three of the mailings were presented on outdated forms." USPS-LR-1-323 at 340, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (August 1998), at 3.

13. "Verification procedures were not performed; mailing statements were not entered timely; significant differences existed in major trust accounts; records were not maintained properly; bulk mailings were dispatched without proper verification; an unauthorized scale was utilized; and funds were left in canceled permit accounts." USPS-LR-1-323 at 391, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (April 1998), at 18.

14. "Pre-sort verifications were not completed....Only one employee had received adequate training to conduct pre-sort verifications. This clerk was assigned to Tour 2. Business mail deposited between the hours of 5:30 PM and 9 AM was not verified, and was no longer on-site when the Tour 2 clerk arrived. Postage statements were left for the Tour 2 clerk, who signed and round dated the statements, even though he had never seen the mail." USPS-LR-1-323 at 402, Postal Inspection Service Audit Report: Financial Audit, Case No. [redacted] (August 1998), at 4.

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Also, there are many other audit reports that the Postal Service has refused to produce. Given the fact that the reports that have been produced raise serious questions about the accuracy of postage statement data, one should be skeptical about relying on postage statement information in the absence of an investigation that attempts to provide a national estimate of bias.

(b) I have not attempted to project the audit report findings to the national level, and that is not necessary for my testimony. See my response to (a), above.

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USPS/UPS-T4-13. Please refer to your testimony at page 25, lines 7-8, where you state that the audit reports indicate that BMAU personnel often do not do tasks such as deriving the total number of pieces in a mailing correctly.

- a. Please identify each audit report that attempted to quantify the effect and/or estimate of the bias (defined as the difference between the expected value of the estimate (audit) and the true value) of these incorrectly applied procedures.
- b. If no audit report can be identified, please provide the basis for your projecting the findings to the national level. Please provide and explain the methodology you use to make this projection.

Response to USPS/UPS-T4-13.

(a)-(b) See my response to USPS/UPS-T4-12.

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USPS/UPS-T4-14. Please refer to your testimony at page 29, lines 13-15, where you question the reliability of the estimates because of the heavy reliance upon "one data collection question" in the CODES RPW data collection instrument.

- a. Please provide any evidence which would [indicate] a change in difficulty beginning in FY1998 or thereafter for data collectors to distinguish between a permit and stamped/metered mailpiece.
- b. Please provide any estimates of bias that you are aware of regarding the effect of mis-recording permit indicia.

Response to USPS/UPS-T4-14.

(a) I am not aware of any "change in difficulty beginning in FY1998 or thereafter for data collectors to distinguish between a permit and stamped/metered mailpiece." That is not the point of the sentence to which you refer. Rather, I am observing: (1) that the consequence of accurately answering this data collection question assumes much more importance when a hybrid BRPW/DRPW system is used to estimate Parcel Post volume; and (2) that there is no evidence that the greater importance of the question, which previously was not very important, was ever communicated to the data collectors.

(b) I am not aware of any such estimates.

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USPS/UPS-T4-15. Refer to your testimony on page 14, lines 11-22, where you compute a GFY 98 Book Revenue Adjustment Factor as derived from USPS-LR-I-30, USPS-LR-I-249, and USPS-LR-I-302.

- a. Please provide specific paragraph and page number citations from any USPS documentation that indicates that the BY 1998 estimates were developed using a "GFY" Book Revenue Adjustment Factor of 0.9414.
- b. Please confirm that as provided in LR-I-30 (Section 2. System Methodology/Process Flow) GFY RPW data are developed by summing quarterly RPW data. If you do not confirm, please explain fully.

Response to USPS/UPS-T4-15.

(a) Book Revenue Adjustment Factors are applied quarterly. For FY1998, the factors were approximately 0.77 for Q0, 0.92 for Q2, 0.91 for Q3, and 1.12 for Q5. Mathematically, these figures result in an implicit factor of 0.9414 for the entire FY1998 year, even though that implicit factor is never actually used. I presented the "annual" equivalent of the quarterly figures to more easily convey the overall effect of the Book Revenue Adjustment Factor on the revenue, pieces, and weight estimates.

(b) Confirmed.

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USPS/UPS-T4-16. Refer to your testimony at page 15, lines 1-3, where you state that the "Book Revenue Adjustment Factor of 0.9414 is applied to DRPW estimates to reduce the DRPW portion of the revenue estimate for each class of mail so that the total RPW revenue estimate matches the Postal Service's actual total revenue."

a. Please confirm that LR-I-23 contains the quarterly Book Revenue Adjustment Factors used to develop the quarters (PQs 0, 2, 3, and 5) that were summed to produce USPS GFY 98 RPW data.

b. Please confirm that the GFY 98 Book Revenue Adjustment Factor of 0.9414 does not correspond to any of the quarterly Book Revenue Adjustment Factors provided in LR-I-23 which were used to develop the quarters that were summed to produce USPS GFY 98 RPW data.

Response to USPS/UPS-T4-16.

(a) Confirmed that the quarterly Book Revenue Adjustment Factors appear in the file FACTORS.TXT in the subdirectory "Data" of USPS-LR-I-23.

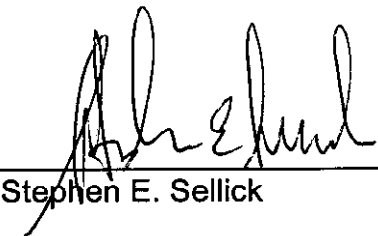
(b) Confirmed. As described in my response to USPS/UPS-T4-15, I used the data and programs provided in USPS-LR-I-30, USPS-LR-I-249, and USPS-LR-I-302 to calculate the implicit annual Book Revenue Adjustment Factor of 0.9414 for GFY1998. The quarterly Book Revenue Adjustment Factors I calculate in that process are the

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same as those presented in USPS-LR-I-23. Accordingly, the "GFY 98 Book Revenue Adjustment Factor" I calculate is consistent with USPS-LR-I-23.

DECLARATION

I, Stephen E. Sellick, hereby declare under penalty of perjury that the foregoing answers are true and correct to the best of my knowledge, information, and belief.



Stephen E. Sellick

Dated: June 15, 2000

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document in accordance with section 12 of the Commission's Rules of Practice.

William J. Pinamont
William J. Pinamont

Dated: June 15, 2000
Philadelphia, PA

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