BEFORE THE POSTAL RATE COMMISSION

POSTAL RATE AND FEE CHANGES, 2001 :

DOCKET NO. R2001-1

INTERROGATORIES OF UNITED PARCEL SERVICE TO UNITED STATES POSTAL SERVICE WITNESS BOZZO (UPS/USPS-T14-11 through 21) (December 10, 2001)

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Pursuant to the Commission's Rules of Practice, United Parcel Service hereby

files and serves the following interrogatories directed to United States Postal Service

witness Bozzo: UPS/USPS-T14-11 through 21.

Respectfully submitted,

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UPS/USPS-T14-11. The following questions are about negative values for Total Piece Handlings ("TPH").

(a) Explain whether it is possible for TPH to take on negative values.

(b) Describe in detail the circumstances under which TPH may take on

negative values.

(c) Explain whether the circumstances described in part (b) are likely to be common or uncommon.

(d) Provide a specific explanation for each of the following examples of

negative values for TPH. In particular, for each example, explain:

(i) Of the weeks that are aggregated to construct the quarter, how

many show negative TPH?

(ii) What is the total TPH for the weeks in the quarter for which TPH is

negative?

(iii) What were the specific circumstance in the MODS system that

resulted in the recording of the negative TPH for these examples?

 TABLE 1 – EXAMPLES OF NEGATIVE TPH

Site ID	MODS Operation	Time Period	TPH
77	08	1996, qtr 4	-2,190
210	12	2000, qtr 4	-4,762
121	17	1999, qtr 1	-2,955

UPS/USPS-T14-12. The following questions are about negative values for Total Pieces Fed ("TPF").

(a) Explain whether it is possible for TPF to take on negative values.

(b) Describe in detail the circumstances under which TPF may take on negative values.

(c) Explain whether the circumstances described in part (b) are likely to be common or uncommon.

(d) Provide a specific explanation for each of the following examples of

negative values for TPF. In particular, for each example, explain:

(i) Of the weeks that are aggregated to construct the quarter, how

many show negative TPF?

(ii) What is the total TPF for the weeks in the quarter for which TPF is

negative?

(iii) What were the specific circumstance in the MODS system that

resulted in the recording of the negative TPF for these examples?

TABLE 2 – EXAMPLES OF NEGATIVE TPF

Site ID	MODS Operation	Quarter	TPF
52	08	1995, qtr 3	-535
210	12	1998, qtr 4	-41,323
156	18	1995, qtr 2	-884,184

UPS/USPS-T14-13. The following questions are about negative values for First Handling Pieces ("FHP").

(a) Explain whether it is possible for FHP to take on negative values.

(b) Describe in detail the circumstances under which FHP may take on

negative values.

(c) Explain whether the circumstances described in part (b) are likely to be common or uncommon.

(d) Provide a specific explanation for each of the following examples of

negative values for FHP. In particular, for each example, explain:

(i) Of the weeks that are aggregated to construct the quarter, how

many show negative FHP?

(ii) What is the total FHP for the weeks in the quarter for which FHP is

negative?

(iii) What were the specific circumstance in the MODS system that

resulted in the recording of the negative FHP for these examples?

TABLE 3 – EXAMPLES OF NEGATIVE FHP

Site ID	MODS Operation	Quarter	FHP
240	01	1998, qtr 1	-356
69	06	1998, qtr 1	-36,114
206	11	1997, qtr 1	-16,749

UPS/USPS-T14-14. The following questions are about negative values for HRS (hours).

(a) Explain whether it is possible for HRS to take on negative values.

(b) Describe in detail the circumstances under which HRS may take on

negative values.

(c) Explain whether the circumstances described in part (b) are likely to be

common or uncommon.

(d) Provide a specific explanation for each of the following examples of negative values for HRS. In particular, for each example, explain:

(i) Of the weeks that are aggregated to construct the quarter, how

many show negative HRS?

(ii) What is the total HRS for the weeks in the quarter for which HRS is

negative?

(iii) What were the specific circumstance in the MODS system that

resulted in the recording of the negative HRS for these examples?

TABLE 4 – EXAMPLES OF NEGATIVE HRS

Site ID	MODS Operation	Quarter	HRS
89	05	1997, qtr 3	-24,610
178	17	1995, qtr 3	-990
7	08	1998, qtr 2	-363

UPS/USPS-T14-15. The following questions are about intermittent gaps in the MODS data series for particular sorting activities, where an intermittent gap is defined as a non-positive value or values in between positive values.

(a) Explain whether it is possible for the Total Piece Handlings ("TPH"), Total Pieces Fed ("TPF"), hours ("HRS"), or First Handling Pieces ("FHP") series for a particular site to have intermittent gaps, as defined above.

(b) Describe in detail the circumstances under which such gaps can occur.

(c) Explain whether the circumstances described in part (b) are likely to be

common or uncommon.

(d) Provide a specific explanation for each of the following examples of

intermittent gaps in the MODS data series:

TABLE 5.1 – INTERMITTENT GAPS FOR TPH

Site ID	MODS Operation	Start Date	Gap Length (in qtrs)
189	08	1997, qtr 1	3
86	11	1995, qtr 2	6
94	17	1999, qtr 2	6

TABLE 5.2 – INTERMITTENT GAPS FOR HRS

Site ID	MODS Operation	Start Date	Gap Length (in qtrs)
197	01	1998, qtr 1	9
226	03	1998, qtr 2	8
179	07	1997, qtr 2	3

UPS/USPS-T14-16. The following questions are about Total Piece Handlings

("TPH") and Total Pieces Fed ("TPF") in manual operations.

- (a) Should TPH equal TPF in manual operations?
- (b) Describe in detail the circumstances that would cause TPH to differ from

TPF in manual operations.

(c) Provide a specific example for each of the following examples where TPH

does not equal TPF in a manual operation:

TABLE 6 – TPH NOT EQUAL TO TPF IN MANUAL OPERATIONS

Site ID	MODS Operation	Year and Quarter	TPF	ТРН
29	05	1995, qtr 3	28	3,158
243	05	1996, qtr 2	-1	6,307
248	07	1997, qtr 1	103	1015

UPS/USPS-T14-17. The following questions are about the relationship between Total Pieces Fed ("TPF") and Total Piece Handlings ("TPH") in automated/mechanized operations.

(a) Explain whether it is possible for TPF to be less than TPH

(b) Describe in detail the circumstances under which TPF can be less than

TPH.

(c) Explain whether the circumstances described in part (b) are likely to be

common or uncommon.

(d) Provide a specific explanation for each of the following examples of TPF being less than TPH:

TABLE 7 – TPF LESS THAN TPH

Site ID	MODS Operation	Year and Quarter	TPF	TPH
212	01	1996, qtr 4	31,149	61,014
11	12	2000, qtr 2	11,791	17,637
1	17	1996, qtr 2	78,521	119,574

UPS/USPS-T14-18. The following questions are about the relationship between

Total Pieces Fed ("TPF") and First Handling Pieces ("FHP").

(a) Explain whether it is possible for TPF to be less than FHP.

(b) Describe in detail the circumstances under which TPF can be less than

FHP.

(c) Explain whether the circumstances described in part (b) are likely to be

common or uncommon.

(d) Provide a specific explanation for each of the following examples of TPF

being less than FHP:

TABLE 8 – TPF LESS THAN FHP

Site ID	MODS	Year and	TPF	FHP
	Operation	Quarter		
3	01	1997, qtr 2	86,168	100,463
156	12	1995, qtr 1	912	9,021
10	19	1998, qtr 3	18,587	21,249

UPS/USPS-T14-19. The following questions are about the relationship between Total Pieces Fed ("TPF") and hours ("HRS").

(a) Explain whether it is possible that while TPF is non-positive, HRS is

positive.

(b) Describe in detail the circumstances under which TPF is non-positive, but

HRS is positive.

(c) Explain whether the circumstances described in part (b) are likely to be

common or uncommon.

(d) Provide a specific explanation for each of the following examples of TPF

being non-positive and HRS being positive:

TABLE 9 – TPF NON-POSITIVE AND HRS POSITIVE

Site ID	MODS Operation	Year and Quarter	TPF	HRS
157	12	1998, qtr 1	0	1,071
2	07	1996, qtr 4	0	14,707
11	07	2000, qtr 1	0	26,063

UPS/USPS-T14-20. The mpe.txt (for 93, 94, 95, 96, 97 and 98) files, provided in R2000, provide data on year-end equipment (identified by PCNs) by plant.

- (a) Explain whether it is possible for a facility to have idle equipment.
 - (i) What types of equipment are likely to remain idle?

(ii) Explain in detail why a piece of mail sorting equipment may remain idle (i.e. not being used to process mail). For example, can mail sorting equipment remain idle because it is temporarily out of use, it is no longer in use, or because it is a new machine that needs to get up and running? List all plausible reasons why mail sorting equipment may remain idle.

(iii) Describe the likelihood of each of the reasons for mail sorting equipment to be idle listed above.

(iv) If an idle piece of mail sorting equipment is temporarily out of use, what is the average period of time over which it is likely to remain out of use. Explain whether the idle time is likely to be measured in days, weeks, months, or years.

(v) If an idle piece of mail sorting equipment is no longer in use, how long would it be stored at the mail sorting facility before it is removed?

(vi) How much time does it take for a new machine to be installed and integrated into the plant and begin to process mail?

(b) Describe in detail the circumstances when at least one DBCS machine is present at a facility, but TPH18 and HRS18 (MODS data for the BCS/DBCS MODS pool) are non-positive?

-8-

(i) Explain whether the circumstances described above are likely to be

common or uncommon.

(ii) Provide a specific explanation for each of the following examples of

instances in which a DBCS machine is present at a facility, but the MODS variables

from MODS group 18 are non-positive:

TABLE 10.1 – DBCS EQUIPMENT PRESENT AND BUT ASSOCIATED MODS DATA NON-POSITIVE

Site ID	Year and Quarter	Number of DBCS machines	TPH	HRS
17	1998, qtr 4	4	0	0
46	1996, qtr 1	34	0	0

(c) Describe in detail the circumstances when at least one OCR machine is present at a facility, but TPH01 and HRS01 (MODS data for the OCR MODS pool) are non-positive?

(i) Explain whether the circumstances described above are likely to be common or uncommon.

(ii) Provide a specific explanation for each of the following examples of instances in which an Optical Character Reader ("OCR") machine (PCN 960000 or PCN 960010) is present at a facility, but the MODS variables from MODS group 01 are non-positive:

TABLE 10.2 – OCR EQUIPMENT PRESENT AND BUT ASSOCIATED MODS DATA NON-POSITIVE

Site ID	Year and Quarter	Number of OCR machines	TPH	HRS
44	1996, qtr 4	2	0	0
310	1998, qtr 1	3	0	0

(d) Describe in detail the circumstances under which when at least one Flat

Sorting Machine ("FSM") machine is present at a facility, but TPH11 and HRS11

(MODS data for the FSM MODS pool) are non-positive?

(i) Explain whether the circumstances described above are likely to be

common or uncommon.

(ii) Provide a specific explanation for each of the following examples of

instances in which an FSM machine (PCN 920000) is present at a facility, but the

MODS variables from MODS group 11 are non-positive:

TABLE 10.3 – FSM EQUIPMENT PRESENT AND BUT ASSOCIATED MODS DATA NON-POSITIVE

Site ID	Year and Quarter	Number of FSM machines	TPH	HRS
40	1996, qtr 4	3	0	0
164	1996, qtr 2	1	0	0

(e) Describe in detail the circumstances when at least one Small Parcel Bundle Sorter ("SPBS") machine is present at a facility, but TPH12, HRS12, TPH03, HRS03, TPH04, or HRS04 (MODS data for the SPBS MODS pool) are non-positive?

(i) Explain whether the circumstances described above are likely to be common or uncommon.

(ii) Should a facility with positive TPH03 necessarily have positive

TPH04? Explain.

(iii) Should a facility with a positive TPH03 or TPH04 necessarily have

a positive TPH12? Explain.

(iv) Provide a specific explanation for each of the following examples of

instances in which an SPBS machine (PCN 930040) is present at a facility, but the

MODS variables from MODS group 12, 03, or 04 are non-positive:

TABLE 10.4 – SPBS EQUIPMENT PRESENT AND BUT ASSOCIATED MODS DATA NON-POSITIVE

Site ID	Year and Quarter	Number of SPBS machines	MODS Group	TPH	HRS
197	1997, qtr 2	3	03	0	0
107	1998, qtr 2	6	04	0	0

(f) Describe in detail the circumstances under which when at least one Letter Sorting Machine ("LSM") is present at a facility, but TPH02 and HRS02 (MODS data for the LSM MODS pool) are non-positive?

(i) Explain whether the circumstances described above are likely to be common or uncommon.

(ii) Provide a specific explanation for each of the following examples of

instances in which an LSM machine (LSM-Multi Pos, PCN 910000 and LSM-Single Pos,

PCN 910010) is present at a facility, but the MODS variables from MODS group 02 are

non-positive:

TABLE 10.5 – LSM EQUIPMENT PRESENT AND BUT ASSOCIATED MODS DATA NON-POSITIVE

Site ID	Year and Quarter	Number of OCR machines	TPH	HRS
3	1998, qtr 4	5	0	0
64	1997, qtr 4	16	0	0

UPS/USPS-T14-21. The following question is about the upper and lower productivity bounds used to filter the regression sample that forms the basis for the econometric volume variability estimates.

(a) Explain the method by which the upper and lower bounds for each MODS group are determined.

(b) Explain the motivation for filtering on productivity.

 (c) If the approach or approaches described in part (a) do not include wellestablished statistical methods for identifying outliers (as described, for example in Regression Diagnostics: Identifying Influential Data and Sources of Collinearity by David A. Belsley, Edwin Kuh and Roy E. Welsch, John Wiley & Sons, 1980), explain why these were not used.

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.

Millig E. Willow h

Phillip E. Wilson, Jr. Attorney for United Parcel Service

Dated: December 10, 2001 Philadelphia, PA

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