### BEFORE THE POSTAL RATE COMMISSION

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ANSWERS OF UNITED PARCEL SERVICE WITNESS DAVID E. M. SAPPINGTON TO UNITED STATES POSTAL SERVICE INTERROGATORIES (USPS/UPS-T6-6 through 17) (June 23, 2000)

Pursuant to the Commission's Rules of Practice, United Parcel Service hereby files and serves the answers of UPS witness David E. M. Sappington to the following interrogatories of the United States Postal Service: USPS/UPS-T6-6 through 17.

Respectfully submitted,

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Of Counsel.

**USPS/UPS-T6-6.** Please refer to your testimony at page 5, lines 4-7 where you state: "Although low rates and significant rate reductions can benefit some mailers, they can unfairly disadvantage other mailers who must pay higher rates as a result. Low rates and significant rate reductions can also unfairly disadvantage competing suppliers of delivery services. Rates that disadvantage competitors unfairly should be avoided."

- a. Please define the term "significant" as used in this portion of your testimony, or provide a threshold beyond which a change would be viewed by you to be "significant."
- b. Please define the term "unfairly" as used in this portion of your testimony.
- c. Please clarify the intended meaning of the phrase "disadvantage competitors unfairly."
- d. Please confirm that 39 U.S.C. § 3622(b)(4) refers only to rate "increases" and not to rate reductions.
- e. Is the converse of the statement "low rates and significant rate reductions . . . can unfairly disadvantage other mailers who must pay higher rates as a result" true? When mailers have high rates and significant rate increases, are other mailers "unfairly" benefiting?

#### Answer to USPS/UPS-T6-6.

(a) What constitutes a "significant" rate reduction will vary with the circumstances under which the reduction is implemented. For example, any rate reduction that causes the revenues for a service to fall below its attributable costs is significant. In any event, the word "significant" is not central to the point made in the

sentences you cite. Those sentences could just as easily read: "Although low rates and rate reductions can benefit some mailers, they can unfairly disadvantage other mailers who must pay higher rates as a result. Low rates and rate reductions can also unfairly disadvantage competing suppliers of delivery services. Rates that disadvantage competitors unfairly should be avoided."

The point of the sentences you cite is that while granting rate reductions to some mailers may at first blush seem attractive, it must be remembered that, given the breakeven constraint contained in the statute, lower rates for some mailers necessitate higher rates for other mailers. Likewise, unduly low rates (e.g., rates that generate revenues below attributable costs) may result in more efficient competitors losing business they otherwise would have had.

(b) Mailers are disadvantaged "unfairly" when they must pay higher rates than they would otherwise pay in order to support rates for other mailers that are below attributable costs, or attributable costs plus a meaningful and reasonable amount of institutional costs, taking into account the service levels of the two classes of mail, the degree of mail preparation performed by each set of mailers, and other such considerations as reflected in the criteria of § 3622(b). Similarly, competitors are disadvantaged "unfairly" by prices for Postal Service products that generate revenues below the sum of attributable costs and the institutional costs that are "reasonably assignable" to those products under 39 U.S.C. § 3622(b). Competitors may also be disadvantaged unfairly by rates that are otherwise inconsistent with the ratemaking criteria of 39 U.S.C. § 3622(b). See also my response to (a), above.

- (c) See my answers to parts (a) and (b), above.
- (d) Confirmed. Low rates and rate decreases can nevertheless be inconsistent with the requirements of the Postal Reorganization Act. In particular, low rates and rate decreases can cause revenues to fall below the sum of attributable costs and a reasonable share of institutional costs, and thereby violate § 3622(b)(3) of the Postal Reorganization Act.
- (e) Not necessarily. If significant rate increases are driven by significant cost increases, for example, other mailers who use services with lower costs do not benefit unfairly from those increases. Similarly, if a significant rate increase reflects the higher value that a service offers, then mailers who choose to use other, less expedited services are not benefited unfairly.

usps/ups-te-7. Please refer to your testimony at page 5, lines 13-16 where you state: "When mailers can obtain comparable services at reasonable cost from suppliers other than the Postal Service, high postal rates impose fewer hardships on those mailers. Consequently, higher rates for postal services are appropriate in such situations, ceteris paribus."

- a. Please reconcile these statements with the direction by 39 U.S.C. § 3622(b)(4) to consider the impact of rate increases on mailers.
- b. Please define "comparable services" as used in this portion of your testimony.
- c. Please define "hardships" as used in this portion of your testimony.

#### Answer to USPS/UPS-T6-7.

(a) The cited statements are entirely consistent with 39 U.S.C. § 3622(b)(4). Section 3622(b)(4) directs the Commission to consider the impact of rate increases on mailers. The statements cited in your question provide guidance as to when the impacts are likely to be more or less pronounced, *ceteris paribus*. If a mailer can avoid the full impact of a rate increase by securing services from another supplier, then that mailer will not be affected by the high rate increase as adversely as he otherwise would be.

Section 3622(b)(4) also directs the Commission to consider the impact of rate increases on competitors. Higher rates for Postal Service products reduce the likelihood that a public enterprise will drive a more efficient private competitor from the market place, or will divert from the competitor business that would otherwise be

provided more efficiently by that competitor. Such safeguards are appropriate in light of the many advantages that the Postal Service enjoys because of its status as a public enterprise. As explained in my testimony (on page 14, footnote 14), the advantages enjoyed by the Postal Service include its ability to borrow from the United States Treasury and the fact that it does not have to pay the same taxes and fees that its competitors must pay.

- (b) Comparable delivery services are those that customers view as reasonable substitutes for the delivery services provided by the Postal Service.
- (c) Hardships include significantly reduced profit for business customers and meaningfully reduced utility (i.e., well-being) for household customers.

usps/ups-T6-8. Please confirm that the pricing criteria listed in 39 U.S.C. § 3622(b) are to be used by the Commission in recommending rates and fees that "provide sufficient revenues so that the total estimated income and appropriations to the Postal Service will equal as nearly as practicable total estimated costs of the Postal Service." 39 U.S.C. § 3621. If you cannot confirm, please explain.

Answer to USPS/UPS-T6-8.

Confirmed.

**USPS/UPS-T6-9.** Please refer to your testimony at page 8 where you state that "except for the fact that the definition of economic value renders it susceptible to measurement, the rationale for distinguishing between intrinsic value and economic value is not apparent."

- a. Is it your opinion that 39 U.S.C. § 3622 (b)(2) refers only to the value of the mail service relative to the services provided to other mail categories, or does the customer's perception of the value of a mail service also depend on the nature of services provided by non-postal delivery firms? Please explain.
- b. If the customer's perception of the value of a mail service depends, in part or in whole, on the service provided *relative to the services provided by other firms*, please explain how this should be measured or identified.

#### Answer to USPS/UPS-T6-9.

(a) A focus of § 3622(b)(2), and of the ratemaking provisions of the Postal Reorganization Act as a whole, is on achieving equity **among mailers**. For example, § 3622(b)(2) refers to "the value of the mail service actually provided **each class or type of mail service**" (emphasis added). Section 3622(b)(1) refers to the "maintenance of a fair and equitable schedule" of rates. Section 403(c) prohibits undue discrimination among mailers in setting rates. These provisions suggest that value relative to the services provided other mail categories is a primary consideration. That being said, all available direct and indirect measures of service performance and value merit

consideration, including the nature of the services provided by other suppliers. That is reflected, for example, in § 3622(b)(5).

(b) The value that customers derive from a service is difficult to measure, whether value is determined on an absolute basis or relative to the value derived from other services. This difficulty has led one observer to conclude that "the 'value of service' principle, as a basis for ratemaking, provides at best a vague and indeterminate formula, rather easily construed as justifying any system of rates found expedient by the carrier." Leo I. Sharfman, The Interstate Commerce Commission, New York: The Commonwealth Fund, 1936, Vol. IIIB, pp. 321-322, quoted in James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, Principles of Public Utility Rates, Second Edition, Arlington, Virginia: Public Utilities Reports, Inc., 1988 ("Bonbright, et al."), pages 129-130.

The value of a service is difficult to assess and measure for a variety of reasons. For instance, the same service can provide very different levels of value to different customers, because customers typically differ in their preferences, needs, and resources. Furthermore, the best metric for assessing value is not always apparent. Value may also be influenced by many different features of a service; the manner in which each feature affects value can be difficult to assess, and typically varies across customers. In addition, a directive to base rates on service value can introduce a circularity into the ratemaking process. This circularity is unavoidable if the measures employed to assess value (e.g., own-price elasticities of demand) are influenced by the established rates. See Bonbright, et al., Chapter 6.

Despite the difficulties it entails, value of service should be considered when recommending postal rates, as § 3622(b)(2) of the Postal Reorganization Act directs. However, in assessing the value of a mail service, it is important to recognize the difficulty of the task, and to avoid the temptation to summarize all relevant dimensions of value with a single statistic, such as the own-price elasticity of demand. Instead, all of the many available direct and indirect measures of service quality should be considered. Relevant measures include the speed of the mail service, the level of priority it is afforded in mail processing, transportation, and delivery, its success in avoiding content damage, and the opportunity it affords users to purchase value-added services, such as delivery confirmation.

**USPS/UPS-T6-10.** Please refer to page 8, line 14 of your testimony and provide a definition of the term "undue reliance."

#### Answer to USPS/UPS-T6-10.

A statistic is afforded undue reliance in a decision-making process when the decision is based primarily on the single statistic, while other relevant factors are afforded little or no attention.

**USPS/UPS-T6-11.** Please refer to your testimony at page 8, lines 16-17 where you state that the use of the own-price elasticity "as a measure of value can contradict the pricing criteria specified in section 3622(b) of the Act."

- a. Please explain this statement.
- b. In your opinion, do any of the criteria specified in the Act contradict other criteria specified in the Act? If so, please provide examples.

#### Answer to USPS/UPS-T6-11.

(a) Section 3622(b)(5) of the Postal Reorganization Act directs the consideration of "the available alternative means of sending and receiving letters and other mail matter at reasonable costs." When mailers can obtain comparable services at reasonable cost from suppliers other than the Postal Service, the mailers will find Postal Service rate increases to be less burdensome. Consequently, higher rates for Postal Service products are appropriate in such situations, *ceteris paribus*.

When mailers can obtain comparable services from other suppliers at reasonable cost, competing Postal Service products will tend to have high own-price elasticities.

Consequently, if high own-price elasticities are taken to indicate low service value and so are systematically associated with low rates, then lower rates — not higher rates — will be established in settings where mailers can obtain comparable services at reasonable cost from other suppliers. This inverse relationship between Postal Service rates and the availability of alternative means of sending and receiving mail stands in direct contrast to the relationship implied by 39 U.S.C. § 3622(b)(5). In this sense,

using the own-price elasticity as a proxy for service value can contradict the directives of 39 U.S.C. § 3622(b)(5).

(b) I am not aware of instances where one criterion in § 3622(b) of the Postal Reorganization Act contradicts other criteria in the Act. That is not to say, though, that the criteria always produce identical implications for rate setting. They do not. For instance, the cost criterion, § 3622(b)(3), may require a substantial increase in rates even though mailers may find the requisite rate increase to be onerous, § 3622(b)(4).

**USPS/UPS-T6-12.** Please refer to your testimony at page 9 where you claim that the own-price elasticity of demand is a "very imperfect measure of the value that senders and receivers derive from a mail service." Given that conclusion, please provide an alternative means by which the Commission may measure value of service in order to comply with 39 U.S.C. § 3622(b)(2).

#### Answer to USPS/UPS-T6-12.

As explained on pages 31-33 of my testimony and in my response to USPS/UPS-T6-9, there are many direct and indirect measures of service value, and all of these measures should be considered when assessing the value that mailers and recipients derive from a mail service.

Direct measures of service value include the speed of delivery and the convenience, security, and freedom from content damage that a service delivers. Other relevant direct measures of service value include features (e.g., Saturday delivery, insurance, pick-up, and delivery confirmation) that are provided automatically or that can be purchased on an optional basis. Indirect measures of service value can also provide useful information about service value, particularly when direct measures are difficult to assess accurately or to compare. Relevant indirect measures of the value that a service provides include the "mode of transportation, and priority of delivery" that the service provides. See 39 U.S.C. § 3622(b)(2).

**USPS/UPS-T6-13.** Please refer to your testimony at page 10 where you state that "since high own-price elasticities can reflect the presence of effective competition, a policy that implements lower rates and smaller rate increases in response to higher own-price elasticities for Postal Service products can serve primarily to protect the Postal Service from effective competition."

- a. Please define the term "effective competition" as used in this portion of your testimony.
- b. Please confirm that the pricing criteria in 39 U.S.C. § 3622(b)(4) and (b)(5), when balanced with criterion (b)(2), are designed to shield against the situation you have described. If you cannot confirm, please explain fully.

#### Answer to USPS/UPS-T6-13.

- (a) Effective competition for Postal Service products is present when a substantial proportion of Postal Service customers view the services offered by competing delivery firms as reasonable substitutes for Postal Service products, given the prevailing prices.
- (b) In my opinion, a number of the criteria in 39 U.S.C. § 3622(b) are designed to guard against undue protection of the Postal Service from competition. The cost criterion (§3622(b)(3)) is essential in this regard, in that it requires each Postal Service product to bear its attributable costs "plus that portion of all other costs of the Postal Service reasonably assignable" to the product. The criterion related to the effect of rate increases (§3622(b)(4)) is also important in this regard, in that it directs

consideration of "the effect of rate increases upon . . . enterprises in the private sector of the economy engaged in the delivery of mail matter other than letters." The available alternatives criterion (§3622(b)(5)) is likewise important in this regard, in that it suggests that larger rate increases are more acceptable for services for which Postal Service customers have viable alternatives, *ceteris paribus*. I do not see any criterion in § 3622(b) that is inconsistent with these provisions.

**USPS/UPS-T6-14.** Please refer to your testimony at page 11, lines 3-4. Define what you mean by "an inefficient production technology with unnecessarily large institutional costs and relatively low incremental costs for competitive services."

#### Answer to USPS/UPS-T6-14.

An "inefficient production technology with unnecessarily large institutional costs and relatively low incremental costs for competitive services" is a technology in which institutional costs exceed, and incremental costs for competitive services are below, the corresponding costs incurred when the cost-minimizing technology is employed. The term "cost-minimizing technology" is defined in my answer to USPS/UPS-T6-15(b). An example of an inefficient production technology is one that employs general-purpose machinery that can sort both letters and flats, even though separate machines for sorting letters and flats would be equally effective but less costly. Another example might be the use of a few large processing facilities and generalized equipment, even though operating costs would be lower and performance would not be reduced if a greater number of smaller, more specialized facilities or equipment were employed.

**USPS/UPS-T6-15.** Please refer to your testimony at page 11 where you refer to "(artificially low) incremental costs."

- a. Is it your testimony that the Postal Service should engage in production practices that would drive up the costs of its competitive products? Please explain fully.
- b. Please define "the technology that minimized its overall operating costs" and provide any and all evidence that the Postal Service does not now utilize such technology.

#### Answer to USPS/UPS-T6-15.

- (a) No. The Postal Service should minimize its costs of delivering all of the services that it provides.
- (b) A firm's technology is the means by which it transforms inputs (e.g., facilities, equipment, and labor) into outputs (e.g., various mail services). The cost-minimizing technology for a firm (i.e., the technology that minimizes its overall operating costs) is the technology that, among all feasible technologies, enables the firm to produce its outputs at minimum expense, i.e., while incurring the smallest possible total input costs.

I am not aware of any studies that examine whether the Postal Service employs the cost-minimizing technology.

**USPS/UPS-T6-16.** Please define and/or quantify "unnecessarily large institutional costs" as referred to at line 10 of page 11 of your testimony.

#### Answer to USPS/UPS-T6-16.

Unnecessarily large institutional costs are any institutional costs in excess of those incurred when operating with the least-cost technology.

**USPS/UPS-T6-17.** Please confirm that "unnecessarily large institutional costs can also increase rates unduly for captive users of monopoly mail services" only if the pricing criteria are applied "inappropriately" such that this burden is shifted to these captive customers. If you cannot confirm, please explain fully.

#### Answer to USPS/UPS-T6-17.

Not confirmed. Monopoly and non-monopoly services both bear portions of institutional costs when the pricing criteria are applied appropriately. Therefore, if institutional costs exceed cost-minimizing levels, captive users of monopoly services will bear a portion of those excess institutional costs in the form of higher rates.

#### **DECLARATION**

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

David E. M. Sappington

Dated: June 23, 2000

#### CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document by first class mail, postage prepaid, in accordance with Section 12 of the Commission's Rules of Practice.

John E. McKeever

Attorney for United Parcel Service

Dated: June 23, 2000 Philadelphia, Pa.

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