

DOCKET SECTION

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

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POSTAL RATE MONITORING
DOCKET NO. R97-1

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS PAFFORD TO INTERROGATORIES OF THE NATIONAL NEWSPAPER ASSOCIATION (NNA/USPS-ST48-6,9-14)

The United States Postal Service hereby provides responses of witness Pafford to the following interrogatories of the National Newspaper Association: NNA/USPS-ST48-6,9-14, filed on November 12, 1997.

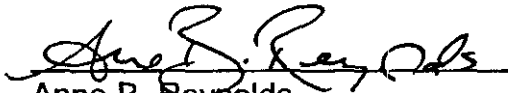
Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking


Anne B. Reynolds

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2970; Fax -5402
November 24, 1997

ANSWERS OF BRADLEY V. PAFFORD
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NNA/USPS-ST48-6. Please explain how the 92 offices referred to in question 4 were selected for the panel and provide a breakdown of those offices by CAG.

NNA/USPS-ST48-6. The ninety-two non-automated panel offices represent the following mail class and indicia based mail categories: First Class mail permit imprint (12 offices); Periodicals (20 offices); Standard Mail (A) permit imprint (19 offices); Standard Mail (B) Bound Printed Matter permit imprint (19 offices); and First Class mail/Standard Mail (A) metered and precanceled stamp (22 offices). For each of the above categories, a subpopulation of non-zero revenue offices is identified from a census or other source to establish a sampling frame. Offices are then stratified on revenue using a cumulative SQRT (f) stratum boundary method with fixed number of strata. A probability-based sample is selected for each category by allocating a fixed total sample size - based on a target coefficient of variation (relative to the total population of offices) - to strata using Neyman allocation. The method of selecting offices is simple random sampling within stratum. CAG information is not used and is not readily available.

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NNA/USPS-ST48-9.

Please refer to LR-H-89, subpart C.1: "Sample Selection Methodology," which states that "the method of selecting sampling units (offices) for noncertainty strata for publishers' second-class ... was random initially."

- a. Should this statement be taken to mean that, at the time the panel was initially drawn, the Postal Service believed the non-certainty portion of the panel was a representative probability sample of the universe of all In-County second-class mail entered at non-automated offices.
- b. Please state the approximate time period when this sample was designed and list any and all time periods subsequent to that date when the design of the sample has been reviewed, altered or confirmed in its design.
- c. If the answer to subpart a. is affirmative, does the Postal Service believe that this portion of the panel is still representative? If so, please explain fully the basis for this belief; if not, please explain why it is still being used.
- d. If the answer to subpart a. is negative, please provide a *correct interpretation of the referenced statement*.
- e. Please state any and all changes that may have been made in this sample design or the designation of offices comprising the sample as a result of errors discovered as a result of preparation for or litigation of R94-1 or in preparation for R97-1.
- f. Please state whether any of the offices in the sample have been removed since the design of the sample because (i) they have been converted to the PERMIT system, or (ii) they have been closed.
- g. If any offices are cited in response to subpart e. above, please explain how those offices are replaced in the sample. If they are not replaced, please explain why.

NNA/USPS-ST48-9.

Response:

- a. Yes.
- b. The earliest known update of the PQ I - III periodicals sample design was PQ I FY1985. The panel was again updated PQ III FY1992. In PQ III FY1993, PQ I FY1994 and for FY1995 the design was changed to incorporate data from automated offices. Based on the results of a FY1995 census of post offices, the panel was updated effective PQ IV FY1996.

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- c. Yes. The panel was updated as recently as PQ IV, FY 1996.
- d. Not applicable.
- e. The Postal Service continually strives to maintain high quality revenue, pieces, and weight information, and to implement improvements in the associated data systems. As recently as PQ IV, FY 1996 the sample design and designation of offices was updated for the RPW noncountable subsystem. To the best of my knowledge there have not been any changes in the sample design *or the designation of offices comprising the* sample as a result of errors discovered as a result of preparation for or litigation of R94-1 or in preparation for R97-1.
- f. To the best of my knowledge, none have been removed from the sample.
- g. Not applicable.

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- NNA/USPS-ST48-10. Please refer to the response of Witness Pafford to NNA/USPS-T1-15 (Tr.9/4361) where he states that "[t]he C.V. [of the estimated volume of In-County second-class mail] is not computed since it is not clear how the set of sample offices used for the base year PQ I-III period were originally selected prior to FY 1989." Please evaluate this response in light of your response to question 9 and explain the apparent contradiction with the portion of Library Reference LR-H-89 cited in question 9.
- NNA/USPS-ST48-10. There is no contradiction. The sample was initially drawn using random sampling techniques. However, specific information about the probability selection methodology is no longer known.

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- NNA/USPS-ST48-11. In order to allow the parties and the Commission to evaluate the precision of your volume estimates for In-County second-class mail entered in Post Offices where such entry is not automated through the PERMIT system, please provide:
- a. upper and lower 95 percent confidence limits about these volume estimates for In-County second-class mail entered in offices in the In-County revenue intensive strata and for In-County second-class mail entered in offices in the other strata;
 - b. the data underlying your calculation of each of the two confidence intervals, in an electronic spreadsheet form;
 - c. the formula or formulae used in the calculations; and
 - d. a description of all statistical assumptions upon which these intervals rely.
- NNA/USPS-ST48-11. The confidence interval is not computed for the same reason as given in response to NNA/USPS-T1-15, Tr.9/4361.

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- NNA/USPS-ST48-12. If there is some reason why it is not possible to compute a classical confidence interval in response to question 11, please fully explain the reason(s), and use the jackknife variance formula provided on page 6 of the LR-H—89 or, alternatively, another appropriate statistic that would allow the parties to evaluate the efficiency of your estimates.
- NNA/USPS-ST48-12. The classical confidence interval for base year volumes cannot be computed for the reasons discussed first in NNA/USPS-T1-15, Tr.9/4361. Using the jackknife variance estimation approach for In-County volume for PQ I - III, and the design-based variance estimator for PQ IV of the base year, the estimated coefficient of variation for the estimated 877,829 (000) pieces is 3.18%.

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- NNA/USPS-ST48-13. Please refer to the Quality Assurance section on page 10 of LR-H-89. Please provide a plain English explanation of the "mainframe computer edits which examine sample data for completeness and consistency." Please also provide the computer code.
- NNA/USPS-ST48-13. Speaking plainly, they include such things as 1) checks on the accurate transmission of data, 2) consistency checks on revenue, pieces, weight, revenue per piece, revenue per pound, and weight per piece, and 3) nonresponse checks. The checks are additional to those performed through the PERMIT system, and are applied to all input data. The computer code has been previously filed in LR H-42.

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NNA/USPS-ST48-14.

Please refer to the response of Witness Pafford to NNA's questions regarding the reasons why some post offices are not automated. (Tr. 9/4382, lines 15-25).

- a. Please provide an explanation why 5,902 offices in the "In-County intensive strata" and the 201 offices in the "other strata" category are not automated.
- b. Please state whether the Postal Service intends to automate each of these offices and, if so, the approximate schedule for conversion to automation. If the Postal Service does not intend to automate these offices within the next three years, please state any and all plans for revision of the strata or sampling systems to be used for calculating In-County volumes.
- c. Please confirm that these offices tend to be smaller and more rural than the PERMIT offices in the system. If you do not confirm, please explain.

NNA/USPS-ST48-14.

Response:

- a. I do not know why the entire population of offices in these strata have not been automated. I can answer this only in terms of the panel offices for which I previously have testified to (USPS-T-1), and are currently testifying about (USPS-ST48). See part b. below.
- b. I have not studied the Postal Service's plans for automating offices outside the panel. Panel offices are automated as explained in the response to NNA/USPS-ST48-1. Some offices may be automated within the next three fiscal years, however, I am unaware of any schedule.
- c. Cannot confirm. I have not studied the demographics of these offices, other than to classify them for purposes of sample selection stratification.

DECLARATION

I, Bradley V. Pafford declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

A handwritten signature in cursive script, appearing to read "Bradley Pafford", is written over a horizontal line.

Dated: 11/24/77

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.



Anne B. Reynolds

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
November 24, 1997