

UNITED STATES OF AMERICA
Before The
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

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Postal Rate and Fee Changes, 2000)

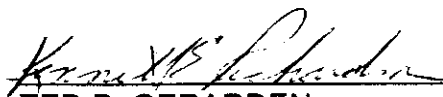
Docket No. R2000-1

ANSWERS OF THE OFFICE OF THE CONSUMER ADVOCATE
TO INTERROGATORIES OF UNITED STATES POSTAL SERVICE
WITNESS: J. EDWARD SMITH (USPS/OCA-T4-36-43)
(June 29, 2000)

The Office of the Consumer Advocate hereby submits the answers of J. Edward Smith to interrogatories of United States Postal Service, dated June 15, 2000. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

OFFICE OF THE CONSUMER ADVOCATE



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ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-36-43

USPS/OCA-T4-36. Please refer to your testimony at page 59, footnote 86. You describe Figure 1 as "a short-run diagram relating small changes in hours and TPH." Please confirm that the description of Figure 1 as representing the "short-run" relationship is your interpretation of the diagram, not Mr. Degen's. If you do not confirm, please explain.

RESPONSE TO USPS/OCA-T4-36. Confirmed. It is clear that Mr. Degen would not agree with my testimony. I am providing an alternate interpretation of the underlying data. I believe that my interpretation is simpler and comports well with the observed data.

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USPS/OCA-T4-37. Please refer to pages 59-61 of your testimony, particularly footnote 88, where you discuss Figure 4 from Mr. Degen's testimony, USPS-T- 16. In the footnote, you state that you "believe the true cost structure is the line he has labeled '100% Volume-Variability.'"

- a. Please confirm that Mr. Degen generated the simulated data in Figures 2 through 4 "by adding random noise to the underlying hours and pieces relationship plotted in Figure 1," as you state at page 59, lines 7-9 of your testimony. If you do not confirm, please explain.
- b. Please confirm that the "underlying hours and pieces relationship. . . in Figure 1" is represented in Figure 4 by the set of ten lines crossing the "100% Volume-Variability" line. If you do not confirm, please explain.
- c. Please confirm that the set of ten lines crossing the "100% Volume-Variability" line, by construction, represent the actual non-stochastic portion of the process that generated the simulated data presented in Figure 4. If you do not confirm, please explain.
- d. Please confirm that the line labeled "100% Volume-Variability" line, by construction, does not represent the actual non-stochastic portion of the process that generated the simulated data presented in Figure 4. If you do not confirm, please explain.

RESPONSE TO USPS/OCA-T4-37. (a) Confirmed.

(b) Confirmed that this is Mr. Degen's interpretation.

(c) Confirmed that this is Mr. Degen's interpretation.

(d) Confirmed that this is Mr. Degen's interpretation.

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USPS/OCA-T4-38. Please refer to your testimony at page 63, lines 1-16, where you present your re-interpretation of Figure 5 from Mr. Degen's testimony, USPS- T-16.

- a. In "Mr. Degen's theory of the mail processing network," is mail volume the only factor that will determine the design and size of a mail processing plant? If you claim that it is, please provide a detailed citation to the portions of Mr. Degen's testimony that you use to support your answer.
- b. Please confirm that that assumption that the "optimal capacity" for plant A is at the point labeled A in Figure 5, which you state at page 63, line 3, of your testimony, is your assumption, not Mr. Degen's. If you contend that the assumption is Mr. Degen's, please provide a detailed citation to the portion of USPS-T-16 that identifies point A as the "optimal capacity" for plant A.
- c. Please confirm that that assumption that the "optimal capacity" for plant B is at the point labeled C in Figure 5, which you state at page 63, line 6, of your testimony, is your assumption, not Mr. Degen's. If you contend that the assumption is Mr. Degen's, please provide a detailed citation to the portion of USPS-T-16 that identifies point C as the "optimal capacity" for plant B.
- d. Is it correct to interpret the cited portion of your testimony as indicating that you believe point C would also represent the "optimal capacity" for plant A, if plant A's volume were to increase from TPH_0 to TPH_1 ? If not, please explain what you contend point C represents for plant A.
- e. In your interpretation of Figure 5, does the point labeled B represent a sub-optimal operating point for plant A? If it does not (i.e., if point B is optimal), please explain the sense in which point A represents the optimal capacity for plant A, as you assume at page 83, line 3, of your testimony.
- f. Please confirm that at point B, the TPH are the same as at point C (i.e., TPH for both points is TPH), but the workhours (or "real" labor costs) are lower for point B than at point C (i.e., $HI < HI'$). If you do not confirm, please explain fully.

RESPONSE TO USPS/OCA-T4-38. (a) No. See pages 15 through 23 of Mr. Degen's testimony. However, I do not understand the concepts of "design and size" as stated in your testimony. "Size" could refer to square feet, capacity, complexity of the equipment (e.g., casing boxes having extensions to them, or alternatively, the installation of newer model FSM machines), or possibly the complexity of the sorting process, accompanied by variations in the plant's position in the network. "Design" could, among other issues, focus on the interrelationship between activities at the

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processing plant. This was not an issue satisfactorily addressed by Dr. Bozzo and Mr. Degen and might, accordingly, be an important item for consideration by a working group.

(b) Confirmed subject to the recognition that I am using the hours/TPH data presented by Mr. Degen.

(c) Confirmed, subject to the recognition that I am using the hours/TPH data presented by Mr. Degen.

(d) Not necessarily. Point C is a different plant with higher costs. As depicted on the diagram, point C belongs to a different plant.

(e) No, not for the volume going through the plant at that point. It is a point that is different from the design capacity. Given the variations in mail volume, mail processing plants frequently operate at various levels of capacity. Point A is the design capacity of the plant.

(f) Confirmed.

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USPS/OCA-T4-39. Please refer to your testimony at page 40, lines 12-14. You state, "Postal Service investments in capital to reduce operating costs indicate a long-run approach is applicable to the analysis."

- a. Please confirm that the antecedent of "the analysis" is Dr. Bozzo's volume-variability analysis. If you do not confirm, please explain.
- b. Please confirm that you advocate modifying the volume-variability analysis to capture the effects of planned capital deployments intended to reduce operating costs. If you do not confirm, please explain.
- c. Does it follow from your statement that you believe that a "short-run" approach would not capture the effects of planned capital deployments intended to reduce operating costs? If not, please explain why a "short-run approach would not also be applicable for the reason given in the quoted statement from your testimony.
- d. Please confirm that the Postal Service's rollforward model accounts for, among other things, the effects on the Postal Service's future costs of planned deployments of capital equipment between the base year and test year. If not, please explain your understanding of how the rollforward model treats planned deployments of capital equipment.

RESPONSE TO USPS/OCA-T4-39. (a) Confirmed.

(b) Not confirmed. I indicated that the Postal Service has been making capital investments. One would expect these investments to affect processing costs to some degree. It would appear that the bulk of investments are also being made to establish additional capacity. I do not believe that Dr. Bozzo has significantly addressed this issue.

(c) A short-run analysis presents costs based on a fixed input, such as capital. Planned capital deployments may reduce operating costs and may increase capacity, but it should be noted that changes in capital plant are an element of a longer-run analysis. This is an issue that could well be examined by a working group. I think that a longer run analysis is applicable, for the reasons stated elsewhere in my testimony.

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(d) Not confirmed. I have not presented information on the rollforward model, nor am I familiar with it. Please note that future data are not included in Dr. Bozzo's model, which is based on historical data. The proposed working group might appropriately address the issue of the degree that future costs of planned deployments of capital equipment between the base year and test year are appropriate indicators of economic costs on a long run basis. This may be another example of a potential deficiency in Dr. Bozzo's work.

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USPS/OCA-T4-40. Please refer to your testimony at page 40, line 21, to page 41, line 1. You indicate that field operating data "probably measure mail processing at a variety of disequilibrium points" and that "accordingly" you "advocate that the regression analysis should be performed on data means." Please explain why it follows from the observation that field operating data represent "disequilibrium points" that "the regression analysis should be performed on data means." Please provide relevant citation(s) to the econometric literature, to the extent you use it to support your response.

RESPONSE TO USPS/OCA-T4-40. From Mr. Degen's testimony as well as various other Postal Service information, I have obtained the impression that there is substantial change in the processing of mail, *i.e.*, that the volume of mail is changing and that there is investment in plants and equipment. See the discussion of mail processing in USPS-T-16. There is also recognition that mail volumes fluctuate substantially; accordingly, it does not appear likely that a plant would be at a specific equilibrium on a continuous basis. A short-run analysis of short run fluctuations would be misleading. This is why I advocated the use of data means. Please also see USPS/OCA-T4-25 for a discussion of the use of a cross sectional model, which could be performed on means.

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USPS/OCA-T4-41. Please refer to your testimony at page 35, lines 5-6. You state, "the depreciation rates being used appear to be based on accounting data." Please provide detailed citation(s) to the material upon which your statement is based.

RESPONSE TO USPS/OCA-T4-41. In OCA/USPS-T-15-47(d) there is reference to the "book lives" of assets; the concepts of book lives, depreciation, and the 1.5 declining balance formula are accounting techniques. Please also note that the Management Operating Data System feeds the corporate data base, much of which would include accounting data. Dr. Bozzo in OCA/USPS-T-15-47(b) indicates that the economic literature on asset deterioration supports the use of geometric decay over straight line decay, leading, in his opinion, to a consistency between the 1.5 declining balance form and the economic literature. It should be noted that depreciation rates serve as a basis for the estimation of property, plant, and equipment on the balance sheet. It is not unusual for heavily depreciated plant and equipment to have a useful production life. Accordingly, this is an area worth consideration by a working group.

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USPS/OCA-T4-42. Please refer to your testimony at page 35, lines 14-15. You state, "Older machines will maintain their operability as they depreciate through increased maintenance." Please explain whether, in your view, an "older" machine that requires "increased maintenance" has the more, less, or the same productive capability as a newer machine that requires less maintenance.

RESPONSE TO USPS/OCA-T4-42. I would expect to find the same level of productive capability. On the factory floor, I don't believe that there would be much difference in productivity between two machines of the same model but difference ages as measured in units processed per hour. However, I would expect to find a higher level of maintenance for the older machine.

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USPS/OCA-T4-43. Please refer to your testimony at page 35, line 20, to page 36, line 1. You state, "maintenance labor is carried in another account but is a complement to machine operating time. Accordingly, the study is seriously deficient without consideration of management and maintenance hours."

- a. Please confirm that "maintenance labor" is recorded in cost segment 11 in both the Postal Service's and Commission's versions of the Cost and Revenue Analysis (CRA). If you do not confirm, please explain.
- b. Please confirm that supervisory labor is recorded in cost segment 2 in both the Postal Service's and Commission's versions of the CRA. If you do not confirm, please explain.
- c. With respect to your statement that "maintenance labor. . .is a complement to machine operating time," is it your understanding that the primary direction of causality between "operating time" and "maintenance labor" is that operating time causes the need for maintenance labor, or that maintenance labor causes the need for operating time?
- d. By "consideration of management and maintenance hours," do you mean a new analysis of costs in cost segment 2 and/or cost segment 11, an investigation of the possible effects of management and maintenance hours on cost segment 3 costs, or both?
- e. If your response to part (d) indicates that the "consideration" means, or includes, an investigation of the possible effects of management and maintenance hours on cost segment 3 costs, please confirm that you have no quantitative evidence that indicate whether the factors you list would actually affect the results of Dr. Bozzo's study. If you do not confirm, please explain fully.
- f. If your response to part (d) indicates that the "consideration" means, or includes, a new analysis of costs in cost segment 2 and/or cost segment 11, do you contend that it is, as a general matter, inappropriate to revise the cost methodology for one cost segment unless the methodologies for all related cost segments are simultaneously revised? Please explain fully.

RESPONSE TO USPS/OCA-T4-43. (a) Confirmed.

(b) Confirmed.

(c) Operating time causes the need for maintenance labor.

(d) Neither. I believe that the costs of management and maintenance hours need to be simultaneously considered as related to mail processing plant activities.

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(e) I do not confirm. Mail processing is a factory type of activity, and I have experience in analyzing a number of types of factory operations, including the manufacture of antipersonnel munitions, transport aircraft, transformers, electrical generation equipment, consumer white goods, fighter aircraft, and certain types of electronics. It has been my observation that equipment age and usage drive maintenance requirements; and that management effort can have a significant impact on the operations. One would naturally expect a study of mail processing costs to address maintenance and management costs.

(f) See my response to parts (d) and (e).

DECLARATION

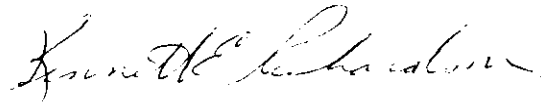
I, J. Edward Smith, declare under penalty of perjury that the answers to interrogatories USPS/OCA-T4-36-43 of the United States Postal Service are true and correct, to the best of my knowledge, information and belief.

Executed June 29, 2000

J. Edward Smith

CERTIFICATE OF SERVICE

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

A handwritten signature in cursive script, appearing to read "Kenneth E. Richardson".

KENNETH E. RICHARDSON

Washington, D.C. 20268-0001
June 29, 2000